

Aviation UPDATE

India's premier aviation monthly magazine

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FROM TEJAS TO AMCA THE FUTURE OF INDIA'S INDIGENOUS
MILITARY AVIATION INDUSTRY **PG 18**

ENGINEERING INDIA'S
AEROSPACE FUTURE.

PAVAN G. RANGA
MD & CEO-RANGSONS AEROSPACE

PG 15

PRECISION
THAT POWERS FLIGHT.

ANUJ JHUNJHUNWALA
MD & CEO - JJG AERO

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(ICE Loitering Munition)



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(High Speed Expendable Target)



RV Maya

(Jet Powered Bomber/ Decoy)



RV Dhristi

(Tethered Drone)



RV Astra

(Jet Powered Kamikaze UAV)

RV Yodha

(Unmanned Ground Vehicle)



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Aviation UPDATE

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Chennai -600 017**B. KARTIKEYA**

Building the Future of Aviation: Technology, Manufacturing and Indigenous Capability

Aviation is entering a defining period in which technological advancement, industrial capacity and operational readiness are becoming equally important. From commercial fleet expansion and next-generation aircraft to indigenous military aviation and advanced manufacturing, the industry is evolving rapidly. The October 2026 issue of Aviation Update explores these developments, with a particular focus on India's growing role in the global aerospace ecosystem.

Our cover story, "From Tejas to AMCA: The Future of India's Indigenous Military Aviation Industry," examines the opportunities and challenges facing India's combat aircraft programmes. While Tejas continues to strengthen indigenous manufacturing capabilities, Tejas Mk2 and AMCA represent more ambitious steps towards advanced aircraft development. Their success will depend not only on design and engineering, but also on reliable supply chains, domestic technology, skilled talent and sustained investment.

In our featured interview, Pavan G. Ranga, MD and CEO of Rangsons Aerospace, discusses the transition from manufacturing capabilities towards a broader aerospace, defence and mission-critical technology ecosystem. He highlights the importance of engineering depth, quality systems, qualification and testing in moving Indian companies up the value chain. His perspective also underscores the growing convergence of aerospace, defence electronics, secure communications and software, alongside opportunities in unmanned systems and international programmes. Rangsons' long-term ambition reflects a wider industry shift towards becoming a trusted technology partner rather than simply a component supplier.

Our second interview features Anuj Jhunjhunwala, MD and CEO of JJG Aero, who shares insights into the company's evolution into specialised aerospace manufacturing. He discusses India's opportunity to increase its participation in global aerospace supply chains, the growing demand for engine and landing-system components, and the importance of advanced CNC machining, automation and digital manufacturing. His emphasis on certification, vertical integration and aerospace-grade material localisation highlights the capabilities Indian suppliers must build to become strategic partners for global OEMs and Tier-1 companies. JJG Aero's planned expansion also illustrates the scale of investment required to support increasingly complex programmes.

Beyond these interviews, this issue covers important developments across commercial aviation, business aviation and maintenance, repair and overhaul. Fleet orders, next-generation aircraft, cargo operations, avionics modernisation and digital maintenance solutions demonstrate how airlines and manufacturers are responding to changing operational and market demands. The developments in global MRO partnerships further reinforce the importance of reliability, lifecycle support and cost-effective operations.

India's aerospace ambitions will ultimately be measured by its ability to convert opportunity into dependable capability. Manufacturing scale, technological ownership, certification, workforce development and collaboration between industry and government will be essential.

As the industry moves forward, Aviation Update remains committed to bringing readers the people, technologies and ideas shaping aviation's future.

Kartikeya B.

Boeing and Turkish Airlines Finalize Order for up to 150 737 MAX Jets



Boeing and Turkish Airlines announced an order for up to 150 737 MAX airplanes, concluding the discussions initiated in 2025 and supporting the flag carrier's expansion goals.

The agreement for the 737 MAX order was finalized in the presence of His Excellency Recep Tayyip Erdogan, president of the Republic of Türkiye.

Turkish Airlines purchased 100 737-8 airplanes and secured options for 50 more 737 MAX jets, making this the airline's largest Boeing single-aisle order. The agreement includes substitution rights for the 737-10, the largest 737 MAX variant, so Turkish Airlines can comfortably serve more passengers on more routes to meet growing demand.

"This agreement marks another significant step in the continued expansion of our fleet. The new Boeing 737 MAX aircraft will bring greater efficiency and flexibility to our operations, supporting the extensive network we serve from our hub in Istanbul," said Prof Murat Seker, Turkish Airlines chairman of the board and the executive committee. "We are pleased to build on our longstanding cooperation with Boeing through an agreement that also supports Türkiye's aviation ecosystem."

Turkish Airlines (including AJet) operates a fleet of more than 200 Boeing airplanes, including the 737 MAX, 787 Dreamliner, 777, 737 Next-Generation and 777 Freighter. By adding more 737-8 jets to its fleet, the airline will leverage the airplane's range, payload flexibility and fuel efficiency to serve high-demand domestic and international routes.

"This order reflects the trust and shared vision that have defined our long-standing partnership with Turkish Airlines," said Stephanie Pope, president and CEO of Boeing Commercial Airplanes. "We're proud to continue our support of Türkiye's aviation ecosystem and Turkish Airlines as it grows its Istanbul-based network, connecting more people and destinations worldwide."

Korean Air Receives Final Regulatory Approval for Asiana Airlines Mileage Integration Plan



Korean Air has received final approval from the Korea Fair Trade Commission (KFTC) on its mileage integration plan with Asiana Airlines. Since submitting the proposed integration framework on June 12, 2025, Korean Air has completed a 15-month review with the KFTC to finalize a structure that protects and maximizes consumer benefits.

Under the approved plan, all newly accrued miles will be credited directly to Korean Air's SKYPASS program upon the launch of the integrated airline. Existing Asiana Airlines miles will be transferred to Korean Air but maintained as a separate mileage balance within the member's account for 10 years. Customers may choose to keep these miles separate or convert them into SKYPASS miles at any time. Passengers who choose to maintain their separate Asiana balance can continue to redeem it for award tickets and seat upgrades based on the existing Asiana Airlines redemption chart.

For elite members, Asiana Airlines status will be automatically matched to the corresponding Korean Air elite tier,

maintaining its current validity period. To support this transition, Korean Air will introduce a new "Morning Calm Select" tier, which includes SkyTeam Elite Plus benefits. This new tier will operate alongside the existing Million Miler, Morning Calm Premium, and Morning Calm tiers.

The mileage conversion ratio operates on a dual structure. Flight-accrued miles will be converted at a 1:1 ratio, reflecting the similar accrual standards of both airlines. Partner-accrued miles will be converted at a 1:0.82 ratio, reflecting the financial cost of accumulation.

Following consultations with the KFTC, Korean Air will maintain award seat availability at or above pre-integration levels to expand redemption opportunities. On key long-haul routes – including the Americas, Europe, and Oceania – the airline will provide award seats at or above the highest levels recorded over the past 10 years. Korean Air will also manage total redemption capacity so that annual mileage usage exceeds the combined pre-integration volume of both carriers by 20% or more. Additionally, allowing customers to redeem Asiana miles for Korean Air flights will expand available schedules by combining Asiana's network, overlapping routes, and Korean Air-exclusive destinations.

To provide detailed guidance on the transition, Korean Air will launch a dedicated mileage integration website (oneskypass.koreanair.com) on September 15.

KLM Royal Dutch Airlines Takes Delivery of its 1st Airbus A350-900



Dutch national carrier KLM, member of the Air France-KLM Group, has taken delivery of its first A350-900.

The milestone marks the introduction of the latest generation widebody for long-haul operations as part of the airline's ongoing fleet renewal. KLM currently operates an Airbus fleet of ten A330 Family aircraft and seventeen A321neos. The A350 will be operated on long-haul routes from its home base in Amsterdam Airport Schiphol to destinations like Toronto, strengthening the airline's global network.

The newly delivered A350 for KLM seats 331 passengers in a three-class layout, featuring 34 Business Class suites with direct aisle access, 26 Premium Comfort seats, and 271 Economy seats. The aircraft is equipped with a comfortable and spacious Airspace cabin, designed to improve the long-haul experience for both passengers and crew through enhanced ergonomics and greater comfort, offering larger luggage capacity, advanced ambient lighting, and high-speed satellite connectivity.

The A350 is the world's most modern widebody aircraft, designed to fly up to 9,700 nautical miles / 18,000 kilometres non-stop, setting new standards for intercontinental travel. The aircraft includes state-of-the-art technologies and aerodynamics delivering unmatched standards of efficiency and comfort. Its latest generation Rolls-Royce engines and use of lightweight materials bring a 25 per cent advantage in fuel burn, operating costs and carbon dioxide (CO₂) emissions, compared to previous generation competitor aircraft.

Embraer and Mahindra Group Advance Plans for C-390 Millennium Industrialization in India

Embraer and Mahindra Group are continuing preparatory discussions and planning activities regarding an industrial and support ecosystem for the C-390 Millennium in India, as the companies jointly pursue the Indian Air Force (IAF) Medium Transport Aircraft (MTA) programme.

As part of their ongoing preparations, Mahindra and Embraer are working with



the Government of Maharashtra and have identified Nagpur for a potential Final Assembly Line for Embraer C-390 Millennium aircraft production in India. The proposed facility would support the local assembly and industrialisation of the aircraft in India, subject to the Embraer C-390 Millennium being selected by the Government of India and an order being placed under the IAF's MTA programme.

The companies are working closely with the Maharashtra Government on completion of the associated processes, with the objective of ensuring that the required industrial infrastructure can be progressed expeditiously if the programme is awarded to the partnership.

Bosco da Costa Junior, President & CEO Embraer Defense & Security, - "Embraer is pleased to deepen its partnership with Mahindra as we advance our preparations to bring the C-390 Millennium's industrial capabilities to India. Identifying Nagpur as a potential location for an assembly facility is an important step in building a robust, long-term aerospace ecosystem in the country. We value the support of the Government of Maharashtra and look forward to working closely with our partners to strengthen India's indigenous aerospace and defence capabilities, subject to the C-390 Millennium being selected for the Indian Air Force programme."

Vinod Sahay, Member of the Group Executive Board, Mahindra Group, - "Mahindra is committed to building a globally competitive aerospace ecosystem in India and to creating meaningful manufacturing and

technology capabilities that contribute to the country's Atmanirbhar Bharat ambitions. As we work with Embraer on the C-390 Millennium, we are preparing the industrial ecosystem required to support the programme at scale. Nagpur offers a compelling opportunity for such a capability, and we are very grateful to the Government of Maharashtra on expeditiously allotting the land in Nagpur and helping with the related requirements. These preparations are, of course, subject to the selection of the C-390 Millennium by the Government of India and the placement of the IAF order."

The proposed Nagpur facility would be a state-of-the-art facility in India bringing knowhow on aircraft assembly, system integration, manufacturing engineering, local supply chain development and others into the country. Subject to the programme award, the partnership intends to progressively integrate Indian aerospace companies into the C-390 Millennium ecosystem, to deliver manufacturing, aftermarket services, training and lifecycle support, in line with the Government of India's Make in India and Atmanirbhar Bharat objectives.

Embraer and Mahindra entered into a Strategic Cooperation Agreement in October 2025 to jointly advance the C-390 Millennium for the IAF's MTA programme, building on their earlier MoU signed in February 2024. The agreement envisages collaboration on industrialisation, local manufacturing, assembly, supply chain development and MRO activities in India. In February 2026, the companies also announced

plans to work towards establishing a C-390 Millennium MRO capability in India, subject to the aircraft's selection under the MTA programme.

The C-390 Millennium is a multi-mission military transport aircraft designed to perform a range of missions including troop and cargo transport, airdrop operations, medical evacuation, search and rescue, firefighting and humanitarian missions. The aircraft has a payload capacity of up to 26 tonnes and is designed to operate from temporary or unpaved runways.

The proposed industrialisation programme would leverage Embraer's aerospace engineering and aircraft manufacturing expertise with Mahindra's established manufacturing capabilities and extensive Indian industrial ecosystem. The companies will continue to engage with the Government of India, the Indian aerospace ecosystem and the Government of Maharashtra as they progress preparations for the programme.

Ethiopian Airlines Orders Boeing 777 and 777-8 Freighters to Expand Cargo Fleet

Boeing and Ethiopian Airlines announced the African carrier has ordered eight 777-8 Freighters and two 777 Freighters. The airline will pair the proven performance of the 777 Freighter with the next generation 777X capabilities of the new 777-8 Freighter to expand its Boeing freighter fleet.

The order is Ethiopian Airlines' second for the 777X airplane family, building on its purchase of eight 777-9 passenger jets that established the carrier as Africa's first 777X customer. The 777-8 Freighter will be the world's largest and most capable twin-engine freighter, supporting Ethiopian Airlines' expanding global network and advancing its international freight operations.

"This agreement marks another significant milestone in strengthening



Ethiopian Airlines' cargo capabilities while supporting the continued expansion of our global network," said Mesfin Tasew, Group CEO of Ethiopian Airlines. "The addition of the Boeing 777-8F Freighters and 777F Freighters will enhance our ability to serve customers around the world with greater payload capacity, operational flexibility, efficiency, and sustainability. As demand for cargo services continues to grow, these aircraft will play a vital role in facilitating global trade, strengthening supply chain connectivity, and further reinforcing Ethiopia's position as a leading cargo gateway between Africa and international markets. It also marks our long-term partnership with Boeing."

With a maximum structural payload of 118 tonnes, the 777-8F offers the highest payload and range capability to open new markets while reducing fuel use and delivering the lowest operating cost per tonne of any freighter. The 777F set the standard for twin-engine freighter efficiency and productivity, and Ethiopian Airlines' 777F fleet ranks among the most highly utilized commercial airplanes in service.

"Ethiopian Airlines' order for the industry-leading 777 Freighter and new 777-8 Freighter highlights both the strength of our partnership and growing demand for air cargo worldwide," said Brad McMullen, Boeing senior vice president of Commercial Sales and Marketing. "We appreciate Ethiopian

Airlines' continued confidence in Boeing and the 777 and 777X family of airplanes as it expands its cargo capabilities and global network. The airline continues to make history as the first in Africa to order the new 777-8 Freighter."

The 777-8F will complement Ethiopian Airlines' freighter fleet, retaining the key features of the 777 Freighter that support efficient operations, high utilization and reliability, including common cross-sections and walkways, and easy carriage of large outside cargo. Ethiopian Airlines currently connects more than 70 cargo markets across Africa, Asia, Europe, the Middle East and North America with a fleet of:

12 777 Freighters

Two 767 Freighters

And four 737-800SF airplanes

The new order will enable the airline to build on this network by providing greater flexibility to meet rising global demand for air cargo.

Airbus A350F Freighter Successfully Performs its Maiden Flight

The A350F freighter (MSN 700), the first of two test aircraft, has completed its first flight. The aircraft, fitted with special flight test instrumentation, flew for 4 hours 10 minutes reaching an altitude of 25,000 feet. The aircraft was flown by a dedicated Airbus Flight Test



crew.

"This maiden flight is a major milestone for the A350F and for our customers worldwide. As the latest development of our highly successful A350 platform, the A350F is a true game-changer for the air cargo market, combining unmatched operational flexibility, fuel efficiency, and range," stated Lars Wagner, CEO Commercial Aircraft at Airbus. "I am immensely proud of the extraordinary dedication and hard work of all the teams who have made this achievement possible."

The second A350F prototype (MSN 701) is now at an advanced stage of final assembly and will enter the paint shop in the next few weeks.

During this inaugural flight, the crew carried out tests focused on verifying the basic airworthiness, fundamental flying qualities, and ensuring basic systems perform as predicted. This marks the start of an over 9 months flight test campaign.

Designed to be the world's most advanced cargo aircraft, the A350F meets the evolving demands of the global air freight market. Thanks to a range capability of up to 8,700 kilometres and a payload of up to 111 tonnes, it will allow operators to deploy it on international long-haul routes. Made of over 70% advanced materials, the A350F is resulting in a 46 tonnes lighter maximum take-off weight (MTOW) compared to competitor aircraft.

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% compared to competitor aircraft with a similar payload-range capability. It is the first new freighter to fully meet the latest ICAO's CO2 emission standards. At the end of August 2026, the A350F had already recorded 115 orders from 14 disclosed customers and it had captured up to 59% market share in the large freighter category.

CDB Aviation Delivers 1st of 4 Boeing 737-8 Aircraft to Norwegian



CDB Aviation, a wholly owned Irish subsidiary of China Development Bank Financial Leasing Co., Ltd. announced the delivery of the first of four Boeing 737-8 aircraft to Norwegian, signifying the lessor's first aircraft on lease to the carrier. The four aircraft are part of the lease agreements executed between the companies in December 2024.

"We are pleased to deliver our first 737-8 on lease to Norwegian, which will support the airline's growing modern, fuel-efficient fleet," commented Gavan

Daly, Head of Commercial EMEA at CDB Aviation. "These aircraft further advance Norwegian's fleet modernization efforts, focused on enhancing the carrier's operational efficiency, environmental performance, and financial flexibility."

"We are pleased to mark the delivery of our first Boeing 737-8 with CDB Aviation. This represents another important step forward in our ongoing fleet renewal. We highly value our new partnership with CDB Aviation as we continue to strengthen Norwegian for the future," said Geir Karlsen, Chief Executive Officer of Norwegian.

"Enabling our airline customers, like Norwegian, to achieve their sustainability goals is a core element of our platform's strategy to maximize our influence to drive meaningful progress on enhanced sustainability within the industry. Our team remains focused on supporting the efforts of airlines in all markets to renew their fleets with energy-efficient, new-generation aircraft," concluded Daly.

Biman Bangladesh Airlines Orders 11 More Boeing Jets to Expand Fleet



Boeing and Biman Bangladesh Airlines announced the national carrier placed an order for 11 787 Dreamliner and 737 MAX airplanes to grow and renew its fleet. The purchase, which includes five 787-10 and six 737-8 jets, builds on the airline's largest-ever order for 14 787 Dreamliner and 737 MAX airplanes earlier this year.

Government leaders celebrated the signing by Boeing and Biman on the sidelines of the United Nations General Assembly, including:

Bangladesh Minister of Civil Aviation and Tourism M. Rashiduzzaman Millat
State Minister of Foreign Affairs Humaiun Kobir

Invest Bangladesh Authority Chairman Chowdhury Ashik Mahmud Bin Harun
Advisor to the Prime Minister Madhi Amin

U.S. Secretary of Commerce Howard Lutnick

U.S. Deputy Secretary of State Christopher Landau

"Today's supplemental agreement is an important step in Biman's ongoing fleet renewal and network expansion. This order responds to specific requirements in our fleet plan. Our team's working relationship with Boeing over the years has given us confidence in the delivery and support arrangements," said Mr. Rume A Hossain, chairman of Biman Bangladesh Airlines. "As the national flag carrier, we remain committed to developing Biman's network and capabilities in a manner that responds to the connectivity needs of the people of Bangladesh, our expatriate community, business and tourism. This agreement is one part of a broader, carefully considered plan to strengthen the country's international connectivity in the years ahead."

Biman currently operates 787, 777 and 737 Next-Generation airplanes across its international network, connecting Bangladesh with major hubs in the Middle East, South and Southeast Asia, and Europe. The 787 Dreamliner and 737 MAX families deliver 20-25% more fuel efficiency compared to the airplanes they replace, supporting the airline's strategy to modernize its fleet and expand global connectivity.

"Biman's follow-on order reflects its strategic approach to fleet renewal and capacity growth, and underscores the strength of our long-standing partnership," said Brad McMullen, Boeing senior vice president of Commercial Sales and Marketing. "These additional 787 Dreamliner and 737 MAX airplanes will deliver the efficiency, versatility and reliability Biman needs to support Bangladesh's growing role in global aviation."

BermudAir Becomes the Second Embraer E-Freighter Operator



Embraer and Regional One announced that BermudAir has become the second operator worldwide of the Embraer E-Freighter. The airline will operate one E190F leased from Regional One, marking the first E-Freighter deployment in the Americas.

Since the launch of the E-Freighter program, Regional One has placed five firm orders for the E190F. Two converted aircraft have already been delivered and have entered successfully into service.

BermudAir currently serves ten destinations across the Caribbean, the United States and Canada with a fleet of two E175s and two E190s. The addition of the E190F expands the airline's capabilities and reinforces the versatility of the E-Jets platform.

"Cargo is a natural next step for us," said Adam Scott, Founder & CEO of BermudAir. "We've built a reliable, right-sized operation connecting Bermuda and the Caribbean to North America, and the E190F lets us put that same network to work moving express cargo, supporting local businesses, e-commerce and time-sensitive freight across the islands we serve. It's an exciting expanded line of business for BermudAir, and one that builds directly on the operational strengths we've already established."

"We are excited to welcome BermudAir as the second operator of the Embraer E190F and the first E-Freighter operator in the Americas. As an innovative and rapidly growing airline, BermudAir is an excellent partner to help showcase the versatility and value of the E-Freighter platform. This milestone represents another important step

in the continued growth of the E190 P2F program, and we look forward to expanding the global operator base and bringing these highly capable aircraft to customers in markets around the world," said George Mamangakis, Chief Investment Officer of Regional One.

"BermudAir's selection of the E190F marks an important milestone for the E-Freighter program as the aircraft enters service in North America and the Caribbean for the first time. As one of the region's fastest-growing airlines, BermudAir is expanding beyond passenger operations and unlocking new opportunities in the air cargo market. The addition of another operator underscores the strong value proposition of the E-Freighter, which was designed to address a unique gap in the cargo market with the right combination of payload, volume, range and efficiency," said Arjan Meijer, President and CEO of Embraer Commercial Aviation.

Korean Air to roll out Starlink Wi-Fi on September 15



Korean Air will begin offering complimentary high-speed in-flight Wi-Fi powered by Starlink on September 15. Passengers on select flights will experience reliable broadband connectivity - so they can stream, work, and stay online in the cabin the same way they would at home.

The service will debut on four newly retrofitted widebody aircraft: three Airbus A350-900s and one Boeing 777-300ER. The aircraft will be deployed on medium-and long-haul routes across the Americas, Europe, and Southeast Asia, as well as on key short-haul

flights. The airline plans to progressively expand Starlink connectivity across its in-service fleet by the end of 2027.

Starlink is the world's most advanced satellite constellation using a low-Earth orbit to deliver fast, reliable internet that enables passengers to stream high-definition video and music, play online games, browse the web, and access cloud-based applications. While the network supports these high-bandwidth activities, voice and video calls remain restricted to maintain cabin comfort. Aircraft awaiting retrofit will continue offering the airline's existing paid Wi-Fi service during the fleet transition.

The launch establishes Korean Air as the first full service carrier in East Asia to introduce Starlink connectivity, marking an initial milestone in its broader fleet modernization roadmap ahead of the airline's merger.

ANA Holdings Inc. Expands E190-E2 Fleet with Additional Order for Eight Aircraft



Embraer and ANA Holdings Inc. announced the signing of an agreement for eight E190-E2 aircraft, formalizing ANA HD's decision unveiled on July 29, 2026 to expand their fleet. This deal builds on the airline's original purchase contract for 15 E190-E2 firm aircraft, announced in 2025, and will increase ANA HD's total firm orders for E2 aircraft to 23. ANAHD still holds five additional options for E190-E2 aircraft.

"This additional E190-E2 order accelerates our efforts to build a sustainable regional aviation network in Japan," said Koji Shibata, President and CEO of ANA Holdings. "It also underscores our confidence in Embraer's technology to reduce both environmental impact and operating

costs. We are excited to deepen our partnership, elevating regional connectivity and delivering a superior passenger experience across Japan."

"We are honoured by ANA HD's continued confidence in Embraer E2 small narrowbody aircraft and look forward to supporting the airline's growth plans in Japan," said Arjan Meijer, President & CEO, Embraer Commercial Aviation. "With its exceptional economics and fuel efficiency, the E2 will support expanded connectivity across Japan along with better comfort and space for passengers."

AIRCAIRO Places Order for 15 Airbus A320neo Aircraft



AIRCAIRO, Egypt's National growing Air-carrier, has signed a firm order for 15 Airbus A320neo aircraft at the El Alamein International Airshow 2026. The agreement marks an important milestone in the airline's strategy as it introduces direct aircraft ownership alongside its leased Airbus fleet to support long-term growth.

Having grown rapidly from seven aircraft five years ago to a fleet of over 45 aircraft today, AIRCAIRO is building on this momentum to grow to a fleet of over 130 aircraft by 2034. The firm order provides the airline with the capacity, flexibility, and operational efficiency needed to expand connectivity across its domestic, regional, and international networks.

Hussein Sherif, Chairman & CEO, AIRCAIRO, said: "This agreement represents a natural next step in AIRCAIRO's growth. Combining owned aircraft with our leased fleet gives us greater operational flexibility and financial efficiency as we scale up. The A320neo will provide the capacity needed to expand our network, serve the growing demand for travel to and

from Egypt, and support the country's aviation and tourism sectors in close partnership with Airbus."

"We are delighted that this first direct acquisition from AIRCAIRO reaffirms the airline's confidence in the A320neo to power its next phase of growth," said Benoît de Saint-Exupéry, Airbus EVP Sales of the Commercial Aircraft business. "The A320neo provides AIRCAIRO with the efficiency and flexibility to scale up its network. This commitment highlights the strength of our partnership and AIRCAIRO's confidence in the A320neo to expand connectivity between Egypt and key international destinations."

Africa's Airplane Fleet Will More than Double by 2045 to Meet Rising Air Travel Demand



Africa's young, increasingly urban population, growing middle class and improving infrastructure will drive passenger traffic to grow nearly 6% annually through 2045, one of the fastest rates globally, Boeing. The region's commercial airplane fleet will more than double from 755 to 1,625 over the next 20 years to support this demand, as projected in Boeing's 2026 Commercial Market Outlook (CMO) for Africa.

Fleet expansion

Of the nearly 1,200 newly delivered airplanes expected by 2045, 870 will be single-aisle jets to support expanding domestic and regional networks.

Demand for widebody airplanes will more than double, supporting fleet modernization and long-haul network growth. Boeing also forecasts that the cargo fleet will grow from 60 to 150 freighters as the continent's logistics, e-commerce and high-value export markets develop.

Passenger traffic growth

Intra-African passenger traffic is expected to grow at a faster pace than the regional average, enabled by better flight connections. Europe remains the largest international passenger market for flights to and from Africa and is forecast to remain so through 2045. This is driven by expanding economic ties, enduring cultural and family connections, and rising tourism investment.

"Africa's aviation market is entering a period of sustained growth driven by improving connectivity, expanding intraregional travel and deeper economic ties across the continent and with key global markets. Meeting



this demand will require a broader commitment to fleet modernization, expanded capacity, digital solutions and workforce development," said Shahab Matin, Boeing managing director of Commercial Marketing. "The opportunity extends well beyond airplanes. It will require investment in affordable access, and the people who will support a larger fleet."

Commercial services and workforce needs

The expansion of Africa's aviation ecosystem will create growing demand for services and skilled personnel through 2045. Boeing's Commercial Services Market Outlook forecasts a \$140 billion market for maintenance, repair, overhaul and modifications

(MRO), digital solutions.

Boeing's Pilot and Technician Outlook forecasts that as airlines grow their fleets and expand route networks, they will need 75,000 new aviation professionals: 22,000 pilots, 25,000 technicians and 28,000 cabin crew.

Embraer Celebrates the Delivery of the 2,000th E-Jet

Embraer a global leader in the aerospace industry celebrated the delivery of its 2,000th E-Jet, a landmark achievement that underscores the enduring success of one of the world's three largest commercial jet families. The milestone aircraft, an E195-E2, was delivered to Azul Linhas Aéreas, Brazil's largest airline by number of destinations served.

Since entering service in 2004, the E-Jets family has transformed the airline industry by combining passenger comfort, operational efficiency, and industry-leading reliability. Over the past two decades, E-Jets have established a remarkable global presence, serving more than 90 airlines across over 60 countries. The fleet has accumulated approximately 48 million flight hours and carried more than 2.85 billion passengers worldwide.

"The delivery of the 2,000th E-Jet is an extraordinary milestone for Embraer and for the global aviation transport industry," said Arjan Meijer, President

and CEO of Embraer Commercial Aviation. "As one of the world's three most successful commercial jet programs, the E-Jets family has played a vital role in connecting communities, opening new markets, and creating sustainable growth opportunities for airlines. We are proud to celebrate this milestone alongside Azul, one of our valued long-standing partners."

Azul has been a key operator of Embraer aircraft and has played a pivotal role in expanding regional connectivity across Brazil. Since launching operations in 2008, the airline has operated more than 140 E-Jets and has been a strategic partner in the success of the E2. Azul became the launch customer for the E195-E2 and took delivery of the first aircraft in 2019.

"E-Jets family has played a fundamental role in Azul's journey. Since our very first flight, operated on December 15, 2008, aboard an E190 aircraft registered as PR-AZL, Embraer aircraft have enabled the expansion of air connectivity across Brazil, bringing cities closer together, stimulating markets, and creating new opportunities for millions of Customers", said John Rodgerson, CEO of Azul. "Receiving the 2,000th E-Jet, which also marks our 50th E2 aircraft, is especially meaningful to us because it represents not only a major milestone for Embraer, but also the strength of a partnership that has helped transform regional aviation, enhance connectivity across Brazil, and deliver significant improvements to our customers' onboard experience."



CESSNA CITATION CJ4 GEN3 FLIGHT TEST PILOTS PUT GARMIN EMERGENCY AUTOLAND TO THE TEST



For generations, Cessna aircraft have been developed around a practical idea: give customers capable, reliable aircraft that help them accomplish what matters to them. Today, that thinking is helping shape the next generation of the Citation CJ4.

The Cessna Citation CJ4 Gen3 is progressing toward Federal Aviation Administration (FAA) certification with new technologies designed to make flying more intuitive while providing additional peace of mind for pilots and passengers. One of those technologies is Garmin Emergency Autoland, which is expected to make the CJ4 Gen3 the first light jet in the market to offer the capability upon certification.

Flight test pilots Corey Eckhart and James Bearman intentionally initiated the Garmin Emergency Autoland sequence during recent Cessna Citation CJ4 Gen3 flight tests, allowing engineers and pilots to observe how the system successfully engaged navigation, communications and landing procedures. Testing of this revolutionary technology comes as the CJ4 Gen3 advances toward FAA certification.

"One of the most impressive aspects of the flight was how seamlessly the system operated within the overall flight deck environment," said Eckhart. "Watching an autonomous system take control of the airplane and safely guide it to a landing in an emergency is remarkable. As a pilot, confidence comes from seeing technology perform exactly as intended, and this test reinforced how Emergency Autoland can provide an additional layer of assurance for both pilots and passengers."

Garmin Emergency Autoland is designed to bring additional peace of mind to both pilots and passengers. Once activated, the system guides the aircraft to a suitable landing site and brings it to a complete stop.

Turning new technology into a capability customers can use

Behind the CJ4 Gen3 development program are Textron Aviation employees bringing together aircraft design, engineering, systems integration and flight testing to turn new technologies into capabilities for pilots and passengers.

For the CJ4 Gen3, Garmin Emergency Autoland is part of a broader evolution of the flight deck. The aircraft also introduces Garmin G3000 PRIME avionics, designed to provide pilots with intuitive control, simplify workload and enhance situational awareness. Together, those capabilities build on the productivity and performance customers have come to expect from the Citation family while bringing new technology into the cockpit.

The people behind what comes next

Technology may be what passengers and pilots ultimately experience, but getting it there starts with people. Flight testing gives Textron Aviation teams an opportunity to see aircraft systems working together in real-world conditions as development progresses. Pilots such as Eckhart and Bearman are part of the broader team helping move the CJ4 Gen3 toward certification and, ultimately, into customers' hands.

TEXTRON AVIATION EXPANDS AVIONIC MODERNIZATION UPGRADE AVAILABILITY FOR ORIGINAL CESSNA CITATIONJET AIRCRAFT



Textron Aviation announced availability of an all-Garmin avionics retrofit solution for Cessna CitationJet aircraft, serial numbers 525-0001 through 0359, following Federal Aviation Administration (FAA) Supplemental Type Certification (STC).

Why it matters

The certification expands Textron Aviation's investment in supporting legacy Cessna aircraft by extending its OEM-supported avionics modernization to the earliest CitationJet aircraft. The all-Garmin upgrade solution gives owners and operators access to advanced cockpit technology also available on the CJ1 and CJ2 while helping keep their aircraft capable, relevant and supported.

The Garmin flight deck includes the G600 TXi flight display, TXi EIS, GTN 750Xi FMS/NAV/COMM and GFC 600 digital autopilot, along with features such as Stabilized Approach monitoring and aural V-speed alerting during takeoff. Optional upgrades include the GWX 8000 StormOptix weather radar and GDL 60 datalink for the PlaneSync connected aircraft management system.

Customers can complete the upgrade through Textron Aviation's service network, gaining access to OEM-backed service expertise while enhancing cockpit capability and extending the value of their aircraft. By combining certification, installation and ongoing support through a single provider, owners benefit from a modernization solution backed by the same company that designed, manufactured and continues to support the aircraft.

INAUGURAL PRAETOR 600E DELIVERED TO FLEET LAUNCH CUSTOMER FLEXJET

Embraer announced the delivery of the first Praetor 600E to Flexjet, making the company the fleet launch customer for Embraer's next-generation super-midsize jet. Flexjet's inaugural Praetor 600E aircraft is equipped with Embraer's industry-exclusive Smart Window™, a 42-inch 4K OLED monitor that enables video conferencing, high-resolution video streaming, and provides a real-time view via three externally-mounted cameras.

The Praetor 600E was unveiled alongside the Praetor 500E in February of this year, introducing a series of enhancements designed to elevate the customer experience. The Praetor 600E received triple certification from ANAC, FAA, and EASA in April 2026, and the Praetor 500E in June 2026, paving the way for aircraft entry into service.

The companies' relationship dates back to 2003 and includes several significant key milestones, including Flexjet's selection as



fleet launch customer for the Praetor 500 and Praetor 600 in 2019. In February 2025, the companies announced a landmark agreement valued at up to USD \$7 billion, including a firm order for 182 aircraft and options for an additional 30 aircraft, alongside an enhanced services and support agreement. The delivery of the first Praetor 600E marks the latest milestone under that agreement and will be followed by Flexjet's first Praetor 500E delivery in the fourth quarter of 2026, when the company will also become fleet launch customer for the aircraft.

"We are proud to once again deliver the inaugural Praetor 600E aircraft to Flexjet, a trusted strategic partner for more than 20 years and a company that shares Embraer's

commitment to efficiency, innovation and exceptional customer experience," said Michael Amalfitano, President and CEO of Embraer Executive Jets. "This milestone reflects the strength of our longstanding relationship, the winning combination of next-generation features onboard the Praetor 600E, and Flexjet's continued confidence in Embraer's ability to deliver industry-leading aircraft that meet the evolving needs of its bespoke customers."

"This milestone delivery continues a success story we have had with Embraer Executive Jets that began back in 2003," said Michael Silvestro, Flexjet's Chief Executive Officer. "As the leader in luxury private aviation, fractional aircraft Owners look to Flexjet to provide access to the world's most advanced aircraft. Embraer's unwavering commitment to innovation, exemplified by the Praetor 600E, continues to deliver the breakthroughs that enable us not only to meet those expectations, but exceed them."

HONDAJET ECHELON PROGRAM ADVANCES WITH COMPLETION OF FIRST AIRCRAFT WING ASSEMBLY

Honda Aircraft Company announced completion of the first wing structure of the HondaJet Echelon test unit, marking a significant milestone in the aircraft's development and advancing the program toward mainline final assembly. The HondaJet Echelon will feature a larger cabin with increased passenger capacity compared to the current HA-420 and is designed to become the world's first single-pilot certified light jet capable of U.S. transcontinental range*, bringing the award-winning design features of the HondaJet to a new segment of the aviation market.

This assembly milestone reflects continued progress across the HondaJet Echelon development program as the company, which is now targeting first flight in 2028 and type certification and first delivery in 2031. The updated timeline reflects tier-one supplier-related schedule adjustments and ongoing development activities, ensuring the aircraft meets the highest standards of quality and performance.

Structural testing activities have advanced with key component tests complete. System integration efforts continue through Honda



Aircraft's Integrated Test Facility, where a fully operational cockpit test environment is supporting active integration campaigns, and a second cockpit is being commissioned to evaluate key aircraft systems prior to the test aircraft taking flight. Manufacturing activities have also accelerated, with more than 70% of parts required for first assembly now on hand and more than 88,400 sq feet now provisioned for manufacturing the Echelon.

"The HondaJet Echelon continues to take shape through the dedication and expertise of our associates and numerous OEM supplier partners," said Amod Kelkar, Senior Vice President, Chief Commercial Officer and HondaJet Echelon Program Leader at Honda Aircraft Company. "Completion of the first wing assembly represents an important achievement as we continue advancing testing, systems integration, and equipment qualification activity across the

program. In spite of some schedule challenges, with steady progress towards the final assembly, we are committed to delivering an aircraft that will redefine light jet performance, efficiency, and capability."

The HondaJet Echelon is planned to incorporate foundational technologies, including Honda Aircraft Company's breakthrough Over the Wing Engine Mount, composite fuselage, and advanced avionics. Features like Auto Throttle, Emergency Autoland, Autobrake, Runway Overrun Awareness and Alerting System (ROAAS), and the Advanced Steering Augmentation System (ASAS) will offer an unprecedented combination of size, range, safety, productivity, comfort, and fuel efficiency.

"With more than 530 signed letters of intent, enthusiasm from customers around the world remains exceptionally strong," said Kelkar. "That confidence reflects the unique value customers see in the aircraft's planned combination of range, comfort, and single-pilot capability. As we achieve each new development milestone, we remain focused on delivering an aircraft that will open new possibilities for operators and owners around the world."

HAWKER OPERATORS GAIN ACCESS TO HIGH-SPEED STARLINK CONNECTIVITY THROUGH TEXTRON AVIATION CUSTOMER SUPPORT NETWORK



Textron Aviation Inc announced Starlink's high-speed internet is now available for the Hawker 700, 800 and 900 series aircraft, following the Federal Aviation Administration's (FAA) issuance of AeroMech's Supplemental Type Certificate (STC). The STC includes the Starlink Aviation Performance Kit, which utilizes Starlink's advanced constellation of Low Earth Orbit (LEO) satellites to help customers stay connected throughout their journey with more reliability over land, water and remote areas, where traditional in-flight Wi-Fi may not have service.

"Hawker operators continue to look to Textron Aviation for long-term care and upgrade solutions that ensure their aircraft remain mission-ready in today's operating environment," said Brad White, senior vice president, Customer Support. "By listening closely to our customers to expand Starlink availability, we are reinforcing our commitment to supporting the Hawker fleet."

Hawker 700, 800 and 900 series operators can now schedule installation of the Starlink Aviation Performance Kit at North American Textron Aviation Service Centers and select international service centers. The next-generation Starlink system supports streaming, video calls, gaming and other online applications, with download speeds of up to 1 Gbps, upload speeds of up to 100 Mbps and latency as low as 20 ms.

BOMBARDIER'S GLOBAL 8000, THE WORLD'S FASTEST CIVIL AIRCRAFT, RECEIVED U.K. CIVIL AVIATION AUTHORITY (CAA) APPROVAL TO LAND AT LONDON CITY AIRPORT



Bombardier announced that the Global 8000 business jet has received the green light by the U.K. Civil Aviation Authority (CAA) to land at London City Airport(1), one of the world's most influential financial hubs. This important designation, effective immediately, ensures that the world's most impressive ultra-long-range business aircraft can connect nonstop from key destinations such as Singapore, Los Angeles, Honolulu, Buenos Aires to downtown London.

"U.K. CAA approval to access London City Airport ensures customers can save precious time when accessing one of the world's most important finance hubs," said Stephen McCullough, Executive Vice President, Engineering, Product Development and Bombardier Defense. "London City Airport's steep approach requirement for noise-abatement laws and its very short runway makes it amongst one of the world's most challenging airports. Access to this airfield is another testament to the Global 8000's engineering excellence, where its advanced wing design including leading-edge slats and its robust braking systems deliver outstanding field performance."

Gaining access to this pivotal airport is a significant benefit for Bombardier customers. Typically, passengers travelling to London on larger aircraft such as a Global 8000 need to access nearby airports like Farnborough or Luton. But by accessing London City Airport, Global 8000 customers can save up to 60-90 minutes in ground transfer time en route to their final destinations, enhancing productivity and providing the ultimate luxury of time.

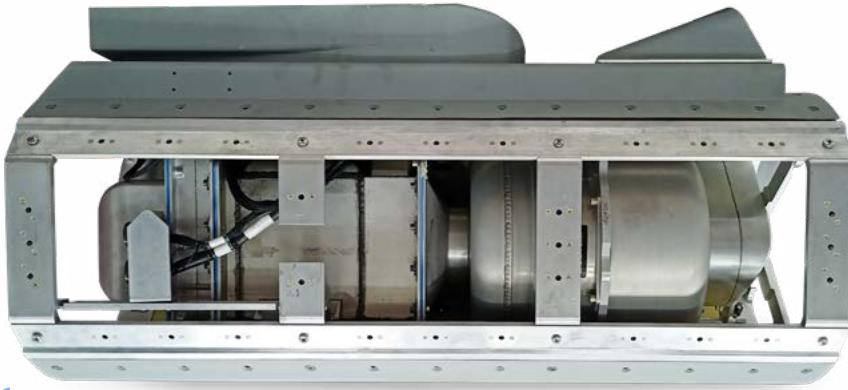
Boasting a top speed of Mach 0.95 and a range of 8,000 NM(2), the Global 8000 is the fastest and highest performing business aircraft in the industry, transporting passengers quicker, farther, from more locations and in greater efficiency than ever before. And when combined with the aircraft's signature smooth ride, luxurious cabin, low cabin altitude, and unmatched landing capabilities – including the ability to reach up to 30% more airports than its nearest competitor – it's truly in a class of its own.

From Manufacturing to Mission-Critical Technology

*In Conversation with Kartikeya,
Editor, Aviation Update*

Pavan G. Ranga
MD & CEO-Rangsons Aerospace





By 2030, we would like Rangsons Aerospace to be recognised as a trusted Indian aerospace and defence technology partner with strong engineering, manufacturing and systems capabilities, serving both Indian and global programmes.

Q Rangsons Aerospace has evolved across aerospace manufacturing, engineering, defence, space and mission-critical technologies. How would you describe the company's current phase of growth, and what are the key areas you are prioritising over the next three to five years?

A Rangsons Aerospace is at an important phase in its evolution, moving from being primarily focused on manufacturing capabilities to building a broader and deeper aerospace and defence technology ecosystem. Our focus is on strengthening our engineering and manufacturing capabilities, developing technology-led solutions and building the competencies required to participate in increasingly complex and mission-critical programmes.

Over the next three to five years, we will continue to invest in advanced manufacturing, engineering, testing and qualification capabilities, while also expanding our presence across aerospace, defence, space and related technology segments. A key priority will be building capabilities

that enable us to participate in programmes across the value chain and create long-term partnerships with both Indian and global customers.

Q India's aerospace industry is increasingly moving from component manufacturing toward higher-value engineering, systems and technology development. Where do you see the biggest opportunities for Indian companies to move up the aerospace value chain?

A India has a significant opportunity to move from being a cost-competitive manufacturing destination to becoming a trusted engineering and technology partner for the global aerospace industry. The opportunity extends across design and engineering, precision manufacturing, systems integration, testing, certification and lifecycle support.

The growing domestic aerospace and defence ecosystem, combined with the increasing interest of global OEMs in diversifying their supply chains, creates a strong foundation for this

transition. To move up the value chain, Indian companies will need to combine manufacturing excellence with engineering depth, intellectual property, quality systems and the ability to deliver consistently to global standards.

Q Rangsons has been involved in demanding programmes across aerospace and space. What have these programmes taught the organisation about engineering, qualification, testing and manufacturing to international standards?

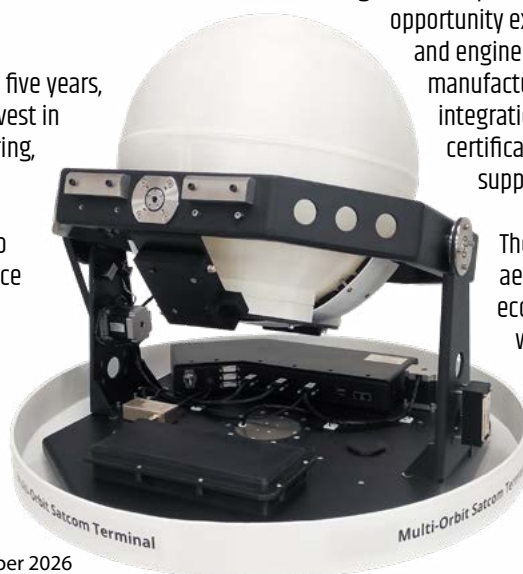
A Mission-critical aerospace and space programmes leave very little room for compromise. They have reinforced for us that engineering excellence is not only about designing a product; it is about ensuring repeatability, reliability, traceability and performance throughout the entire lifecycle.

These programmes have strengthened our understanding of stringent qualification requirements, testing protocols, documentation, process discipline and quality assurance. They have also reinforced the importance of building engineering and manufacturing processes that are robust from the beginning rather than relying on inspection at the end of the process.

Q Global aerospace OEMs are looking to diversify and strengthen their supply chains. What capabilities must Indian aerospace companies develop to become long-term global programme partners rather than simply cost-competitive suppliers?

A Cost competitiveness will always be relevant, but it cannot be the only differentiator. Long-term programme partnerships are built on quality, reliability, engineering capability, delivery performance and the ability to continuously improve.

Indian aerospace companies need to develop strong programme management capabilities, robust quality and certification systems, advanced manufacturing infrastructure, engineering talent and the ability to support customers over long programme lifecycles. Equally important is the ability to understand a customer's requirements and take ownership of outcomes rather than simply delivering to a drawing or purchase order.



Q Rangsons is working across areas including tactical communications, EW, SATCOM and mission-critical technologies. How do you see the convergence of aerospace, defence electronics, secure communications and software changing the products and systems India will need in the coming decade?

A The boundaries between aerospace, defence electronics, communications and software are becoming increasingly interconnected. Future platforms will depend not only on their physical structures and propulsion systems but also on secure communications, sensing, data processing, connectivity and software-driven capabilities.

This convergence will create demand for integrated and interoperable systems that can operate reliably in complex and contested environments. For India, it also creates an opportunity to develop indigenous capabilities across hardware, electronics, communications and software, reducing dependence on external technologies while creating solutions suited to our own operational requirements.

Q With the rapid growth of drones and unmanned systems, what opportunities do you see for Rangsons Aerospace in areas such as communications, avionics, mission systems and other critical technologies supporting next-generation unmanned platforms?

A Unmanned systems are likely to become an increasingly important part of both defence and civilian aerospace applications. Their effectiveness, however, depends on a range of underlying technologies including reliable communications, avionics, navigation, mission systems and secure data links.

Our focus is on building capabilities in these critical technology areas that can support the broader unmanned systems ecosystem. We see opportunities not only in complete platforms but also in the technologies and subsystems that enable these platforms to operate safely, securely and effectively.

Q Aerospace programmes require significant investment in advanced manufacturing, testing, certification and



India has a significant opportunity to move from being a cost-competitive manufacturing destination to becoming a trusted engineering and technology partner for the global aerospace industry.

skilled engineering talent. What are the biggest challenges facing Indian aerospace companies as they scale, and where does the industry need greater ecosystem support?

A Scaling aerospace capabilities requires patience and sustained investment. Unlike many other industries, aerospace involves long development cycles, stringent qualification requirements and significant investments in specialised equipment, testing infrastructure and skilled manpower.

One of the biggest requirements is therefore the development of a deeper aerospace talent pool across engineering, manufacturing, quality, certification and programme management. Greater collaboration between industry, academia, research institutions and government can help accelerate this development. A stronger supplier ecosystem,

access to advanced testing infrastructure and continued support for indigenous technology development will also be important.

8. Rangsons has been building capabilities that serve both Indian and international markets. How important will exports become to the company's growth strategy, and which international aerospace markets or programme segments do you see as particularly relevant?

Exports will be an important part of our long-term growth strategy. India's aerospace ecosystem is increasingly integrated into global supply chains, and Indian companies have an opportunity to establish themselves as reliable partners for international programmes.

Rather than looking at exports only in terms of geography, we see the opportunity in terms of programme segments where our engineering, manufacturing and technology capabilities can create long-term value. Our objective is to build globally competitive capabilities that allow us to participate in international programmes while continuing to contribute to India's strategic and domestic requirements.

Q Looking toward 2030, what would you like Rangsons Aerospace to represent in the global aerospace industry, and what capabilities or investments will be critical to achieving that ambition?

A By 2030, we would like Rangsons Aerospace to be recognised as a trusted Indian aerospace and defence technology partner with strong engineering, manufacturing and systems capabilities, serving both Indian and global programmes.

Achieving this will require sustained investment in advanced manufacturing, engineering talent, testing and qualification infrastructure, technology development and digital capabilities. Most importantly, we want to build an organisation where innovation and quality are embedded into the way we work.

Our larger ambition is to contribute to the development of a stronger Indian aerospace and defence ecosystem—one that is globally competitive, technology-driven and capable of delivering mission-critical solutions from India to the world.

FROM TEJAS TO AMCA

THE FUTURE OF INDIA'S INDIGENOUS MILITARY AVIATION INDUSTRY

India's ambition to become a major aerospace manufacturing power is entering a defining phase. From the Light Combat Aircraft (LCA) Tejas Mk1A to the Tejas Mk2 and the Advanced Medium Combat Aircraft (AMCA), the country is pursuing a portfolio of indigenous fighter programmes that could reshape its defence industrial base and create new opportunities for aircraft manufacturers, original equipment manufacturers (OEMs), component suppliers and engineering companies.

The opportunity extends far beyond aircraft assembly. Fighter development requires an interconnected ecosystem spanning propulsion, avionics, radar, electronic warfare, flight-control systems, precision machining, advanced

materials, software, testing and lifecycle support. The success of India's indigenous military aviation ambitions will therefore depend not only on the performance of its aircraft, but also on the depth, reliability and technological ownership of the industrial network behind them.

For India's aerospace industry, Tejas is building the manufacturing foundation, Tejas Mk2 is intended to expand the country's combat aircraft capabilities, and AMCA represents a longer-term ambition to develop a fifth-generation fighter. Each programme presents a different stage of industrial opportunity—and a different set of technical and commercial challenges.

Tejas Mk1A: Building a scalable manufacturing ecosystem

The Tejas programme has been a central element of India's efforts to develop indigenous combat aviation capabilities. Designed and developed under the Aeronautical Development Agency (ADA), with Hindustan Aeronautics Limited (HAL) serving as the principal manufacturing partner, the aircraft has helped establish capabilities in aerodynamic design, fly-by-wire flight controls, systems integration, flight testing and aircraft production.

The Tejas Mk1A represents an important step in the programme's development. It incorporates enhancements intended to improve operational capability, including





advanced radar, electronic warfare systems and other upgraded equipment. Its significance, however, extends beyond the aircraft itself: the programme is creating an opportunity to build a much broader Indian supplier base capable of meeting the demanding requirements of military aviation.

In January 2021, the government contracted HAL to supply 83 Tejas Mk1A aircraft for approximately ₹45,696 crore. A further contract, signed on 25 September 2025, covered 97 aircraft at a cost exceeding ₹62,370 crore, excluding taxes. The second order comprises 68 fighters and 29 twin-seat aircraft, taking the combined Mk1A requirement to 180 aircraft. Deliveries under the additional contract are scheduled to begin in 2027-28 and continue over six years.

The scale of these orders provides Indian industry with a substantial opportunity to establish repeatable production processes, deepen technical expertise and invest in specialised manufacturing infrastructure. Compared with producing limited numbers of aircraft, sustained production offers suppliers a clearer basis for planning equipment purchases, workforce development and quality systems.

Yet the transition from an order book to operational aircraft remains critical. In September 2026, HAL Chairman and Managing Director Ravi K said the company had prepared 27 Mk1A airframes, while deliveries were awaiting further testing and integration involving systems including the active electronically scanned array (AESA) radar and missiles. The delay illustrates how an aircraft can be substantially manufactured but still require additional work before it is ready for acceptance.

For aerospace manufacturers, this is a reminder that production capability must be matched by systems integration, testing and certification capability. Meeting contractual commitments requires all major components and subsystems to arrive on schedule and function together as an approved configuration.

Private-sector suppliers become central to production

One of the most significant developments in the Tejas Mk1A programme is the expansion of private-sector participation. HAL is increasingly operating alongside Indian companies that manufacture complex aircraft structures and assemblies, helping to increase capacity while extending aerospace-grade manufacturing capabilities beyond the public-sector organisation.

In May 2025, VEM Technologies in Hyderabad handed over the first centre-fuselage assembly for the Mk1A to HAL. Other companies participating in structural manufacturing include Larsen & Toubro (L&T), Tata Advanced Systems Limited, Alpha Tocol and Lakshmi Machine Works. The components and assemblies involved include wings, rear fuselages, air intakes, fins, rudders and centre fuselages.

The additional production infrastructure is equally important. In October 2025, HAL inaugurated its third Mk1A production line at Nashik. The facility was designed to produce eight aircraft annually, taking HAL's stated total production capacity across its three lines to 24 aircraft per year. Production capacity, however, should not be confused with completed deliveries: actual output depends on component availability, integration, testing and other programme requirements.

The industrial implications extend to Tier 2 and Tier 3 suppliers. Aircraft structural assemblies require extensive supporting capability in precision machining, tooling, heat treatment, surface finishing, composites, fasteners, electrical harnesses and inspection equipment. As demand grows, suppliers may also need to strengthen configuration control, documentation, traceability and quality assurance.

COVER STORY

For smaller companies seeking to enter the aerospace supply chain, the opportunity is substantial but demanding. Military aviation suppliers must demonstrate consistent quality and repeatability, not simply competitive pricing. Investment in skilled personnel, metrology, advanced manufacturing equipment and aerospace quality-management systems will be essential to securing long-term programme participation.

HAL reported in May 2025 that its wider supplier network included more than 6,300 Indian vendors, among them 2,448 micro, small and medium enterprises. This provides an existing industrial foundation that future aircraft programmes could build upon.

The engine challenge: A strategic gap that cannot be ignored

Propulsion remains one of the most important challenges for indigenous military aviation. The Tejas Mk1A uses the American-made General Electric F404-IN20 engine, and delays in engine availability have contributed to difficulties in meeting aircraft delivery schedules.

In September 2026, HAL reported receiving 10 engines from GE Aerospace and said additional testing and system integration were still required before the initial aircraft could be delivered. The episode illustrates a wider industrial vulnerability: even when the airframe is manufactured domestically, dependence on a critical imported subsystem can constrain the output of the complete aircraft.

India is also strengthening domestic engine support. In April 2026, GE Aerospace announced an agreement with the Indian Air Force to establish an in-country depot for F404-IN20 engine repair and overhaul. The facility is intended to improve turnaround times and reduce dependence on overseas repair centres. This is an important step towards improving fleet support, although engine maintenance capability is different from indigenous design and manufacturing of the engine itself.

For India's aerospace industry, the strategic objective must therefore go beyond increasing the domestic content of aircraft structures. It must also address propulsion technology, specialised materials, high-temperature manufacturing, precision components and the supply chains required to sustain engines throughout their service lives.

The challenge offers opportunities for partnerships with international engine manufacturers, Indian research

institutions and domestic industrial groups. However, meaningful self-reliance requires clarity about which technologies will be developed locally, what expertise will be transferred, and how much design authority and manufacturing knowledge India will ultimately own.

Tejas Mk2: Moving towards a more capable medium-weight fighter

While the Mk1A builds on the existing Tejas platform, the Tejas Mk2 is intended to expand the aircraft family into the medium-weight fighter category. It is expected to offer greater size, payload capacity and performance than the Mk1A, with a more powerful General Electric F414 engine.

The aircraft's development presents an opportunity to retain the benefits of an established indigenous fighter programme while introducing more demanding design, integration and production requirements. It also provides a potential bridge between the current Tejas family and the much more complex AMCA programme.

In September 2026, HAL reported that structural coupling work on the Tejas Mk2 had advanced and that ground testing was planned for a subsequent phase. These are development milestones rather than evidence of operational readiness; prototype testing, systems validation and the broader certification process remain essential steps before an aircraft can enter service.

For Indian manufacturers, Mk2 creates opportunities in structural assemblies, actuation, electrical systems, avionics, landing gear, fuel systems and advanced machining. It may also support the development of higher-value engineering capabilities, including the production of complex components using difficult-to-machine materials and tighter manufacturing tolerances.

The challenge will be to carry lessons from Tejas Mk1A into Mk2 from the start. Supplier qualification, component availability, production planning and test requirements should be integrated into programme management early, rather than becoming constraints during the move towards serial production.

The Mk2 programme will be particularly important in determining whether India can progress from manufacturing a domestically designed light fighter towards developing and producing a wider range of combat aircraft within its own industrial ecosystem.



AMCA: India's fifth-generation aerospace ambition

The Advanced Medium Combat Aircraft is the most technologically ambitious element of India's indigenous fighter portfolio. Intended as a fifth-generation combat aircraft, AMCA is being developed under the leadership of the Aeronautical Development Agency and the Defence Research and Development Organisation.

The government has placed the programme's total outlay at approximately ₹15,000 crore. In May 2025, the Ministry of Defence approved an execution model under which eligible Indian companies could compete for the development phase independently, through joint ventures or as consortia. The model provides an opportunity for private-sector companies to participate alongside public-sector industry, rather than restricting the programme to a single established manufacturing structure.

As of October 2026, public reporting indicated that the process to select an AMCA development partner remained underway. The

programme should therefore be viewed as an emerging industrial opportunity, not as a project whose development partner and production structure have already been conclusively settled.

AMCA could create demand across a wide range of advanced capabilities: low-observable structures, composite materials, thermal management, electronic warfare, sensor integration, mission software, secure communications and advanced manufacturing. Its complexity will also require extensive ground testing, flight testing and validation of interactions between the aircraft's systems.

For Indian OEMs, one of the key opportunities will be to move beyond manufacturing components to taking responsibility for larger subsystems and engineering packages. This requires not only manufacturing investment but also access to design data, technical expertise, testing facilities and the ability to work within a tightly controlled aircraft configuration.

Propulsion remains a major strategic consideration. In August 2026, Rolls-Royce and Reliance Industries announced their intention to explore a partnership for a sovereign combat-aircraft engine and a dedicated aerospace gas-





turbine complex in India. The proposal remains at an early stage, and it should not be treated as a confirmed final engine selection for AMCA. Nonetheless, it highlights the growing industrial interest in developing deeper domestic propulsion capabilities.

The wider objective is not simply to manufacture a fifth-generation fighter. It is to develop the industrial and technological capabilities needed to sustain advanced military aircraft, upgrade them throughout their service lives and potentially support future programmes.

What this means for India's aerospace OEMs

The transition from Tejas Mk1A to Tejas Mk2 and AMCA offers Indian aerospace companies a potential progression in industrial responsibility. Suppliers could move from manufacturing components to producing complex assemblies, integrating subsystems and participating in engineering and lifecycle-support work.

To capture these opportunities, companies will need to focus on five priorities: aerospace-grade quality and traceability; investment in precision manufacturing and inspection; development of skilled engineering and production teams; reliable, qualified material sources; and the ability to meet programme schedules over many years.

Partnerships with global OEMs may provide

access to technical knowledge, advanced production methods and international quality requirements. However, such partnerships create lasting value only when Indian suppliers are able to build independent capabilities, retain skilled personnel and compete for increasingly complex work.

Exports could eventually become another growth avenue. Yet international sales of military aircraft and major assemblies require much more than a capable product. They depend on government-to-government relationships, export approvals, financing, customer support, spare-parts availability and confidence in long-term operational support. India's industrial ecosystem must therefore develop not only manufacturing capacity but also the commercial and technical infrastructure needed to serve customers over decades.

Conclusion: From aircraft manufacturing to aerospace leadership

India's journey from Tejas Mk1A through Tejas Mk2 to AMCA represents more than the development of three fighter programmes. It is a test of whether the country can build a comprehensive aerospace industry that combines design authority, advanced manufacturing, critical technologies, reliable suppliers and sustained production.

Tejas Mk1A is already demonstrating the importance of private-sector participation and industrial capacity, while also exposing the consequences of delivery bottlenecks. Tejas Mk2 offers a route towards more advanced medium-weight fighter capabilities. AMCA presents the longer-term challenge of developing a fifth-generation aircraft and the supporting ecosystem of advanced materials, systems integration and propulsion.

For Indian aerospace OEMs and component manufacturers, the opportunity is substantial—but it will depend on execution. Investment must be matched by rigorous quality, realistic schedules, strong engineering and dependable supply chains. The next stage of progress will be measured not merely by programme announcements or aircraft orders, but by reliable deliveries, greater technological ownership and the ability to compete for complex aerospace work globally.

The strategic objective is clear: India must move from assembling more aircraft to owning and sustaining more of the technologies that make them possible. Achieving that goal would strengthen national aerospace capability while creating a deeper, more resilient industrial base for the next generation of military and potentially wider aerospace applications.

JJG Aero: Scaling India's Aerospace Manufacturing Capabilities for Global OEMs

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In Conversation with
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day one, with automation deployed wherever it improves consistency, quality and spindle utilisation.

Q Quality and certification are critical in aerospace. How do AS9100, NADCAP and customer-specific approvals influence your manufacturing strategy and ability to win global programmes?

A In aerospace, certifications are not a box to tick – they are the licence to operate. AS9100 is the backbone of our quality management system, and NADCAP accreditation for special processes is often the gating factor in winning a programme. We have over 30 NADCAP-approved special processes, including electroplating, anodising, painting and NDT, which lets us offer customers a complete, qualified route from raw material to finished part.

Customer-specific approvals are the final and often the longest step, as each OEM and Tier-1 audits and approves us independently. It took us the better part of a decade to build these credentials, and that patience is now one of our biggest advantages. It also shapes our strategy: every new capability we add – whether heat treatment at the new facility or sub-assembly work – is planned around getting it certified and customer-approved as quickly as possible.

Q Supply-chain resilience has become a major priority for aerospace companies. How is JJG Aero strengthening its supply chain and increasing localisation of aerospace materials and processes?

A Vertical integration is our primary lever. Bringing special processes in-house removed one of the biggest sources of delay



ramp up. That confidence comes from a proven track record, the right certifications and approvals, and robust quality systems with full traceability.

Beyond that, customers increasingly look for scale, breadth and integration. They want partners who can absorb a wide range of part numbers quickly – we are adding around 50 new aerospace parts every month – and who can machine, finish and inspect a component under one roof rather than routing it through multiple vendors. That shortens lead times, reduces risk and simplifies their supply chain. Finally, they want financial strength and a clear capacity roadmap. OEMs are looking for strategic growth partners, not just low-cost suppliers, and our investor backing and new facility give them that visibility.

Q Which aerospace applications and product segments do you see offering the greatest growth opportunities for JJG Aero over the next five years?

A Aero-engines are the biggest opportunity for us. We have recently onboarded GE Aerospace, Pratt & Whitney and a division of Safran, and engine components are higher in value and complexity and tied to long-running programmes – while engine supply chains are among the most capacity-constrained in the industry. Landing systems are another key area, particularly larger and more complex landing-system components, along with actuation, fluid and air-management systems, electrical power, avionics and interiors, where we already have a strong base.

The demand backdrop is exceptional: aircraft manufacturers are facing all-time high demand that legacy vendors in the Western world are struggling to meet. Over the next five years we also expect to move steadily up the value chain, from individual components into

sub-assemblies and mechanical assemblies, supported by our in-house special processes and testing.

Q How is JJG Aero investing in advanced CNC machining, multi-axis manufacturing, automation and digital technologies to handle increasingly complex aerospace components?

A Our capability today spans everything from simple 2-axis work to complex 5-axis machining, including CNC turning, turn-milling, Swiss-type machining, precision grinding and deep-hole drilling, backed by advanced metrology. As our mix shifts towards engine and landing-system components – with more complex geometries and demanding materials such as titanium – we are adding new categories of machinery with every expansion, with a focus on high-end multi-axis and mill-turn capability.

Equally important is how we run those machines. We build on the Lean and continuous-improvement practices from our automotive roots and layer on Industry 4.0 integration and productivity-enhancing software. Our new North Bangalore facility takes this a step further: it is being designed as a paperless, digitally native factory from





systems offer real opportunities for Indian precision manufacturers. The push for defence indigenisation and self-reliance, the opening of the space sector to private players and the rapid growth of drones and unmanned systems are all creating demand for high-precision, certified components made in India. Much of the start-up activity we see is concentrated in exactly these areas, which bodes well for the wider ecosystem. The Defence Offset Policy has also encouraged European and American defence manufacturers to source from India, although its impact is modest compared with the broader realignment of global supply chains.

For JJG, the capabilities these segments demand – tight-tolerance machining of exotic materials, qualified special processes and rigorous traceability – are precisely what we have built for commercial aerospace. Our new campus gives us room to expand into adjacencies at the opportune time, and we will pursue these segments selectively, where our strengths add real value.

 **Looking towards 2030, what would success look like for JJG Aero in terms of global customers, technology, manufacturing capabilities and its position in the aerospace supply chain?**

 By 2030, success would mean JJG is recognised as India's premier aerospace precision-components company – a strategic, multi-programme partner to the world's leading airframers, engine makers and Tier-1s, rather than a supplier of individual parts. In technology, it would mean our North Bangalore campus operating as a benchmark digital factory, with a much larger share of complex engine and landing-system work. In capability, it would mean having moved firmly up the value chain into sub-assemblies and assemblies, with special processes and heat treatment fully integrated under one roof.

More broadly, I would like to see India's share of the global aerospace supply chain grow from around 1% today to 3–5%, with JJG playing a meaningful part in that journey. Knowing that hundreds of our components already fly on every aircraft we supply is hugely motivating – our goal is to make that number many times larger.

Our vision is to establish JJG as India's premier aerospace precision-components company and become the strategic growth partner that global OEMs and Tier-1 suppliers choose to scale with.

and risk in the aerospace supply chain – parts travelling between multiple vendors for finishing. At the new facility we are extending this further with in-house heat treatment of raw material, moving towards a complete build-to-print offering under one roof.

On materials, localisation is still at an early stage. Our automotive business sources around 98% of its material locally, but in aerospace the figure is below 5%, as most aerospace-grade alloys still come from qualified mills in Europe and the US. We expect this to change significantly as Indian steel and aluminium producers secure the necessary approvals, and we are keen to support that journey. In the meantime, we manage risk through long-term relationships with qualified mills and distributors, multiple approved sources wherever possible, and careful planning of long-lead materials.

 **JJG Aero has been expanding its manufacturing footprint and capacity. What are the key priorities behind this investment, and how will the new capacity change the company's capabilities?**

 The key driver is demand. The aerospace supply chain is facing all-time high demand from aircraft manufacturers, and our existing sites are close to full. We have grown

at a CAGR of around 35% over the last three years, and our US\$30 million Series B from Norwest – which takes our total funding to US\$42 million, following our Series A from CX Partners – is being deployed primarily to build and add capacity at our new facility in North Bangalore, drive further vertical integration and support other strategic initiatives.

The new site will change the company on three fronts. Scale: we go from two small one-acre sites to a campus designed for 800 machines at full build-out, with the first phase targeted to be operational by mid-to-late 2027. Integration: a dedicated 100,000 sq ft special-process facility and in-house heat treatment. And value: space to progress from components into sub-assemblies and, at the opportune time, into adjacencies. People are central to this – we are hiring aggressively and have partnered with ITIs and universities, including setting up labs on campus, so that new graduates train on our machines and join us ready to contribute.

 **Beyond commercial aerospace, where do you see the strongest opportunities in defence, space and emerging areas such as unmanned systems for Indian precision manufacturers?**

 Commercial aerospace remains our core focus, but defence, space and unmanned

CHINA AIRLINES SELECTS SAFRAN FOR AIRBUS A350-900 LANDING GEAR OVERHAUL PROGRAM

Safran Landing Systems and China Airlines, a Taiwan-based carrier, announced the signature of a new agreement covering the overhaul of the main landing gears for the carrier's fleet of 18 Airbus A350-900 aircraft.

The agreement, signed at Safran Landing Systems' Singapore facility during MRO Asia-Pacific, covers China Airlines' entire fleet of Airbus Airbus A350-900 aircraft and will support the airline's landing gear maintenance requirements from 2026 through 2031.

The agreement includes landing gear overhaul services and associated technical support, ensuring the long-term reliability, availability and performance of China Airlines' Airbus A350-900 fleet. Maintenance activities will be performed at Safran Landing Systems' MRO center in Singapore, leveraging the company's original equipment manufacturer (OEM) expertise and comprehensive maintenance, repair and overhaul capabilities.

This new contract marks another important milestone in the long-standing relationship between the two companies. China Airlines already relies on Safran Landing



Systems for landing gear maintenance services for its Airbus A330 fleet, while other members of the CAL Group, including Tigerair Taiwan and Mandarin Airlines, also partner with Safran Landing Systems on their respective fleets.

"We are proud to strengthen our relationship with China Airlines through this new Airbus A350-900 landing gear overhaul agreement. This contract reflects the confidence China Airlines places in our teams, our technical expertise and our ability to support critical fleet operations over the long term. As airlines increasingly seek not only repair capabilities

but also direct access to OEM expertise, we look forward to supporting China Airlines throughout this next chapter of its Airbus 350 journey," said Olivier Thomas, EVP Maintenance, Repair and Overhaul at Safran Landing Systems.

The agreement further reinforces Safran Landing Systems' commitment to supporting airlines across Asia-Pacific through a comprehensive network of landing gear maintenance services. It also highlights the strategic role of the company's Singapore MRO facility, which serves operators throughout one of the world's fastest-growing aviation markets.

ST ENGINEERING AND COLLINS AEROSPACE DEEPEN COLLABORATION ON AIRCRAFT COMPONENT SUPPORT

ST Engineering's Commercial Aerospace business and Collins Aerospace, an RTX business, announced the signing of three multi-year agreements that build on their longstanding working relationship to enhance component support for airline operators.

These agreements mark a new collaboration on component repairs and extend existing arrangements for spare parts procurement and lifecycle repairs. Together, they enable ST Engineering and Collins to integrate original equipment manufacturing (OEM) and maintenance, repair and overhaul (MRO) expertise, providing airline operators with reliable, fast-turnaround component repairs to meet aircraft dispatch needs.

The agreements cover three areas of collaboration:

New Boeing 787 component repair support ST Engineering will provide repair services for Collins fan assembly electronics boards used on the 787. The cooperation agreement reduces Line Replaceable Unit (LRU) repair turnaround times and improve efficiency through repair-over-



replacement solutions for airlines and operators.

Broader OEM spare parts support ST Engineering extended and expanded a multi-platform agreement to procure new Power & Controls spare parts from Collins for its LRU component MRO operations. The broader scope adds more narrowbody aircraft components to ST Engineering's portfolio for enhanced OEM-standard component repair support.

Continued lifecycle repair support for Airbus A320 and Boeing 737 LRUs ST Engineering and Collins extended their collaboration on A320 and 737 family LRU component repairs through Collins' aftermarket support programme, FlightSense™.

"Our longstanding relationship with Collins Aerospace brings together its OEM expertise and ST Engineering's lifecycle MRO and comprehensive asset management strengths to better support airline operators worldwide," said Poon Kok Wah, SVP and Head of Component Services at ST Engineering. "The expanded scope of these agreements deepens our collaboration and enhances the value of our Maintenance-By-the-Hour™ programme, in-house component MRO capabilities for the 787, 737 MAX and A320neo and distribution and material services. Together, these capabilities provide customers with broader repair coverage, reliable component support and responsive lifecycle solutions."

"Expanding our collaboration with ST Engineering allows us to better support the aviation ecosystem with agile and high-standard MRO solutions," said Jen Latka, vice president of Aftermarket, Power & Controls, Collins Aerospace. "These lifecycle and repair programmes ensure that operators worldwide benefit from maximised component efficiency and enhanced fleet performance."

MTU MAINTENANCE ZHUHAI REDELIVERS 100TH PW100G-JM FROM JINWAN SITE



MTU Maintenance underscores its strong role in the maintenance of geared turbofan engines (GTF), particularly the PW100G-JM. This engine type is flown on the Airbus A320 family. The new Jinwan site, operating under MTU Maintenance Zhuhai, a joint venture between China Southern Airlines and MTU Aero Engines, has reached a major milestone in its ramp-up, successfully redelivering its 100th PW100G-JM engine in less than 18 months after the site commenced operations in March 2025.

The achievement highlights the rapid development of the Jinwan site as an important part of Pratt & Whitney's global GTF maintenance, repair and overhaul (MRO) network. Since opening, the site has steadily expanded its operational capabilities to support growing customer demand while maintaining a strong focus on quality, efficiency and workforce development.

"The rapid success of our Jinwan facility, including this 100th redelivery so soon after the start of operations, speaks foremost to the collaborative spirit that governs the MTU network," says Gert Wagner, President and CEO of MTU Maintenance Zhuhai and responsible for its Jinwan branch. "The experience and expertise that we developed in the GTF program at our original site over the years was further empowered and supported by our colleagues from MTU sites in Hannover and Munich, Germany, as well as EME Aero in Poland. The scaling up of Jinwan is also their accomplishment."

The Jinwan facility plays a strategic role within the global GTF network. Its successful ramp-up has been supported by advanced technologies such as the Fixed Overhaul System (FOS), initiatives designed to reduce turnaround times and a dedicated training engine that has accelerated employee qualification and on-the-job learning. As demand for GTF maintenance continues to grow, MTU Maintenance Zhuhai is expanding its workforce to support the ongoing ramp-up of operations and future shop-visit volumes.

Building on the momentum of this first milestone, the team has already set its sights on reaching the next 100-engine mark in an even shorter timeframe. The achievement underscores MTU's commitment to delivering reliable, high-quality engine maintenance solutions and supporting customers worldwide with safe, efficient and dependable MRO services throughout the engine lifecycle.

HONEYWELL AEROSPACE TO PROVIDE GARUDA INDONESIA WITH AUXILIARY POWER UNIT MAINTENANCE SUPPORT



Honeywell Aerospace announced it has signed a three-year agreement with PT Garuda Indonesia (Persero) Tbk to provide repair and maintenance services for Honeywell Aerospace's 131-9B, 331-350 and 331-500 auxiliary power unit (APU) models across Garuda Indonesia's aircraft fleet. This agreement builds on Honeywell Aerospace and Garuda Indonesia's longstanding partnership, while establishing a multi-year framework for APU repair support for Garuda Indonesia.

The arrangement provides Garuda Indonesia with greater repair-cost predictability and defined service expectations, supporting the airline with more effective maintenance planning over the three-year term.

"Consistent, predictable maintenance support is critical in helping airlines plan maintenance effectively and keep their fleets operating reliably," said Eric Ai, president, Asia Pacific, Honeywell Aerospace. "This agreement enables Honeywell Aerospace to provide that support to Garuda Indonesia through a clear multi-year framework and represents an important next step in our longstanding relationship focused on supporting the airline's operational needs."

Auxiliary power units provide electrical power and conditioned air while aircraft are on the ground, supporting aircraft and cabin systems during boarding and turnaround. As an original-equipment and lifecycle-service partner, Honeywell Aerospace supports airlines from the systems installed on their aircraft through ongoing repair, overhaul and upgrades. This includes a global network of 26 repair and overhaul facilities, including facilities in Asia-Pacific, and more than 100 commercial air transport channel partner locations.

Mukhtaris, director of maintenance of Garuda Indonesia said, "As we continue our transformation journey, we remain focused on strengthening our operational capabilities including optimizing APU reliability as a part of our effort in maintaining aircraft readiness. Through the strategic partnership with Honeywell Aerospace, we are aiming to deliver a seamless journey for our passengers through operational excellence by ensuring our aircraft readiness and operational reliability."

The agreement reinforces Honeywell Aerospace's aftermarket support for airline maintenance and lifecycle services in Indonesia and across Asia Pacific.

TECHNOLOGY DELAYED IS TECHNOLOGY DENIED: CAN INDIA ACCELERATE INDIAN AIR FORCE MODERNISATION?



As India marks the 94th anniversary of the Indian Air Force, recent warnings from its leadership highlight a challenge that extends beyond aircraft acquisition: ensuring that combat capability, operational readiness and modernisation keep pace with an increasingly demanding security environment.

A strategic warning at a critical moment

India's air power is entering a decisive period. Regional military competition is intensifying, aircraft technologies are advancing rapidly, and modern combat increasingly depends on the integration of sensors, weapons, electronic warfare, communications and unmanned systems. In this environment, the strength of an air force depends not simply on the sophistication of its platforms, but on its ability to field the right capabilities when they are needed.

Air Chief Marshal Amar Preet Singh brought this issue into sharp focus during his press conference ahead of Indian Air Force Day on 8 October 2026. He warned that delays in aircraft induction were hurting the Indian Air Force (IAF) and called for modernisation programmes to be prioritised, with tighter delivery schedules.

His concerns reflect a broader strategic problem. India has ambitious plans for its air force, but the gap between planned capability and timely induction remains significant. When ageing aircraft retire faster than new platforms enter service, the force can struggle to maintain the strength required for its operational responsibilities.

The Air Chief's earlier observation, "Technology delayed is technology denied," captures the underlying principle. A capability delivered late may still be technologically advanced, but it may not meet the operational requirement for which it was intended.

For India, the question is no longer whether modernisation is necessary. It is whether the systems, decisions and planning processes supporting it can deliver capability at the required pace.

The fighter squadron challenge

The most visible dimension of this challenge is the IAF's fighter squadron strength.

At his October press conference, Air Chief Marshal Singh indicated that the IAF had around 29 fighter squadrons against an authorised strength of 42. He said the service needed to induct approximately 36-40 fighter aircraft annually to stop the decline and begin rebuilding its strength.

These figures illustrate the scale of the problem. Fighter squadron strength cannot be restored through a single purchase or one successful development programme. It requires a sustained flow of aircraft over several years, coordinated with retirements, operational

requirements, training and the availability of supporting systems.

The retirement of older aircraft is part of the natural evolution of an air force. The difficulty arises when replacements do not arrive in sufficient numbers or on schedule. This creates a gap between the capabilities a force plans to maintain and the platforms it can actually deploy.

Tejas Mk-1A delays have become an important part of this discussion. However, the issue is broader than the performance of any individual programme. India needs a dependable long-term approach to force planning that accounts for development schedules, procurement lead times, aircraft retirement profiles and the time needed to convert newly inducted platforms into effective operational units.

The 42-squadron target also needs to be understood in the context of India's strategic requirements and the operational assumptions used to establish force levels. The central issue is not simply whether a target can be reached, but whether the IAF has the appropriate mix of aircraft, weapons, support capabilities and trained personnel to meet its assigned missions.

Modernisation must therefore be assessed through operational outcomes rather than acquisition announcements alone.

Modernisation needs prioritisation, not just ambition

India's military aviation plans encompass several complex programmes at different stages of development. These include upgrades and new variants of existing aircraft, future combat platforms, advanced sensors and emerging autonomous systems.

Each addresses important requirements, but pursuing multiple ambitious programmes simultaneously places demands on specialist expertise, testing infrastructure, funding and senior programme-management capacity.

Air Chief Marshal Singh has questioned whether too many projects are being handled concurrently within the existing development structure. His remarks raise an important policy question: should India concentrate resources more sharply on the capabilities most urgently needed, while sustaining investment in longer-term technologies?

This is not an argument against indigenous research or ambitious development. It is an argument for sequencing.

An air force needs near-term capabilities to address current operational requirements, medium-term programmes to replace ageing systems and long-term research to ensure that it does not fall behind future technological developments. Treating these three time horizons as interchangeable can result in important current requirements becoming dependent on programmes that may take many years to mature.



A more disciplined approach would classify programmes according to operational urgency, technological readiness, strategic importance and realistic delivery timelines. Each should have clear milestones, regular progress reviews and contingency planning for significant delays.

Where a programme faces an extended delay, decision-makers should assess the operational consequences early and consider alternative ways to manage the resulting capability gap. Such decisions must account for cost, interoperability, training, future support and the long-term implications of introducing another platform type.

The objective should be to preserve strategic ambition without allowing the pursuit of future capabilities to undermine immediate readiness.

Beyond aircraft numbers: What constitutes operational readiness?

Fighter aircraft remain central to air power, but the ability to deploy and sustain them effectively depends on an interconnected operational ecosystem.

Modern aerial operations require timely intelligence, surveillance and reconnaissance; effective airborne warning and control; secure communications; precision weapons; electronic warfare; aerial refuelling where required; and reliable command-and-control arrangements.

The availability of these supporting capabilities can influence how effectively aircraft perform their missions. A technically advanced fighter cannot deliver its full potential if it lacks suitable weapons, dependable mission data, effective coordination or the maintenance support necessary to remain available.

The same principle applies to training and personnel. Newly inducted platforms require pilots, engineers, technicians and operational units to develop the expertise needed to use them safely and effectively. Induction is therefore a process rather than a single event: aircraft must be accepted, supported, integrated into operational structures and maintained at an appropriate level of readiness.

India's modernisation assessments should reflect this wider picture. The number of aircraft ordered and delivered matters, but so do serviceability, the availability of compatible weapons, training capacity, mission-system integration and the ability to sustain operations over time.

A balanced readiness framework would help policymakers distinguish between the number of platforms in the inventory and the capability that the force can generate.

The changing character of air warfare

The modernisation debate also needs to account for the pace at which air warfare is changing.

Unmanned aerial systems, loitering munitions, electronic warfare, artificial intelligence and increasingly capable air-defence networks are changing the way forces collect information, protect assets and conduct operations. These developments place a premium on adaptability.

For the IAF, future effectiveness will depend on the ability to integrate manned and unmanned platforms, connect sensors to decision-makers, respond to electronic interference and protect critical communications. Counter-drone capabilities are also increasingly relevant to the protection of air bases and other high-value installations.

These technologies do not make conventional fighter aircraft obsolete. Instead, they change the environment in which those aircraft operate. Air superiority increasingly depends on how effectively different systems work together rather than on the performance of one platform in isolation.

India must therefore consider both immediate force requirements and the speed at which new operational concepts can be introduced. Emerging technologies should be assessed against clearly defined military needs, tested under realistic conditions and integrated with existing systems wherever appropriate.

The challenge is to innovate quickly without mistaking a successful demonstration for a mature operational capability.

International partnerships and strategic autonomy

India's acquisition decisions also have a significant international dimension. Foreign platforms and technologies can help address capability gaps, provide access to advanced systems and support interoperability with partners. At the same time, dependence on external suppliers can expose operational planning to restrictions on technology access, maintenance, upgrades and delivery schedules.

Air Chief Marshal Singh's recent comments about limited access to the American F-35 during Exercise Tarang Shakti 2026 illustrated the distinction between participating in an international exercise and obtaining meaningful access to a platform's underlying technology. He also clarified that the United States had made no formal offer to sell the F-35 to India.

The episode reinforces a broader lesson: defence partnerships offer important opportunities, but technology access and procurement possibilities should not be confused with guaranteed transfers of design knowledge or sovereign control.

India must evaluate foreign acquisitions according to their operational value, delivery timelines, lifecycle cost and long-term support requirements. Where external procurement is necessary, it should be integrated into a wider plan for developing domestic expertise and sustaining capability.

Strategic autonomy does not require India to develop every technology independently. It requires the country to understand where dependence creates unacceptable risks and where partnerships can strengthen rather than constrain operational freedom.

Five measures to accelerate readiness

First, establish a capability-based modernisation roadmap. Procurement and development decisions should be connected directly to operational priorities, with clear timelines and milestones for delivering usable capability.

Second, strengthen accountability for programme delivery. Delays should trigger timely assessments of their operational impact, the reasons behind them and the corrective measures required. Responsibility for resolving problems must be clearly assigned.

Third, develop contingency plans for capability gaps. When a major programme slips, the IAF and policymakers should examine realistic options to preserve operational effectiveness rather than waiting for the delayed solution to arrive.

Fourth, measure readiness beyond inventory numbers. Aircraft availability, training, weapons integration, maintenance support and the ability to coordinate multiple systems should form part of a more comprehensive assessment of modernisation progress.

Fifth, accelerate evaluation of emerging technologies. Unmanned platforms, electronic warfare, artificial intelligence and integrated command-and-control systems should be assessed against operational requirements, with successful technologies moving through disciplined testing and adoption processes.

These measures require close coordination between the IAF, the Ministry of Defence, research organisations and industry. They also require a willingness to make difficult choices when programmes cannot meet their original timelines.

Conclusion: Readiness must be the measure of progress

India's Air Force modernisation challenge is fundamentally a question of time, priorities and operational effectiveness. The country has important long-term ambitions, but strategic plans must translate into capabilities that can be fielded, sustained and upgraded when required.

Air Chief Marshal Singh's warnings deserve attention because they highlight the cost of allowing delays to accumulate. A shortfall in fighter strength cannot be resolved instantly, and the integration of advanced systems requires years of preparation. The earlier problems are identified and addressed, the greater the opportunity to protect operational readiness.

Indian Air Force Day should therefore be an occasion not only to recognise the service's professionalism, but also to examine whether national modernisation efforts are delivering against its operational needs.

The essential task is to connect long-term technological ambition with near-term readiness. That requires realistic planning, decisive prioritisation, effective oversight and a clear understanding of the capabilities the IAF must generate.

India's air power will be measured not only by the aircraft it plans to acquire, but by the strength, readiness and effectiveness of the force it can actually field.

JAPAN AIRLINES RENEWS POOL PROGRAM AGREEMENT WITH EMBRAER TO SUPPORT E-JET OPERATIONS

Embraer and Japan Airlines (JAL) have extended their long-standing partnership through a multi-year agreement under Embraer's Pool Program, providing comprehensive maintenance, repair and spare-parts support for the airline's fleet of 32 E170 and E190 aircraft.

The agreement will provide support for a wide range of repairable components for Japan Airlines' E-Jets fleet, helping to enhance aircraft reliability. The solution also includes a significant inventory of components available close to the customer's operations, ensuring rapid access to critical parts and minimizing operational disruptions.

Since 2008, the E-Jets have played an integral role in J-Air's fleet, supporting regional connectivity across Japan. The extension of the Pool Program agreement underscores the shared commitment of both companies to maintaining the highest standards of operational excellence while supporting the continued growth of regional connectivity in the country. Japan Airlines' E-Jets six-month service



reliability average stands at 99.8%.

"Through this contract renewal with Embraer, we reinforce our commitment to securing high-quality components and, above all, ensuring the absolute safety of our flight operations. Building on our trusted relationship with Embraer, we look forward to driving further operational excellence and delivering a highly reliable travel experience for our passengers," said Yuta Kawaguchi, Executive Officer, Vice

President, JAL Engineering Co. Ltd, Material & Component Services.

"We are proud to further strengthen our long-standing relationship with Japan Airlines through this agreement," said Carlos Naufel, President and CEO, Embraer Services & Support. "Through our Pool Program, we are committed to providing the reliability, responsiveness and operational support needed to maximise the E-Jets' performance."

DRUKAIR, ROYAL BHUTAN AIRLINES SELECTS CFM LEAP-1A ENGINES TO POWER 5 AIRBUS A320neo FAMILY AIRCRAFT

Drukair, Royal Bhutan Airlines, the national flag carrier of the Kingdom of Bhutan, announced today its selection of CFM International's LEAP-1A engines to power five Airbus A320neo family aircraft. The order consists of three A320neo and two A321XLR aircraft, which the airline announced in 2024.

"We are pleased to strengthen our partnership with CFM through this purchase of LEAP-1A engines," said Tandi Wangchuk, CEO of Drukair. "The LEAP-1A assets in terms of efficiency and reliability will support Drukair's next phase of growth across Asia while helping us strengthen connectivity and deliver greater value to our passengers."

Drukair has been a CFM customer since 2004, when it received its first Airbus A319ceo aircraft, which was powered by CFM56 engines. The airline currently operates one LEAP-powered A320neo aircraft, along with three CFM56-powered A319ceo aircraft.

"We are honored by Drukair's renewed confidence in CFM products and support," said Gaël Méheust, president and CEO of CFM International. "We remain committed to playing



a major role in Drukair's growth and to ensuring smooth ramp of LEAP-powered aircraft in its fleet, with the highest standards in customer support."

With more than 10,000 engines delivered to date, CFM LEAP engines have experienced the fastest ramp in commercial aviation history. CFM continues to upgrade the LEAP fleet with a high-

pressure turbine (HPT) durability kit to extend time on wing and a reverse bleed system (RBS). The company is focused on delivering high engine availability through exceptional MRO performance and competitive cost of ownership, with the benefits of aftermarket competition through its open MRO ecosystem.

BOEING, AMERICAN AIRLINES COMPLETE FIRST 737 MAX LANDING GEAR EXCHANGE



Boeing and American Airlines announced the successful completion of the first landing gear exchange for a 737 MAX, marking a key milestone as the company extends its longstanding Landing Gear Exchange Program to the MAX platform. The exchange validates Boeing's ability to deliver fully overhauled, Boeing-certified main and nose landing gear assemblies that arrive ready to install — reducing aircraft on-ground time and easing spare-parts burdens for operators.

The Landing Gear Exchange Program has long provided customers with a practical alternative to buying and warehousing expensive spare gear. This first 737 MAX swap with American Airlines demonstrates the program's proven model — overhaul, certification and delivery of ready-to-install assemblies — is effective for the newest generation of Boeing single-aisle aircraft.

"This milestone reinforces what our customers have known for years: Boeing's Landing Gear Exchange capability delivers predictable, safe and cost-effective outcomes," said William Ampofo, senior vice president, Parts & Distribution and Supply Chain, Boeing Global Services. "Extending the program to the 737 MAX gives operators another proven tool to shorten downtime, manage costs and align heavy maintenance with operational needs."

For the completed 737 MAX exchange Boeing supplied an overhauled and certified landing gear assembly with installation kit. The swap validated the end-to-end process — from technical overhaul and paperwork through delivery — and proved the approach can be applied consistently to the MAX fleet.

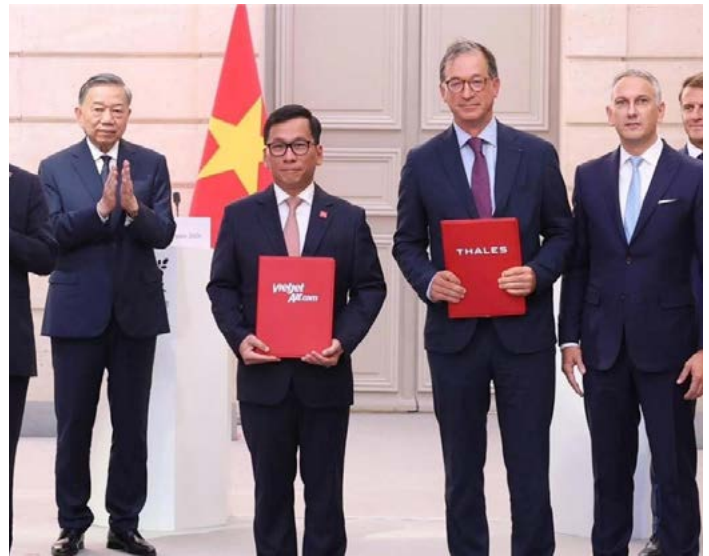
Boeing is also increasing global overhaul capacity and coordinating with certified MRO partners to expand geographic availability and shorten lead times. Near term priorities include enlarging 737 MAX-capable exchange inventory, adding forward-exchange slots close to customer operations, and tracking operational metrics to quantify downtime and cost benefits as the program scales.

By enabling a forward exchange of certified assemblies, Boeing's solution helps airlines avoid lengthy in-place overhauls and the risk of extended groundings. Operators can shift from holding high-cost spare inventories to reserving forward-exchange slots, freeing working capital and improving fleet predictability. Boeing manages the technical overhaul, incorporation of applicable service bulletins, certification and supplier coordination, transferring inventory and obsolescence risk away from operators.

For the completed 737 MAX exchange Boeing supplied overhauled and certified main and nose landing gear assemblies with installation kits (wheels, tires and brakes excluded). The swap validated the end-to-end process — from technical overhaul and paperwork through delivery — and proved the approach can be applied consistently to the MAX fleet.

A leading global aerospace company and top U.S. exporter, Boeing develops, manufactures and services commercial airplanes, defense products and space systems for customers in more than 150 countries. Our U.S. and global workforce and supplier base drive innovation, economic opportunity, sustainability and community impact. Boeing is committed to fostering a culture based on our core values of safety, quality and integrity.

VIETJET AND THALES STRENGTHEN PARTNERSHIP IN MRO AND KICKSTART DIGITAL AVIATION, AI & CYBERSECURITY COOPERATION



During the Vietnamese delegation's visit to France on September 10, Vietjet and Thales signed a key Maintenance & Repair (MRO) contract. As part of this strategic Repair-By-The-Hour (RBTH) contract, Thales will provide comprehensive component maintenance services for Vietjet's A320 and A330 fleets. Thales' expert support and services will help optimise fleet availability, lower overall operational lifecycle costs, and expedite repairs.

Aviation was defined as a key pillar of the Comprehensive Strategic Partnership established between France and Vietnam in October 2024. This contract leverages Thales' global MRO network and Vietjet's fleet modernisation ambitions.

Extending Partnership to Digital Aviation, AI and Cybersecurity

Vietjet and Thales also signed a Memorandum of Understanding (MoU) around digital aviation, avionics, cybersecurity and AI-enhanced airline operations. This MoU will explore technologies to optimise flight operations, data-driven maintenance and leverage Thales' connected aircraft services.

Additionally, this cooperation will focus on the use of AI and cybersecurity to protect Vietjet's critical aviation systems through secure cloud solutions, predictive analytics and decision-support tools. As a leading provider of commercial aviation solutions and nurturing over 800 AI experts, Thales can combine expert knowledge of the aviation industry and deep tech.

To strengthen Vietnam's aviation hub, major airlines like Vietjet are investing with partners in early training programmes and technical certification pathways for local talent. Through this MoU, Thales also positions itself as an active partner to enhance local capabilities and transfer knowledge to Vietjet. Ultimately, these initiatives will contribute to the development of strong engineering and support capabilities in Vietnam.

"With Thales' 30-year presence in Vietnam, we are honored by Vietjet's continued trust. We look forward to supporting the airline in its next phase of growth through innovation, advanced technology and operational excellence." Pascale Sourisse, CEO of Thales International, Thales.

"Our partnership with Thales will not only enhance the reliability, safety and operational efficiency of Vietjet's fleet, but also open up new areas of cooperation in digital technology, AI and cybersecurity. Together with leading French partners, we look forward to connecting technological expertise with a dynamic aviation market, contributing to stronger trade, investment and ties between Vietnam and France." Nguyen Thanh Son, CEO of Vietjet.

KOREAN AIR AND THAI AVIATION INDUSTRIES FORGE MRO PARTNERSHIP

Korean Air has signed a strategic partnership agreement with Thailand's state-owned Thai Aviation Industries (TAI) to collaborate on maintenance, repair, and overhaul (MRO) for Thai military aircraft.

The companies signed a Teaming Agreement (TA) on September 2 at the Korean Air Tech Center in Busan with Hyeoncheol Cho, Vice President and Head of Korean Air's Defense Business Department, and Piboon Vorravanpreecha, Managing Director of TAI, in attendance.

Under the agreement, Korean Air and TAI will initially collaborate on depot-level maintenance for the Royal Thai Army's UH-60 Black Hawk helicopters. The companies plan to expand the partnership to include other military aircraft operated by the Royal Thai Armed Forces. Korean Air will also support TAI in standardizing military aircraft maintenance processes and providing technical training.

TAI manages the maintenance and logistical support for all aircraft operated



by the Thai military. By combining Korean Air's extensive military MRO expertise with TAI's established maintenance network and

infrastructure in Thailand, the partnership is expected to enhance the operational readiness of the Thai military's aviation fleet.

Korean Air brings over 50 years of experience in military aircraft maintenance, having completed depot-level maintenance and performance upgrades for more than 5,500 aircraft. Korean Air began producing UH-60 helicopters in 1991 and has continued to provide maintenance support for the fleet. Building on its proven technical expertise, Korean Air recently secured a major contract to upgrade the helicopters' performance.

"This partnership marks an important step in bringing Korean Air's advanced MRO capabilities to Southeast Asia and creating opportunities for mutual growth," said Hyeoncheol Cho, Vice President and Head of Korean Air's Defense Business Department. "By combining our military aircraft maintenance expertise with TAI's strong local network, we aim to expand our presence in the regional and global MRO markets."

AFI KLM E&M AND AIR CORSICA EXPAND LONG-STANDING PARTNERSHIP WITH LEAP-1A ENGINE SUPPORT AGREEMENT



Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) and Air Corsica have signed a new multi-year agreement for the support of the airline's LEAP-1A engine fleet. The agreement covers nine LEAP-1A engines supporting Air Corsica's Airbus A320neo operations and represents an important milestone in a partnership that has spanned several decades.

Already a trusted partner for Air Corsica's CFM56-5B engine maintenance and component support across its Airbus A320ceo and A320neo fleet, AFI KLM E&M will now extend its support to the airline's new-generation LEAP-1A engines. The agreement reflects Air Corsica's continued confidence in AFI KLM E&M's engine MRO capabilities and reinforces the Group's growing position in the rapidly expanding LEAP engine

support market.

By combining proven operational expertise with high-quality maintenance solutions, AFI KLM E&M will support Air Corsica in maximizing engine reliability, fleet availability and operational performance throughout the lifetime of the agreement.

ROYAL BRUNEI AIRLINES SELECTS COLLINS AEROSPACE FLIGHTSENSE AND DISPATCH SERVICES



Collins Aerospace, an RTX business, has secured two 12-year contracts with Royal Brunei Airlines to provide FlightSense™ and DispatchSM services for its current and future Boeing 787 fleet. These solutions will enhance the airline's operational efficiency, improve reliability and optimize maintenance schedules across several systems, including avionics, cargo, electrical power, environmental control and lighting.

FlightSense and Dispatch provide guaranteed component availability, reduced downtime and cost predictability through a fixed-rate service model. Under the long-term agreement, Collins will provide predictive, reliability-based maintenance to optimize avionics system performance, along with asset and logistics support and access to certified spares and repaired parts.

"Our aftermarket solutions continue to deliver meaningful value for 787 operators in the Asia-Pacific region," said Jen Latka, vice president of Aftermarket, Power & Controls, Collins Aerospace. "With a connected data ecosystem through FlightSense and proactive, globally supported avionics maintenance through Dispatch, Royal Brunei will be positioned for strong fleet performance."

"As we continue to optimize our operations and strengthen our network, maintaining a highly reliable and efficient Boeing 787 fleet remains a key priority for Royal Brunei Airlines," said Colonel Norsuriati binti Haji Sharbini, Interim Chief Executive Officer of Royal Brunei Airlines. "The FlightSense and Dispatch solutions from Collins Aerospace provide advanced predictive maintenance capabilities, technical expertise and global support that will help maximize fleet availability, enhance operational efficiency and improve cost predictability. This agreement reinforces our commitment to operational excellence, minimizes disruptions and enables us to continue delivering a safe, seamless and dependable travel experience for our guests."

ENGINES & MRO

AFI KLM E&M AND MALAYSIA AIRLINES BERHAD SIGN LONG-TERM COMPONENT SUPPORT AGREEMENT TO SUPPORT A350 FLEET



Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) has signed a long-term agreement with Malaysia Airlines Berhad (MAB), the operator of Malaysia Aviation Group's (MAG) A350 fleet, to provide comprehensive component support for its aircraft.

The agreement builds upon the existing successful relationship between AFI KLM E&M and MAB, which includes ongoing support for the airline's Boeing 737 fleet. Under the new agreement, AFI KLM E&M will provide comprehensive component support MAG's A350 aircraft, supporting their availability and operational performance through a solution tailored to the airline's operational requirements.

AFI KLM E&M brings extensive A350 experience through Air France's own operation of the aircraft type, combined with its experience supporting multiple A350 operators worldwide. This combination of airline operational insight and MRO expertise enables AFI KLM E&M to provide support aligned with the specific needs of Malaysia Airlines.

Aida Salfaraz Ahmad Fadzil, Chief Operating Officer of Malaysia Airlines, said: "This new agreement with AFI KLM E&M underscores our commitment to driving operational efficiency while upholding the highest standards of safety and reliability across the MAG's fleet. As we operate a growing fleet of new-generation aircraft, having access to responsive and reliable component support is essential to maintaining operational performance. We are confident that AFI KLM E&M's technical expertise will further strengthen the reliability and performance of our aircraft."

Martijn de Vries, Senior Vice President Commercial at Air France Industries KLM Engineering & Maintenance, said: "We are very pleased to extend our partnership with Malaysia Airlines to support their A350 fleet. This agreement reflects the confidence MAB places in our teams and our ability to provide reliable and customer-focused component support. As an A350 operator ourselves, we understand the operational requirements associated with this aircraft and look forward to bringing this experience to our long-term partnership with Malaysia Airlines."

L3HARRIS ADVANCES PRODUCTION OF PROXIMITY SENSORS FOR US AIR FORCE

L3Harris Technologies has received a contract from the U.S. Air Force, valued at approximately \$60 million, to continue production of its DSU-43/B Cockpit Selectable Height of Burst Sensors (C-HOBS).

This technology allows aircrews to choose the precise detonation altitude, helping them tailor the munition's effect to different targets and mission environments. The sensors deliver improved radar-guided performance, manual and cockpit-selectable burst heights, and advanced sensing features.

"C-HOBS is an important part of ensuring warfighters have modern, reliable and adaptable capabilities," said Scott Alexander, President, Propulsion Systems, Missile Solutions, L3Harris. "As we continue to increase production capacity to support a wartime footing, L3Harris' long history of fusing innovation ensures we are ready to meet our customers' needs today and into the future."

L3Harris is increasing proximity fuze and sensor production capacity to help meet the U.S.



military's growing demand for cost-effective, proven counter-threat solutions. C-HOBS

production will take place at the company's site in Cincinnati.

HONEYWELL AEROSPACE ENGINE SELECTED BY U.S. AIR FORCE FOR PRELIMINARY DESIGN



Honeywell Aerospace announced its small-thrust-class engine, the SkyShot 1600, was selected by the U.S. Air Force to advance into Preliminary Design Review — a formal milestone in which the Air Force evaluates whether the engine design is technically mature enough to move into detailed development — as part of the Air Force's Autonomous Collaborative Platform (ACP) program.

"We've leveraged our proven and tested technology, plus the latest advancements in digital modeling and manufacturing, to design an engine ready to power the next generation of collaborative combat aircraft and unmanned systems," said Dave Marinick, president and CEO of Engines and Power Systems at Honeywell Aerospace. "We look forward to supporting the U.S. Air Force in their mission of building smarter, more effective and more cost-efficient systems."

The SkyShot1600 is designed to meet all mission-critical performance parameters for collaborative combat aircraft (CCA) and unmanned aircraft systems (UAS), including high-altitude capabilities, rigorous G-level performance and the ability to reach maneuverability targets. The cost-effective, flexible and versatile architecture supports both turbojet or turbofan variants from 800 to 2800 pound-force. The core engine has been demonstrated across its full rated thrust range.

The engine is designed to go "from model to metal" quickly. A significant percentage of the materials used are capable of being additively manufactured or produced with high-volume manufacturing techniques, enabling both speed and supply chain resilience.

MODERNIZING THE KC-135 FOR DECADES OF MISSION READINESS



In an era of increasingly unpredictable conflict, affordable and fast modernization of the KC-135 aerial tanker is vital to ensuring an aerial refueling capability remains available and mission-ready around the globe.

With KC-135s expected to remain in service beyond 2050, tailored avionics upgrades can help extend fleet viability and deliver capability needed to support evolving mission demands. L3Harris Technologies brings decades of modernization and modification expertise in the defense industry, providing a low-risk avionics option that is fast to field.

Maintaining Fleet Readiness and Reducing Risk

KC-135 avionics modernization upgrades aging, obsolete flight deck instrumentation with new digital technology, extending aircraft operations for decades and reducing maintenance risk, sustainment cost and aircrew workload. L3Harris' solution leverages government-owned architecture and a mature C-135 baseline to provide an open foundation for future modernization, reducing integration risk and offering a path to field new capabilities while preserving aircraft readiness. This approach helps ensure these aircraft continue to provide a distributed global network of aerial refueling capacity, keeping close to operational forces, training routes, homeland missions and global deployment corridors.

Decades of Avionics Experience Connected Globally

As KC-135 fleets continue to meet growing mission demands, aging avionics and diminishing parts availability can increase sustainment challenges and impact aircraft readiness. Using commercially proven components with industry-standard interfaces, L3Harris' solution provides a flexible architecture that reduces vendor lock and original equipment manufacturer (OEM) control. L3Harris has completed mission systems upgrades for C-135 variants for the U.S. Air Force and the United Kingdom's Royal Air Force, keeping aircraft available and ready for decades of continued service.

*The appearance of U.S. Department of War (DoW) visual information does not imply or constitute DoW endorsement.

BELL COMMEMORATES FIRST PRODUCTION AH-1Z AIRCRAFT FOR NIGERIA



Bell Textron Inc., a Textron Inc. company, hosted a delegation from the country of Nigeria to mark the start of production of AH-1Z Viper attack helicopters built as part of the Foreign Military Sales (FMS) program approved by the Department of War in 2024. Delegates toured Bell's Amarillo production facility to observe the production line and ceremoniously sign the aircraft's frame destined to join the Nigerian Air Force.

"We are honored to host the Nigerian Air Force and share this milestone in production for the AH-1Z," said Scott Sims, H-1 program director, Bell. "The beam of the first production Viper for Nigeria will forever carry the names, hopes, and commitment of those who brought this aircraft to life."

Delivering unmatched multi-mission flexibility while employing both precision guided weapons and unguided munitions, the Bell AH-1Z Viper meets the modern battlefield's expeditionary requirements across the full spectrum of military operations. The Viper routinely maintains a high operational tempo from forward operating facilities by minimizing its logistical footprint without losing warfighting capabilities.

"The Bell AH-1Z Viper will play an important role in strengthening our counterterrorism and counterinsurgency operations and enhancing our ability to protect the citizens of Nigeria," said Air Commodore Ehimen Ejodame, NAF spokesperson. "We are pleased with the Viper's advanced capabilities and interoperability and look forward to its induction as a key platform in our attack helicopter fleet."

The Department of War awarded Bell a contract to manufacture and deliver 12 AH-1Z Viper aircraft to Nigeria from its Amarillo Assembly Center in Texas. Along with the aircraft, Bell will also provide associated engineering, program management, and logistics support. Bell projects the aircraft production to be completed in early 2029.

"Today also signifies the dedication of thousands of Bell and Team Viper employees around the world who are proud to support this important international partner," said Sims.

RAYTHEON AWARDED SEVEN-YEAR CONTRACT FOR TOMAHAWK CRUISE MISSILES

Raytheon, an RTX business, will dramatically accelerate the production of Tomahawk cruise missiles for the U.S. Navy over the multi-year period under the terms of an unprecedented \$22.9 billion contract, awarded as part of the Department of War's Arsenal of Freedom.

This contract follows the landmark agreements between Raytheon and the Department of War and supports the annual production ramp to more than 1,000 Tomahawk missiles and associated support, ensuring a stable, predictable supply for the Navy and allies.

"Tomahawk is the Navy's most important strike weapon, able to target hostile forces hundreds of miles away without ever risking the lives of our sailors," said Raytheon President Phil Jasper. "We are making significant investments in our workforce, technology, supply chain and facilities to dramatically boost production capacity and meet surging demand."

RTX has invested heavily in recent years



to ramp production of Tomahawk and other critical munitions, delivering three times more Tomahawks in the first half of 2026 compared to the first half of 2025. With this contract, RTX will increase capacity and collaborate closely with hundreds of small and mid-sized suppliers nationwide to rapidly scale output to meet long-term needs.

Tomahawk cruise missiles remain one of the U.S. military's most proven and versatile long range strike capabilities. With a decades-long record of operational performance, Tomahawk provides military leaders with reliable, flexible options against high value targets from a variety of launch platforms.

MBDA SUCCESSFULLY COMPLETES VALIDATION FIRING OF THE NEW ANTI-SHIP TESEO MK2/E MISSILE SYSTEM FOR THE ITALIAN NAVY

The TESEO MK2/E evolved missile system successfully performed a validation firing as part of a multi-year development programme for the Italian Navy. The test successfully validated the missile's range, during an approximately 20-minute piloted cruise flight of the TESEO MK2/E.

The trial validates the overall design of this new generation anti-ship system and paves the way for a swift conclusion of the development phase. This will allow the programme to smoothly enter the production phase, within the time frame agreed with the customer, targeting a first delivery in 2028. This milestone represents a key step in the qualification process, following the 2024 firing, which validated the design of the new missile components and aerodynamics.

The new anti-ship TESEO MK2/E programme was launched in 2021 under a contract signed with the Italian National Directorate of Naval Armaments for the development, integration, and qualification of a new anti-ship solution for the Italian Navy; a production contract was subsequently signed in 2025.



The TESEO MK2/E represents a new generation of missiles, significantly enhancing the anti-ship capabilities of the TESEO missile family, which is known internationally as OTOMAT.

Designed to address evolving threats and meet new operational requirements, the TESEO MK2/E has been developed in close collaboration with the Italian Navy to equip the new PPA (Multi-Purpose Combat Ship), the new generation destroyers (DDX), the FREMM-class frigates and Horizon-class destroyers. Furthermore, the TESEO MK2/E will be integrated in future FREMM EVO frigates and remains adaptable to the needs of international customers.

Renzo Tosini, Executive Vice President Sales & Business Development and Managing Director of MBDA Italia, stated: "I am extremely proud

of this result, which will guarantee a unique sovereign capability to Italy and the Italian Navy and will pave the way for further international success for MBDA, thanks to the system's cutting-edge anti-ship performances. The success of this firing once again demonstrates that working in total synergy with the customer is fundamental to achieving even more ambitious results. My deepest appreciation and thanks go to our colleagues whose passion and determination made this great achievement possible".

Thanks to its proven validated performance, the TESEO MK2/E will set a new standard in the anti-ship missile market. Its versatility and flexibility will perfectly complement MBDA's existing anti-ship portfolio, making it a cornerstone of modern naval defence systems.

INDRA UNVEILS SQUALL, ITS NEW LOW-COST, HIGH-PRECISION CRUISE MISSILE DESIGNED TO STRIKE STRATEGIC TARGETS IN DEPTH



Indra has unveiled SQUALL, its new low-cost cruise missile designed for mass attacks against targets located hundreds of kilometres away, at Unvex, the leading drone trade fair held in Spain, which is taking place this year in San Javier, Murcia.

This system provides a precision-strike solution against strategic targets located in the rear, such as command-and-control centres, air defence systems and high-value military infrastructure.

Its low-altitude flight capability enables it to evade enemy radars and operate with a high degree of stealth. This is complemented by its precision and effectiveness in target acquisition. To achieve this, it is equipped with different guidance and navigation systems designed to withstand attempts at jamming or spoofing and reach the intended target.

SQUALL also offers enormous flexibility for integration into land or naval platforms. It is a solution designed for launch from ramps, containers or tactical vehicles.

As a low-cost system compared with a conventional missile, it can be used both in surgical strikes involving a small number of units and in mass attacks in which large numbers of this type of missile are launched in a coordinated manner to saturate enemy defences. The high value of the assets being attacked and of the missiles required to try to counter them also provides a major advantage in rapidly wearing down the adversary's resources and economic capacity.

Its design is also supported by a reliable and resilient national supply chain, based on components over which sovereignty and control are maintained, to ensure the ability to scale production in times of crisis, when international supply chains may be disrupted and access to certain materials may become more difficult.

The new SQUALL cruise missile thus joins Indra's portfolio of solutions, which includes counter-drone systems in fixed configuration, to protect bases and critical infrastructure, and in mobile configuration, to escort convoys and units in the field; its DRIZZLE effector drone, designed to intercept drones and strike light assets at distances of up to 130 kilometres; and the Tarsis family of drones, capable of attacking tactical targets and providing intelligence, surveillance and reconnaissance (ISR) capabilities, as well as target designation. All these systems have been designed to be integrated within a multi-layered integrated air defence system and to operate within a combat cloud that increases the speed of decision-making and enhances reaction, intelligence and effectiveness. In addition, the company is progressively incorporating artificial intelligence functionalities to strengthen the capabilities of all these systems.

HII TO ADVANCE AIRDROP TECHNOLOGIES FOR US ARMY SOLDIER SUSTAINMENT



HII's Mission Technologies division announced that it was awarded a task order to research improved airdrop and combat feeding techniques to support U.S. Army soldier sustainment.

Under the five-year task order, HII will advance new cargo and personnel airdrop technologies for precision-guided and conventional aerial delivery systems across manned and unmanned aircraft.

The effort encompasses improving equipment reliability, safety and interoperability between systems while advancing sensing technologies, autonomous capabilities and cybersecurity protections to mitigate environmental and operational threats.

"Our troops' safety and mission success depend on their ability to stay supplied and mobile even in the most difficult and austere environments," said Todd Gentry, president of Mission Technologies' All-Domain Operations group. "Driven by innovation, our team is uniting cutting-edge research, engineering, and an operator's mindset to tackle these critical challenges, ensuring our forces are always ready wherever duty calls."

The task order was awarded under the Information Analysis Center Multiple Award Contract, administered by the Defense Technical Information Center for the U.S. Army Combat Capabilities Development Command Soldier Center. HII has extensive expertise in soldier sustainment technologies, with nearly 60 active task orders on the IAC MAC program.

BITTIUM AND SAFRAN ELECTRONICS & DEFENSE SIGN MOU TO OFFER ADVANCED TACTICAL COMMUNICATIONS FOR THE FRENCH ARMED FORCES

Bittium Wireless Ltd., subsidiary of Bittium Corporation, and Safran Electronics & Defense SAS have signed a Memorandum of Understanding to explore cooperation on advanced tactical communications solutions for the French Ministry of Defence and the French Armed Forces. The signing took place at the Finnish Embassy in Paris, underlining the shared interest of Finnish and French defence technology companies in developing advanced capabilities for the French Armed Forces.

The two companies bring complementary offerings to the collaboration. Bittium is a proven supplier of resilient tactical communications systems, secure mobile communications, and software-defined radio technology, with 40 years of experience serving defence forces across Europe and beyond. Safran Electronics & Defense is a French leader in integrated soldier systems, optronics, and avionics, with decades of experience equipping the French army and allied forces with field-proven technology.



Together, the companies will explore how their capabilities can be combined to meet the evolving communications needs of the French armed forces.

The areas identified for joint exploration include ground-based air defence networking, counter-drone communications, communications for unmanned systems, mission networking, dismounted soldier radio, and secure communications. These reflect some

of the most pressing operational challenges facing modern defence forces, where reliable and protected connectivity between sensors, platforms, and command structures is increasingly decisive.

The Memorandum of Understanding runs for two years and provides a framework within which the two companies will assess the potential for deeper cooperation, including joint development, production, and the commercialisation of solutions in France.

"France is a strategically important market for Bittium, and we are committed to strengthening our presence in the country. Safran's strong position as a local player, its deep understanding of the French Armed Forces, and its proven track record in soldier systems make the company an ideal partner for bringing Bittium's most advanced tactical and secure communications capabilities to French defence programmes," says Tommi Kangas, Senior Vice President, Bittium Defence & Security.

TERMA AND CORNES TECHNOLOGIES JOIN FORCES TO STRENGTHEN NAVAL SELF-PROTECTION IN ASIA PACIFIC

Terma has signed a contract with Cornes Technologies in Japan to promote and supply C-Guard MK II Decoy Launching System and related equipment for new naval vessels.

As naval threats become more complex, vessels require self-protection systems that can adapt to different platforms, missions, and operational environments. C-Guard MK II provides a flexible soft-kill capability, continuously evolving from AI-developed algorithms, against missile and torpedo threats and can operate independently or as part of a vessel's combat management system.

"Working with Cornes Technologies gives us a strong local foundation from which to support these requirements with C-Guard MK II. Our shared focus is to provide customers in Asia Pacific with reliable, adaptable protection and effective support throughout the system's lifecycle," says Henriette Hallberg Thygesen, CEO of Terma.

"We look forward to working with Terma and introducing C-Guard MK II to the Japanese market. Terma's naval self-protection expertise,



combined with our understanding of local customer requirements, will allow us to offer a strong solution for future naval vessels," says Kazuhiko Nishioka, CEO of Cornes Technologies.

C-Guard MK II uses NATO-standard 130 mm decoys and supports countermeasures from different suppliers. Its scalable configurations, using fixed launchers to the trainable Ancilla

launchers, allows the system to be adapted to a variety of vessel classes while giving operators the flexibility to respond to changing threats and future countermeasure requirements.

The agreement expands Terma's cooperation with Japanese industry and strengthens its ability to serve naval customers in Japan through a dedicated local partner.

LEIDOS TO SUPPORT EXTENDED ARTEMIS AIRBORNE ISR MISSION FOR US ARMY



In today's rapidly evolving security environment, military commanders rely on timely, high-quality intelligence to make critical decisions. Under a recent U.S. Army contract, Leidos will continue providing the Airborne Reconnaissance and Targeting Exploitation Multi-Mission Intelligence System (ARTEMIS), delivering rapidly deployable airborne intelligence, surveillance, and reconnaissance (ISR) capabilities across Europe and, when needed, other regions around the world.

Valued at up to \$127 million, the award extends ARTEMIS ISR operations within the U.S. European Command area of responsibility through the summer of 2027 with two additional option years. Leidos has supported the mission since 2020, helping provide commanders with the real-time intelligence needed to detect threats, maintain situational awareness, and make faster, more informed operational decisions.

"ARTEMIS combines the flexibility of commercial aircraft with military-grade sensing to deliver timely intelligence wherever commanders need it," said Jason McCarthy, Leidos senior vice president, Airborne & Mission Solutions. "As threats continue to evolve, we're providing the Army with a proven, rapidly deployable ISR capability that helps commanders stay ahead of the fight and make decisions with greater confidence."

Leidos provides a comprehensive Contractor-Owned, Contractor-Operated (CO/CO) ISR capability built around a modified Bombardier Challenger 650 aircraft. The company provides the aircraft, mission systems, flight operations, and support services. Originally fielded as a technology demonstrator, ARTEMIS has evolved into a globally deployable, high-altitude ISR platform that strengthens the Army's intelligence collection capabilities while providing the flexibility to support operations across multiple theaters.

This award advances Leidos' NorthStar 2030 strategy by expanding the company's Defense Tech and Mission & Digital Solutions portfolio. Through mission-critical sensing, airborne ISR, and decision advantage capabilities, Leidos continues to help defense customers maintain operational readiness and respond to increasingly complex security challenges.

The contract was awarded through the Army's Common Hardware Systems-6 (CHS) next-generation prime contract for the rapid procurement of CSISR hardware solutions and services. CHS-6 provides the U.S. Army, all U.S. military service branches, and federal agencies with a rapid tactical and operational equipment and service procurement experience.

DENMARK - MH-60R MULTI MISSION HELICOPTERS



The U.S. Department of State has made a determination approving a possible Foreign Military Sale to the Government of Denmark for MH-60R Seahawk Helicopters and related equipment. The estimated total cost is \$425 million.

The Government of Denmark has requested to buy three (3) MH-60R multi-mission helicopters; eight (8) embedded global positioning system/precise positioning service/inertial navigation systems with selective availability/anti-spoofing module (6 installed, 2 spares); and three (3) digital magnetic anomaly detection systems. The following non-major defense equipment items will also be included: T700-GE-401D engines; M514 impulse cartridge/cartridge actuated devices; MJ20 cartridge actuated thruster/cartridge actuated devices; WB53 fire extinguisher cartridge/cartridge actuated devices; CCU-136A/A impulse cartridges; AN/ARC-210 RT-2036 radios with communications security; AN/AAR-47 missile warning systems; AN/APX-128 identification friend or foe transponders; AN/ALE-47 dispenser, electronic countermeasures; advanced data transfer systems; AN/AAS-44C(V) multi-spectral targeting systems; identification friend or foe Mode 4/5 cryptographic applique, KIV-79; joint mission planning systems; AN/ALQ-210 electronic support measures systems; APS-153(V) multi-mode radars; spare engine containers; spare and repair parts; support and test equipment; communications equipment; ferry support; publications and technical documentation; personnel training; U.S. Government and contractor engineering, technical, and logistics support services; obsolescence engineering, integration, and test activities required to ensure readiness for the production of the Denmark MH-60R helicopters and other related elements of logistics and program support. The estimated total cost is \$425 million.

This proposed sale will support the foreign policy goals and national security objectives of the United States by improving the security of a NATO Ally that is a force for political stability and economic progress in Europe.

The proposed sale will improve Denmark's capability to meet current and future threats by providing increased security for its critical infrastructure. Denmark will use the enhanced capability to strengthen its homeland defense. Denmark will have no difficulty absorbing these articles and services into its armed forces as they are currently operating this aircraft.

The principal contractors will be Lockheed Martin, located in Owego, NY, and Sikorsky, Corporation, located in Stratford, CT. At this time, the U.S. Government is not aware of any offset agreement proposed in connection with this potential sale. Any offset agreement will be defined in negotiations between the purchaser and the contractor.

Implementation of this proposed sale will not require the assignment of any additional U.S. Government or contractor representatives to Denmark.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

THE NEXT AVIATION SKILLS GAP: CAN THE INDUSTRY TRAIN ENGINEERS FAST ENOUGH?



As aircraft fleets expand, maintenance demand increases and aerospace technologies become more complex, the aviation industry faces a critical question: can it develop a skilled workforce at the pace required to sustain safe, reliable and affordable growth?

A workforce challenge behind aviation's growth story

Aviation's future is often discussed in terms of aircraft orders, airport infrastructure, advanced propulsion, digitalisation and sustainable aviation. Yet one essential resource receives considerably less attention: the engineers and technicians who design, manufacture, maintain, inspect and repair aircraft.

The industry is entering a period in which workforce availability could become as strategically important as manufacturing capacity, engine supply and maintenance infrastructure. New aircraft need skilled people to support their production and entry into service. Older aircraft require increasingly sophisticated maintenance to remain operational. At the same time, digital engineering, advanced materials, automation and new propulsion technologies are changing the capabilities that employers need.

Boeing's 2025 Pilot and Technician Outlook estimates that the global commercial aviation industry will require approximately 728,000 new maintenance technicians over the 20 years to 2044, alongside 674,000 new pilots and more than one million cabin crew members. These are long-term workforce projections rather than a measure of current vacancies, but they illustrate the scale of future recruitment and training requirements.

The challenge is not simply to recruit more people. It is to develop a workforce with the right qualifications, practical experience, technical knowledge and safety

culture—and to do so before shortages constrain the industry's ability to grow.

Why the skills gap is widening

Several forces are converging to intensify the demand for aviation professionals.

First, global air travel and fleet expansion create a sustained requirement for engineers and technicians across the aircraft lifecycle. Aircraft manufacturing depends on design engineers, production engineers, machinists, quality specialists and supply-chain professionals. Once aircraft enter service, airlines and maintenance, repair and overhaul (MRO) providers need licensed maintenance engineers, technicians, inspectors and planning specialists.

Second, the industry must manage an ageing workforce in several established aviation markets. Experienced professionals carry valuable knowledge of troubleshooting, inspection, repair and operational decision-making. When they retire, that knowledge cannot always be replaced by recruiting graduates. New employees need time to develop practical judgement, particularly when dealing with unfamiliar faults, complex repairs or situations where safety depends on recognising a small but significant detail.

The United Kingdom provides a notable warning. A Reuters report from July 2026 cited an estimated annual shortage of around 10,000 specialised engineers across its aerospace and defence sector. It also reported that more than half of the country's licensed aerospace engineers were over 50, while fewer than one in ten were under 30. These figures relate to the UK aerospace and defence workforce, not the entire global aviation industry, but they highlight the risks posed by an ageing talent pool and an insufficient flow of younger entrants.

Third, aviation competes with other industries for engineering talent. Software, artificial intelligence, electronics, automotive technology, energy and advanced manufacturing all seek people with analytical, digital and engineering skills. Aerospace careers offer technical depth and long-term value, but the industry must communicate those opportunities clearly and provide attractive entry routes.

Finally, advanced aircraft systems are reshaping the skills required. Modern maintenance increasingly involves digital diagnostics, complex electronics, data analysis, software-controlled systems and predictive maintenance. Future professionals will still need strong mechanical and engineering fundamentals, but they must also understand how physical systems interact with software, sensors and digital records.

Training is not the same as producing job-ready engineers

One of the central weaknesses in workforce planning is the assumption that expanding enrolment in engineering courses will automatically solve the skills shortage.

A qualification is a starting point, not a guarantee of workplace readiness. Aviation is safety-critical, highly regulated and dependent on established procedures. Students must develop practical competence, understand documentation requirements, work under appropriate supervision and learn when to stop and seek further guidance.

Aircraft maintenance illustrates this difference particularly clearly. Formal knowledge examinations and training programmes must be supported by practical experience, task competence and the applicable licensing requirements. In India, for example, the Directorate General of Civil Aviation's CAR-66 sets out requirements for aircraft maintenance engineer licensing and the conditions governing its validity and use. Training capacity therefore needs to be aligned with the regulatory framework as well as employers' operational requirements.

Institutions also face practical constraints. Aircraft, engines, components, tools, workshops and simulators require investment and maintenance. Qualified instructors must have the technical expertise and teaching ability to prepare students for real working environments. Access to live aircraft and operational facilities can be expensive or difficult to arrange.

The instructor problem is especially important. Experienced engineers are in demand from airlines, MRO organisations and manufacturers, where operational roles may offer attractive salaries. Training institutions need to offer competitive career paths if they are to retain capable instructors. Otherwise, expanding classroom capacity may not translate into a comparable increase in practical training capacity.

The answer is not to weaken qualification standards or accelerate licensing at the expense of competence. It is to make high-quality training more accessible, better aligned with industry needs and more efficient without compromising safety.

India's opportunity—and its responsibility

India has an opportunity to develop a larger aviation engineering ecosystem. The expansion of domestic air travel, aircraft orders, airport infrastructure and maintenance activity can support demand across airlines, MRO providers, manufacturers, component suppliers and training organisations.

Boeing's 2026 regional outlook, presented at Wings India, projected that Indian and South Asian carriers would require approximately 3,300 new aircraft by 2044. The same outlook indicated a need for around 141,000 new aviation professionals in the region, including approximately 45,000 technicians, over the forecast period. These projections underline the scale of the workforce challenge facing a rapidly developing aviation market.

For India, the strategic question is whether workforce development can progress alongside commercial growth. A larger fleet will require maintenance capability, engineering support, technical documentation, component repair,

quality assurance and specialist expertise. If these capabilities are not developed at the same pace, growth may create greater dependence on overseas services and imported technical expertise.

India should therefore treat aviation skills as part of its broader aerospace industrial strategy—not as a separate education issue.

This means connecting engineering colleges, aviation training organisations, airlines, MRO providers, original equipment manufacturers and component suppliers through structured partnerships. Employers should help define course content, provide access to practical facilities, offer internships and apprenticeships, and communicate the competencies expected from entry-level employees.

Training institutions, in turn, should provide employers with a clearer view of what graduates can do, what supervised experience they still require and where additional training is needed. Regular feedback from industry can prevent courses from drifting away from operational realities.

Five priorities for building the next-generation workforce

1. Expand apprenticeships and earn-while-you-learn pathways : Aviation needs stronger routes from education into employment. Structured apprenticeships can combine classroom learning with supervised workplace experience, allowing students to develop practical skills while giving employers a direct role in workforce development.

Paid placements and transparent career progression would make technical aviation careers more accessible to young people who cannot afford long periods of unpaid training. Apprenticeship programmes should have clear competency milestones and consistent assessments.

2. Modernise training without replacing hands-on experience : Digital tools, virtual reality, augmented reality and simulation can help students understand complex systems, practise procedures and repeat scenarios that might be difficult to reproduce in a workshop. Data-driven training can also identify where students need additional support.

However, technology must complement, not replace, supervised practical experience. A simulated task can build familiarity, but it cannot by itself demonstrate competence in every real-world maintenance or manufacturing environment.

3. Make continuous learning part of the job : Training cannot end when an engineer receives a qualification or licence. Aircraft designs, maintenance procedures, digital systems, materials and regulatory requirements evolve. Employers should establish ongoing professional development programmes that allow experienced staff to update their skills while helping younger colleagues develop technical judgement.

Knowledge transfer also deserves formal attention. Mentoring, structured handovers, technical case reviews and documented lessons from maintenance work can help organisations preserve expertise as experienced personnel retire.

4. Build pathways into emerging technologies : The next aviation workforce will need both traditional engineering competence and new specialisations. These include avionics, software and systems integration, digital twins, predictive maintenance, cybersecurity, advanced manufacturing, composite structures, electric propulsion and sustainable aviation systems.

The industry should not assume every engineer needs to master every emerging technology. Instead, foundational engineering education should be combined with focused technical pathways, allowing professionals to specialise as market requirements develop.

5. Improve the attractiveness and accessibility of aviation careers : Outreach needs to begin before students make major education and career decisions. Schools should be introduced to the variety of aviation careers, including maintenance, manufacturing, materials, electronics, testing, quality, data and systems engineering—not just piloting.

Scholarships, financial support, work placements and regional training



partnerships can widen access. Employers should also demonstrate that technical careers provide professional recognition, opportunities for advancement and meaningful involvement in technologies that keep people and economies connected.

Can artificial intelligence close the gap?

Artificial intelligence and automation can support training, maintenance planning, technical documentation searches, fault analysis and predictive maintenance. Used carefully, these tools may help engineers find relevant information faster, identify patterns and reduce certain administrative burdens.

They will not eliminate the need for qualified human judgement. Aviation professionals must understand the limitations of automated recommendations, verify information against approved technical data and follow authorised procedures. Accountability, safety decisions and regulatory compliance cannot be delegated blindly to a software system.

AI may also intensify competition for digital talent. The industry must make its technical roles attractive to candidates who could otherwise choose careers in software or other technology sectors. The strongest future workforce strategy will integrate digital capability with deep knowledge of aircraft and engineering.

A shared responsibility for industry and government

No single organisation can solve aviation's skills gap. Governments can support technical education, apprenticeships and training infrastructure, while regulators can provide clear competency and licensing frameworks. Universities and specialist training institutions can modernise curricula, and employers can commit to placements, instructor development and longer-term workforce planning.

Industry associations should help identify regional shortages and emerging occupational needs. Companies can also collaborate on foundational training where individual organisations cannot justify building complete programmes independently, while maintaining the security, confidentiality and quality controls

required for specialised work.

Crucially, workforce planning needs measurable outcomes. Enrolment figures alone are insufficient. Stakeholders should track course completion, practical training access, time to competency, licensing outcomes, graduate employment, retention and the availability of qualified instructors. These indicators would help distinguish an apparent increase in training capacity from a genuine improvement in workforce readiness.

Conclusion: The industry must train ahead of demand

Aviation cannot expand sustainably through aircraft orders and infrastructure investment alone. It also needs the people capable of designing, building, inspecting, maintaining and improving its systems.

The coming skills challenge is particularly significant because engineering expertise takes time to develop. An apprentice can be recruited quickly, but technical judgement, specialist experience and a strong safety culture are built over years. Waiting until shortages become operational constraints will leave employers competing for a limited pool of qualified professionals.

For India and other growing aviation markets, the opportunity is to build workforce development into long-term industrial planning. For established aerospace nations, the priority is to renew ageing talent pipelines, protect technical knowledge and attract new generations to engineering careers.

The central question is no longer whether aviation will need more skilled engineers and technicians. It is whether governments, training institutions and industry can work together quickly enough to prepare them—without compromising the standards on which aviation safety depends.

The next competitive advantage in aviation may not be defined only by who can order or manufacture more aircraft. It may also belong to those who can train, retain and develop the skilled people needed to keep those aircraft safe and serviceable.

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