



**INDIGO STRENGTHENS INTERNATIONAL
CONNECTIVITY WITH DIRECT FLIGHTS
BETWEEN MUMBAI AND ISTANBUL**



**CHINA AIRLINES FINALIZES
LANDMARK ORDER FOR UP TO 24
BOEING 787 DREAMLINERS**

AVIATION

India's premier aviation monthly magazine

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UPDATE



THE VISIONARY SPACE MAN

DR SUBBA RAO PAVULURI

CHAIRMAN AND MD, ANANTH TECHNOLOGIES LIMITED

IndiAirport

An International Expo & Conference on Airport Technology

22 23 24 NOVEMBER 2022

INDIA EXPO CENTRE MART, NOIDA, NCR, INDIA

Exclusive Show on
**Airport
Technology**
in India

INDIAIRPORT Exhibition to be organized on **Airport Technology**, Supported by **GATE - German Airport Technology & Equipment & Federal Ministry for Economic Affairs and Climate action of Germany**.

Radeecal Communications, India partnered with **IFW Expo Heidelberg GmbH, Germany** to organize **INDIAIRPORT Exhibition** as Pilot project at India Expo Center Mart, Noida, NCR, India during 22-24 November 2022. **GATE - German Airport Technology & Equipment & Federal Ministry for Economic Affairs and Climate action of Germany** announces their Supporting Partnership & Supporting authority respectively for the show. A formal announcement made from PHD Chamber of Commerce & Industry will join this initiative as Industry Partner.

After the impact of Covid Pandemic Civil Aviation, industry is looking to optimize and forcing itself to revive to pre-Covid numbers. Whereas **Government of India & PM launches Gati Shakti- National Master Plan** for infrastructure development in India with wide focus of developing and establishing domestic air connectivity via building new airport at revolutionary pace.

We aim to support the initiative of **Government of India** and creating a **platform**, IndiAirport as the first exclusive physical exhibition offering an ideal opportunity vide displaying of the latest technologies for the effective airport solutions and high quality services. The participants of the airport products, services and solutions to meet and engage with senior and middle management from **airports, airlines, government agencies, regulators, ground handlers, architects, engineers, consultancies, suppliers and the buyers will have an unparalleled access to all encompassing network opportunities**. This exhibition to witness around 200 exhibitors (National as well as International Private and Government Units/ Departments). These three days of Exhibition and Conference planned with the vision, **"Our government has the honor of bringing an aviation policy that is transforming the sector."** **"Atma Nirbhar Bharat"** and **"Make In India"** in support of our Hon'ble Prime Minister- **Shri Narendra Modi**.

India is on the path to develop its greatest air connectivity since the independence, as per the Civil Aviation Minister Jyotiraditya Scindia, Indian Airport industry to attract 1 Trillion Rs. Of investment by Year 2024 and hoping the total passenger traffic to rise to 400 million by 2023-24. As per Civil Aviation Minister Jyotiraditya Scindia until 2014, only 74 airports were built in the country, following the new government in 2014 in next 7 years another 66 new airports were added to the list of **total 140 airports in the country**, which we resolve to take to 220 by 2025, he said.

Considering rising market for the companies related to airport development and contributors of airport technologies are highly encouraged to participate in the only, standalone show of the industry named INDIAIRPORT in the month of November 2022.

- Terminal & Traffic Operation & Management**
- Airport Communication**
- Airport Automation & Robotics**
- Airport Interlogistics & AI**
- Cargo & Baggage Handling**
- Security & Surveillance Systems**
- Green/Smart Airport Infrastructure**

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A cold November morning is always better with a cup of coffee and a good read. We've kept everything clear and crisp to bring you the most engaging and informative magazine this month. This magazine offers all the key requisites to keep you hooked till the end. Relevant and quick updates, catchy graphics, and intriguing stories of the aviation world are incorporated generously throughout.

From Vistara inaugurating the non-stop service between Mumbai and Abu Dhabi to Akasa Air completing its maiden operations, it's been a busy month for the aviation industry, and we're here to tell you all about it. The Honda aircraft company revealed its highly anticipated launch of the HondaJet Elite II. 'Aviation Update' aims to cover top-notch industry advancements around the globe for aviation enthusiasts and inspire a new era of innovation. It details the new laches and flights, commercial aviation and engineering developments, and initiatives associated with defence and military. The DRDO handed over licensing agreements at the 'Bandhan' ceremony of the DefExpo2022, encouraging technology transfers.

This issue also covers the interview of Dr Subba Rao Pavuluri, Chairman and MD of Ananth Technologies Pvt. Ltd. His insights on 'Make in India' and COVID-19's impact on the aviation industry are worth your weight in gold. The future of global aviation has also been discussed.

The journey of arriving at the final draft of this piece was challenging yet exciting at the same time. The team of writers have covered a diverse selection of topics and presented them succinctly. We strive to offer only the best and most relevant content intertwined with valuable information for the readers. The journalists and other experts who have lent their expertise in the form of write-ups cannot be thanked enough. We extend our heartfelt gratitude to all authors who have contributed to this issue.

Now loosen up and flip through these pages to peek into the latest new announcements and the future of aviation in India and worldwide

Kartikeya B.

■ INDIGO FELICITATED FOR WOMEN EMPOWERMENT IN AVIATION AND AEROSPACE BY IWPA



IndiGo was recently felicitated by Indian Women Pilot Association (IWPA) at the 55th Emerald Golden Jubilee for Women Empowerment in Aviation and Aerospace. IndiGo boasts the highest number of women pilots employed by any airline in the World. IWPA acknowledged the airline’s efforts towards creating a more inclusive and gender-diverse work culture by employing over 680 women pilots and setting an example for the world to see. IndiGo also prioritizes women-specific needs as part of the 4-pronged well-being effort, which includes equality, physical, emotional, and social.

Capt. Ashim Mitra, Senior Vice-President: Flight Operations, IndiGo, said, “We are extremely grateful to IWPA for recognizing IndiGo’s efforts towards women empowerment. At IndiGo, we are incredibly proud of being an equal-opportunity employer and always strive to create a culture that embodies inclusivity and diversity in all our practices. India tops the list with 12.4%, twice the global average of women pilots in the world. This award motivates us to aim even higher to witness an even better inclusive work culture that will serve as an example for the aviation industry across the globe.”

Indian Women Pilot Association (IWPA) keeps its doors open not only to active women flyers but also to those who, due to one reason or another, have discontinued to fly and to keep alive their interest in

aviation. The Association acts as a medium also between women wishing to take up flying and the authorities concerned with aviation.

■ INDIGO STRENGTHENS INTERNATIONAL CONNECTIVITY WITH DIRECT FLIGHTS BETWEEN MUMBAI AND ISTANBUL



IndiGo has announced the launch of direct flight between Mumbai-Istanbul. These new routes and additional frequencies will enhance international connectivity between India & Turkey and beyond, through IndiGo’s code share with Turkish Airlines.

Mr. Vinay Malhotra, Head of Global Sales, IndiGo said, “In line with our vision to strengthen international connectivity from India, we have launched a new connection between Mumbai- Istanbul. This will enhance international capacity and offer more options to the consumers. Istanbul is a major city in Turkey which is world-famous for its rich history and culture, stunning scenery, magnificent structures, and a plethora of aspects. Istanbul is a prominent center of trade and commerce. Mumbai, the commercial capital of India, is a mix of iconic old-world charm architecture, strikingly modern high rises, cultural and traditional structures, and whatnot. Mumbai is all about art, history, culture, food, theatre, cinema, nightlife, and a lot more. We will strive to stay true to our promise of affordable fares, on-time performance, courteous and hassle-free service across wide network.”

This connection will further enhance tourist footprint in Istanbul, offering easy access to attractions like Hagia Sophia Mosque, Dolmabahce Palace, Bosphorus Strait, Istanbul Sea Life Aquarium, Blue Mosque, Grand Bazaar and Spice Bazaar, Turkish and

Islamic Arts Museum and Istanbul Cevahir Mall. These flights will not only promote international tourism, trade, and commerce, but also make travel affordable to these destinations through direct connections and additional capacity.

■ VISTARA INAUGURATES NON-STOP SERVICE BETWEEN MUMBAI AND ABU DHABI



Vistara inaugurates non-stop, daily flights between Mumbai (India) and Abu Dhabi (UAE). The inaugural flight will depart from Mumbai at 1910 Hours (IST) and arrive in Abu Dhabi at 2040 Hours (GST), making Vistara the first-ever carrier to offer the choice of Premium Economy class on the route, in addition to Business and Economy class.

Commenting on the start of the new international route, Mr. Vinod Kannan, Chief Executive Officer, Vistara, said, “We have been steadily strengthening our presence in the UAE and the rest of the Gulf region, and are excited to add Abu Dhabi to our growing international network. UAE’s flourishing business, trade, and tourism make Abu Dhabi a perfect fit in our network. We are confident that travellers will appreciate the choice of flying India and South Asia’s best airline on this route.”

Vistara will accept all eligible customers meeting visa/entry requirements in both countries, as specified by the respective government bodies. Vistara strongly encourages its customers to fully understand these guidelines before making their bookings.

AKASA AIR COMPLETES 60 DAYS OF COMMERCIAL OPERATIONS



Akasa Air has successfully completed the first two months of its commercial journey in building India's greenest, most dependable, and most affordable airline. Speaking at an event to mark the airline's first 60 days of operations, Vinay Dube, Founder and Chief Executive Officer, Akasa Air said, "Our first two months have been very exciting and satisfying as we moved from planning to commercial operations. We have been hyper focussed on establishing and delivering an empathetic, dependable, and reliable flying experience unlike anything witnessed in the Indian skies thus far."

"We are delighted that a significant number of flyers have already chosen to fly with us and are very pleased with the positive feedback we have received on our product and service. It is equally satisfying to see the pride in our employees as they work together to deliver the Akasa Experience," he added.

After the successful completion of two months of its operations, Akasa Air will establish Delhi as the sixth destination on its network and inaugurate its first flight on the Delhi-Bengaluru and Delhi-Ahmedabad routes, on October 7, 2022. Both routes will be served with daily flights in each direction. The airline has announced eight destinations so far, including Mumbai, Ahmedabad, Bengaluru, Kochi, Chennai, Delhi, Agartala and Guwahati being covered with 11 non-stop routes.

Commenting on the occasion, Praveen Iyer, Co-Founder, and Chief Commercial Officer, Akasa Air said, "We are elated by the response we have received as we welcomed on board more than 100,000 passengers within just 60 days of operations. Further strengthening our domestic connectivity

and catering to more flyers during the festive season, we are delighted to be able to add Delhi to our network and connect the capital city to the rapidly growing and vibrant cities of Bengaluru and Ahmedabad. By expanding our network with an aircraft arriving every 15 days, we aim to fulfil our goal of developing a strong pan-India presence and expect to operate 300 weekly flights by October end."

Speaking on product, service and customer experience, Belson Coutinho, Co-Founder and Chief Marketing & Experience Officer, Akasa Air said, "We set out with a promise to be a dependable airline focussing on warm, efficient, and reliable service. We are extremely happy with the reception and feedback on our product and service which motivates us not just to sustain but raise the standard of our service delivery. We will continue to provide our passengers with category-first and personalised product features which help Akasa will create a satisfied and loyal base of customers in the months to come."

"Further, as we continue with our vision to create an inclusive and humane travel experience, Akasa's pet-friendly service will commence from 1st November 2022, wherein passengers flying on Akasa Air will be able to travel with their pets in the cabin. Taking an additional step to ease the travel experience of pet parents and their wards, we have joined hands with Umeed for Animals Foundation to ensure smooth pet-friendly travel," he added.

BEL, TRITON ELECTRIC VEHICLE (TEV) SIGN MOU



Navratna Defence PSU Bharat Electronics Ltd (BEL) has signed a MoU with Triton Electric Vehicle (TEV), for manufacture of Hydrogen Fuel cells by BEL with technology

transfer from TEV, to meet the requirements of Indian market and mutually agreed export markets.

The MoU aims at tapping the demand for clean energy solutions for various applications including for E- Mobility, by leveraging Government of India's thrust for adoption of clean energy fuels for applications in transport, energy storage etc.

CHINA AIRLINES FINALIZES LANDMARK ORDER FOR UP TO 24 BOEING 787 DREAMLINERS



Boeing and China Airlines announced they have finalized an order for up to 24 787 Dreamliners, as the carrier invests in the fuel-efficient widebody to expand passenger and cargo operations. The deal includes a firm order for 16 of the longest range 787-9 with options for eight additional jets, a landmark purchase that will enable the airline to meet its long-term sustainability goals.

"We are excited to introduce the 787-9 Dreamliner into our operations as we continue to upgrade our fleet with more modern, fuel-efficient airplanes. Adding the state-of-the-art 787 will help us reduce carbon emissions, while also providing our customers with unmatched levels of comfort," said China Airlines Chairman Hsieh Su-Chien. "Our continuous investment in fleet modernization is the cornerstone of our sustainability efforts. The 787's best-in-class efficiency and low operating costs will allow us to expand our network for years to come."

The best-selling model of the Dreamliner family, the 787-9 will allow China Airlines to operate with the lowest trip cost among medium-sized widebodies, while reducing

fuel use and emissions by up to 25% compared to airplanes it replaces. Since entering service in 2011, the 787 family's fuel efficiency, flexibility and range have enabled airlines to open more than 325 new nonstop routes and reduce carbon emissions by 80 billion pounds.

"The 787's superior fuel efficiency and range, combined with China Airlines' existing fleet of 777-300ERs, will enable the carrier to grow efficiently and also expand its global route network," said Ihssane Mounir, Boeing senior vice president of Commercial Sales and Marketing. "This is a milestone order in our continuing partnership with China Airlines, and the market-leading efficiencies of the 787 will play an important role in furthering the airline's sustainability efforts."

AIR CANADA ORDERS 15 MORE A220S FOR A TOTAL OF 60 AIRCRAFT



"The A220 has become an important component in the modernization of Air Canada's fleet and a key part of our narrowbody fleet, thanks to its performance and passenger comfort. Our customers truly enjoy the benefits of the A220, from its quieter cabin, larger overhead bins and comfortable seating. The A220 is the perfect aircraft for our North American network thanks to its economics, and its fuel efficiency also supports Air Canada's commitment to reduce emissions on the way to its goal of net zero emissions from all global operations by 2050," said Mark Galardo, Senior Vice President, Network Planning and Revenue Management at Air Canada.

"We are honored that Air Canada is coming back for more A220s. This demonstrates the value the aircraft is bringing and we are proud to provide our customer with

a high level of flexibility, great economics and a real passenger-appeal," said Christian Scherer, Airbus Chief Commercial Officer and Head of International. "With already over 30 aircraft in service with the airline, the A220 has established itself as an efficient route-opener, as well as mainline workhorse, strengthening the carriers' continental network while delivering on Air Canada's ambitious decarbonization targets. We thank Air Canada for their continued trust in Airbus."

AKASA AIR OPERATES ITS MAIDEN FLIGHTS ON THE GUWAHATI AND AGARTALA ROUTE



Akasa Air inaugurated its first flights on the Guwahati and Agartala route taking the total number of destinations on the airline's network to eight cities. With its first Through Flight product offering, Akasa Air provides seamless one-stop connectivity between Bengaluru and Agartala with no change of aircraft required at Guwahati.

Honourable Chief Minister of Tripura, Shri. Prof. (Dr.) Manik Saha-ji, along with Honourable Minister of Agriculture & Farmers Welfare and Tourism & Transport, Shri Pranajit Singha Roy-ji, inaugurated the maiden flight in the presence of Shri Kailash Chander Meena-ji, Airport Director, Maharaja Bir Bikram Agartala Airport. Both guests-of-honour officially flagged off the event and extended their wishes on the commencement of Akasa Air's operations while addressing the gathering.

In addition, strengthening its pan-India network connectivity, the airline has also added two additional double daily non-stop flights on the Bengaluru-Chennai route starting today. Akasa Air has been

progressively expanding its operations and is now flying along a total of eleven non-stop routes along eight cities - Ahmedabad, Bengaluru, Kochi, Chennai, Mumbai, Delhi, Guwahati, and Agartala. The airline is currently operating 30 daily flights and will be crossing 44 daily flights by October end. Further, the airline expects to cross the 300 weekly flights mark by the end of October 2022.

TUI SELECTS EMBRAER E195-E2



TUI Group has selected Embraer's E195-E2, the quietest and most efficient aircraft under 150 seats, to join the TUI fly Belgium fleet. TUI, one of the world's leading tourism groups, will take delivery of three E195-E2 from AerCap on long-term lease. The aircraft, from AerCap's existing fleet and powered by Pratt & Whitney GTF engines, will be delivered in a comfortable 136 seat, single class configuration, in the first half of 2023.

"We are thrilled to add the E195-E2 to our Belgium fleet. Operating on short and medium haul routes, the new airplane is the most efficient aircraft in the market. It uses less fuel, has a longer range, while at the same time is 50% quieter and emits up to a third less carbon dioxide. The airplanes will operate mostly out of Antwerp, from where they will fly to more distant airports, which will allow us to expand into new holiday destinations from Northern Belgium", said Marco Ciomperlik, Chief Airline Officer, TUI Group.

"The selection of the E195-E2 is an important milestone to make TUI's fleet even more efficient in support of our sustainability goals. Working together with AerCap, Embraer and Pratt & Whitney, we have agreed on an attractive package that enables TUI to provide travellers

from regional airports in Belgium an even better start to their holidays,” added Tom Chandler, Managing Director Fleet and Asset Management, TUI Group

“We are very pleased to announce the lease placement of three E195-E2s with TUI. AerCap has a long history of working with TUI and we are excited to be a part of their fleet renewal plan,” said Peter Anderson, Chief Commercial Officer of AerCap. “The E195-E2s are the perfect aircraft to support TUI’s operations with greater versatility and improved efficiencies, enabling them to meet their sustainability commitments. We wish TUI every success with the E2-Jets, and we look forward to working with them as these aircraft deliver.” Martyn Holmes, Chief Commercial Officer, Embraer Commercial Aviation, added,

“We welcome TUI, already operators of the first generation E190, to the E2 family of operators. The economics of the E195-E2 combined with its comfort, is a win win for TUI – allowing the operator to increase capacity and delight their guests, while still reducing fuel costs and lowering emissions. We’re pleased to continue our long relationship with TUI and thank AerCap for their partnership.”

■ INDIGO CARGO LIVE; INDUCTS THE FIRST A321 P2F FREIGHTER



Building on the success of the CarGo business in the recent years, IndiGo, India’s leading carrier has received its first A321 Freighter aircraft, converted from passenger jet to a full freighter configuration. The initiative will make best use of the natural synergies that IndiGo offers, using the same pool of pilots and engineers that fly and service its current fleet. The aircraft will be used for both domestic and international missions by transporting products such as

valuables, express shipments, perishables, general cargo, documents, and couriers. IndiGo leased the aircraft from funds serviced by Castlelake Aviation Holdings (Ireland) Limited, part of a global alternative investment firm with 17 years of tenure investing in, financing and managing aviation assets.

Mr. Mahesh Malik, Chief Commercial Officer-CarGo, IndiGo said: “We are pleased to receive our first A321 freighter aircraft in 6E fleet. CarGo has always been a success story for us especially highlighted during the pandemic. The CarGo business brought in revenues when the scheduled commercial flights were at a standstill. Our partnership with the Airbus for Freighter programme will further help strengthen our business in the CarGo segment, and act as a strong engine of economic growth for the country. We remain optimistic on the future of Indian aviation, clearly, and the place of CarGo within it – and the expansion into a true freighter fleet is a testament of this confidence.”

The A321P2F (Passenger-to-Freighter conversion) is the most efficient narrow-bodied freighter available, offering 24 container positions and supporting a payload of up to 27 tonnes. These are being converted through a programme involving ST Engineering and Airbus with their joint venture, Elbe FlugzeugWerke (EFW). The aircraft is uniquely capable for IndiGo, using our current vast pool of A320 family pilots, and able to service markets between China in the east and the Gulf in the west, not forgetting the CIS countries to the north.

■ IAG CONFIRMS ORDER FOR AN ADDITIONAL 37 A320NEO FAMILY AIRCRAFT

International Airlines Group (IAG) has confirmed an order for 37 additional A320neo aircraft, following shareholder approval. The latest order follows earlier agreements for 22 A320neo Family (17 A320neos, 5 A321neos) announced in March and June 2022, taking the total for the year to 59 single aisle aircraft.

“IAG operates Airbus aircraft extensively in its fleet making it one of the largest Airbus customers globally. These latest generation aircraft will be a key part of IAG’s plan to achieve net zero emissions by 2050”, said Christian Scherer, Chief Commercial Officer and Head of Airbus International.

■ INDIGO INTRODUCES 8 NEW FLIGHTS

IndiGo has announced the launch of 8 new exclusive flights on the Bhopal-Udaipur, Ahmedabad-Jammu, Ranchi Bhubaneswar, and Indore-Chandigarh routes in its winter schedule for 2022. Out of these new connections, Bhopal-Udaipur flight will be an RCS route and will increase accessibility between the states.

Mr. Sanjay Kumar, Chief Strategy and Revenue Officer, IndiGo said, “We are pleased to enhance connectivity and accessibility by introducing exclusive flights on new domestic routes between seven states. We will start direct flights between Bhopal and Udaipur under the UDAN scheme. Enhanced connectivity between the political and commercial capitals of these states will help bolster economic growth through increased trade opportunities and tourist footprint. We will strive to stay true to our promise of affordable fares, on-time performance, courteous and hassle-free service across our wide network.”

These destinations are known for their breathtaking scenic tourist locations and serve as manufacturing centers of various industrial goods. Ranchi provides easy access to numerous waterfalls located in the close vicinity of the city. Ahmedabad is situated on the banks of Sabarmati river and is known for its world-famous cotton textiles, a wide variety of mouth-watering snacks and diamond cutting. Jammu is famous for its temples and its beautiful palaces, forts, forests and powerful ziarats. Bhopal is known as the City of Lakes due to its various natural and artificial lakes and has major industries engaged in producing cotton textile, jute, and electrical products. Bhubaneswar is known for its temples; the city is a major centre of attraction for tourists from far and wide. Udaipur is righteously known for its rich historical

wealth in terms of forts, palaces, and lakes. Chandigarh has been known as the beautiful city with an ode to its cleanliness that compliments the tourist destinations. Speaking about Indore, it boasts of rich history and rapid industrialization with the prominence of a thriving cotton handloom industry, magnificent palaces and temples, street food and night markets. Enhanced accessibility in these cities will help in magnifying the socio-economic and cultural growth of the country.

■ **SALAMAIR, OMAN'S LOW-COST CARRIER, SELECTS THE EMBRAER E195-E2 FOR NEXT STAGE OF GROWTH**



SalamAir has signed a firm order with Embraer S.A. for six E195-E2, with options for a further six aircraft. The E195-E2, the quietest and most efficient aircraft in its class, will be delivered in a comfortable dual class configuration with 135 seats, beginning at the end of 2023. The deal, which will be added to the Q3 backlog, is valued at US\$934.6 million, at list price with all options exercised.

The Muscat based low-cost carrier has opted for the E195-E2 to join and complement their all Airbus narrowbody fleet for the benefits and flexibility right-sizing provides; protecting yields while growing frequencies, and developing new markets and city pairs profitably.

Captain Mohamed Ahmed, CEO of SalamAir, said, "The aircraft will grow to be a core part of our fleet portfolio. It is exhilarating for us to be the first airline in the Middle East to fly the incredible E195-E2. Embraer's aircraft represents the best environmental efficiency, operating performance, and passenger comfort. The aircraft's sophisticated aerodynamics, novel wing

design and new technologies enable its exceptional energy efficiency. These aircraft are perfect for the next frontier of our growth. They will allow the airline to open new local and regional cities and increase its frequency to these destinations due to its fuel efficiency and capacity, which suits the needs of these markets. The new fleet will be used on domestic flights initially, including the 4 oil fields and 4 international airports within Oman, as we receive more aircraft we will be able to use them on regional airports in neighbouring countries which today are not connected to Oman.

Arjan Meijer, President and CEO Embraer Commercial Aviation, added, "It's great to be growing in the Middle East, a region that has often focused on long-haul travel. For Embraer it is also important to see a pioneering low-cost carrier like SalamAir recognize the value that E-Jets deliver in the LCC scenario, complementing larger narrowbodies to grow and maintain networks."

■ **INTERNATIONAL AIRLINES GROUP (IAG) SHAREHOLDERS APPROVE BOEING 737 ORDER**

International Airlines Group (IAG) has announced that its shareholders approved an agreement with Boeing to order a total of 50 737-8-200s and 737-10s, plus 100 options.

Boeing and IAG announced the agreement that was subject to shareholder approval in May 2022. The firm order for 50 737s will be reflected on Boeing's Orders & Deliveries website in November.

"We welcome today's decision by IAG's shareholders to approve a firm order for 50 737-8-200s and 737-10s, with options for 100 more, and we look forward to working with IAG on reintroducing the 737 in to the Group's fleets," said Ihsane Mounir, Boeing's senior vice president of Commercial Sales and Marketing.

The largest model in the family, the 737-10 seats up to 230 passengers in a single-class configuration and can fly up to 3,300

miles. The fuel-efficient jet can cover 99% of single-aisle routes, including routes served by 757s.

The 737-8-200 will enable IAG to configure the airplane with up to 200 seats, increasing revenue potential and reducing fuel consumption.

■ **AIRBUS TO JOIN AMAZON AIR FLEET WITH TEN A330-300P2F CONVERTED FREIGHTERS**

Amazon Air has signed a firm agreement to lease ten A330-300P2F freighters from Altavair, taking advantage of the A330's capacity and economics to help fulfil its one-day delivery promise to Amazon Prime customers. The aircraft will be operated for Amazon by Hawaiian Airlines, which has had A330s as a key element of its fleet since 2010. The ten airframes are being converted from passenger aircraft to freighters by Elbe Flugzeugwerke GmbH (EFW), the centre of excellence for Airbus Passenger-to-Freighter (P2F) conversions.

"We're thrilled to welcome Airbus to our Amazon Air fleet," said Philippe Karam, Director, Amazon Global Air Fleet & Sourcing. "These A330-300s will not only be the first of their kind in our fleet, they'll also be the newest, largest aircraft for Amazon Air, allowing us to deliver more customer packages with each flight."

Amazon Air transports customer packages over longer distances in shorter timeframes to deliver on its customer promise of fast, free delivery. The first of their A330-300P2F aircraft is expected to join the Amazon Air fleet in late 2023.

"The endorsement of our freighters by Amazon speaks volumes about the market value of the A330 and the position Airbus wide-bodies are gaining in the cargo market," said Christian Scherer, Airbus Chief Commercial Officer and Head of Airbus International. "Amazon has built a reputation around delivering their goods to our doorsteps with extraordinary speed and consistency, and we're very proud that our aircraft are trusted to become a key link in that remarkable logistics chain."

Bombardier Introduces Executive Cabin, Industry's Most Spacious Three-Workspace Interior for Global 7500 and Global 8000 Aircraft

Bombardier unveiled its new Executive cabin for the Global 7500 and Global 8000 aircraft, featuring its unique open office concept and spacious three workspace interior designed to maximize corporate collaboration, productivity and networking with fellow passengers. With three workspaces, each 12 feet in length, the Executive cabin offers the unprecedented flow and leg room, enabling teams to creatively utilize space to remain productive in flight and rested on arrival for meetings or events.

The new Executive cabin also introduces novel configuration and seating options, including the innovative Nuage Cube, a versatile piece of furnishing that during flight can be moved about the cabin and used as a seat, stool, or small table.

The Executive cabin adds to the already class-defining and uncompromising features of the Global 7500 and Global 8000 aircraft, such as the industry's smoothest ride, cutting-edge cabin innovations, top speed and best runway performance. Potential customers of the Global 7500 and Global 8000 aircraft can also opt to configure their aircraft with four living spaces if preferred.



"With the introduction of the new Executive cabin, Bombardier once again is showcasing that our team is second to none when it comes to continuously improving cabin design on its world-renowned and record-setting aircraft, further solidifying its position as the leader in business aviation today," said Éric Martel, Bombardier's President and Chief Executive Officer. "The new Executive cabin provides Global 7500 and Global 8000 customers with the productivity configuration they need to transform their aircraft into the ultimate business tool – the most impressive corporate purpose-built business jets in the skies today.

Comfort and connectivity are essential elements of the Executive cabin's innovative design and the three workspaces offer their own unique attributes. The Executive cabin's Office Suite is equipped with four (4) industry-defining Nuage seats and features the most leg room in its class – and each seat boasts its own large side table for a highly efficient workspace. The Executive cabin's Conference Suite is designed to maximize productivity with its efficient, elegant conference grouping, opposite an ultra-large credenza with an integrated flip up monitor – the perfect videoconference or presentation option. And finally, to facilitate confidential conversations and for added privacy and tranquility, the C-Suite provides an ideal location to review a presentation, host a private conversation or take a moment to relax and freshen up following a long journey.

Both three- and four-suite configurations will also incorporate the revolutionary features that set it apart in terms of passenger experience: the Soleil circadian-based cabin lighting system to help combat jet lag; revolutionary cabin entertainment control and connectivity via the intuitive nice Touch CMS and OLED touch dial; Bombardier's l'Opéra directional audio sound system and available 4K monitor.

Gulfstream announces G700 world tour

Gulfstream Aerospace announced the two fully outfitted Gulfstream G700 production test aircraft will embark on an extensive world tour to showcase Gulfstream's flagship and the most spacious cabin in the industry to customers. The G700 world tour will commence directly after the two aircraft appear at the 2022 NBAA Business Aviation Convention & Exhibition (NBAA-BACE) and builds on the test program's impressive real-world performance capabilities, which already include eight international city-pair speed records.

"These outfitted G700 aircraft currently flying feature two of the most stunning interiors in business aviation," said Mark Burns, president, Gulfstream. "After being on display for the industry at NBAA-BACE in Orlando, Florida, the G700 will fly to major events and private showings across 20 cities and six continents as part of our efforts to give customers direct access to the aircraft. The strategic route of the G700 world tour reflects the strong demand we are seeing in established markets, such as Europe and the Middle East, and in growing markets for us, including Southeast Asia, India and Africa."

The G700 world tour will take the aircraft to South America, Europe, Africa, Asia and Australia as well as events including the Future Investment Initiative in Riyadh, Saudi Arabia; the Bahrain International Airshow; and the Middle East & North Africa Business Aviation Association (MEBAA) Show in Dubai.

Honda Aircraft Company Reveals Latest Aircraft – the HondaJet Elite II

Honda Aircraft Company revealed the “HondaJet Elite II” at the 2022 National Business Aviation Convention and Exhibition (NBAA-BACE), a new upgraded aircraft that features a host of key advancements in performance and comfort. The company also announced the introduction of automation technologies.

Through Honda Aircraft Company’s constant pursuit of innovation, the HondaJet Elite II is the fastest, highest, and farthest flying aircraft in its class, achieving a whole new level of performance that redefines what

it means to be a very light jet. With an expanded range of 1,547 nm, the Elite II now extends HondaJet’s reach to more destinations while maintaining its position as the most fuel-efficient aircraft in its class. The addition of ground spoilers completes the performance upgrades, optimizing takeoff and landing field performance.

“The HondaJet Elite II once again pushes the boundaries of its category on all fronts of performance, comfort, and style,” said Hideto Yamasaki, President & CEO of Honda Aircraft Company. “We are also excited to take our aircraft forward on the journey of automation by bringing new technologies to the market next year.”

With the announcement of its journey of automation, Honda Aircraft Company also plans to introduce Autothrottle and Emergency Autoland by the end of 2023. This direction encapsulates the continuous effort to improve the HondaJet through automation, augmentation, and situational awareness technologies, to enhance operational safety and reduce pilot workload while aligning with global Honda’s commitment to advances in safety technology.

The HondaJet Elite II features a fully redesigned cabin and the introduction of two new interior design options – Onyx and Steel, featuring new surface materials and colors. The cabin redesign led to a modern luxury of flight experience with a holistic approach to comfort that includes a nose to tail acoustic treatment, creating a tranquil space for both passengers and pilots. Outside, the Elite II introduces a bold new Black Edition paint scheme that further differentiates the ramp appeal of the aircraft.



Falcon 10X Enters Production Phase

With parts manufacture now in full swing, Dassault Aviation is gearing up to produce initial subassemblies for the Falcon 10X, which will set a new standard in the ultra-long range business jet segment.

“All the elements for another great Falcon are literally coming together in our various production facilities,” remarked Dassault Aviation Chairman and CEO Eric Trappier. “This new aircraft, the largest purpose-built business jet on the market, will embody the latest technology and set a new benchmark for passenger experience.”

The first long-lead items including the landing gear, have been manufactured and are ready for assembly. A first fully representative composite wing is also being prepared for static and fatigue testing.

Development of the aircraft’s Rolls-Royce Pearl 10X is progressing well, too. Tests to date have demonstrated the reliability of the engine and shown it will fully meet its performance requirements. To date, Rolls-Royce has logged over 1,000 test hours on the 18,000 pound-plus thrust engine, including runs on 100 percent sustainable aviation fuel (SAF).

Ground tests of the first complete power plant, including its new nacelle and EBU (Engine Build Up), are in preparation.

Rolls-Royce recently broke ground on a new production support facility adjacent to the aircraft final assembly line in Bordeaux-Mérignac. The flight test campaign for the Pearl 10X will take place on a Rolls-Royce flying test bed, scheduled to begin in 2023.

AW609 tiltrotor programme sets major milestone with first production aircraft's maiden flight

The world's first multirole tiltrotor programme, designed to redefine a range of commercial and public services, set a major milestone with the maiden flight of the first AW609 production aircraft. This aircraft introduces unprecedented capabilities under a dedicated 'powered lift category' civil certification now under development. Designated AC5, the aircraft took to the air at Leonardo's Philadelphia-based site on 13th October performing as expected the initial in-flight evaluation of systems and general handling.

The first production aircraft joins a prototype based in the US and two more located in Italy, all currently involved in the last stages of testing activities ahead of (Federal Aviation Administration) FAA certification. AC5 will be retained by Leonardo contributing to customer demonstrations, mission capability evaluation and expansion, and supporting the manufacturer and the operators in the transition from the developmental to the operational phase once on the market. Currently, three customers' production aircraft are on the dedicated final assembly line at various stages of construction in Philadelphia.



Gian Piero Cutillo, MD Leonardo Helicopters, said: "This amazing achievement adds to several milestones for the AW609 programme over the last year, through its technical progress and during its public appearances. Together this testifies the level of maturity this groundbreaking programme has reached and our credentials to pioneer in the emerging fast rotorcraft domain. I thank our integrated team of skilled and committed people across our geographies for making all of this possible, as they continue to work towards certification."

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Textron Aviation Announces Order for 55 Cessna Skyhawks to Support Pilot Training for ATP Flight School

Textron Aviation announced an agreement with ATP Flight School for the purchase of 55 Cessna Skyhawk aircraft. The piston aircraft will add to ATP's existing fleet of nearly 200 Skyhawks, across 74 training centers nationwide.

"This order announcement demonstrates our continued long-term relationship we have with ATP in support of their flight training needs," said Chris Crow, vice president, Textron Aviation Piston Sales. "For more than six decades, the legendary Cessna Skyhawk has been one of the world's top training aircraft. We are thrilled to see these aircraft utilized to inspire the next generation of professional pilots."

Deliveries of the 55 aircraft will begin in late 2023 and continue throughout 2024. Students in ATP's Airline Career Pilot Program will utilize the new Cessna Skyhawks to train as airline pilots amid unprecedented demand for the skillset. The stable flight characteristics, advanced avionics, and proven dispatch reliability of the Cessna Skyhawk make it a dependable training platform for ATP, who flies 40,000 flight hours per month.

"ATP takes pride in providing Airline Career Pilot Program students with one of the newest, most advanced safety-focused training fleets," said Michael Arnold, director of Marketing, ATP Flight School. "The Skyhawk has proven to be an integral part of the ATP fleet, which system wide delivers 480,000 flight hours and nearly 9,000 pilot certificates issued annually. The new order with Textron Aviation will be essential in continuing to provide students with the fastest path to gain certification and start their careers as airline pilots."



ATR Regional Aircraft Powered by Pratt & Whitney Canada's PW127XT-M Engines Receives EASA Certification



Pratt & Whitney Canada announced that ATR has received European Union Aviation Safety Agency certification for its regional turboprop aircraft powered by the new PW127XT-M engine.

"The PW127XT engine series is the new standard for operating economics, maintenance and sustainability for regional aircraft," said Anthony Rossi, vice president, Sales and Marketing, Pratt & Whitney Canada. "This certification, occurring less than a year after the new engine was unveiled at the 2021 Dubai Airshow, is a testament to the long and collaborative working relationship we have with ATR. This is an important milestone for the program, and we congratulate ATR on this achievement."

The PW127XT engine series offers 40% extended time on wing, 20% lower maintenance costs and 3% improvement in fuel efficiency, which is owed to engine improvements and a step change in sustainability for the regional turboprop. Regional aircraft that are powered by Pratt & Whitney Canada's PW100 turboprop engine families already provide up to 40% improvement in fuel efficiency and related emissions over the flights they serve (up to 400 nm) compared with similar 30-70 passenger regional jet aircraft platforms.

"We designed the PW127XT-M for ATR 72/42 aircraft with the latest materials and technologies to offer improved time on wing and fuel efficiency," said Edward Hoskin, vice president, Engineering, Pratt & Whitney Canada. "For example, we increased the capacity of both the low-pressure and high-pressure compressors, and we enhanced the efficiency of the power turbine. As well, we created a step change in all components cyclic lives supporting the improved time on wing and maintenance intervals."

AFI KLM E&M to team up with Ascendance to explore VTOL maintenance solutions

Air France Industries-KLM Engineering & Maintenance (AFI KLM E&M) has announced that it has signed a Memorandum of Understanding (MoU) with Toulouse-based Ascendance Flight Technologies (Ascendance) to jointly explore collaborations in the areas of line maintenance, component repair, mechanics training and airworthiness management.

Ascendance is currently working on a major take-off and landing aircraft (VTOL) project in Europe, called Atea which comprises a five-seat aircraft with a 400 km range through its Sterna propulsion architecture which has also been developed by the start-up. Sterna is a distributed hybrid electric motorisation, adopting a modular energetic approach to accept conventional fuel, Sustainable Aviation Fuel (SAF) and also hydrogen. The Atea prototype is expected to have its first flight in 2023.



AFI KLM E&M will be hoping to help the start-up, which was established and which has a mission to help decarbonise aviation, by providing both solutions and answers to problems that may be encountered when developing maintenance policies that are operationally and financially efficient.

Air India and Willis Lease Ink Historic agreement ConstantThrust® Engine Sale & Leaseback

Air India has signed a definitive sale and lease back agreement with Willis Lease Finance Corporation for 34 CFM56-5B engines installed on its Airbus A320 family fleet.



The engines will be covered under Willis Lease's ConstantThrust® program, which will deliver significant reliability and cost savings versus a traditional MRO shop visit program. This is the first ConstantThrust® sale and leaseback agreement for aircraft engines by any Indian carrier.

Under the sale side of the transaction, Willis Lease will purchase from Air India 34 engines powering 13 Airbus A321 aircraft and 4 Airbus A320 aircraft. Through ConstantThrust®, Willis Lease will provide replacement and standby spare engines, allowing Air India to avoid potentially costly and unpredictable shop visits on engines powering a transitioning aircraft fleet. Willis Lease will also have an in-country team to co-ordinate and manage the entire programme and all logistics and transportation involved.

Speaking on the agreement, CCO of Air India, Mr. Nipun Aggarwal said, "This is a very unique and landmark transaction which will enable Air India to eliminate the maintenance burden and fully derisk itself from the maintenance cost uncertainty associated with the engines which were not covered under any "Power By The Hour" program with the OEMs. This transaction will allow Air India to derisk itself operationally, improve fleet reliability, reduce cost, and optimize cash flows."

"Air India ran a rigorous process to evaluate all options for managing the substantial maintenance, operational risk and logistical burden these engines would have created, and we are proud that all the benefits of ConstantThrust® rose to the top in the end," said Brian R. Hole, President of Willis Lease. "Air India's selection of ConstantThrust® validates our longstanding belief that traditional options are not the only options for airlines willing to spend the time to fully investigate the benefits of our programmatic solutions."

GKN Aerospace successfully conducts first test run on RM16 engine

GKN Aerospace has successfully completed the first engine run of the state-of-the-art RM16 engine that will power the JAS 39 Gripen E. This landmark enables GKN Aerospace to deliver full RM16 product support to the Swedish Armed Forces, ensuring engine availability for future Swedish Air Force missions.

The RM16 is based on the General Electric F414 aero-engine that powers the F-18 Super Hornet. GKN Aerospace has been collaborating with GE and SAAB to build up the necessary infrastructure to support the RM16. FMV selected GKN Aerospace to be the product support and MRO provider for the RM16 in 2020 with the aim to utilize synergies between the RM12 and the RM16 engine as much as possible. GKN Aerospace is OEM (Original Equipment Manufacturer) and a long-term service provider for the RM12 engine and holder of the military type certificate (MTC).

Martin Wänblom, VP Operations for GKN Aerospace Sweden said: "Today is an important landmark in our proud history to support the JAS 39 Gripen platform. It's great that the first RM16 engine test has been a success and we are looking forward to support the Armed Forces and the Gripen System in the coming years."

Göran Mårtensson, Director General of the Swedish Defence Materiel Administration, said: "Air defence is a vital part of the Armed Forces' operational capability as we continue to protect Sweden. GKN Aerospace has long been an important supplier in the aircraft engine domain, and I am convinced that it is both economically and operationally the best solution to retain this capability in Sweden, especially with the current levels of uncertainty around the world."

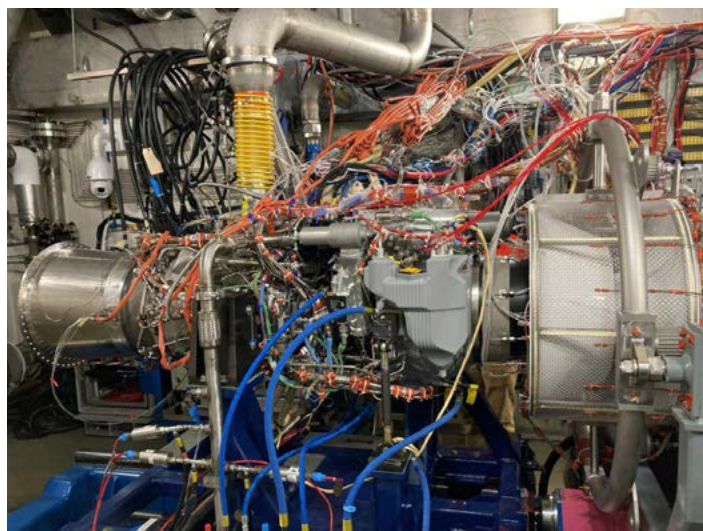
GE Readies Second T901 Engine for Testing

GE Aerospace is accumulating hardware for the second T901-GE-900 development engine that will begin testing next year. The T901, GE's next-generation rotorcraft engine, will power the U.S. Army's UH-60 Black Hawk, AH-64 Apache, and Future Attack Reconnaissance Aircraft (FARA). Engine testing is part of the Engineering and Manufacturing Development (EMD) phase of the Army's Improved Turbine Engine (ITE) program.

"Testing of the first T901 engine was very successful with the engine accumulating more than 100 hours of run time," said Tom Champion, GE's T901 Program Director. "We were impressed with the performance and condition of the engine's compressor, combustor, and turbine sections as well as the 3D-printed (additive) manufactured parts and ceramic matrix composite (CMC) components."

The second T901 engine will undergo performance and controls testing in an upgraded test cell at GE's Lynn, Massachusetts facility. GE upgraded three Lynn test cells for the T901 EMD engine test program. Upgrades included new systems to absorb the engine's increased power, allow for no-load operation, improve instrumentation capability, and advance engine test controls. The second development engine will then travel to GE's Evendale, Ohio, facility for altitude testing.

A total of eight T901 engines will be part of a multi-year test campaign to the Army Military Airworthiness Certification Criteria standards. These standards will ensure an engine meets the Army's requirements for design, production, and airworthiness. Once all testing is complete, the T901 engine will have undergone close to 1,500 hours of full-scale ground testing for preliminary flight rating and close to 5,000 hours of testing for full engine qualification.



Pratt & Whitney GTF Advantage™ Flight Testing Starts on Airbus A320neo Aircraft

Pratt & Whitney announced that Airbus has started development flight testing of the GTF Advantage engine on an A320neo aircraft. This early flight test campaign will continue to mature the engine by testing it in a variety of environments, including hot and cold weather and operation from high-altitude airports. The flight test campaign is an extension of ongoing product development by Pratt & Whitney and Airbus. Engine certification will continue through the first half of 2023, including flights currently underway on the Pratt & Whitney flying test bed in Mirabel, Québec, Canada, as well as extensive endurance testing to ensure product maturity at entry into service. The engine has completed more than 2,400 hours and 7,800 cycles of testing, including a successful test on 100% sustainable aviation fuel (SAF).

"GTF engines already offer the lowest fuel consumption and CO2 emissions for the A320neo family," said Rick Deurloo, president of Commercial Engines at Pratt & Whitney.

"The GTF Advantage engine extends that lead. It also enhances aircraft capability by increasing thrust and protects durability by running cooler. For airlines, this means new revenue opportunities and better operating economics. Our revolutionary geared fan architecture is the foundation for more sustainable aviation technologies in the decades ahead, and the GTF Advantage engine is the next step in that journey."

The GTF Advantage engine lowers fuel consumption and CO2 emissions by up to 1% compared to the current model GTF engine. Capable of a takeoff thrust improvement of 4% at sea level, the engine could enable longer range and higher payload, making it particularly suitable for A321XLR aircraft and unlocking more destinations for airlines. In addition, the engine will offer an increase of up to 8% takeoff thrust at higher altitudes. GTF Advantage will be intermixable and interchangeable with the current GTF engine to ensure maximum operational flexibility.



16 Licensing Agreements for Transfer of Technology for 10 indigenous technologies handed over to 13 industries by DRDO during 'Bandhan' ceremony of DefExpo 2022

Defence Research & Development Organisation (DRDO) handed over 16 Licensing Agreements for Transfer of Technology (LAToT) for 10 DRDO-developed technologies to 13 industries during the 'Bandhan' ceremony of the 12th DefExpo in Gandhinagar, Gujarat on October 20, 2022. Raksha Mantri Shri Rajnath Singh presided over the ceremony, which saw a total of 451 Memoranda of Understanding, Transfer of Technology agreements and Product Launches. Of the 451, there were 345 MoUs, 42 Major Announcements, 46 Product Launches and 18 ToTs. The contribution of Gujarat was 28 MoUs and one Product Launch. It envisages investment worth Rs 1.5 lakh crore. Indian Air Force and Hindustan Aeronautics Limited concluded a contract for 70 HTT-40 indigenous trainer aircraft worth Rs 6,800 crore.

The technologies transferred by DRDO are from the area of electronics, laser technology, armaments, material science, combat vehicles, naval systems and sensors etc. The products include Handheld Ground Penetrating Radar (GPR), Unexploded Ordnance Handling Robot (UXOR), Semi-Solid Metal (SSM) Processing Technology for Aluminum Alloys, High Oxidative and Thermal Stability Oil (DMS Hots Oil-I), Nuclear Shielding Pads for Combat Vehicles, 120mm Tandem Warhead System for Anti-Tank Application, High Energy Material (TNSTAD), Laser-Based End Game Fuze, Multi-kW Laser Beam Directing Optical Channel (BDOC), SHAKTI EW System. These high-technology products will provide impetus to 'Aatmanirbhar Bharat' drive of the Government and boost the defence manufacturing sector through self-reliance, besides enhancing the operational capabilities of the Armed Forces.

Gujarat Governor Shri Acharya Devvrat, Raksha Rajya Mantri Shri Ajay Bhatt, Chief of Defence Staff General Anil Chauhan, Chief of the Air Staff Air Chief Marshal VR Chaudhari, Chief of the Naval Staff Admiral R Hari Kumar, Chief of the Army Staff General Manoj Pande, Defence Secretary Dr Ajay Kumar and OSD, Department of Defence Shri Giridhar Aramane were among those who attended the ceremony.

Dynamatic Technologies Limited Completes the First F-15 Former Assembly for Boeing

Dynamatic Technologies Limited has completed the first F-15 former assemblies for Boeing. This is the first aero-structure, for the latest and most advanced F-15 manufactured in India, a significant milestone for the Indian aerospace and defence industry. This is enabled by innovation and forward-thinking processes, the newest version of the legendary F-15 fighter incorporates the most advanced systems available globally, including next-generation design and technology built on a digital thread.

"The collaboration between Boeing and Dynamatic to transfer technical & artisanal skills for complex assemblies is an example of Deep Industrialisation: 100 percent of the components are indigenously developed by us in addition to final assembly. We are proud to support Boeing's iconic P8, Chinook, and F15 EX programs internationally," said CEO & Managing Director, Dynamatic Technologies Limited, "Make in India for the World," Udayant Malhoutra.

Dynamatic has been associated closely with Boeing as a strategic supplier partner for over a decade now. In September 2021, Boeing awarded the contract for manufacturing assemblies for the F-15 to Dynamatic Technologies.

"The completion of the first made in India aero-structure by Dynamatic Technologies for the F-15 marks a significant milestone in the effort we have put in over the years to help build a strong foundation of indigenous manufacturing capabilities. It is through this scaling up and maturation of our industrial partners' capabilities and capacity that will support India's aspiration to become Aatmanirbhar in aerospace and defence," said Salil Gupte, president, Boeing India.



The President of India Inaugurates HAL's Integrated Cryogenic Engine Manufacturing Facility; Lauds HAL – ISRO Partnership

The President of India, Smt Droupadi Murmu inaugurated HAL's Integrated Cryogenic Engine Manufacturing Facility (ICMF) and said it is not only a historic moment for HAL and ISRO but for the whole of India. "India is the sixth country in the world to have Cryogenic Engine Manufacturing capabilities. The glorious past of HAL and ISRO gives us an assurance that they will play a crucial role in the future", she said.

The President also went around the HAL facility. She virtually laid the foundation stone for Zonal Institute of Virology (South Zone) of NIV, Bengaluru. The Governor of Karnataka Mr. Thaaawarchand Gehlot, the Chief Minister of Karnataka, Mr Basavaraj Bommai and others were present on the occasion.

Referring to Bengaluru as Space City, Mr. Bommai said the state contributed most of the space and defence related manufacturing activities in the country and Karnataka will continue to support the development of science and technology projects in the state to realise the 'Aatmanirbhar Bharat' vision.

Dr. Bharati Pravin Pawar, Union Minister of State for Health and Family Welfare also spoke on the occasion. Dr. Sudhakar K, the Minister for Health, Family Welfare and Medical Education (Govt of Karnataka) was present.

Mr. Somanath S, Secretary, Dept of Space and Chairman of ISRO said India can emerge as a superpower in rocket technology only with the help of HAL which has shown ability to absorb complicated space technology with perfection. ISRO therefore is confident that the entire rocket manufacturing will happen at HAL's facility, he added. Mr. C. B. Ananthkrishnan, CMD, HAL welcomed the gathering.



Collins Aerospace receives milestone certification for combined vision systems

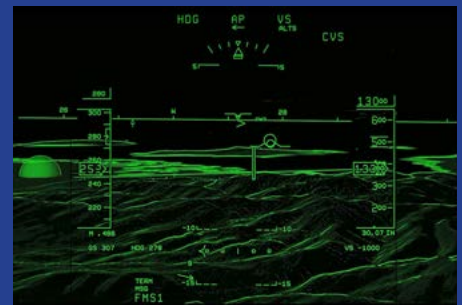
Collins Aerospace has achieved a technical standard order (TSO) for its combined vision system (CVS) for business aviation aircraft. The CVS provides clarity to pilots in all types of weather to confidently and securely navigate aircraft through low visibility situations.

A long-time industry leader in head-up display (HUD) technology, Synthetic Vision Systems (SVS) and Enhanced Vision Systems (EVS), Collins' advanced CVS algorithms blend the full EVS image and SVS into a single conformal view, creating the best possible image on the HUD and primary flight display (PFD) that pilots use to safely and efficiently navigate through challenging environments.

"TSO certification is an important step in our journey to provide dynamic CVS technology to our customers who rely on our vision systems to guide them through low visibility situations in every stage of flight," said Craig Brown, general manager of Vision Systems for Collins Aerospace. "Whether it's poor weather, smoke, dust, demanding terrain or busy airports, CVS clearly and automatically displays the critical visual information pilots need to safely operate their aircraft."

CVS brings together Collins' proven HUD, PFD, SVS and EVS technologies, to present the best view to pilots. Advanced algorithms detect and extract real-time features from the complete EVS image – such as from Collins' EVS-3600 multi-spectral EVS sensor – and integrate them with Collins' feature-rich SVS which accurately presents terrain, obstacles, airports and runways, independent of the visibility conditions. These CVS images are displayed conformally on the HUD and in color on the PFD, providing clarity through low-visibility conditions like smoke, fog and darkness.

Collins' true CVS is a single enhanced view, enabling pilot visibility far beyond what the eye can see. This greatly improves situation awareness, reduces workload by eliminating the need for manual switching between vision systems and enables maximum operational credit by allowing aircraft to continue all the way to the runway surface in low visibility scenarios rather than necessitating a go-around. CVS is ready to support these future operations, such as EFVS takeoff and EFVS approaches in lower visibilities.



U.S. Army Orders Additional Enhanced CH-47F Block II Chinooks

The U.S. Army is continuing to modernize its heavy-lift helicopter fleet with an order for two more Boeing CH-47F Block II Chinooks and long lead funding for additional aircraft.

“Modernizing the Chinook for our Army customer is a priority,” said Ken Eland, Boeing vice president and H-47 program manager. “CH-47F Block II improves readiness, limits future sustainment costs and provides commonality across the fleet. We’re dedicated to making CH-47F Block II the best option for the Army’s heavy lift mission, now and well into the future.” The CH-47F Block II Chinook is powered by cutting-edge technologies — including redesigned fuel tanks, a strengthened fuselage and an enhanced drivetrain.

Last year, the Army awarded Boeing a \$136 million contract for the first four CH-47F Block II aircraft, which began production in April 2022. The Lot 2 order valued at \$63 million brings the total number of aircraft under contract to six. The separate Lot 3 advance procurement contract is valued at \$29 million.

Boeing’s H-47 Chinook Block II expands upon 60 years of partnership with the U.S. Army. During that time, Boeing has delivered over 1,000 Chinooks to the U.S. Army, continuously modernizing the helicopter to meet evolving needs. The U.S. Army and 19 allied countries around the globe rely on the Chinook for its multi-mission capabilities including equipment and troop transport, humanitarian assistance and disaster relief.



BEL signs MoU with MIL

Navratna Defence PSU Bharat Electronics Ltd (BEL) has signed a MoU with Munitions India Limited (MIL), a Defence PSU, to jointly address the requirements of Indian Defence and Export markets in the areas of Ammunition, Explosives and related systems.

Mr Bhanu Prakash Srivastava, Director (Other Units), BEL, and Mr S K Rout, Director (Operations), MIL, exchanged the MoU documents at Defexpo in the presence of Mr Ravi Kant, CMD, MIL, Mr Joydeep Majumder, Executive Director, BEL and other senior officers of BEL and MIL.

The MoU aims at leveraging the complementary strengths and capabilities of BEL and MIL and strengthens the spirit of the Make In India initiative of Government of India, for achieving self-reliance in Defence Sector. The co-operation will enable the companies to jointly address the domestic and Export opportunities in the areas of Ammunition, Explosives and related systems and sub systems.





Aviation Update Editor Kartikeya In conversation with
Dr Subba Rao Pavuluri,
Chairman and MD, Ananth Technologies Limited

ANANTH



Aerospace Systems Facility in Hi-Tec City, Hyderabad



SpaceCrafts Manufacturing Facility, Bengaluru



Launch Vehicle Related Facility, Thiruvananthapuram

Can you describe your journey from the beginning days of your career to becoming a supplier of products to big players in Aerospace sector?

Dr Rao: As I was working in Indian Space Programme of ISRO, I realised the importance commercialisation of Space related products and resigned my good job and started Ananth Technologies to work on Launch vehicle products, satellite products and satellite applications - in all sectors of Indian Space programme. That is why developed Centres in Hyderabad, Bangalore and Thiruvananthapuram. Similarly working for defence research programmes like LCA

etc. The aerospace products are related to Avionics, Navigation, Electro mechanical related, mechanical products. Thus working for Satellite programme - so far contributed extensively to 90 Satellites and 70 launch Vehicles.

What are the Aerospace sectors that Ananth Technologies is serving currently?

Dr. Rao: working for satellite programmes of Low Earth Orbits (LEOS), Medium Earth Orbits (MEOs), Geosynchronous Orbits (GEOS) for Earth observation Satellites (EOS), Navigation Satellites and Communication satellites. Also working for helicopters and LCA.

Give us an insight into your collaborations with multiple companies? What are the prospects achieved so far?

Dr. Rao: Ananth has built cooperation's with Airbus, Antaris, Nexeya, Israel companies etc for manufacturing of Satellites in our facility in Bangalore.

My goal is to make India "Spacecraft Manufacturing Hub" - for global needs.

In general, what are the major challenges the sector is facing today and how is the road ahead? Is PPP the only way to boost India's space business?

Dr. Rao : Since reforms were announced by Hon Narendra Modi , Prime Minister , that opened opportunity for private sector to grow on its own globally. Space economy in India and globally is huge. Particularly India gets various inputs from Space in to developing its economy fast. Space sector contributes immensely for economy.

How did the outbreak of pandemic Covid-19 effect your operations? How did you overcome them?

Dr. Rao: Pandemic did effect operations nationally and internationally. As a result all projects were delayed. We are working hard to compensate for the time lost to the extent possible.

What is your level of participation in ‘Make in India’ Initiative? How is it helping in expanding Ananth Technologies operations in India?

Dr. Rao: The government of India pushing “Make in India “under “AATMA NIRBHAR Bharat “is a great boon to Indian industry. As a result, imports from various OEMS from abroad are restricted with a rider that they must collaborate with Indian industry and manufacture those subsystems and platforms. This resulted in to huge manufacturing opportunities to Indian industries. Now foreign OEMS are also realising that India can work with them from design, development, and manufacturing to testing with best quality processes and economical products. This gives raise to deployment of large scale expertise from Indian side. Thanks to PMs Initiative in this direction.

What is your vision for Indian space market in the coming decade?

Dr. Rao: Indian Space market is huge - for Earth observation satellites coming with high resolution and more revisit time helps collect larger inputs needed for development in various sectors like water resources sector, environmental sector, infrastructure sector etc to name few.

In communication sector, satellites in LEOS, MEOS, and GEOs are undergoing larger technological changes towards higher band widths per transponder, low latency and becoming more economical.

Satellites small and large contribution for Defence sector too in the areas of surveillance, detailed mapping etc. Therefore, my vision is to make “India satellite manufacturing hub “. Since we are also involved in launch vehicle area; we endeavour to make launches from India more economical - and thus entire Space eco system shall be in place soon in India for India and for globe.

MTU Aero Engines AG delegates Dr. Silke Maurer as Chief Operating Officer



MTU Aero Engines Supervisory Board At an extraordinary meeting AG Dr. Silke Maurer (49) is taking over responsibility for the OEM Operations division as Chief Operating Officer (COO). Dr. Silke Maurer has been appointed to MTU Aero Engines Executive Board for a three-year term of office starting on February 1, 2023. Dr. Silke in her new role will take responsibility for the OEM Operations at MTU that are currently being handled by the present Chief Operating Officer, Lars Wagner, who will become CEO on January 1, 2023. Lars Wagner will remain responsible for the Technology & Engineering and the Sustainability of the company in the future.

In the future, OEM Operations will comprise Operations at the sites in Munich (Germany) and Rzeszów (Poland) as well as group-wide responsibility for Procurement & Logistics, Value Stream Management, Enablement, and Corporate Quality.

Gordon Riske, Chairman of Supervisory Board, MTU said, "By appointing Silke Maurer, we have secured a high-profile manager for this demanding role in our high-tech company. She brings extensive experience of the relevant areas of operations and impressed the Supervisory Board with the clarity and sincerity of her leadership style."

Dr. Silke Maurer's most recent job before joining MTU was Chief Operating Officer and a member of the Management Board of the Webasto Group, Munich. Prior to that, she held the same position at BSH Home Appliances GmbH, Munich. For almost 20 years of her career, Maurer, who has a doctorate in engineering, held various management positions in technical areas and human resources at BMW AG, Munich.

Liesbeth Oudkerk joins Qatar Airways Cargo as senior vice president



Liesbeth Oudkerk has been appointed as Qatar Airways Cargo's senior vice president for cargo sales and network planning. She will be responsible for the cargo carrier's sales and freighter network planning, focusing on digital transformation in order to improve customer support as well internal processes, mainly digitalisation which is a key element in Qatar Airways Cargo's new approach to business.

"I am thrilled about my new position and firmly believe in Qatar Airways' vision of the industry. I look forward to bringing my expertise to such a diverse and committed team. I am honoured and proud to accompany it all the way to the top," Oudkerk said.

Since Qatar Airways Cargo prides itself in diversity of its staff, coming from nearly 100 countries, altogether speaking 40 languages and with varied age groups as well as cultural backgrounds, it seems that Oudkerk has found the ideal environment to contribute her expertise and several years of knowledge.

An asset to the Next Generation project, Liesbeth brings with her over 25 years of experience in the airline sector, having worked for KLM, where she occupied leading positions in various departments, including Digital Transformation and Cargo Network & Freighter Management.

Guillaume Halleux, Chief Officer Cargo at Qatar Airways, commented: « We are delighted to welcome Liesbeth to our team. She couldn't have joined us at a better time as we have just set the Next Generation strategy in motion. Her extensive knowledge and expertise of the air cargo industry will be truly invaluable to us in these changing times.

Julien Péchalat appointed Finance Vice President for Safran Electrical & Power



As of October 1st, 2022, Julien Péchalat is appointed Vice President of Economic and Financial Affairs at Safran Electrical & Power, and will sit on its Executive Committee.

Julien Péchalat began his career in 2006 at Ernst & Young as a financial auditor. In 2011, he moved to the United-States and worked first for Ernst & Young and then Deloitte as a Senior Manager, supporting French companies and investment funds with their external growth operations in North America. During this period, he worked for Zodiac Aerospace, as well as a number of other aerospace groups.

In 2015, he joined Zodiac Aerospace's Mergers & Acquisitions department in France, before becoming deputy CFO in 2017. He was tasked, for Zodiac Aerospace, with managing the financial aspects of the merger between Safran and Zodiac Aerospace.

Since 2018, he has been Safran Aircraft Engines' Management Control Director. Julien Péchalat, 40, is a graduate of the Lyon Ecole Centrale (2005) and of the Lyon Ecole de Management (2008).

ATR appoints Rahul Domergue as Corporate Secretary and General Counsel



Rahul Domergue has been appointed Corporate Secretary and General Counsel of ATR, the world number one regional aircraft manufacturer, effective from 1 October 2022. Rahul joins ATR's Executive Committee, reporting directly to the new Chief Executive Officer, Nathalie Tarnaud Laude, and heading the Legal, Ethics & Compliance, Environment & Public Affairs, and Facility Management functions. Rahul succeeds Frédéric Torrea who starts a new role as Head of Export Control at Airbus Helicopters.

Previously Head of Contracts, Litigation and Intellectual Property at Airbus Helicopters since 2012, Rahul started his career in 1999 as a business lawyer for Veolia Environnement in Paris. Rahul joined the Thales Aerospace division in 2002, then NHIndustries in 2007 – a joint venture between Airbus Helicopters, Leonardo Helicopters and Stork Fokker – where he set up and headed the Legal department supporting the NH90 helicopter programme. Since January 2022, he also acted as Crisis Management Team Director within the helicopter division of Airbus.

Rahul is 49 years old and holds a degree from the University of Paris X in English Law and a Masters in International Business Law from the University of Aix-en-Provence.

Lockheed Martin Names Michael Williamson as Senior Vice President of Global Business Development & Strategy



Lockheed Martin announced that Michael Williamson will be the new senior vice president of Global Business Development & Strategy. The appointment is effective Nov. 1.

"The focus on deterrence internationally is greater than ever before, and Lockheed Martin brings unrivaled capability to replenish and upgrade the defense of nations around the world from emerging threats. As we develop the 21st Century Security technologies and capabilities to ensure our customers remain ahead of ready, I can't think of a better leader than Michael Williamson to grow our business worldwide and support our international priorities," said Lockheed Martin Chief Operating Officer Frank St. John. "Michael is an accomplished leader and is an example of the deep bench of talent at our corporation."

Williamson is currently vice president and general manager for Lockheed Martin Missiles and Fire Control (MFC), where he leads operational excellence, a diverse portfolio of products and business enabling initiatives. He also provides strategic oversight of technical, cost and schedule performance execution for the MFC lines of business and enterprise performance.

"I'm so honored and pleased to be part of a great company and team during a unique time in history," said Williamson. "Our 21st Century Security offerings and portfolio will help our global customers deter future conflict and keep their citizens safe."

Airbus Beluga delivers Airbus satellite to Kennedy Space Center

First Airbus Eurostar Neo satellite successfully launched just hours before its twin arrived at KSC Second Eutelsat telecommunications satellite to join its twin in orbit within a month BelugaST fuelled with 30% Sustainable Aviation Fuel (SAF) for Toulouse departure.

A special aircraft landed at the Kennedy Space Center at Cape Canaveral in Florida this weekend: the Airbus BelugaST (A300-600ST). It delivered the Airbus-built HOTBIRD 13G satellite for Eutelsat. This happened a few hours after its twin, HOTBIRD 13F, was successfully launched by a SpaceX Falcon 9 rocket.

The spacecraft are the first members of the new "Eurostar Neo" family of Airbus telecommunications satellites, based on a next-generation platform and technologies

developed with the support of the European Space Agency (ESA), and others, including the Centre National d'Etudes Spatiales (CNES) and the UK Space Agency (UKSA).

This milestone also marks the first time since 2009 that the Beluga has visited the USA – when it transported the International Space Station European module "Tranquility". For this latest mission, the Beluga used 30% Sustainable Aviation Fuel (SAF) for its departure flight from Toulouse – reflecting Airbus' decarbonisation ambitions.

"It is a true honour to consecutively showcase two satellites for our customer Eutelsat: two pieces of European technology at the iconic Kennedy Space Center," said Jean-Marc Nasr, Head of Space Systems at Airbus. "The ability of Airbus to field an autonomous European solution is underscored by the transportation of our satellites in the unique Beluga aircraft – a true example of pan-Airbus synergies!"

Once they reach their orbital position, these two satellites, with more efficient power and thermal control systems than their



predecessors, will be able to broadcast more than 1,000 television channels across Europe, Northern Africa and the Middle East. They will also enhance Eutelsat's ability to provide connectivity for more than 135 million people, as they replace three Eutelsat satellites currently in orbit.

With the advent of the new BelugaXL, based on the larger A330-200 platform, the existing BelugaST fleet is progressively being made available for outsized freight transport services globally. Since the launch of the new Airbus Beluga Transport service in January, the BelugaST has performed missions for various customers worldwide.

Boeing-Built SES Satellites Send, Receive First Signals

Two newly launched Boeing built satellites are sending and receiving signals as they continue their journey to their orbital destinations. The satellites will enable SES, a leader in global content connectivity solutions, to continue delivering C-band broadcast and radio services as well as critical network communications to the United States.

The pair of all-electric propulsion 702SP (small platform) satellites, SES-20 and SES-21, launched at 5:36 p.m. EDT from Cape Canaveral Space Force Station atop a ULA Atlas V rocket. After an approximate 6-hour coast and burn phase, the Centaur upper stage delivered the satellites to a near-GEO orbit. The satellites are currently orbit-raising to their test locations using electric propulsion en route to their final orbital

operating slots at 103 degrees West and 131 degrees west, respectively.

"Our unique dual-launch configuration was again successful on this mission," said Ryan Reid, president of Boeing Satellite Systems International. "That coupled with the ULA Atlas V's ability to achieve an advantageous orbit enables SES to get these satellites into service in a matter of weeks. We appreciate the faith SES has put in our industry team to make that happen."

Following on-orbit checkouts, SES-20 and SES-21 are expected to begin operations in November. The satellites are part of SES's accelerated C-band clearing plan to meet the U.S. Federal Communications Commission's objectives to roll out 5G services across the United States, an initiative that impacts

all mobile users.

"The successful launch of SES-20 and SES-21 will allow us to support our customers in delivering high-quality sports and entertainment to tens of millions of U.S. households while delivering on our promise to repurpose spectrum to enable U.S. leadership in 5G," said Steve Collar, CEO of SES. "The second phase of our U.S. C-band clearing activities is fully on track and we are grateful for the hard work of our partners at Boeing and ULA."



Singapore Airlines Goes Live with New Integrated Cargo Management System

Singapore Airlines (SIA) has successfully gone live with its new Integrated Cargo Management System (ICMS), powered by IBS Software's iCargo cargo management platform. The ICMS is a strategic initiative to future-proof SIA's core cargo platform by eliminating disparate cargo systems and bringing in the latest cloud technology to transform cargo operations and customer delivery.

iCargo supports SIA in its cargo business processes. The ICMS provides a single integrated cargo application for business users in Singapore and overseas, as well as a seamless interface with partners including general sales agents, ground handling agents, and freight forwarders, simplifying the end-to-end operations. Enhanced data quality and insights also allow SIA to make real-time, data-driven decisions across its sales, operations, and finance processes, while ensuring compliance with international regulations.

Since the ICMS went live on 1 August 2022, approximately 1,500 users across sales, operations, and finance industries have benefited from the system, with iCargo enabling more than 24,000 flights, creating 202,000 bookings and 192,000 airway bills, as well as processing and responding to 8.5 million incoming messages.

IBS Software's Consulting and Digital Transformation (CDx) business provided user acceptance testing (UAT) support to SIA. The UAT focused on business process transformation and change management efficiency, with inputs from more than 100 end users across the world, and end-to-end testing involving more than 20 upstream and downstream messaging systems.

"The Covid-19 pandemic has greatly accelerated the need for digital transformation, especially given the important role that air freight plays in critical supply chains, as well as the need for greater supply chain visibility to improve resilience. IBS Software's iCargo platform is a key element in SIA's digitalisation efforts to enable it to serve its customers even better, respond more quickly to changes in the marketplace and improve work processes, while allowing it to stay compliant and update-to-date with global industry standards and initiatives," said Mr Chin Yau Seng, Senior Vice President Cargo at Singapore Airlines.

"It is an honour to work with SIA, a team that recognises the transformative impact of digitalising air cargo and is dedicated to creating innovative customer experiences that will enable it to capitalise on the air cargo opportunities ahead," said Ashok Rajan, Head of Cargo & Logistics Solutions at IBS Software. "We are beyond excited to continue to work with SIA on the ICMS to deliver even further capabilities and business benefits in the future."

The second phase of the implementation is planned for in March 2023. This includes migrating the mail module, implementing mail revenue accounting, and rolling out new capabilities in sales, operations, and cargo revenue accounting modules.



Embraer, NAC sign firm order for 10 P2F conversions



Nordic Aviation Capital (NAC), a global leader in regional aircraft leasing and Embraer have signed a contract for up to ten conversion slots for the E190F/E195F, with deliveries starting in 2024. In May of 2022, NAC and Embraer reached an agreement in principle to take up to ten conversions; this order is now confirmed. The aircraft for conversion will come from NAC's existing E190/E195 fleet.

In July of 2022, NAC signed a memorandum of understanding to place its first two E190F passenger-to-freighter conversions with Astral Aviation, based in Nairobi, Kenya.

The conversion to freighter will be performed at Embraer's facilities in Brazil and includes main deck front cargo door; cargo handling system; floor reinforcement; Rigid Cargo Barrier (RCB) – 9-G Barrier with access door; cargo smoke detection system (class E main deck cargo compartment), Air Management System changes (cooling, air circulation, etc.); interior removal and provisions for hazardous material transportation.

Airbus' multi-mission "cargo copter" is put to the test during a robotic military exercise

Airbus has confirmed that a sub-scale demonstrator version of the company's future multi-mission UAV (unmanned aerial vehicle) has been tested during a large robotic exercise. The demonstration, organised by the Portuguese Navy and NATO, validated the usefulness of the cargo copter design, particularly its modularity and easy, flexible and rapid swap-out of payloads and batteries.

The demonstrator was developed by Airbus' UAS New Programmes group in collaboration with the company's X-Works rapid prototyping team. A system-of-systems approach was applied with the goal of meeting military mission requirements that range from cargo transportation and ISR duties (Intelligence, Surveillance, and Reconnaissance) to serving as a communications relay and a combat force multiplier.

Its validation occurred in highly realistic operational conditions during the REP (MUS) 2022 military exercise, which was conducted in Portugal's Troia Peninsula region. Overall, REP (MUS) 2022 brought together some 1,500 personnel to test the coordination of unmanned systems and experimental mission scenarios above the water, on the water and under the sea.

The sub-scale demonstrator of the future Airbus Multi-Mission and Transport UAS is a 35-kg vertical take-off and landing (VTOL) multicopter. Sized to accommodate a range of payloads, the "cargo copter" is equipped with the Airbus-developed DeckFinder all-purpose landing aid for automatic landings on ship decks.

For the full-scale version, Airbus UAS New Programmes envisions a drone capable of carrying payloads of more than 250 kg over a range of 300-plus km. Beyond the military applications, Airbus foresees a role for the Airbus Multi-Mission and Transport UAS in civilian use for, e.g. humanitarian and/or disaster/crisis management.

Jens Federhen, who leads the X-Works rapid prototyping team, noted: "This was a great opportunity to trial our small-scale demonstrator in realistic conditions. Performing the demonstrations in such a demanding environment – surrounded by six research ships, 11 warships and 120 uncrewed systems around us – was extremely challenging, and at the same time very productive, as we have been able to learn and create useful collaboration links."



Boeing and Cargolux Finalize 777-8 Freighter Order

Boeing and Cargolux have finalized an order of 10 777-8 Freighters with options for six additional airplanes, with a signing ceremony at Cargolux's headquarters in Luxembourg. The selection of Boeing's newest freighter was previously announced at this year's Farnborough International Airshow as Cargolux's preferred choice as the replacement for its 747-400 Freighter fleet.

Cargolux's choice of the 777-8 Freighter underlines its commitment to establishing long-term sustainability. Europe's number one all-cargo airline has a long-standing engagement towards sound operations and the 777-8 Freighter offers reduced emissions, noise, as well as the lowest fuel use and operating costs per tonne of any large freighter.

"The agreement we signed today will consolidate Cargolux's position as a global leader of air freight services. Replacing our aging fleet of 747-400 Freighters with the latest technology and fuel-efficient 777-8 Freighter model will contribute to our long-term sustainability program while continuing to offer our customers the tailored service they expect," said Richard Forson, Cargolux President & CEO.

"With its purchase of our newest freighter, Cargolux has invested in a sustainable future as the 777-8 Freighter will significantly reduce CO2 emissions compared to the airplane it is replacing," said Stan Deal, president and CEO of Boeing Commercial Airplanes. "Equally important, the 777-8 Freighter operates with a noise footprint up to 60% smaller than its predecessors, significantly minimizing noise emissions around airport communities."



IBS Software Partners with IATA to Power IATA's New CASSLink Initiative Aimed at Transforming Air Cargo Payments



IBS Software, a leading SaaS solutions provider to the travel industry globally, announced that it has been selected by the **International Air Transport Association (IATA)**, as a technology partner for IATA's new CASSLink project, designed to simplify payments in the air cargo industry. The modernized CASSLink

has been successfully deployed in the United States air cargo market, in collaboration with IATA's wholly owned subsidiary Cargo Network Services (CNS).

CASSLink is IATA's internet-based data processing and customer management system, which puts customers first by meeting the evolving billing and payment requirements for the entire air cargo value chain. It facilitates the interaction and exchange of information between airlines and freight forwarders participating in IATA's Cargo Accounts Settlement System (CASS), simplifying the customer experience and driving operational efficiencies.

Working closely with IATA, IBS Software is focused on digitally transforming the CASS platform to develop an agile platform that can meet payment innovations and customer demands. Focussed on customer experience, the new CASS platform features improvements in real time analytics, self-service capabilities, additional payment options, global accessibility and a fresh modern multi-lingual user interface. The new CASSLink will be rolled out to all other CASS markets from the fourth quarter of 2022 and continuing through 2023.

"Air cargo played an outsized role during the pandemic, delivering life-saving vaccines and medical supplies and keeping global supply chains running. Moving forward, it is vital that industry continues to digitally transform to allow payments between parties to be handled quickly, efficiently and with total trust," said Muhammad Albakri, IATA's Senior VP, Financial Settlement and Distribution Services. "Our CASSLink platform has already changed the way airlines and third parties interact. We're delighted to have found an excellent partner in IBS Software to power the new CASSLink, ensuring that it continues to be fit for purpose as we head into a new era for air cargo."

"As air cargo grows, so do the challenges for airlines, freight forwarders and other players in handling payments in an increasingly complex value chain. The air cargo industry has a golden opportunity to influence the global supply chain, making payments simpler and more efficient is critical to enticing and keeping customers," said Akshay Shrivastava, Head of Consulting & Digital Transformation at IBS Software. "It's an honour for us to partner with IATA to modernize its platform and further enhance the value it brings the industry."

Pradhaan Air Express commences commercial operations

Pradhaan Air Express, commenced commercial operations on 1st October on the DEL-BOM-DEL route. The airline received the world's first A320 converted freighter in July and aptly named it 'PEHALWAN', a Hindi term meaning wrestler or a strongman.

New Delhi Airport witnessed the landing of the A320 P2F (Passenger-to-Freighter conversion) as the airline is all set to take the Indian Air Freight Industry to new heights.

Pradhaan Air Express A320-P2F:

The **A320-P2F** offers up to 174 cbm capacity with a gross payload of nearly 21 tons. The cargo plane with a fully palletized main deck will offer charter capacity to domestic shippers and freight forwarders on domestic and international routes. The converted freighter will also be available for on-demand cargo charters.

Current Service Offering:

- On-demand Round-trip Charters
- One-Way Charters
- Chain Charters

We are confident of playing our part in the Government's vision of increasing Air Cargo to 10 million tonnes - says a social post of the airline.



Minister of Civil Aviation Urges MRO Industry to Think Big, Think Global & Act Global



After a two-year COVID-19 break, it was two days of the who is who of the MRO industry in India and abroad, rubbing shoulders at Aero MRO India A&D 2022. A classic example of birds of a feather flock together, the annual conference organized by MRO Association of India, which completes 10 years this year, attracted both Indian and global MRO industry professionals. It was a congregation of Airlines, MROs, OEMs, Supply Chain Managers, Legal Experts, Lease and Finance Experts, Support Services Providers, Bureaucrats, Defence Forces, Design Companies, Aviation Laboratories, Airport Developers and Operators, to name a few.

Union Civil Aviation Minister Sh. Jyotiraditya Madhavrao Scindia, who could not be present at the Inaugural Ceremony, was kind enough to address the gathering through his Video Message. Link https://drive.google.com/file/d/19PzGFz_fz1k5RopAE_

[BqA25JD48vyZE-/view?usp=sharing](https://drive.google.com/file/d/19PzGFz_fz1k5RopAE_)

Additional Secretary and Senior Economic Advisor, Ministry of Civil Aviation Sh. Piyush Srivastava, in his Keynote Address said, "We need to have a manufacturing base of aircraft and aircraft components, leasing capability in the country, and the role of drones in the cargo industry is only said to expand exponentially. The biggest challenge is that we have been late mover in the race and we need to reach to the heart of the race quickly.

This Aero MRO India was an event with a difference as stress was not on what was not happening but on what is happening and the positive developments in the ecosystem which make India a self-sustained MRO market with solutions in hand. The stress was on why the MRO business should now remain within the country rather than going beyond the borders.

Capt. Rajesh Pratap Singh Member JWG Integrated Aviation Hub, Hisar, Government of Haryana in his inaugural address apprised the gathering on all works which were over including shifting of Haryana Vidut Prasaran Nigam high tension power line, setting up of 33 KW sub-station on two acres of airport land, construction of alternative route from Barwala Road, observation home shifting, cat lighting works, shifting of the water supply channel and terminal.

Annabelle Larouche, Counsellor and Senior Trade Commissioner at Global Affairs Canada | Affaires mondiales Canada and Ajita Hathlia, Dy Head Trade, Department for International Trade (DIT), South Asia, The UK both representing their nations as country partners were key note speakers at the inaugural session.

A White Paper on 'Growing Opportunities

in the Indian Aviation Market 2022' by MRO Association and Caladrius Aero LLC was released along with "Indian MRO Market Unlocking The Seven Billion Price" by Adani Defence and Aerospace and AT Kearney.

The session on Atma Nirbhar Bharat - MRO (SELF RELIANT – MRO) was moderated by Dr. S K Bansal, Vice President (Fleet), IndiGo. It was a mix of Indian and foreign MROs brainstorming India's clarion call on self-reliance with Joe Depaoli, VP – APAC, HEICO, C S Tomar, Willis Lease Finance Corp., Anand Bhaskar, MD & CEO, Air Works India, Joel Cadeux, Head, Liebherr Aerospace & Transportation Systems and S.K Bhattacharya, OSS Air Management Pvt Ltd.

Another session was India: An MRO Hub - Unlimited Opportunities; Steps taken by OEMs in this Direction moderated by Arun Kashyap, Director, Air India. Ashutosh Agarwal, Business Head, South Asia, Airbus, Vikram Rai, Country Head, South Asia & Indonesia, GE Aviation, Farrukh Qamar, Director Customer Ops. India, SE Asia & Oceania, Safran Helicopter Engines Asia Pte Ltd, and Cedric Genevaise, Dassault Aviation together discussed the status quo of the

MRO industry in India.

The third session deliberated on the Key Initiatives Undertaken to Improve the Economic Viability of Component MRO Business in India. It was moderated by Dibendu Maiti, CEO, HAL Nashik, MIG Complex where Anurag Garg, Head Strategy & Marketing, Thales India, Mahendra Kumar, ED AI Engineering Services Ltd, Per Smedegaard, President, Horizon Aerospace, Ambalik Agarwal, Managing Partner, Global Sales Director, AMP Aero Services LLC, Sven Krickow, COO, GMR Aero Technik, Babu Kerai, Ex-RR & GE Elano Thailand and Samay Bahulikar, Millenium MRO discussed the topic thread bare.

Cooperation between the key stakeholders moderated by D. Anand Bhaskar, MD & CEO, Air Works India Pvt. Ltd. had the airlines and OEMs represented by S K Dash, Sr. VP, Vistara Airlines, Anubhav Kumar, Head of Strategy, Boeing India, Sq. Ldr. (Retd.). Anjali Joshi, GM Contracts, Jet Airways and Dr. S. K. Bansal, (Fleet), IndiGo celebrated.

This year Aero MRO India also had Canada and United Kingdom as Country Partners. Both had representations of the original

OEMs/MROs and their Indian partners. A session on Canada - Your Partner in Aviation & The MRO Sector was moderated by Dipesh Mathur, President, Stellar Aviation and Jason Diniz, President, Eagle Copters, Ashwani Acharya, CEO, CAE Simulation Training Private Limited and John Ling, CEO, Canadian Aviation College cogitated on Indo-Canadian aviation opportunities.

Country Partner- UK Department for International Trade (DIT) led the session themed "Technology & Innovation in Aviation MRO" with Ganesh Gupta, ABI Electronics - Manufacturer of Test, Repair & Reverse Engineering equipment, credentials in innovation through Obsolescence Management, Willian Santos, Javier Sagrado GemDT Limited with Digital Twin in Aero Engine for compressor and turbine blades as well as Airframe structural scan at leading MROs. Steve Evans supported by Lakshman Aragam - Global Sales Accenture in India whose UMLAUT has just merged into the IT major. Ben Pritchard of Jewers Doors Limited also represented the Dubai office of his UK Headquartered company at the event.

S.K. Rahman, Principal Commissioner





of Customs delved deep into the GST systems and its advantages to conduct business said, "Ease of doing business and trade facilitation is our aim. There is a threshold Limit and we have in mind to extend threshold limit for inter-state supply of goods as well and further to extend threshold limit to E – Commerce operators as well. According to him up to certain limits quarterly tax payments may also be provided to SMEs and there will be a provision for distinction between B2B and B2C invoices."

The stress on brainstorming was not majorly on what is hurting the Indian MRO business and the reasons for declining share in Global MRO Business, but on what was available in India and how to make it lucrative for the users.

Indian State Partners like GUJSAIL, A Government of Gujarat Company, Govt of Haryana, Civil Aviation Department and J P. Modi, Sr. Vice President, OSS Air Management informed the gathering in their session the importance of state governments foraying strongly into the

sector to make the market lucrative.

Day 2 at Aero MRO India was dedicated to Defence MROs and the need of military air assets to fulfil their requirements within the nation rather than sending them overseas to the manufacturer. The session was moderated by Bharat Malkani, President, MRO Association of India and Lt. Gen. Ajay Kumar Suri, Director General Army Aviation, Indian Army was the Chief Guest.

In his inaugural address Gen. Suri appreciated the growth in the military MRO sector and agreed that the symbiotic relationship could help in creating this market with both user and service supplier perspectives in mind. Adani Aerospace & Defence was represented by Lt. Gen S K Upadhyya in the session who put forth a platform for the industry to let the user feel its needs could be met domestically and at cheaper rates.

Bharat Malkani also moderated a session on Progress of Govt's Vision of Civil-Military Convergence and partnerships In MRO with Air Cdme DB Murali- GMR Aero Technic,

Mangesh Karyakarte, Chief Sales Officer, Air Works Group etc.

Lastly, a session on MRO - New Avenues was conducted by Rear Admiral (Retd.) Srinivas Kanugoo with, Saharad Agarwal, CEO AIESL, Manu Saxena, Vistara, Aviation College (Training), Vipin Vohra, Chairman Continental and Advisor to MOCA on Cargo. GR Dharanidharan, Adani Defense (Military MRO), Hardik Someshwar, Senior Manager MRO Projects, Collins Aerospace, Nitin Despande, Bytsoft Technologies (MRO Software) and Aman Johri, CEO Jatayu Unmanned Technologies (Drone MROs).

The concurrent exhibition was also a thunderous success too. Over 31 companies form MROs, both Indian and Overseas, Oil and Lubricant company, Logistic companies, Country Partners, State Partners, Spare Parts and Asset Management companies, MRO and Aerospace Equipment companies, Insurance and Re-Insurance Broker, Media Houses, etc. A detailed list of exhibitors can be provided on request.



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