MRO BUSINESS TODAY

Mar 15th, 2022

Celebrating the AME warriors

The path taken by these women will inspire many young girls to enter the AME field as a career choice.

Ever since we are children, we are taught in school that equality is a basic human right and that all human beings are equal. We grow up believing in this thought. Then, why do we celebrate men's day / Women's Day/ Father's Day/ Mother's Day, etc? Yes, we firmly believe in equality, but every individual has gone through their share of ups and downs to reach where they are today. It is rightly said, to understand a person thoroughly, we have to get in their shoes and go through their ordeals. On occasion of International Women's Day, we are making an attempt to take a peek in the lives of some such remarkable women who have chosen the path less taken. They have ventured into the male-dominated world of Aircraft Maintenance Engineering, adorned greasy-dirty uniforms with a smile on their faces to follow their dreams. Let us understand the inspiring stories behind a few such women. What makes them tick? What inspired them to enter the field of aircraft maintenance, the sacrifices they made along the way, and their plans for the future.

Louise Williams loves a challenge and she finds the thought of proving men and women wrong about her extremely appealing. That's one of the reasons she chooses to become an AME. Currently, she is working as an engine workshop development manager at GJD Aero-Tech. However, as she entered the field of aircraft maintenance, she fell in love with it. There is a strange charm about aircraft maintenance that draws both men and women towards it. There is a sense of purpose and the satisfaction of repairing an aircraft and making it air-worthy again. "it's not where you start in your working life, it's where you finish your career that counts and the only person who has control of my career are myself. I've sacrificed my evenings and spare time to put myself through university and additional training to always better myself," Lousie adds

LOUISE WILLIAMS - GJD AeroTech

Davia Zemaite choose her line of work organically, however, once she entered the aviation industry there was no looking back. She is the Head of EngineStands24 at Magnetic MRO. When we asked her about what keeps her going, she said, "It is a highly demanding industry – and conservative one too, still – but I keep on choosing the approach to do my best and innovate it, introduce new products and services, change it. And being a woman AND an innovator can be a challenge in this industry which is still widely perceived as a man's business – but I like this challenge as I think it is up to all of us whether to accept it or to change it, and I choose the latter."

DAVIA ZEMAITE- Head of EngineStands24 at Magnetic MRO

Life is all about the choices you make and I made my choice to become an Aircraft Maintenance Engineer because airplanes have always fascinated me since childhood said **Neetu Sharma,** who is currently working as Deputy Chief Aircraft Engineer, Air India. She is working on the entire Air India Boeing fleet – B787-8, B777-200, B777-300, B37-800NG. "Ever since childhood, when kids used to watch the stars, I used to count the aircraft. It always fascinated me how does an aircraft flies," she said when we asked her about the reason for choosing this field. "It's more like – the field of aircraft engineering choose me, and my combined with my childhood dream it all got aligned together and here I am today," she adds. However, it is not a bed of roses, the job of an AME is extremely challenging. It requires sharp precision, vigilance, and an analytical mind. "The real satisfaction comes when you sign a certificate of release to an aircraft after completing its checks," she further adds," but it comes with a lot of responsibility," she concludes.

NEETU SHARMA- Deputy Chief Aircraft Engineer, Air India.

For **Hemangi Kadam** the fascination for aviation goes way deep down in her roots. An aircraft flew over her head when she was just a kid. "I still remember the awe feeling to see a giant and robust airplane fly past me. I idolized Kalpana Chawla in school. I often used to think, if a car needs repairing and an engineer, an aircraft must need one too. This thought guided me for years to come," she said. She is currently working as an Aircraft maintenance engineer at TATA SIA Airlines, India. Her first face-off with an aircraft was on a Boeing 737, and something deep within her told her she is exactly where she wanted to be, "this is where I belong" she said. Today she has an Airbus A319/A320 and A321 endorsement on her Aircraft Engineers license. "I have proved myself in this male-dominated industry of Aircraft Maintenance with my passion for aircraft, my expertise, and my experience. I can proudly say today that we ladies can fix the metal birds single-handed." She signs off.

HEMANGI KADAM - Aircraft Maintenance Engineer, TATA SIA Airlines

For **Lynn Frederic Dsouza,** the journey into aviation goes far back when she was a kid. As a child, she was an aviation enthusiast and started her journey with aeromodelling during school days. Presently she is the founder of ESPIRIDI LLP and the National President of Aviation Council at Women's Indian Chamber of Commerce & Industry. When asked about her journey and the challenges she faced she said, "As one of the few, and at times, the only woman in a male-dominated field, the barriers to entry are high. There are gender equality issues in the aircraft maintenance industry where there are a handful of women. This made me more resilient despite the glass ceilings and sticky floors. One has to put in a lot of time and effort. Focusing on growth and rising above my competitors was my key motivation. While facing challenges head-on and navigating the narcissistic political maze, I found my opportunities and worked hard, despite the disruptions, to be a leader and create a sustainable impact." Being a single girl, she inherited her love for technical skills from her dad, coupled with her passion for aviation and troubleshooting led her straight to the depths of an airplane. "My engineering background laid a strong foundation where I developed analytical thinking and I have now evolved into an Aviation strategist," she concludes.

LYNN FREDERIC DSOUZA - Founder of ESPIRIDI LLP and the National President of Aviation Council at Women's Indian Chamber of Commerce & Industry.

This is a small attempt from our end to shine some spotlight on the women working behind the scenes with oily, greasy hands to make sure our flight is safe and airworthy. We will continue this journey in the next edition with more AMEs and their journeys to celebrate. Happy International Women's Day to everyone.

Pratt & Whitney expands MTU's MRO capacity for GTF engines to cover global customer demand

EME Aero has already successfully concluded the first shop visit for a PW1500G engine and is industrializing to receive its first PW1900G engine.

MTU is now positioned to supply overhaul services for two additional engine models: PW1500G for the Airbus A220 family and PW1900G for Embraer E190-E2 and E195-E2.

MTU Aero Engines and Pratt & Whitney have signed an agreement to grow MTU's MRO capabilities for all Pratt & Whitney's GTF engines in service. The contract is set to run over the lifespan of the engine program. The contract further expands MTU's role in the GTF MRO network beyond PW1100G-JM for the Airbus A320neo family. MTU is now positioned to supply overhaul services for two additional engine models: PW1500G for the Airbus A220 family and PW1900G for Embraer E190-E2 and E195-E2 aircraft.

In future, EME Aero, a maintenance joint venture between MTU and Lufthansa Technik that is based in Rzeszów, Poland, will perform shop visits for PW1900G in addition to PW1500G. Beyond that, MTU is also a part of the Pratt & Whitney network for repair services.

Tom Pelland, senior vice president of GTF Engines at Pratt & Whitney said, "We are delighted to expand MRO capacity for GTF engines through this cooperative initiative. We have a growing backlog of engine orders and see increasing demand for GTF engine family shop visits. By working with MTU, we know we have a team of experienced and reliable maintenance providers to help meet our global customers' needs."

Michael Schreyögg, Chief Program Officer of MTU Aero Engines said, "This cooperation is further expanding our great and intensive partnership with Pratt & Whitney and strengthens our position as a leading MRO expert. EME Aero has already successfully concluded the first shop visit for a PW1500G engine and is industrializing to receive its first PW1900G engine. Customers benefit from our comprehensive experience with GTF engines and our clear focus on superior quality and maximum efficiency."

MTU Aero Engines is a key contributor to GTF engine development, production, and maintenance. MTU's global footprint and full range of GTF MRO services will benefit PW1500G and PW1900G operators, which include more than 20 airlines flying close to 200 A220 aircraft and more than 50 E-Jets E2 aircraft around the world.

Iberia to carry out MRO on Qatar Airways V2500 engine on Airbus A320 for ten years

All events will be carried out at Iberia Maintenance's engine workshop at its facilities next to Madrid airport.

Qatar Airways awarded a 10-year contract to Iberia Maintenance for the repair and maintenance of V2500 engines. This strategic agreement will result in scheduled visits over 10 years. All events will be carried out at Iberia Maintenance's engine workshop at its facilities next to Madrid airport, with more than 52,000 m2 dedicated to MRO and engineering services.

Javier Sánchez-Prieto, Iberia´s chief executive said, "We are delighted that Qatar Airways has entrusted Iberia Maintenance with this long-term strategic contract for the engine maintenance support of its V2500 powered fleet. We have over recent years invested heavily in the development of this product and we will continue to do so ensuring we provide cost-effective and differentiated service to our customers today and into the future."

Qatar Airways Group Chief Executive, His Excellency Mr. Akbar Al Baker said, "We are pleased to be working with our strategic partner, Iberia Maintenance, who will provide long-term maintenance support for our V2500 engines fitted on our extensive A320 series aircraft. Qatar Airways strives to provide customers with industry-leading safety and reliability, and we are confident in the experience and quality of service that Iberia Maintenance will provide".

Iberia Engine Workshop serves airlines and lessors around the world, provides a high-quality service, and offers a very differentiated and competitive program for the V2500 engines in terms of TAT (turnaround time) and efficiency.

Embraer to provide extensive component support to German Airways

German Airways serves several European airlines, utilizing comfortable, highly economic, and modern E190 jets.

With Embraer's Pool Program customers can save in repair and inventory carrying costs along with a reduction in warehousing space.

Embraer signed a multi-year contract with German Airways for the Pool Program. As per the contract, German Airways will receive support for a wide range of repairable components for their fleet of five E190jets. Currently, Embraer's Pool Program supports more than 50 airlines worldwide.

German Airways is a German airline and leader in the European wet-lease market. Currently, it serves several European airlines all of which utilize comfortable, highly economic, and modern E190 jets.

Embraer provides support to airlines worldwide, with its technical expertise and its vast component services network. With Embraer's Pool Program customers can save in repair and inventory carrying costs along with a reduction in warehousing space and resources required for repair management, while ultimately providing guaranteed performance levels. Embraer Services & Support's portfolio offers a wide range of competitive solutions designed for each customer to support the growing fleet of Embraer aircraft worldwide and deliver the best after-sales experience in the global aerospace industry.

ST Engineering to provide comprehensive component support to Vietjet's entire fleet

ST Engineering can provide on-site MRO services as well as leverage their global component support network to support Vietjet's international flight operations 24/7.

ST Engineering will provide Vietjet with a full suite of component support solutions covering component pooling, repair, overhaul, modification, main base kits, component health monitoring.

ST Engineering and Vietjet signed a comprehensive component Maintenance-By-the-Hour contract. As per the contract, ST Engineering will support Vietjet's entire fleet. ST Engineering will provide Vietjet with a full suite of component support solutions covering component pooling, repair, overhaul, modification, main base kits, component health monitoring, and logistics services for the airline's entire fleet.

Vice President of Vietjet, Ho Ngoc Yen Phuong, said, "We value the fact that ST Engineering can provide on-site MRO services as well as leverage their global component support network to support our international flight operations 24/7. We are assured that they will be a reliable partner to support the flexibility in our technical operations and maintenance as we focus on expanding our flight network internationally."

Jeffrey Lam, President of Commercial Aerospace at ST Engineering said, "The component MRO facilities, together with life-cycle support capabilities, in our global network will be able to provide excellent support to Vietjet's fleet. When combined with our comprehensive component solutions, we are confident in helping Vietjet achieve significant cost savings and enjoy operational reliability at the same time.

Recognized worldwide for its hallmark component MBH programs, ST Engineering supports more than 900 aircraft and provides integrated component solutions for over 23,500 unique aircraft parts. ST Engineering is also the authorized service center for over 20 leading OEMs. The contract was signed recently during the official visit of Vietnam President Nguyen Xuan Phuc to Singapore.

Satair launches its first Airbus semi-finished floor panels

The Airbus semi-finished floor panels can be cut on-site leading to a reduction of downtime during repairs and fit application across all passenger, aisle and galley.

Satair has launched its first Airbus semi-finished floor panel (ASFP) solution with improved quality and cost-reducing benefits. Developed in collaboration with Airbus and Schütz GmbH & Co. KGaA, the ASFP repair solution sets new standards for PAX & Cargo floor panels.

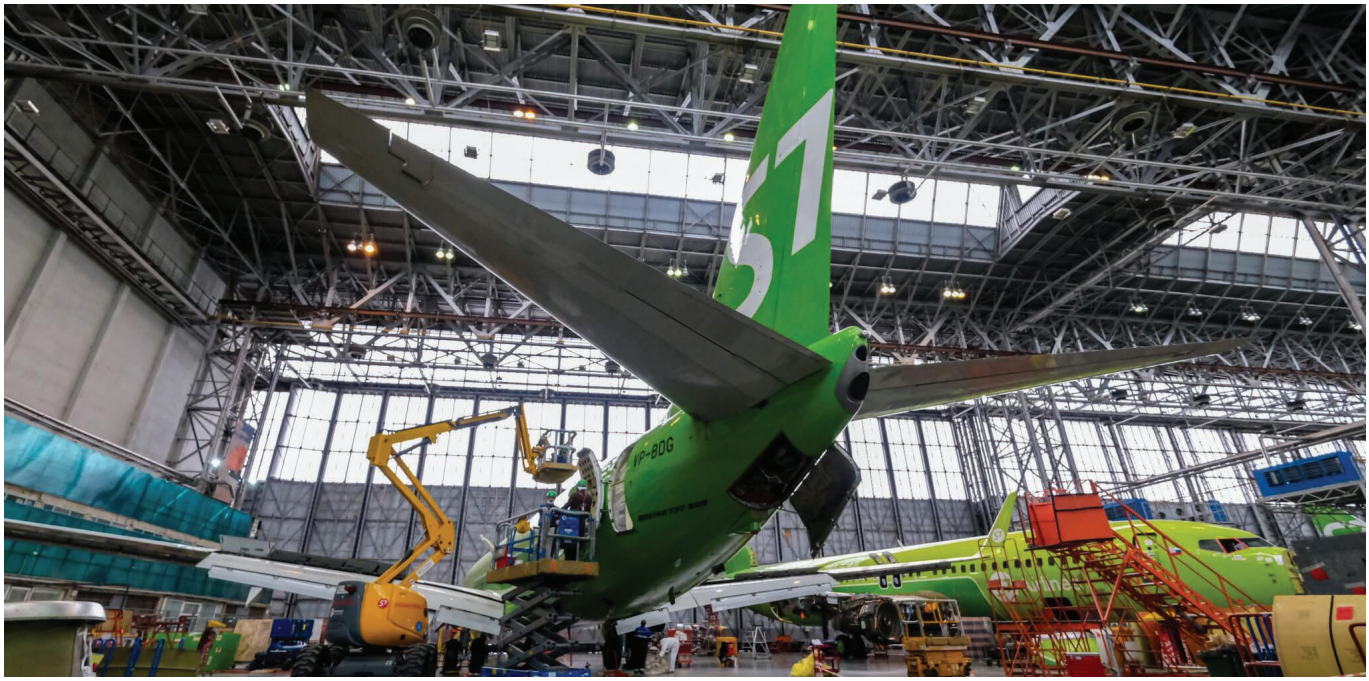
The Airbus semi-finished floor panels can be cut on-site leading to a reduction of downtime during repairs and fit application across all passenger, aisle and galley areas. In addition to being competitively priced against the standard market panels, the Airbus semi-finished floor panels are more robust without the compromise of additional weight and can be installed across the majority of Airbus aircraft platforms including A320, A330, A340, A350, and A380. Being an Airbus-qualified product, the solution can be installed in line with the Airbus Structural Repair Manual (SRM) and Aircraft Maintenance Manual (AMM).

Bart Reijnen, CEO of Satair said, "The launch of the Airbus semi-finished floor panel solution represents Satair's dedication to driving innovation by developing a tailored spares product for the aviation aftermarket. We are truly excited that we can develop and distribute a product of this quality to our customers and support their needs through high stock flexibility, product durability, and by easing operational administration and handling."

Utilising the expert production and development capabilities of Schütz, a state-of-the-art composite supplier for Airbus, the ASFP is developed to flexibly meet aftermarket demands.

Roland Strassburger, CEO of SCHÜTZ Group said, "This project is an outstanding example of creating customer benefits through a combination of technical, production, and market expertise. We are very pleased with bringing the semi-finished floor panel solution to market via Satair to the benefit of Airbus operators worldwide. This encourages us to continue our composites strategy towards integrated materials and solution provider for the aerospace market."

In its first entry into service, the ASFP product line is available for PAX robust and will be available for the seat, aisle and galley areas with the first SRM release for the single-aisle family in February 2022, A350 and A380 in March, and long-range platforms in April. The container and cargo applications are being developed with an expected release by the end of 2022.

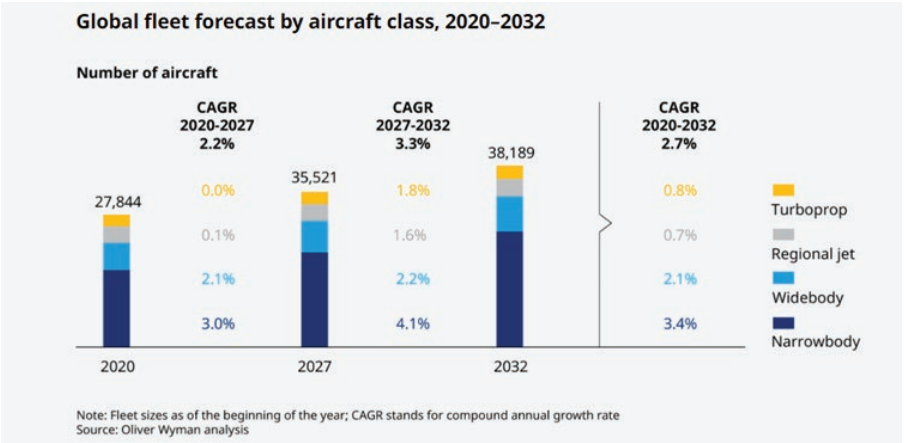


MROs surviving pandemic turbulence

The first quarter of 2022 showed a small ray of hope and optimism for the aviation industry as the airline operator graphs began showing an upward climb. Global vaccination schemes, government grants, rise in passenger and business tourism have played their part well. As per the Oliver Wyman predictions, by early 2023lmthe global demand for domestic travel is expected to reach and exceed 2019 pre-pandemic levels.

Given the pandemic, the number of in-service aircraft had dropped more than 50 percent during the peak of the spread while the number of active aircraft in 2020 was about 20 percent below 2019 levels said Shantanu Gangakhedkar Aviation consultant at Frost and Sullivan. This reduced in-operation fleet brings a huge number of challenges to MROs. The hardest hit is the Airframe segment as almost all airlines have postponed heavy maintenance (C/D Checks) given the grounding of aircraft during the pandemic and reduced usage. Moreover, Airframe will be permanently impacted given the faster than planned retirement of older fleet and replaced with newer aircraft that require comparatively less airframe maintenance and have longer intervals between heavy checks. Engine segment will be hit in the short-term as airlines have been pushed back by the maintenance for about 2 years given the grounding and reduced usage. Modification's segment is gaining popularity and is on a strong growth trajectory mainly fuelled by 2 key trends – high demand for Passenger-To-Freight conversions and airlines are looking at their cabin configuration to suit the changing demand – move from business/first call to premium economy, he further adds.

While fleet recovery is sluggish, the MRO sector has a different story to tell. Less flight activity led to decreased line maintenance and non-scheduled maintenance, but this was compensated by an increase in base maintenance and maintenance of the parked fleet.

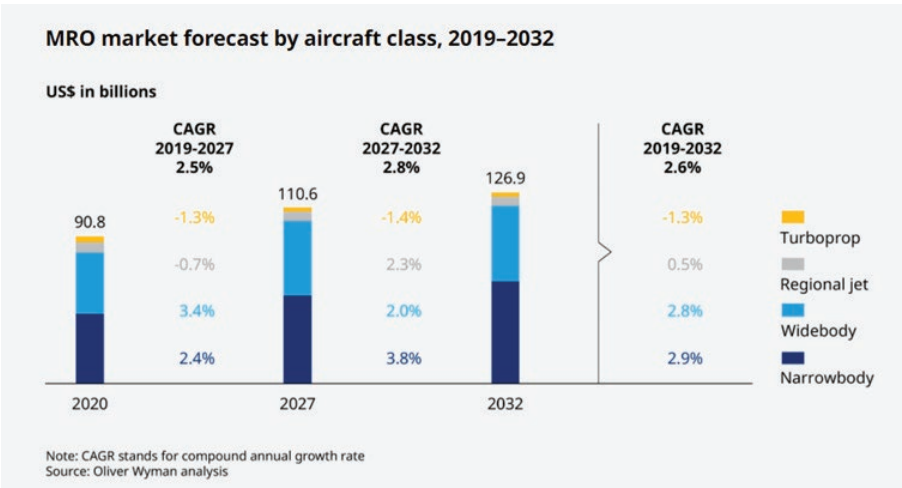


Risto Mäeots, CEO at Magnetic Group

"Pandemic brought us a heavy hit and had an impact on our revenue. It also forced us to 'cut costs' mainly in businesses such as interior solutions, spare parts trading, leasing business," said Risto Mäeots, CEO at Magnetic Group. "What remained very demanded service was aircraft heavy maintenance and parking services. This has a logical explanation: airlines stopped spending money on operational needs such as cabins and spares – simply because they flew much less. But the aircraft requires maintenance also when it is parking; therefore, our hangar business remained very popular. And in general, we have stabilized well and look forward to continuing serving aviation."

Mike Stengel, Senior Associate at AeroDynamic Advisory

As per the predictions of Aero-Dynamic Advisory, global MRO demand will accelerate in 2022 as the air travel recovery continues. We expect global RPKs to reach ~77% of 2019 levels by the end of 2022, with travel in the Americas and Europe leading the pack while the Asia Pacific region lags due to COVID-zero measures and a generally cautious re-opening. In the MRO ecosystem, we see signals that airline cash-conservation measures, such as deferring engine overhauls and burning down inventory, are softening thus creating tailwinds for shop visit volumes, workshops, and component re-stocking," said Mike Stengel, Senior Associate at AeroDynamic Advisory. Some risks remain, however, such as the ongoing threat of a new COVID variant, weakness in airline profitability, labor shortages, and supply chain bottlenecks. Geopolitics has also been highlighted as a growing risk area in the last few weeks, of course," he further added



However, on the other hand, 2022 saw a spurt of MRO activity in Asia-Pacific. Due to global lockdowns and border closures, the airline operators that relied on Western MROs now turned to domestic MROs as the only viable option. Another plus for Asia-Pacific MROs is that many MROs have undergone robust expansion during the pandemic times to meet customer demands post-pandemic.

Eg – Collins aerospace invested about USD 27 million to double the size of its MRO operation in Xiamen, China, and almost quadruple the size of its MRO footprint in Selangor, Malaysia. These two additional facilities have led to faster TATs and more efficient service to Collins customers.

Another reason for MRO growth in Asia-Pacific is the low-labor cost which attracts foreign players to set up their own MRO facilities in Asia-Pacific countries. Despite market growth, most of the airlines in Asia have minimal in-house maintenance capabilities due to which they outsource most of their maintenance work. But the picture is slowly changing post-pandemic as the airlines have started enhancing their maintenance capabilities to cut cash flow to third-party MROs.

The Garuda Maintenance Facility (GMF) by AeroAsia is aggressively expanding its MRO business overseas while improving its in-house maintenance capacity in Indonesia to cater to more airlines. In January 2021, Revima Group, which has set up a new landing gear maintenance facility for the A320 and the B737NG narrowbody aircraft in Thailand, announced that it has obtained Part-145 certification from three key agencies, namely CAAT (Civil Aviation Authority of Thailand), EASA, and FAA,

and is ready to start its activities. Likewise, Thai Airways International, Thailand's national flag carrier is also embarking on expanding its MRO business.

Companies like ST Engineering are looking for expansion of their aerospace MRO business, both locally and internationally. On the other hand, it has also set up a Joint Venture with Vietnam Airlines Engineering Company (VAECO), a subsidiary of Vietnam Airlines Co Ltd, called Vietnam Singapore Technologies Engineering Aerospace Co. Ltd.

In October 2020, Jetex, an executive aviation provider, announced the expansion of its global FBO network in the Asia-Pacific region with a fixed-base operator in Singapore. In collaboration with Bombardier, the new FBO expands the Singapore Service Centre at Seletar Aerospace Park beyond aircraft service and maintenance and now offers a full range of services to the business jet operators.

Turkish Technic has signed an agreement with Sapura Technics, an aircraft maintenance and repair company in Malaysia in 2021. The then Turkish Airlines Chairman of the Board and the Executive Committee, Ilker Aycı had said, "Without a doubt, aviation and MRO sector are one of the sectors most affected by the pandemic. As Turkish Technic, during these challenging times, we aim to distinguish ourselves from the competition in a positive way by increasing our capabilities, expanding our customer portfolio, and continuing our investment and growth efforts without cutting pace. Therefore, we aspire to expand our investments in the Asia-Pacific region, which is the fastest developing region in the world and is expected to have the highest fleet ratio shortly."

On the defense front, Asia Digital Engineering and Korea Aviation Engineering & Maintenance expanded their MRO operations marking an increased footprint for Airbus customers to avail MRO facilities in Asia.

Global, as well as Asia-Pacific operators, are optimistic about the future of the Asia- Pacific MRO business.

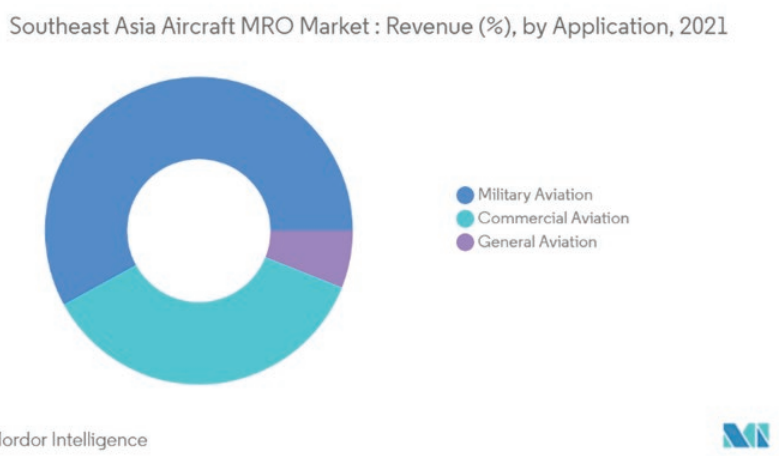
Global MROs have also undergone robust expansions over the last two years. Commenting on the expansion plans of Magnetic MRO, Risto Mäeots said, "We are looking to expand in Tallinn by having new and larger aircraft heavy maintenance hangar, we are continuing to invest into engine repair capabilities, we are expanding our line maintenance network and just in past quarter have opened several service stations in German airports - and soon going to launch Copenhagen station. In our Creative sector, we are looking for right-minded talent in order also to get part of the green aviation (Europe's Fit55) and unmanned aerial vehicles development."

West Star expanded its facilities at their East Alton, IL (ALN), Grand Junction, CO (GJT), and Chattanooga, TN (CHA) locations to keep pace with customer demand.

Dassault acquired TAG Maintenance Services, ExecuJet MRO Services, and RUAG's MRO operations in Switzerland to build up their factory service capacity. With this acquisition, they are leveraging their recently acquired MRO capabilities in Kuala Lumpur and Dubai along with several new line service bases in Europe. They can now offer major inspections at a range of new locations, dispatch GoTeams to more remote places, and share expertise across its global network.

APOC expanded their new facility in Berkel en Rodenrijs by adding 2500 square meter warehouse and technical inspection base. APOC specializes in narrowbody components and currently has four Boeing 737 airframes undergoing teardown which will balance its Airbus A320 family stock.

The pandemic also led to delayed decision-making by certain companies, as companies prioritized short-term financial plans and the well-being of employees. The impact was felt by certain companies like 8tree, which specializes in advanced technology for aircraft dent detection.



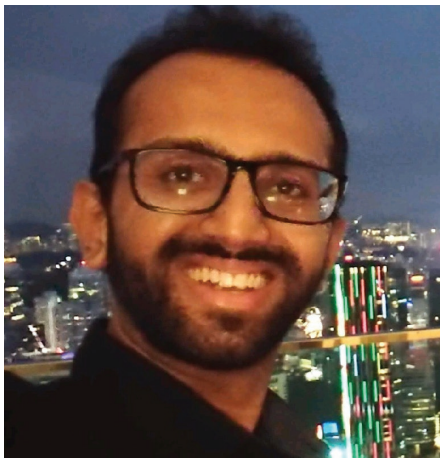
Arun Chhabra, 8tree CEO

"COVID-19 injected unprecedented uncertainty into the aviation sector, including for our existing and prospective customers. This delayed their decisions on new tooling/ technology, as they understandably prioritized short-term financial health over smart tools that are proven to immediately enhance efficiency, quality, and safety for their maintenance operations," commented 8tree CEO, Arun Chhabra. " Fortunately, during the height of COVID-19 last year, although customer investments into procuring our 3D surface inspection tools did slowdown, we continued to witness some healthy order activity, despite the COVID circumstances," he further added.

Some companies responded to the pandemic by announcing lay-offs, pay-cuts, and halting all investment and expansion plans, however, certain exceptions like 8tree tackled this problem in their way, "During the early days of COVID, we made a conscious decision to invest for the long-term. During CY2020, we nearly doubled our company headcount. We aimed to accelerate new product/feature developments and to strengthen our customer-support engineering teams so that when the market returned, we would be even more prepared to respond to customer needs thoroughly and promptly," continued Mr. Chhabra, "I'm glad to report that this decision paid off. We started CY2022 with growth in new customer adoption across commercial, cargo, and military aviation, and our customer satisfaction metrics for existing customers show very promising and consistent growth. The new features we introduced last year -- such as large-area panoramic scanning to accelerate catastrophic hail damage assessment -- are gaining significant traction with the industry," he concluded.

Currently, the only challenge that not only MRO but the entire aviation industry is facing is the shortage of skilled labor. Before the pandemic, workforce shortage was always an issue with airline operators and MROs, the problems have now been alleviated with many would-be pilots and mechanics discouraged from entering the industry due to COVID19 uncertainty.

As per Boeing's predictions, the industry will need 612,000 new pilots, 626,000 new maintenance technicians, and 886,000 new cabin crew members in the next two decades.



Shantanu Gangakhedkar, **Consultant, Aviation, Frost & Sullivan**

Commenting on the problem of labor shortage Mr. Gangakhedkar commented, "MROs are facing labor shortage given the movement restrictions and this is resulting in increased deployment of digitization solutions by MROs to increase efficiency and reduce downtime for the aircraft. Many MROs are also working towards increasing capability and capacity to support cargo aircraft given the increase in demand and usage of those aircraft across the globe. Moving forward as the industry begins to recover, MROs will have to upskill to support the faster than anticipated influx of new aircraft in the fleet, work with reduced airframe maintenance demand and widen offerings to capture a larger market share."

One of the solutions to the problem of a labor shortage could be digitization and advanced technology. The time has come for OEMs and MROs across the world to embrace the technology and add capabilities that are at par with the global standards. Technologies like AI, robotics has paved their way into the MRO sector and going by Darwin's theory only those MROs will survive the competition if they adapt and embrace the future.

Aruna Schwarz, **CEO at Stele Technologies**

"OEMs and MROs to adopt global information exchange standards for Aerospace & Defence enabling seamless information exchange across the eco-system," said Aruna Schwarz, CEO at Stele Technologies. "OEMs and MRO have been very active in accelerating the pace of Digital Transformation projects and where we have seen the focus is on Document Transformation projects converting Engineering Manuals to Digital Data (S1000D, XML,...). This will be a major driver to speed up Maintenance workflows and provide paper-less, Interactive Electronic Maintenance Manuals. Despite the lack of face-to-face meetings due to travel restrictions and the complete absence of any conferences, we signed on great Engineering Solutions partners to implement our software at global customers," she concluded.

As per Oliver Wyman, MRO demand should recover to pre-COVID levels by 2024, but annual growth in the second half of the 10-year forecast period will be 2.8 percent. By 2030, MRO demand is expected to reach USD118 billion, 13 percent below the pre-COVID forecast of USD135 billion.

However, these slower growth projections won't apply to every company. For instance, the active China-based fleet and its MRO demand had already exceeded pre-pandemic levels by the end of 2021. Other regions like Western Europe will not see MRO demand recover until 2025.

As unimaginably bad as COVID-19 has been for aviation, the challenge of the next decade may be almost as disruptive. The industry needs smart strategies to get itself in a better position by the 2030s.

The narrowbody market recovery closer to reaching pre-pandemic levels

The higher value of the Boeing 737-800 as compared to the A320ceo is due to stronger demand for P2F (passenger to freighter) conversions of the aircraft, and a lower level of fleet dispersion.

The higher value of the Boeing 737-800 as compared to the A320ceo is due to stronger demand for P2F (passenger to freighter) conversions of the aircraft, and a lower level of fleet dispersion.

The most popular segment of aircraft – the narrowbody is found to recover much faster than its wide-body counterparts. As per the data released by IBA recently, the market values of Airbus A320neo and Boeing 737MAX are both recovering quickly, and are now at 96.5% and 94.4% respectively of their pre-pandemic base values. The market value of the 737MAX has bounced back further, and from a greater divergence with its base value, following its re-certification in most global markets.

By comparison, the market values of new generation widebodies still have a greater scope for recovery to pre-pandemic levels. The cost of the four-year-old Airbus A350-900, four years back was USD 102 million whereas the cost of the same aircraft in January 2020 was USD 115 million. On the other hand, a four-year-old Boeing 787-9 would amount to USD 93 today as against USD 108 million a couple of years back, IBA estimates.

The values of previous generation narrowbodies have recovered partially, with market distortions due to the grounding of the 737 MAX. IBA currently values a ten-year-old Airbus A320ceo at USD17.5 million, compared to USD23 million in January 2020, and a ten-year-old Boeing 737-800 at USD21.25 million currently, compared to USD25.7 million two years ago.

The higher value of the Boeing 737-800 as compared to the A320ceo is due to stronger demand for P2F (passenger to freighter) conversions of the aircraft, and a lower level of fleet dispersion due to a slower pace of 737MAX replacement. Once the MAX is globally certified and as deliveries continue to ramp up, IBA expects the value gap between the A320ceo and 737-800 to narrow.

These value changes come as the recovery of international air traffic stalled in late 2021 due to the Omicron variant of Covid-19. From December 2021 to January 2022, total air traffic across the globe remained static at 74% of pre-pandemic levels.

Air traffic levels in Asia-Pacific have dropped in the first quarter of 2022, whilst those in Europe are expected to bounce back through the spring and into summer 2022. However, this might be impacted by the situation in Ukraine, which is already driving oil prices (Brent Crude) above USD100 per barrel for the first time since 2014, with an adverse effect on the ATF prices.

Metrojet expands Gulfstream capability along with worldwide regulatory certifications

The newly added Vietnam CAAV maintenance approval will assist Metrojet to support the growth of VN-registered business jets in the region.

The MRO station of Hong Kong based Metrojet Limited has recently intensified its Gulfstream G650/G650ER capability up to 8C inspection level with the corresponding repair station approval from the United States of America FAA, Bermuda BCAA, Cayman Island CAACI, Isle of Man IoMAR, Qatar QCAA and San Marino SMAR.

Mr Dave Yip, Metrojet's General Manager, MRO HK said, "Metrojet is dedicated to elevating our capacity continuously, to provide safe, international quality and cost-competitive options for customers to choose from. The newly added Vietnam CAAV maintenance approval also assists Metrojet to support the growth of VN-registered business jets in the region."

In addition to the G650/G650ER 8C Approval from the multiple Aviation Authorities, Metrojet HK MRO has received its maintenance approval from the Vietnam CAAV for Gulfstream G450 and Boeing 737-700 series (BBJ), up to 8C and B3 inspection respectively, allowing Metrojet to expand its maintenance services to VN-registered aircraft.

Air Transport Services Group to A330 freighter, books conversion slots with EFW

The A330-300 is an excellent complement to the Boeing 767-300 medium widebody freighter, which has long been the freighter of choice for the e-commerce air cargo market.

In order to diversify its existing fleet in service with the addition of next-generation widebody freighters Air Transport Services Group has committed to a total of 29 Airbus A330 Passenger-to-Freighter (P2F) conversion slots with Elbe Flugzeugwerke (EFW). Air Transport Services Group is one of the world's largest lessors of freighter aircraft.

Mike Berger, Chief Commercial Officer of ATSG said, "The A330-300 passenger-to-freighter conversion is a natural next step for ATSG as it is an excellent complement to the Boeing 767-300 medium widebody freighter, which has long been the freighter of choice for the e-commerce air cargo market. The availability of feedstock combined with impressive cargo capacity make the A330 a very attractive option for conversion and will enable ATSG to continue to meet the demands for full-capacity freighters long into the future. Customers' response to the news that we will have A330-300 freighters available for lease has been exceptionally strong, and we already have customer deposits towards future leases for half of these 29 converted freighters."

Andreas Sperl, CEO of EFW said, "To have a key market player like ATSG adopting the A330P2F programme with such a high commitment is a major milestone for us. This is a great sign of confidence in next-generation Airbus freighters and trust in EFW's competency as a centre of excellence for Airbus freighter conversions."

The A330P2F conversions for ATSG will be performed from mid-2023 through 2027 mainly at EFW's facility in Dresden, Germany, and at a new conversion site to be set up in Shanghai, China. Multiple conversions will be carried out in parallel.

Similar to the latest conversion programmes, A321P2F and A320P2F, the A330P2F programme is a collaboration between ST Engineering, Airbus and EFW, which is leading the overall programme as well as marketing & sales efforts. To meet the rising demand for freighter conversions, ST Engineering and EFW are setting up new conversion sites in China and the U.S. this year, and are ramping up conversion capacity for all their Airbus P2F programmes to about 60 slots per year by 2024.

The A330P2F programme comes with two variants – the A330-200P2F and A330-300P2F – which are both equipped with advanced technology that offer airlines additional operational and economic benefits.

The Airbus Pilot Cadet Training Programme is open to high school graduates over 18 years old worldwide.

Airbus leads the way in training pilots of tomorrow, opens new campus in France

The Airbus Flight Academy Europe can train up to 200 pilot cadets at one time.

Airbus recently opened a new pilot-training campus, Airbus Flight Academy in South-west France. The facility is about 4.7 hectares and includes a new building of approx. 3200m which will be dedicated to the training of aspiring pilots with 14 classrooms and briefing rooms, a simulator hall, an auditorium and a restaurant. The facility can train about 200 pilots at a time. It is the first flight school in Europe to deliver the Airbus Pilot Cadet Training Programme. Besides, the campus is ISO 14001 certified in 2021.

By opening this facility Airbus once again proves that they are committed to helping the aviation industry build a skilled workforce for the future. As per the predictions, pilot demand is expected to shoot up to 550,000 over the next 20 years. Airbus is ensuring the commercial aircraft industry is ready for air traffic recovery in the 2023-2025 timeframe and the years beyond.

In a milestone achievement, Volotea, a Barcelona based airline, will recruit eleven of Airbus' newly graduated pilot cadets. This achievement is an endorsement of the quality of the Airbus Ab-Initio Training Programme which equips cadets with the skills and mindset required to become an "operationally-ready pilot" focusing on the all-important development of key pilot technical and behavioural competencies. Currently, in the final stages of their pilot training, the Airbus cadets will be joining Volotea and flying as commercial airline pilots from April-May this year.

Carlos Muñoz, CEO of Volotea said, "This is a very important day for Volotea, as we are taking cadets directly from the Airbus Flight Academy Europe for the first time. We're all very excited by it as we know the programme quality is of a very high standard, adapting perfectly to Volotea´s training philosophy. Our company keeps on growing year after year our Airbus fleet, and we're going to be needing many more pilots. We certainly hope this is the beginning of a very successful long-term partnership with the Airbus Flight Academy benefiting many young pilots."

Focussing on sustainability, the new campus will work towards reducing CO_2 emissions of its training aircraft fleet -an order for the more fuel-efficient, quieter Elixir light aircraft is ongoing to complement the current Cirrus fleet, as well as ensuring a decarbonised environmental footprint in terms of its physical sites and supply chain.

The Airbus Pilot Cadet Training Programme is open to high school graduates over 18 years old worldwide. Candidates will undergo online and on-site screening tests before being eligible for training which will include 750+ hours of ground school, plus 200 hours of practical (flight and simulator) training.

Boeings' deliveries remained sluggish in February - delivered just 22 airplanes and won 37 net orders

The FAA will perform a final inspection of the 787 and retain the power to clear each new plane.

Boeing deliveries remained sluggish in the first quarter of 2022, mainly due to the grounding of the 787 Dreamliner by the FAA. Deliveries of jets are crucial for Boeing and other manufacturers because that's when customers pay the bulk of the plane's price.

February orders

As of February, Boeing landed orders for another 37 commercial jets, including deals for 32 737 Max and for five first-generation 777 Freighters.

February deliveries

They delivered 20 narrowbody 737 MAXs from its Renton assembly plant in February, including the 50th delivery of a MAX to Ireland's Ryanair. In addition, Boeing delivered two widebody freighters from its Everett plant: a 747-8F for UPS and a 777F for DHL. This amounts to a total of 22 deliveries in February, its fewest since August.

Boeing delivered just 22 airplanes and won 37 net orders.

There were no deliveries of the 767 in its military tanker or freighter models, and also none for the 787-passenger jet. Boeing still awaits approval from the Federal Aviation Administration for fixes to a series of manufacturing defects on the 787.

The manufacturing defect in 787

The 787 addresses a series of tiny imperfections on the carbon-fiber jet frames that will require labor-intensive fix involving the doors of over 110 aircraft in the system. The deliveries of 787 are halted since June. Boeing has addressed the issue as a series of manufacturing flaws that have required fixes and more in-depth inspections. Meanwhile, Boeing also confirmed that they won't rush when it comes to 787 deliveries. The risk of customers switching over to their rival counterparts always lingers, however, Boeing hopes that the power of the product will get them through. Stan Deal, president and chief executive officer of Boeing Commercial Airplanes said, "We are in talks with all the affected airlines and we don't expect to lose their orders." Meanwhile, he declined to comment when will the deliveries commence.

The FAA stand

The FAA has been adamant about its stand on the 787. The FAA confirmed in a statement that once deliveries of 787s resume, it will perform final inspections and retain the power to clear each new plane until it is confident that Boeing's quality control and manufacturing "consistently produce 787s that meet FAA design standards. It also said Boeing must have a plan for handling planes that need reworking. This will allow the agency to confirm the effectiveness of measures Boeing has undertaken to improve the 787-manufacturing process

For years, the FAA has relied on Boeing employees to certify the airworthiness of planes by deputizing some company employees to act on behalf of the agency. The practice came under intense criticism after two deadly crashes involving Boeing 737 Max jets and revelations that FAA officials knew little about the key flight control systems implicated in the crashes.

The 787, a larger plane than the 737, has been plagued by production flaws such as unacceptable gaps between fuselage panels. Deliveries were stopped briefly in late 2020, then again in May 2021, and have not resumed.

Boeing 737 MAX

On a positive note ...

The FAA finalized three safety directives for some grounded Boeing 777 planes with Pratt & Whitney 4000 engines that will allow them to return to service.

The Losses

Boeing has more than 100 undelivered 787s. The halt in shipments has deprived Boeing of the cash that airlines pay when they receive new planes. Boeing in January recorded USD 5.5 billion in total costs for the 787 Dreamliner, wiping away any near-term profit for the marquee wide-body jet. The 787 program's profits have been erased as Boeing pays airlines for the service they've lost because of delivery disruptions.

Boeing has meanwhile burned through more than $31 billion during a nearly three-year-long slump marked by the grounding of its 737 Max, the Covid-19 pandemic, and a spate of quality lapses.

The Predictions

The industry has received mixed signals about the demand for planes. Especially long-range ones. Boeing has said publicly that it sees a full recovery in air traffic by the end of 2024, however, it sent a message to a supplier that 787 parts production rates may not reach pre-pandemic levels until around 2026 or 2027.

Overall, Boeing's projections for commercial market recovery remain unchanged. As per their predictions, passenger traffic will return to 2019 levels between 2023 and 2024.

The Conclusion

The pace of Boeing jet deliveries, already slowed by lack of access to the Chinese market, is being hit by supply chain glitches. Some airplanes cannot be completed for want of items.

Boeing's orders for customers in Russia are still in its backlog, despite the fact that Airbus said they would no longer supply parts or service aircraft there. Boeing's deliveries to Russia have been suspended, however.

Boeing has 85 airplanes on order by Russian airlines or by lessors that are slated to go to Russian airlines.

Boeing Chief Financial Officer Brian West said last month on the quarterly earnings call the company is building MAXs at a rate of 27 jets per month. In addition to the newly built jets, it aims each month to clear out batches of the 335 formerly grounded MAXs still parked since the airplane was allowed to return to service.

Yet, despite the expectation that some previously parked jets might be delivered in addition to those being built each month, the rate of deliveries remains much lower than the production rate.

Next Level Aviation expands geographic footprint by placing USM inventory in Ireland

The new subsidiary marks their entry into the used aircraft/engine asset trading business.

Next Level Aviation recently established a new subsidiary, Next Level Aviation-Ireland to meet customer demands in Europe, the Middle East, and African regions. The new subsidiary plans to support the customers, in Aircraft On Ground (AOG) situations, by strategically placing used serviceable material (USM) inventory in Ireland. As per the predictions, Next Level Aviation -Ireland is expected to grow to USD 100MM+ in annual revenues within five years through USM sales and used aircraft/engine asset transactions.

Jack Gordon, Chairman, and CEO of Next Level Aviation said, "This new subsidiary will expand our geographic footprint by strategically placing USM inventory in Ireland, closer to our EMEA customers and trading partners. The establishment of Next Level Aviation-Ireland, Ltd. will also mark our entrance into the used aircraft/engine asset trading business, where NLA seeks to develop a reputation as an efficient and reliable counter-party in the monetization of asset portfolios by airlines, leasing companies, and financial owners. NLA-Ireland will be built on the same founding principles of Next Level Aviation (US) which are decisiveness, integrity, superior customer service, impeccable quality assurance, and teamwork, and will mirror the performance-driven culture we have cultivated in the U.S. over the last nine years."

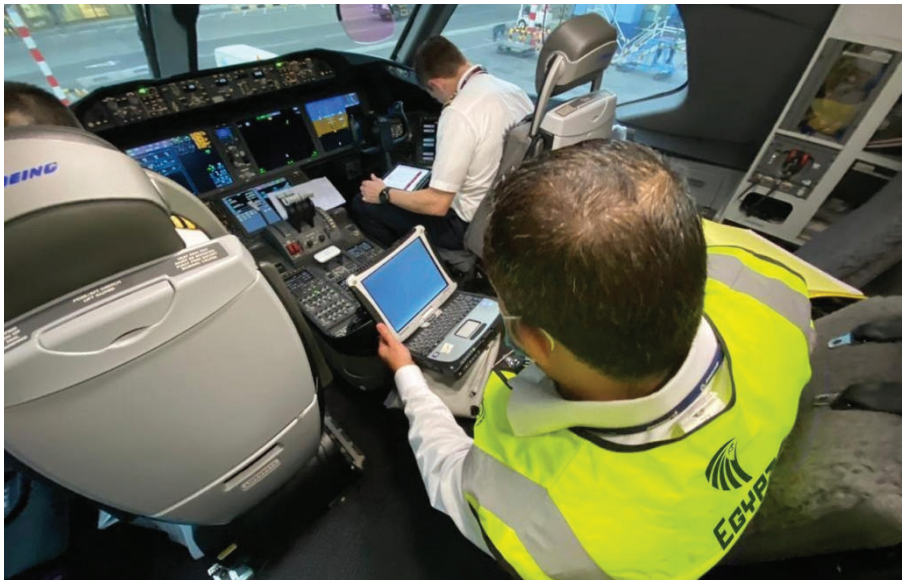
Next Level will soon announce the president of its new Irish subsidiary, who is a seasoned and respected industry leader with significant long-term relationships within the Irish leasing community and commercial aviation aftermarket globally.

EgyptAir Maintenance & Engineering launches Line Maintenance Services at Accra

EgyptAir subsidary inaugurates a new aircraft maintenance center at Kotoka Airport.

EgyptAir Maintenance & Engineering has started providing line maintenance services at Kotoka International Airport of the Ghanaian capital Accra. In addition to supporting EGYPTAIR fleet operation, the Egyptian MRO commenced providing line maintenance for Qatar Airways' fleet operating at Accra as its first third party customer at the station.

Eng. Yehia Zakaria, Chairman & CEO of Egyptair Maintenance & Engineering said "Our station at Kotoka Airport mainly serves EGYPTAIR fleet, while the cooperation with Qatar Airways in Ghana is an extension to the existing cooperation and the first step toward providing our services to the third party in the station. We aim at expanding our presence in the African continent and the Middle East through new footprint in many locations in the region to provide line maintenance support to our current and potential customers."



Line maintenance services at Kotoka International Airport.

Egyptair Maintenance & Engineeringalready provides line maintenance at Cairo Airport for Qatar Airways' B777, B777 Freighters, B787, A330 and A320 family along with the most recent A350 which has been recently added to EgyptAir Maintenance & Engineering's capabilities, this is in addition to line maintenance services at Borg al Arab, Sharm El Sheikh and Luxor.

Constant Aviation achieves FAA certification for having a single, integrated corporatewide Safety Management System

The FAA understands that Safety Management Systems work best with priorities, resources, and interaction fully aligned to maximize their effectiveness.

Constant Aviation has achieved an important milestone of becoming the second independent MRO in the U.S. to be recognized as having a single, integrated corporatewide Safety Management System (SMS) by the FAA. Achieving FAA-Accepted Corporate SMS status means that Constant is operating under a single safety system companywide, which generally reduces safety risk and ranks it as a leader in business aviation maintenance safety.

Constant Aviation Chief Executive Officer David H. Davies said, "The improvements throughout our organization because of SMS implementation are clear, as evidenced by this latest recognition by the FAA. This honor underscores that we are a leader in moving from a reactive safety culture to one that is highly proactive, continuously improving and dynamically driving safety organization-wide."

SMS is the standard for safety programs in aviation worldwide. Although SMS processes are optional for MROs such as Constant, they are seen as highly beneficial and frequently are requested by both domestic customers and foreign certificate holders. Although the FAA only recently recognized Constant's Corporate SMS program, the company has been operating with SMS processes since August 2018.

"Having two or more systems generally means maintaining multiple manuals, operating multiple databases and operating with less communication and coordination. The FAA understands that Safety Management Systems work best with priorities, resources, and interaction fully aligned to maximize their effectiveness. We have worked to integrate our SMS across our entire company, and FAA acceptance of our Corporate SMS program is recognition of this at the highest level," Davies further added.

During an FAA audit in December 2021, Constant Aviation demonstrated that its SMS system runs parallel between the Cleveland and Sanford facilities, thereby meeting the standard of a Corporate SMS Program. It met such criteria as having a single accountable executive; maintaining a common database; having data reviewed and analyzed at the corporate level; having the capacity to identify and communicate hazards across all affected organizations, and having a common manual and documentation.

MTU Maintenance multi-pronged strategy led to robust growth and global expansion

MTU Maintenance was able to gain new independent MRO contracts worth 4.6 billion USD.

MTU Maintenance has carried out robust and extensive worldwide expansion activities in 2021, pushing the numbers more than pre-Covid levels. By consistently and successfully pursuing growth plans, MTU Maintenance has established itself as the global market leader in customized solutions for aero engines. Apart from expansion, MTU has also significantly increased shop inductions to pre-Covid levels.

Michael Schreyögg, Chief Program Officer, MTU Aero Engines said, "This speaks to the stability of our broad engine portfolio and customer base in nearly every corner of the world, as well as of ingrained entrepreneurship. But above all, it underlines the outstanding expertise and performance of our excellent staff."

Thanks to a multi-pronged strategy including OEM network participation, joint ventures with airlines, and a portfolio across multiple business segments, MTU Maintenance was able to gain new independent MRO contracts worth 4.6 billion USD. Over 1,100 shop visits were carried out, surpassing pre-Covid volume and to which the ramp-up at EME Aero contributed significantly.

The year 2021 saw moving and construction activities at nearly every MTU Maintenance location. MTU Maintenance Canada moved into its new site at Delta south of Vancouver in spring while business continued undeterred. New buildings and operations were opened at Dallas in the U.S., Hannover, and Ludwigsfelde/Germany – where a new facility with quick turn docks was opened as part of the expansion of MTU's on-site services network and capabilities. The ASSB extension at Kota Damansara/Malaysia was completed and ready for operations in April 2021. And the year saw the ground-breaking at MTU Maintenance's biggest construction sites at Nova Pazova/Serbia and Jinwan near Zhuhai/China, where two completely new facilities are scheduled to start operations by mid-2022 and 2024, respectively. MTU Maintenance does Brazil in Sao Paulo received the key aviation authorities' certifications to perform various engine types on-site services. MTU fully took over MTU Maintenance Lease Services B.V. in Amsterdam and incorporated MTU Maintenance Coating Services GmbH into MTU Maintenance Berlin-Brandenburg.

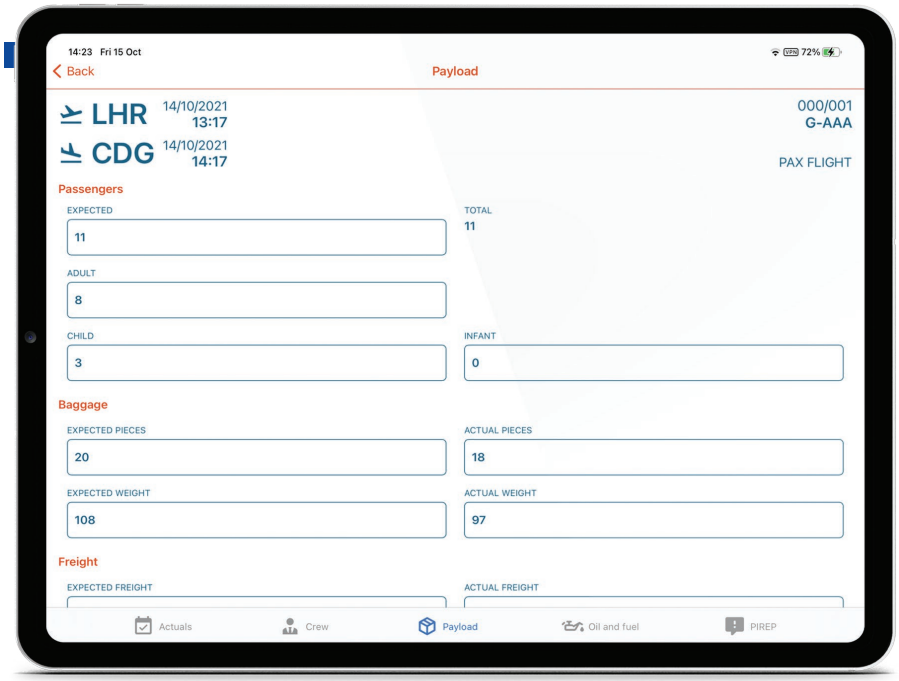
Not only the company itself is growing, but its business is also expanding, too. EME Aero, a 50/50 joint venture with Lufthansa Technik which only started operations in 2020, specializes in Pratt & Whitney GTF engines and is steadily ramping up operations. More than 100 engines were inducted in 2021, among them the first PW1500G. Adding to group growth was MTU Maintenance Canada's licensing for LEAP accessory repairs or the extension of the CF34 license into 2030 at MTU Maintenance Berlin-Brandenburg, for instance.

‘Flexibility’ – A key pillar of ENVISION & Rusada’s mantra for customer satisfaction

“In aviation no two operators are the same, even two commercial operators flying in the same region have very different ways of doing things” - Julian Stourton
Right from integrating emerging technologies like Blockchain and Artificial Intelligence to robust expansion plans in **Europe and Asia, Rusada has it all. Rusada CEO, Julian** Stourton speaks with immense pride about the latest Rusada App – ENVISION Flights, the diverse customer base, and Rusada’s adaptation strategy along with the digital revolution picking pace in the MRO sector, in an Exclusive Interview with **Swati.k.** READ ON! To find more...

Q– Congratulations on the new app ENVISION Flights to provide users with live flight details. Can you tell our readers the best part that you liked about this app?
A- What I like most about the new app, is what I like about all our apps – they save people time. In the case of our Flights app, this means removing the need to get updates via phone calls or third-party agents, as all the information is there on the app, with any changes immediately pulling through. Key actions can also be conducted straight from the cockpit rather than being recorded on paper and then someone else re-recording on a PC.
Although the time saved per action is relatively small, when you multiply this across all your flights over the course of a year, this can add up to thousands of hours saved in this area alone.

Q- ENVISION Flights becomes the third new app released in the last 10 months after ENVISION Tasks and ENVISION Stock, what is next in line for Rusada?
A- There several areas on which we are currently focusing. Mobility is still a key area for us, and we are in the planning



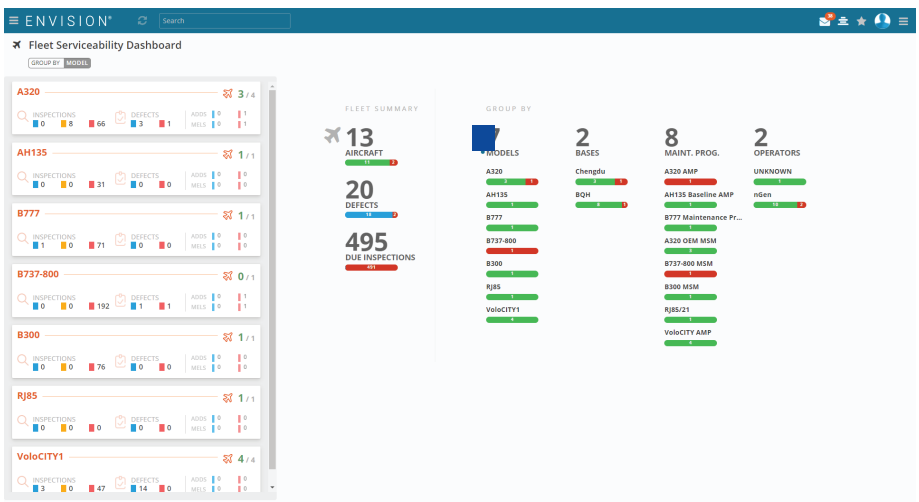
and development phase on a number of news apps.

We are also looking at a number of emerging technologies, such as Blockchain and AI, to understand how these can be integrated into ENVISION, and also if it makes sense. Too often providers will force the use of these hot-topic technologies just so they can say it's something they have, but in reality, the way they implement them is of little use to the user. Our mindset is to only use them when and where it makes sense too.

On top of this, we continue to deepen ENVISION's functionality, improve its processes, and streamline the user experience wherever possible.

Q– Last year Spirit AeroSystems signed up for 8 of ENVISION's modules along with ENVISION Tasks expanding Rusada's presence in North America, any further expansion plans on the cards?

A- This is a contract we were incredibly excited to get, and the implementation is progressing well. It further cements our position in this region, and we are talking to more and more prospective clients here with each passing month. But we are always looking to expand our presence wherever we can, whether that be in our more established customer bases like Europe and Asia, or in the likes of Africa and Latin America where we are still growing.



Aviation is a global industry, and as such most of our customers operate across multiple countries, so as a provider, having a global presence only adds more benefits to our user base.

Q– Recently Falcon Aviation signed a deal with Rusada for ENVISION software to manage their airworthiness, maintenance planning, maintenance execution, and inventory. After Chrono Aviation of Canada, this is Rusada's second charter deal for ENVISION in recent months. How does the diversity of your customer base affect the development of your software? Can ENVISION be used in defense applications?

A- What you learn very quickly in aviation is that no two operators are the same. You'll find that even two commercial operators flying in the same region will likely have very different ways of doing things. Therefore, flexibility is a key pillar of ENVISION and how we approach development.

As a result, we have a wide array of businesses using our software. Aircraft operators of all disciplines. Base, line, and component maintenance providers. Both aircraft and engine manufacturers. We have them all. And yes, that also includes a host of military operations, who use ENVISION for the airworthiness and maintenance of their aircraft.

We continuously work alongside all our customers from every area of the industry to assess and add functionality, so that ENVISION meets their needs, for the way they operate.

Q- ENVISION software aims to meet the aviation sector's complex digital needs, are we currently experiencing a digital revolution in MRO sector?

A- We are definitely experiencing a revolution, but it is a sustained period of change rather than an overnight transition. It has been going on for a number of years now, and because of that people can see the overwhelming benefits for those that have made the switch.

Fully digital operations are where everyone wants to be, but these projects require time and resources, so it's understandable that some haven't been able to make the change as of yet. Unfortunately, Covid caused further delay for many looking to adopt systems like

ENVISION, but it also highlighted how important it is to have high levels of efficiency and adaptability. These can only be achieved through digitisation, so we expect Covid to ultimately be a positive catalyst for change.

Q– Can you tell our readers the importance of data automation in years to come and how it will benefit the aviation industry?

A- The number of aircraft data sources has grown exponentially over the last decade. So much data is being produced and fed to operators, but this is all for nothing if you can't make sense of it and gain actionable insights. ENVISION's UI uses dashboards, graphical displays, and smart filters to provide users with clear and concise information so that they can manage by exception, and not get lost in the weeds.

With the advancement of AI, the processing of data will become even more sophisticated in the coming years. Software will not only be able to highlight important events and occurrences, but also advise how and when they should be remedied, making operations even more efficient.

Q– The success of ENVISION software is clearly visible by its global acceptance in over 40 countries. However, how did you deal with regional regulatory challenges?

A- I spoke earlier about the need for flexibility. If you have a software that's not locked into one way of doing things, then it's easy to adapt to the variations in processes that different regional regulations can throw up.

At the start of implementation projects, we sit down with the customer and understand how they operate and what rules they have had to adhere to. We then configure the system to take this into account allowing them to continue to operate in compliance whilst still gaining the efficiency of a modern system.

For the majority of new customers, we already have experience working with their regulations, so can take what we've done with previous customers and adapt, rather than start again from scratch.

Airbus to develop fixed wings for fully electric CityAirbus NextGen eVTOL with Spirit AeroSystems

The partnership will support Airbus' exploration of disruptive aircraft design while complying with the most stringent regulations.

Airbus has signed an agreement with Spirit AeroSystems through its subsidiary for the development of CityAirbus NextGen's wings. This partnership will support Airbus' exploration of disruptive aircraft design while complying with the most stringent regulations.

Spirit AeroSystems will be responsible for developing and manufacturing CityAirbus NextGen's wings in Belfast, Northern Ireland. Both partners' ambition is to achieve a minimum weight solution while ensuring the highest levels of safety. The structural concept of the eVTOL's fixed wings will be able to transmit the related aerodynamic loads while being optimized for the right balance between hover and cruise efficiency. CityAirbus NextGen's distributed propulsion system will contribute to reducing the influence of air turbulence.

Jörg Müller, Head of Urban Air Mobility (UAM) at Airbus said, "The partnership with Spirit AeroSystems is an important step for the development of CityAirbus NextGen and its wings are key structural components for flight efficiency. To build this vehicle, we are proud to work with Spirit as a strategic partner who benefits from a proven track record in this field, and extensive experience in component quality and airworthiness."

With a significant UK footprint, particularly in Northern Ireland and Scotland, Spirit AeroSystems has a longstanding relationship with Airbus includes the provision of fully integrated wings and wing elements for multiple Airbus commercial aircraft. Extending existing collaboration between Airbus and Spirit AeroSystems, this partnership is a further sign of the Company's commitment to the United Kingdom.

The fully electric CityAirbus NextGen is an eVTOL prototype equipped with fixed wings, a V-shaped tail, and eight electrically powered propellers as part of its distributed propulsion system. CityAirbus NextGen is being developed to fly with an 80km operational range and to reach a cruise speed of 120 km/h, making it perfectly suited for a variety of missions. Airbus is developing a UAM solution with eVTOLs not only to offer a new mobility service in urban areas and beyond but also as an important step in its quest to reduce emissions in aviation all over its product range.

StandardAero set to offer aircraft upgrade expertise with Gogo AVANCE L3 and L5

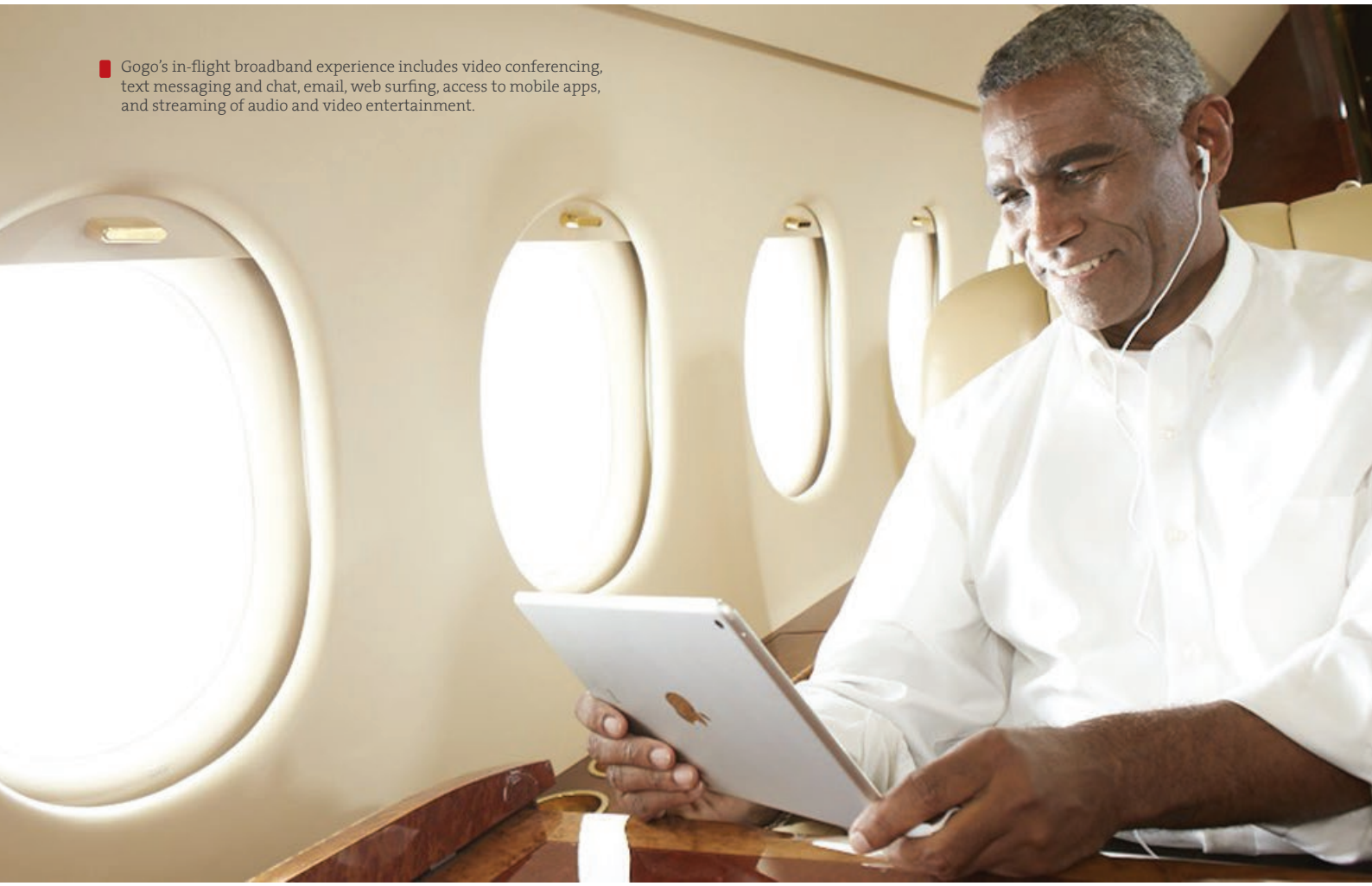
Gogo AVANCE L3 and L5 systems are cabin connectivity solutions designed to meet individual connectivity requirements.

Supply chain woes continue to hit the aerospace industry. In order to tackle this problem once and for all and to ensure that customers won't face any production delays in the future, StandardAero has signed a volume purchase agreement with Gogo. As per the terms of the agreement Gogo will deliver the AVANCE L3 and L5 systems in March. Gogo AVANCE L3 and L5 systems are cabin connectivity solutions designed to meet individual connectivity requirements, enabling customers to perform daily network activities in the sky, as they do in their homes or businesses.

The agreement will open up more available options for operators seeking installations. StandardAero offers Gogo AVANCE L3 and L5 installation slots for Dassault Falcon, Bombardier, Hawker, Gulfstream, Embraer, and Citation business jet operators from the US and Canada. Upgrades are managed at StandardAero's Centers of Excellence in Houston, TX, Springfield, IL, and Augusta, GA.

Robert Randall, Director of Avionics Sales said, "Our sites will be stocked with Gogo AVANCE L3 and L5 systems, ready for installation. Gogo AVANCE systems are top sellers and we foresee this trend to continue through 2023. We want to ensure business jet operators' cabin connectivity requirements are being met by offering industry-leading solutions such as Gogo's AVANCE L3 and L5 systems. Operators can take advantage of StandardAero's aircraft upgrade expertise and unit availability to give both passengers and crew the in-flight experience they expect in a fast-moving, digital and connected world."

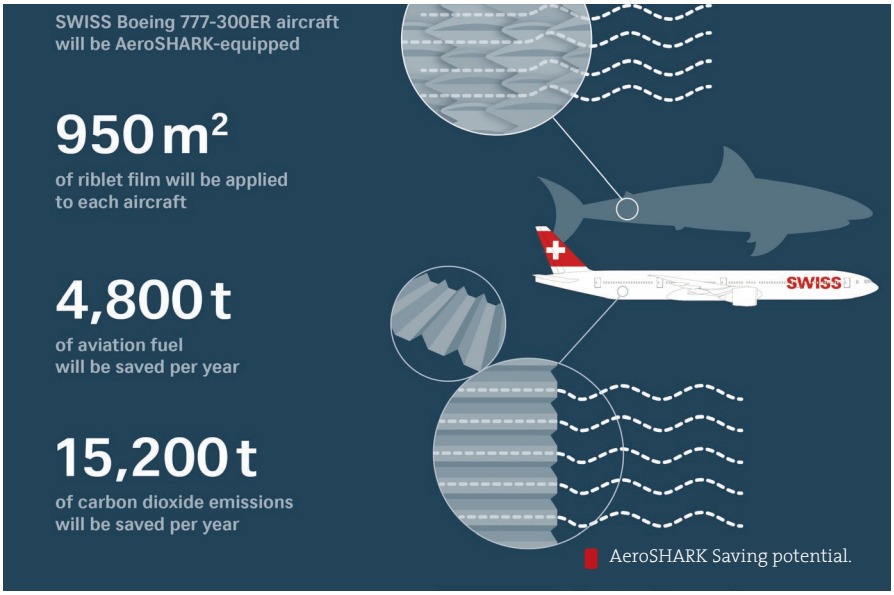
Gogo's in-flight broadband experience includes video conferencing, text messaging and chat, email, web surfing, access to mobile apps, and streaming of audio and video entertainment. Onboard crew and ground support can also use real-time data and remote diagnostics using the onboard connectivity system.



Gogo's in-flight broadband experience includes video conferencing, text messaging and chat, email, web surfing, access to mobile apps, and streaming of audio and video entertainment.

SWISS provides fuel saving AeroSHARK for the entire Boeing 777-300ER fleet

Riblet films developed by Lufthansa Technik and BASF reduce frictional resistance leading to fuel efficiency and reduction in emissions.



LufthansaTecknik will be providing the AeroSHARK equipment for SWISSAir Boeing fleet. Starting during the Mid year, a total of twelve Boeing 777-300ERs will gradually be fitted with the riblet films developed jointly by Lufthansa Technik and BASF. The frictional resistance is greatly reduced by this modification thereby making the sub-fleet more than one percent more fuel-efficient and lower in emissions.

Swiss International Air Lines (SWISS) is the first passenger airline in the world to use the innovative surface technology to significantly reduce fuel consumption and emissions of one of its existing fleets, thereby improving both economy and ecology. With an approximate of 950 square meters of riblet film, the changes of the "long" Boeing 777-300ER will be even larger than the 800 square meters on the Boeing 777F of AeroSHARK's launch customer Lufthansa Cargo. The savings potential for fuel and CO_2 on this scale will be 1.1 percent. Converted to the operational profile of the twelve Boeing 777-300ERs at SWISS, this means yearly savings of more than 4,800 tons of kerosene and roughly 15,200 tons of carbon dioxide, that is generated on an approximate estimate covering 87 long-haul flights from Zurich to Mumbai.

Dieter Vranckx, Chief Executive Officer of SWISS said "Reducing our environmental footprint is one of the biggest challenges facing the aviation industry, and becoming carbon-neutral until 2050 is an important strategic goal for SWISS. We are keen to actively promote and invest in the use of new technologies. We are pleased to be the world's first passenger airline to offer the innovative AeroSHARK technology on our Boeing 777 fleet, making another important contribution to more sustainable air travel in the future."

Due to the long lifecycles in our industry, we cannot only rely on new aircraft generations to reduce our environmental footprint, but also need to specifically optimize existing fleets towards sustainability. AeroSHARK makes a significant contribution to this, and I am very pleased that SWISS is leading the way", explained Dr. Johannes Bussmann, Chief Executive Officer of Lufthansa Technik.

"In developing our Novaflex Sharkskin surfaces, the focus was on a robust yet functional solution that meets the stringent requirements of aviation and also helps our customers achieve their sustainability goals," said Uta Holzenkamp, head of BASF's Coatings division and in this position also responsible for functional films. "The fact that SWISS is convinced by our solution shows that economic action and sustainability go hand in hand."

SWISS will install AeroSHARK on its Boeing 777-300ER fleet successively from mid-2022 during suitable maintenance layovers. The airline had already supported Lufthansa Technik and BASF during the development phase of AeroSHARK: In the summer warm season of 2021, a Boeing 777 wing was precisely measured for the entire duration of a regularly scheduled flight between Zurich and San Francisco. With the data collected, Lufthansa Technik was subsequently able to create highly accurate 3D models for flow simulations, on the basis of which the AeroSHARK modification is to be extended to the wings of the Boeing 777 in the near future in order to realize further savings potential. SWISS will also provide one of its aircraft for the so-called STC flight to obtain the required Supplemental Type Certificate from the European Union Aviation Safety Agency (EASA).

AeroSHARK is a surface technology developed jointly by Lufthansa Technik and BASF that consists of ribs around 50 micrometers in size – known as riblets. It specifically imitates the properties of sharkskin, which has particularly favorable flow characteristics, and thus optimizes aerodynamics at relevant points on the aircraft. Due to this, less fuel is needed overall. Lufthansa Technik and BASF intend to systematically develop the new technology further in the direction of additional aircraft types and even larger surfaces, so that in the future they will be able to provide airlines around the world with even more extensive support in achieving their emissions targets. In initial model calculations, the sharkskin technology in its maximum expansion stage could even avoid CO_2 emissions to the extent of up to three percent.

SR Technics open six-bay hangar in Malta to serve rising customer demands in EMEA region

The new hangar will accommodate both narrow and wide-body aircraft at Malta International Airport.

SR Technics recently opened a new six-bay hangar including significant back-shop facilities for its center of excellence (CoE) for aircraft maintenance in Malta. This facility will enable SR Technics to continuously provide high-quality aircraft maintenance and cabin modification services to six narrow-body aircraft of the B737 & A320 families simultaneously.

Robert Abela, Prime Minister of Malta said, "This new facility is unquestionably one of the most technologically advanced facilities in Europe – both in terms of innovation, as well as stunning design. It is also a story of national pride as the largest steel structure ever manufactured and built-in Malta. We want only the highest standards for this country and that is what you have created here."

Jean-Marc Lenz, Chief Executive Officer at SR Technics, shared the update about the recent achievements and plans for the facility. "I am glad we celebrated this opening together. The new hangar will accommodate both narrow and wide-body aircraft at Malta International Airport. This 40,000sqm facility includes workshop space, increased capacity for heavy maintenance, C-checks, and cabin modifications to up to six narrow-body aircraft at a time. By choosing our maintenance services in Malta, you are assured not only the highest levels of safety and reliability but also short turn-around times and cost-efficient service delivery."

Arthur Magri, General Manager of SR Technics Malta said, "With this hangar, our excellent and highly motivated workforce will be able to produce excellent service and product quality and redeliver the aircraft on time to customers. This hangar will support continuous improvements and efficiency and be a major success factor for the sustainable future of SR Technics Malta. The company marks success thanks to the excellent support of the Malta government."

The new facility will not only employ around 500 highly trained professionals but also offer new opportunities to customers in EMAE region. The Malta facility will continue to support both SR Technics' strategic operations in Europe and the overall aerospace strategy of its shareholders.

Gulfstream opens new facility in Arizona to expand and modernize the facilities for growing Gulfstream fleet

The new facility, which is located just across the airport features a large hangar that can hold multiple Gulfstream large-cabin aircraft; customer office space; a tool room; and space for parts inventory.

Gulfstream Aerospace recently opened a facility at Phoenix-Mesa Gateway Airport to meet growing customer demand. The new facility, which is located just across the airport features a large hangar that can hold multiple Gulfstream large-cabin aircraft; customer office space; a tool room; and space for parts inventory.

Derek Zimmerman, president of Gulfstream Customer Support said, "We received a tremendous amount of interest from our customers when we announced our new Mesa service center this past November. Anticipating that interest, we were already working with Phoenix-Mesa Gateway Airport officials to begin providing maintenance repair and overhaul options as soon as possible. Gulfstream's Mesa Service Center is the latest strategic investment we have made to expand and modernize our facilities in support of the growing Gulfstream fleet around the world. Our goal is to provide our customers with the best service when and where they need it."

The facility, located at 6253 South Sossaman Road in Mesa, will offer a variety of routine inspections and maintenance for all Gulfstream in-service aircraft.

The facility, located at 6253 South Sossaman Road in Mesa, will offer a variety of routine inspections and maintenance for all Gulfstream in-service aircraft. Gulfstream's Mesa service facility also will offer aircraft-on-ground (AOG)/drop-in support to address any immediate customer needs. This new facility will help prepare tomorrow's workers for high-paying jobs in the fast-growing aerospace sector. Gulfstream already has more than 60 employees working at the Mesa facility and plans to ultimately grow to around 200 employees once the new larger facility opens next year.

The Arizona service center augments Gulfstream Customer Support's growing network around the world and follows recent expansions in Savannah, Georgia; Van Nuys, California; Fort Worth, Texas; Palm Beach, Florida; Appleton, Wisconsin; and Farnborough, England.

AvidAir joins Rolls Royce FIRST Network global support team as Authorized Repair Facility

Rolls-Royce FIRST Network provides M250 and RR300 operators with a global network of authorized MRO service centers.

Rolls-Royce has announced AvidAir as the newest FIRST Network Authorized Repair Facility. Headquartered in Grain Valley, Missouri, AvidAir will provide limited scope overhaul and replacement maintenance for M250 and RR300 customers.

The AvidAir team will provide service related to engine compressor case overhauls, removing the existing plastic liner in series I & II engines and applying a patented carbon fiber material that will reduce lifecycle cost and aircraft downtime, while improving engine performance and reliability.

Rege Hall, Rolls-Royce Customer Service Executive – Helicopters said, "We congratulate AvidAir for their ongoing commitment and investment in capabilities, and are excited to welcome them as a Rolls-Royce Authorized Repair Facility. Their expertise in compressor case overhauls is unparalleled in the market and will be a strong addition to our global FIRST Network team."

Craig Rookstool, AvidAir President and Director of Operations said, "We are pleased to join the FIRST Network global support team as an Authorized Repair Facility and expand our relationship with Rolls-Royce. This demonstrates our ongoing commitment to providing solutions that deliver quality, safety, and reliability at a reasonable cost to our customers and partners around the world. We look forward to continuing to expand our support capabilities as a FIRST Network member."

The FIRST network provides operators with affordable and reliable service anywhere for Rolls-Royce M250 or RR300 engines.

With more than 16,000 turboshaft and turboprop engines in service and 4,500 customers worldwide, the Rolls-Royce FIRST Network provides M250 and RR300 operators with a global network of authorized MRO service centers. The FIRST network includes more than 30 approved, licensed service centers, and its competitive structure means operators can find affordable and reliable service anywhere for Rolls-Royce M250 or RR300 engines.

The proven Rolls-Royce M250 and RR300 engines have powered more than 260 million flight hours of dependable service around the world. To date, more than 33,000 of these workhorse engines have been delivered to the marketplace.

The M250 and RR300 are manufactured in Indianapolis, Indiana, where a $600 million Rolls-Royce investment in modernization and technology programs was recently completed, including state-of-the-art advanced manufacturing.

Avion Express selected as a long-term ACMI partner for Eurowings

Eurowings is a market leader currently operating a fleet of 100 aircraft.

Avion Express signed an agreement with Lufthansa Group's Eurowings to wet-lease 11 A320 aircraft in the third quarter of 2022.Eurowings is a market leader operating from the airports of Düsseldorf, Hamburg, Stuttgart, and Cologne Bonn, and currently has a fleet of 100 aircraft. With a focus on affordable products and services, Eurowings offers a large number of non-stop flights within Europe.

Avion Express Vice President Commercial, Dainius Staniulis said, "We are pleased to work with one of the largest and most respected airline groups globally in a partnership that demonstrates our high quality and safety standards as well as our focus on flexibility. Thanks to the close collaboration and dedication of the Eurowings and Lufthansa teams, we are looking forward to successful long-term cooperation."

After a successful and thorough selection process, Avion Express was nominated as the long-term ACMI partner for Eurowings. With the pent-up travel demand continuing from last year, the partnership reflects booming numbers in holiday bookings for the upcoming summer season in 2022.

Etihad to use Boeing's FliteDeck Advisor solution to optimize 787 Dreamliner fleet

The FliteDeck Advisor helps to save fuel by 1.4 percent i.e 350 kgs and 1,100 kgs of CO2 per flight.

Boeing has been selected to provide Etihad Airways with the Jeppesen FliteDeck Advisor digital solution for their 787 Dreamliner fleet to optimize operational efficiency and reduce fuel consumption. Etihad has already found benefits from the use of FliteDeck Advisor. During a trial on several of its 787 Dreamliners, they found that the digital solution delivered cruise fuel savings of 1.4 percent, saving an average of 350 kilograms of fuel and 1,100 kilograms of CO_2 per flight.

Sulaiman Yaqoobi, vice president of Flight Operations, Etihad Airways said, "We have been very pleased with the fuel and cost savings we have achieved with FliteDeck Advisor. FliteDeck Advisor was tested as part of the Etihad Greenliner program, and it is great to now see it deployed across the 787 fleet, helping Etihad achieve efficiency gains and reduce CO_2 emissions."

Since 2019, Boeing and Etihad have collaborated on sustainability efforts centered on the 787 Dreamliner fleet, including Etihad's participation in Boeing's ecoDemonstrator program, where the FliteDeck Advisor solution was initially tried.

Jeppesen FliteDeck Advisor analyses airplane-specific performance metrics for all Boeing aircraft, including changes over time with aircraft age and maintenance action. The tool enables flight crews to make small, real-time adjustments to their course, altitude, and speed to optimize fuel use and minimize the carbon footprint of each flight.

Duane Wehking, vice president of Digital Aviation Solutions at Boeing Global Services said, "Etihad has been a tremendous partner in advancing sustainable aviation technologies, and we are excited to continue providing them with solutions that help them decarbonize their fleet while meeting their commercial goals."

Boeing provides several other digital solutions and services to Etihad's 787 fleets including Jeppesen FliteDeck Pro, Jeppesen Crew Rostering, and Boeing Wind Updates, which provide crew scheduling, charting, navigation, and flight efficiency capabilities.

With 39 Boeing Dreamliner airplanes currently in operation, Etihad is the largest operator in the Middle East of the 787, a family of airplanes designed with superior efficiency which allows airlines to profitably open new routes to fly people directly where they'd like to go in exceptional comfort.

Ethiopian joins select group of launch customers for Boeing 777-8 Freighters

The MoU will enable Ethiopian Airlines to meet expanding global cargo demand from its hub in Addis Ababa.

Boeing and Ethiopian Airlines signed a Memorandum of Understanding (MoU) to purchase five 777-8 Freighters, the newest, most capable, and most fuel-efficient twin-engine freighter. This MoU will enable Ethiopian Airlines to meet expanding global cargo demand from its hub in Addis Ababa and position itself for long-term sustainable growth.

Ethiopian Airlines Group CEO Tewolde Gebremariam said, "Consistent with our history of aviation technology leadership in Africa, we are pleased to sign this MoU with our longstanding partner Boeing, which will make us join a select group of launch customer airlines for the fleet. In our vision 2035, we are planning to expand our Cargo and Logistics business to be one of the largest global multimodal logistics providers on all continents. To this effect, we are increasing our dedicated freighter fleet with the latest technology, fuel-efficient, and environment-friendly airplanes of the 21st century. We have also started the construction of the largest E-commerce Hub Terminal in Africa. The new 777-8 Freighters will be instrumental in this long journey of growth agenda. Today, our air cargo services cover more than 120 international destinations around the world with both belly-hold capacity and dedicated freighter services."

Boeing launched the new 777-8 Freighter in January and has already booked 34 firm orders for the model, which features the advanced technology from the new 777X family and proven performance of the market-leading 777 Freighter. With payload capacity nearly identical to the 747-400 Freighter and a 30% improvement in fuel efficiency, emissions and operating costs, the 777-8 Freighter will enable a more sustainable and profitable business for operators.

Ihssane Mounir, senior vice president of Commercial Sales and Marketing said, "Ethiopian Airlines has been at the forefront of Africa's cargo market for decades, growing its fleet of Boeing freighters and connecting the continent to the flow of global commerce. The intent to purchase the new 777-8 Freighter further underscores the value of our latest airplane and ensures Ethiopian will remain a key player in global cargo, providing it with increased capacity, flexibility, and efficiency for the future."

Ethiopian Airlines currently operates nine 777 Freighters, connecting Africa with more than 40 cargo centers throughout Asia, Europe, the Middle East and the Americas. The carrier's fleet also includes three 737-800 Boeing Converted Freighters and a combined commercial fleet of more than 80 Boeing jets including 737s, 767s, 787s, and 777s.

BOC offers 8 Boeing 737 MAX aircraft on lease to help Lynx with expansion in Canada

The aircraft will be leased to Lynx Air ("Lynx") on long-term leases.

BOC Aviation recently purchased 11 new 737 MAX 8 aircraft from Boeing. The aircraft will be leased to Lynx Air ("Lynx") on long-term leases.

Robert Martin, Managing Director and Chief Executive Officer, BOC Aviation said, "We are delighted to welcome Lynx as a new customer and are pleased to support the airline's plans to serve the Canadian travel market with the most fuel-efficient, technologically advanced aircraft. This transaction demonstrates the innovative financing solutions that we provide for our global customer base and reflects our disciplined investment strategy focused on a portfolio of latest technology aircraft."

Merren McArthur, CEO, Lynx Air said, "We are pleased to be partnering with BOC Aviation for the lease of 11 of our new aircraft. The financing of these aircraft is integral to our growth plans as we continue our mission to make air travel accessible to all Canadians. We are looking forward to welcoming Canadians onboard these brand-new Boeing 737 MAX airplanes."

The aircraft will be powered by CFM LEAP-1B engines and are scheduled for delivery in 2023 and 2024.

VD Gulf and Aero Cabin Solutions join hands to share capacities for efficient aircraft interior solutions

The services will include refurbishment/repair of Seats, Repair of Galleys, Lavatories, Partitions, and other monuments.

VD Gulf recently signed an MoU with Aero Cabin Solutions (ACS), thus paving the way for cooperation in aircraft interior works. This agreement sets the framework for passenger seat refurbishment works to be carried out at VD Gulf's facilities in Sharjah, UAE. VD Gulf and ACS will be working jointly to offer these new services to their respective clients.

Oleg Novak, VD Gulf's Chief Operating Officer said, "At VD Gulf, we are committed to a policy of continuously expanding our capabilities to offer more for our valued clients. We are delighted to partner with Aero Cabin Solutions, and we are excited to see how these new synergies can help further facilitate a growing market demand within the ME region needs."

Laurent Dental, Chief Executive Officer of Aero Cabin Solutions said, "We are delighted to be entering into this Memorandum of Understanding with VD Gulf. This MoU provides a visible manifestation of our mutual commitment towards our customers. Our Shared capacities will contribute to the most efficient solutions for the management of aircraft interiors. We trust that this MoU will establish a model for further collaboration to serve our respective customers. The one-stop solution for airlines and lessors is coming soon to the Middle East!"

The services will include refurbishment/repair of Seats, Repair of Galleys, Lavatories, Partitions, and other monuments.

AerCap leased Boeing planes to ASA for narrowbody fleet renewal

The lease is for ten new Boeing 737 MAX 8 aircraft and eight Boeing 737-800 NG aircraft.

AerCap Holdings signed agreements with Norwegian Air Shuttle ASA for the lease of ten new Boeing 737 MAX 8 aircraft and eight Boeing 737-800 NG aircraft. The aircraft are scheduled to deliver in 2022 and 2023.

Peter Anderson, Chief Commercial Officer of AerCap said, "We are delighted to support Norwegian's narrowbody fleet renewal program. The addition of these aircraft will help Norwegian grow its operations whilst maintaining its commitment to operate a highly competitive, fuel-efficient fleet of aircraft. We wish Geir Karlsen and all the team every success and we look forward to working with them as these aircraft deliver."

Geir Karlsen, CEO of Norwegian said, "The addition of these aircraft will help us achieve our target of building a larger, modern, and more fuel-efficient fleet. This will, in turn, enable us to deliver our products and services in a wide network of routes in the Nordics and to European destinations."

Also, AerCap is set to release its fourth-quarter 2021 financial results on March 30, 2022.

Young Air Sial relies on EPCOR's experience for their maintenance needs

Air Sial fleet includes two types of engines Pratt & Whitney APS3200s and Honeywell GTCP131-9As.

EPCOR will carry out comprehensive maintenance of the auxiliary power units (APUs) equipping Air Sial's fleet of three Airbus A320 aircraft.

Air Sial has signed an exclusive long-term contract with EPCOR for the comprehensive maintenance of the auxiliary power units (APUs) equipping its fleet of three Airbus A320 aircraft. EPCOR has designed an adaptive, competitive offer suited to the needs of a young airline. As part of the AFI KLM E&M network, EPCOR is providing Air Sial with its airline-MRO mindset: the benefits of its first-rate technical know-how, as well as its experience as an operator in the management of the maintenance plan. In order to secure its operations and limit the risks of AOG, Air Sial will be able to rely on PROGNOS for APU, the predictive maintenance solution developed by EPCOR.

Mr. Fazal Jillani, Chairman of Air Sial said, "It is important for a young company like ours to be able to rely on the resources of an experienced MRO. We particularly appreciated the way EPCOR listened to us, understood our exact needs, and adapted its proposal throughout our discussions."

Dominik Wiener-Silva, EPCOR Managing Director said, "On behalf of all EPCORians, we are very pleased to welcome Air Sial as a customer. Pakistan is a particularly dynamic market where our MRO solutions have proven their reliability and performance in an often-harsh operational environment for aircraft. With Air Sial, this is the beginning of a great story, and, I know EPCOR and the Group AFI KLM E&M will be committed to supporting its promising development by delivering the best quality of service and sharing our expertise. In line with Air Sial's motto, we are looking forward to 'touch the SKY together."

EPCOR is known for its expertise on a wide range of APUs solutions and thanks to this extensive know-how, Air Sial will benefit from a single point of contact to facilitate its operations. Air Sial fleet includes two types of engines Pratt & Whitney APS3200s and Honeywell GTCP131-9As and EPCOR is one of the world's leading dual-licensed APU MRO.

Renewal of Maintenance Agreement between Joramco and DHL

Maintenance of the aircraft will be the core element of the agreement.

Joramco, the Amman-based maintenance, repair, and overhaul (MRO) provider and the engineering conglomerate of Dubai Aerospace Enterprise (DAE), has announced that it will continue its maintenance agreement with the global delivery company DHL, which commenced in 2017.

The new deal consists of heavy checks on four of DHL's Airbus A300-600 wide-bodied aircraft. The first freighter plane arrived in Amman during February 2022, and will be followed by three more scheduled for nose to tail checks starting May 2022.

CEO Fraser Currie, said on the signing, "This agreement marks the continuation of our successful long-term partnership with DHL. We are proud to be entrusted with the maintenance of their aircraft, which yet again confirms our standing as a world-class MRO service provider and our competitiveness in the global market."

This was announced during the MRO ME 2022 tradeshow where Joramco is an annual participant.

By this agreement, the long term partnership between Joramco and DHL will be the important breakthrough and the maintenance of the aircraft will be the core element and this signifies and establishes competitive strategic advantage in the global market.

Finnair takes the 3D map experience to the next level with Panasonic Avionics' ARC

Using Arc, passengers will now be able to choose from over 20 distinct map views in full HD for various phases of flight.

Finnair has selected Panasonic Avionics Corporation's Arc map platform to enhance the passenger experience onboard its long-haul fleet. This captivating and immersive map solution will be available through Panasonic Avionics' eX3 in-flight entertainment (IFE) system. It will be further enhanced by Panasonic Avionics' high-speed connectivity services, which are also installed across Finnair's long-haul fleet. With the unveiling of its new long-haul cabins, Finnair is the launch customer for Arc in Europe.

Arc will be installed on the airline's 19 Airbus A350-900 and eight A330-300 aircraft, with the first having entered service on February 10th. It brings a wide range of innovations to the traditional in-flight map application while expanding the concept into a fully integrated experience within the IFE and connectivity system – which is already provided by Panasonic Avionics.

Andrew Mohr, Vice President of Digital Solutions for Panasonic Avionics Corporation, said, "The moving map is an integral part of the passenger experience and Arc takes this to a whole new dimension. As the European launch customer, Finnair, with its well-deserved reputation for innovation, will be setting the standard for the in-flight map experience across this important region."

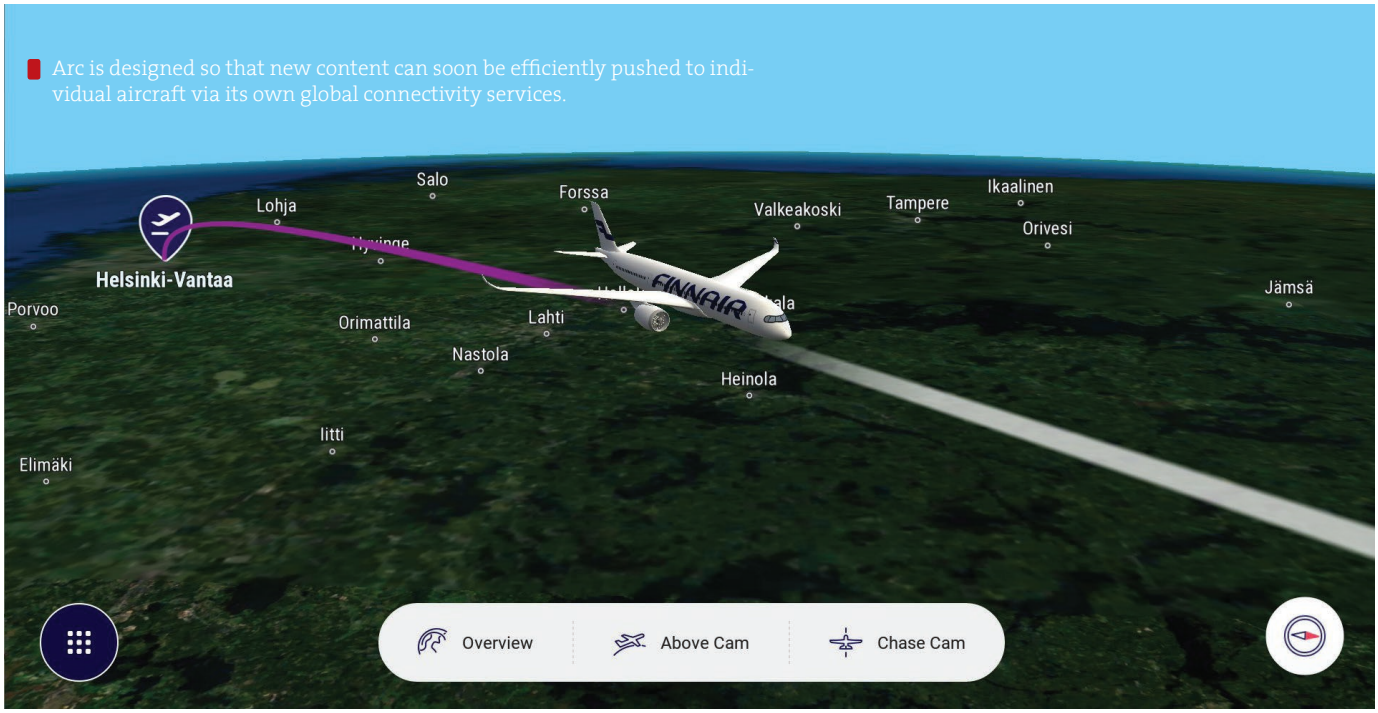
Arc will be available to all passengers, in all cabin classes using Panasonic Avionics eX3 product and visible on overhead monitors and seatback screens.

Using Arc, passengers will now be able to choose from over 20 distinct map views in full HD for various phases of flight, incorporating everything from stunning 3D satellite imagery, local and global views, down to a personalized feature that enables passengers to see the aircraft's relative position to their selected map location throughout their flight.

Arc is inspired by the latest design thinking of contemporary digital and gaming experiences and enables airlines to leverage the high viewership of in-flight moving maps. Arc is designed so that new content can soon be efficiently pushed to individual aircraft via its own global connectivity services, ensuring a unique, fresh passenger experience that also maximizes operational efficiency and passenger engagement.

Harri Valkama, Digital Channel Lead at Finnair said, "Finnair is striving to create a unique, differentiated IFE user experience and we are excited to take the 3D map experience to the next level with Panasonic Avionics, going beyond offering a traditional third-party off-the-shelf app. We found it very valuable to actively participate and influence the development of the Panasonic Arc map based on the feedback received from our customers. The map will be an integral part of the Finnair IFE user interface and we see big potential in the possibilities enabled by open APIs. In the future, Arc Studio will enable us to easily make changes to the Arc map and influence how the map is shown to our customers."

Since its debut, Arc has experienced one of the highest adoption rates of any Panasonic Avionics service, with confirmed orders from over 20 airlines on over 300 aircraft, highlighting the success of Panasonic Avionics' commitment to leading the digital evolution of the passenger experience.



Royal Thai Army selects Boeing's AH-6 light attack reconnaissance helicopters for fleet modernization

Thailand becomes Boeing's second international customer for AH-6 helicopters.

Boeing has been awarded a USD103.7 million contract by the U.S. Department of Defense as part of a foreign military sale for eight AH-6 light attack reconnaissance helicopters to Thailand. The contract also includes spares, training devices, support equipment, and technical publications for the Royal Thai Army.

The deal paves the way for the Royal Thai Army to replace its fleet of aging AH-1F Cobras as part of its defense modernization efforts. The aircraft will be produced in Mesa, Arizona, with deliveries planned through 2024.

Jessie Farrington, business development director of Attack Helicopter Programs said, "We welcome Thailand's selection of Boeing's AH-6 light attack reconnaissance helicopter and look forward to working with the U.S. and Thai governments as part of the foreign military sale process. From its unmatched power-to-weight ratio to its extensive, integrated digital communications suite, the AH-6 offers superior performance, capability, and versatility and will be a force-multiplier for the Royal Thai Army."

Thailand is Boeing's second international customer for the aircraft. Boeing has a long and proven track record of being a trusted partner to Thailand's aviation and defense customers for more than 60 years.

A beneficiary of ongoing AH-64 Apache modernization efforts, the AH-6 features an advanced mission computer capable of processing large amounts of data and sharing system information with the rest of the aircraft quickly — enhancing safety and situational awareness, enabling faster decision making, reducing pilot workload, and decreasing support costs throughout the aircraft's life cycle.

The deal paves the way for the Royal Thai Army to replace its fleet of aging AH-1F Cobras as part of its defense modernization efforts.

Serbia joins long-list of 33 countries to operate Airbus C295 for defence ops

Serbian military ordered two Airbus C295s becoming the 36th operator of C295s.

The Serbian Ministry of Defence has ordered two Airbus C295s and therefore the Serbian Air Force and Air Defence join the family of C295 becoming the 36th operator worldwide.

The contract was signed in Madrid in the presence of senior government members of the Republic of Serbia and Spain. This contract will be accompanied by a Government-to-Government supervision agreement between the Ministries of Defence of Spain and the Republic of Serbia, which aims to study the development of future defence programmes between both nations. Airbus is committed to maintaining and fostering its close collaboration with the Republic of Serbia, which already operates Airbus military solutions.

The two C295 aircraft will be equipped with the modern avionics suite Collins Aerospace Pro Line Fusion and will contribute to enhancing the air transport capabilities.

The two aircraft, in transport configuration, will be equipped with the modern avionics suite Collins Aerospace Pro Line Fusion and will contribute to enhancing the air transport capabilities of the Republic of Serbia.

Deliveries are expected to commence in late 2023.

With this order, 33 countries have already relied on the Airbus C295. With a total of 281 orders worldwide and more than half a million flight hours in operation, this aircraft is the undisputed leader in its segment.

US Army to undergo fleet modernization with latest upgraded MH-47G Block II Chinook

With this order, the total number of MH-47G Block II aircraft under contract with the USASOAC adds up to 36.

The US Army's extended contract to Boeing is valued at USD 195 million for six additional upgraded Chinook helicopters.

The United States Army Special Operations Aviation Command (USASOAC) has ordered additional six MH-47G Block II Chinook helicopters from Boeing. With this order, the total number of MH-47G Block II aircraft under contract with the USASOAC adds up to 36.

The new order is valued at USD 195 million for an upgraded version of the Chinook helicopters. The upgraded MH-47G Block II Chinook features improved structure and weight reduction initiatives that increase the aircraft's performance and efficiency, allowing for extended lift and range.

Andy Builta vice president, Cargo programs, and H-47 program manager said, "We're answering the USASOAC's call to modernize its fleet of heavy-lift helicopters. With this upgrade, new advances in technology enable the proven Chinook to meet evolving threats and ever-changing mission requirements."

Boeing has delivered five MH-47G Block II aircraft to date. Deliveries of the new order are scheduled to begin in 2024, with production to primarily take place at Boeing's Philadelphia site.

The H-47 Chinook program supports more than 20,000 jobs and 360 suppliers in 40 states and is relied on by the U.S. Army and 19 countries around the globe. Supporting a global fleet of more than 950 aircraft, Boeing continues to deliver unrivaled production, maintenance, and sustainment cost efficiencies.

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SITA board promotes David Lavorel as the new CEO

Over the past 20 years at SITA, Lavorel has served in a range of senior roles, most recently as CEO of SITA AT AIRPORTS AND BORDERS.

David Lavorel is appointed as the new CEO by the SITA board. Under his leadership and vision, SITA will continue to lead a strategic change for the industry, helping its customers implement digitalized and smart solutions.

Over the past 20 years at SITA, Lavorel has served in a range of senior roles, most recently as CEO of SITA AT AIRPORTS AND BORDERS. He also served as CEO of SITA FOR AIRCRAFT, where he pursued a strategy to extract the full potential of the connected aircraft for SITA's airline customers. As Senior VP Corporate Development and Head of the CEO office, Lavorel's responsibilities included executing the company's growth and development plans.

Dr. Omar Jefri, SITA Board Chair, said, "The air transport industry has been through an incredibly turbulent period. As we look to recovery, the digitalization of the industry is a key focus. David's experience and knowledge of both the industry and SITA will be instrumental in cementing SITA's position as a trusted partner, working with our shareholders to shape the future direction of the organization."

Adib Charif, SITA Council President, said, "David brings a deep conviction and commitment to delivering SITA's vision as a vital industry partner. The SITA Council looks forward to working closely with him." Lavorel replaces former CEO Barbara Dalibard who has left SITA after five years at the helm.

Under his leadership and vision, SITA will continue to lead a strategic change for the industry, helping its customers implement digitalized and smart solutions.

International CALENDAR 2022

2022

Date	Event	Venue
28-31 Mar	AEA International Convention & Trade Show	New Orleans, USA
26-28 Apr	MRO America	Dallas, TX, USA
03-05 May	NBAA Maintenance Conference	San Antonia, TX
23-25 May	EBACE	Geneva, Switzerland
07-08 Jun	Engine Leasing, Trading & Finance	London, UK
09-11 June	France Air Expo	France
15-16 June	MRO BEER	Istanbul, Turkey
22 Jul	AERO South Africa	South Africa
06-08 Oct	Istanbul Airshow	Istanbul Atatürk Airport, Istanbul
7-8 Sept	AERO-ENGINES EUROPE	Dublin, Ireland
7-8 Sept	Helitech Expo	ExCeL London
20-22 Sept	MRO ASIA-PACIFIC	Singapore
18-20 Oct	MRO EUROPE	London, UK
25-27 Oct	Abu Dhabi Air Expo	Abu Dhabi
6-9 Nov	ATCA	Washington, D.C.

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