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Aerospace Magazine

## Paris Air Show

Stepping up aircraft support services

#### Software

TRAX and AAR accelerate digital offering

## **Cabin Services**

A321XLR

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#### An Indian summer in Paris

By the second day of the Paris Air Show, and at the time of this writing, Indian aviation had stolen the limelight with the jaw dropping orders placed by Indigo and Air India collectively. Indigo placed a whooping 500 A320 family aircraft order eclipsing the 470 aircraft order made by Air India in February. Indigo's big order is in addition to outstanding aircraft that still need to be delivered, so in total that could reach around 1,330 aircraft, making the Indian carrier one of the largest Airbus operators.

Meanwhile, Air India has firmed up orders with both major OEMs for 220 aircraft with Boeing and a 250 aircraft order with Airbus. The deal with Boeing is of specific interest to us because it comes with support services that include parts provisioning, digital applications, training programmes and modification services. And looking closer, specifically at parts support, Boeing says it will provide comprehensive managed parts programmes for Air India, including a 787-landing gear exchange programme through its global services division. This will guarantee Air India availability of landing gear shipsets as and when required.

Considering the magnitude of both orders and the outstanding deliveries, it has certainly sparked some debate especially amongst industry analysts asking whether the Indian market can accommodate this number of aircraft. According to industry advisory firm IBA, recent estimates have the market growing at 9% annually, with the Indian government also pledging \$12bn to support infrastructure development. IBA also notes that both IndiGo and Air India were running at operating losses until recently, with pricing making it difficult for new entrants to establish market share.

Go First, which operated ultra-low-cost services from Mumbai, fell into trouble citing operational reasons and temporarily shut down. It's all up in the air if operations will resume, rumoured to be in late June.

Back in Paris though, Air India and Indigo were certainly the stars of the show.

Keith Mwanalushi EDITOR Air India has firmed up a 250 aircraft order with Airbus. © *Airbus* 



AviTrader MRO - June 2023

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Cover image: Airbus

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SR Technics signs off-load agreement with Safran Aircraft Engines for LEAP-1A engines



LEAP-1A engine

© SR Technics

SR Technics, a world leading MRO service provider, has signed a five-year agreement with Safran Aircraft Engines, one of CFM International's parent companies, for SR Technics to provide quick-turn maintenance offload support to LEAP-1A engines. This multi-year agreement follows earlier agreements signed with Safran for CFM56-5B, CFM56-7B, and LEAP-1B engines, demonstrating a strong commitment by SR Technics to continuously strengthen its support for CFM engines and the market. The first shop visit is scheduled in July 2023. SR Technics and Safran Aircraft Engines have developed over the years a firm and enduring relationship, built on mutual trust. In October 2022, SR Technics signed with CFM International, a LEAP-1B/1A General Support License Agreement (GSLA). This has enabled SR Technics to support customers for the new generation LEAP engine platform. The LEAP engine services will be an integral part of SR Technics' organisation and product portfolio in Zurich, Switzerland. The core team of engine mechanics and engineers is already trained by Safran Aircraft Engines on the initial work scopes, backed by the industrialisation process, which is in progress. SR Technics recently announced the ground-breaking of its Test Cell 2 facility in Zurich, which will also include LEAP-1A/1B and CFM56-5B/7B capabilities.

## **RECARO** to equip Qantas' A350 economy cabin with new seats



RECARO will equip the Qantas A350 economy cabin with the brand-new CL3810 seat © RECARO

RECARO Aircraft Seating (RECARO) was selected to equip the Qantas A350 economy cabin with the brand-new CL3810 seat. This is the first time the award-winning CL3810 will be used on record breaking non-stop flights from Australia to any city in the world. The airline is slated to take delivery of its first A350 in late 2025, a total of 140 seats to be installed on each of the 12 A350-1000 aircraft and are a part of "Project Sunrise." Pitched at 33" with a generous 6" recline, the CL3810 has a six-way adjustable headrest, articulating seat pan for added comfort when reclining and custom-shaped cushions to provide longhaul passengers with an enhanced sleeping experience. Built with a lightweight structure, the CL3810 is nearly 15% lighter than its predecessor. The seat also offers passengers extra knee space. "Our partnership with Qantas has grown and evolved over almost 20 years, however, one thing hasn't changed: the united commitment to push the boundary of travel innovation," said Dr Mark Hiller, CEO of RECARO Aircraft Seating and RECARO Holding. "'Project Sunrise' allows the seat's design and ergonomic innovations to shine through, and I am confident our CL3810 will play a key role in providing a comfortable passenger journey." Both the Qantas and RECARO teams collaborated to introduce features, enhancing passenger's convenience and comfort. Travelers can look forward to the latest inflight entertainment system, the Panasonic Astrova with a 13.3-inch OLED screen, 3D spatial audio, Bluetooth, 4K resolution, and 67W of USB-C power at every seat to keep passenger electronic devices fully charged throughout the flight.



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#### MTU and MT Aerospace to develop liquid-hydrogen fuel system



Barnaby Law, Chief-Engineer Flying Fuel Cell™ of MTU Aero Engines (I.) and Markus Staudt, Vice President and Head of Business Development Export, Defence & Hydrogen of MT Aerospace © MTU

MTU Aero Engines (MTU) and aerospace company MT Aerospace have announced a collaborative effort to develop a comprehensive liquid-hydrogen (LH2) fuel system for commercial aviation. The partnership, unveiled at the Paris Air Show in Le Bourget, aims to advance the vision of zero-emission flight. The initial application of this endeavour will be MTU's innovative Flying Fuel Cell<sup>™</sup>. Barnaby Law, Chief Engineer Flying Fuel Cell for MTU, emphasised the longstanding successful partnership and shared commitment to zero-emission aviation. The joint development of the LH2 fuel system began approximately

three years ago, encompassing tanks, sensors, heat exchangers, valves, safety systems and control systems. Law expressed optimism about the project's progress, with plans to conduct the first system test at MT Aerospace in Augsburg, Germany, by the end of the year. Markus Staudt, Vice President and Head of Business Development Export, Defence & Hydrogen at MT Aerospace, highlighted the company's extensive expertise with hydrogen in the aerospace sector and the ambition to apply it to commercial aviation. The aerospace experts will focus on cryogenic hydrogen storage

and supply systems, additively manufactured heat exchangers, sensors and system integration. Dr. Günther Schullerer, Director of Engineering at MT Aerospace, explained that this expertise derives from sustainable technology innovations and numerous product-based cryogenic system tests. MTU's scope of work includes the safety system, control system, valve technology, and overall systems leadership. The collaboration closely involves the European Union Aviation Safety Agency (EASA) to ensure compliance with certification and safetyrelated requirements. Starting in 2035, the MTU fuel cell will be utilised on shorter routes within the shuttle and regional aviation sector. As its efficiency improves, the system will expand to cover short and medium-haul routes, further reducing the climate impact of commercial aviation. Law also notes the possibility of modifying the LH2 fuel system, currently being developed for the FFC, to enable direct hydrogen combustion in aircraft engines. The joint efforts of MTU Aero Engines and MT Aerospace reflect their commitment to sustainable aviation and the development of innovative solutions that pave the way for zero-emission flight.





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Vallair has completed the sale of two aircraft engines to TrueAero for tear-down @ CFM56-5B engine

Vallair, the mature asset specialist, has completed the sale of one V2527-A5 and one CFM56-5B3 engine to U.S. asset specialist and parts provider, TrueAero, for teardown. TrueAero is a diversified mid/end of life asset manager with a portfolio of 50 aircraft and 20+ engines under or available for lease. Furthermore, TrueAero provides customers with an extensive inventory of repaired and ready-to-ship replacement parts. They maintain a reliable inventory of GE, CFMI, Pratt & Whitney, and IAE certified engine components, as well as Airbus, Boeing and Embraer airframe material. According to Patrick Leopold, Director of Trading at Vallair, USM for engines is in high demand globally, especially for the CFM56-5B engine model. "This is linked to the large number of -5Bs which will go through planned shop visits over the next few years. In anticipation of this increased parts demand, many significant businesses in the market are acquiring tear-down assets for the type. Considering the on-going reliability issues with the A320-family NEO-engine types, we see current engines being operated for longer and the requirement for parts to continue to ramp up." Both engines were sold in 'as is' condition and tear-down will be managed by TrueAero. Vallair is seeing year-on-year growth of more than 20% for USM attributed to its clear focus on extending the life and maximising the value of key parts through its in-house repair shop for aerostructures and its network of audited repair vendors worldwide.



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## MTU Aero Engines raises earnings forecast for 2023

MTU Aero Engines (MTU), Germany's leading engine manufacturer, is raising its earnings forecast for the current financial year in light of expectations regarding future business development. The company now expects an adjusted EBIT of more than €800 million. This represents a slight year-on-year increase in the adjusted EBIT margin, compared to the previous guidance of a stable adjusted EBIT margin. Free cash flow in 2023 is expected to be above the previous year's level of €326 million, as already announced at the end of April. Revenue guidance for 2023 remains at €6.1 to €6.3 billion, with growth expectations for the segments largely unchanged. MTU is a technological leader in low-pressure turbines, high-pressure compressors, turbine centre frames as well as manufacturing processes and repair techniques. In the commercial OEM business, the company plays a key role in the development, manufacturing and marketing of high-tech components together with international partners. Some 30% of today's active aircraft in service worldwide have MTU components on board. In the commercial maintenance sector, the company ranks among the top-three service providers for commercial aircraft engines and industrial gas turbines.

#### Daher and start-up Ascendance Flight Technologies join forces

The collaboration between Daher Aerospace and Ascendance Flight Technologies further underlines Daher Group ambitions to leverage innovation and accelerate the decarbonization of its activities, with particular emphasis on its Aircraft division. These decarbonisation ambitions are set out in the Take-Off 2027 strategic plan announced by Daher earlier this year and are supported by a high level of R&D project investment, made possible by the fact that this innovation budget has quadrupled since 2017. Ascendance Flight Technologies is a French start-up and pioneer in the low-carbon aviation market. Founded in 2018, the company develops solutions, technologies and hardware to hybridise propulsion systems, and leverages the potential of hybridization to accelerate the transition to a new model of air mobility. The Toulouse-based startup will contribute its expertise in hybrid-electric propulsion systems architecture, modelling, integration and testing to the collaboration with Daher. As a result, it will be able to test its technology on successful CS23-category aircraft, designed and marketed by Daher Aerospace, a leader in its market segment.



#### Joby Aviation and GKN Aerospace sign multi-year agreement

Joby Aviation, which is developing all-electric aircraft for commercial passenger service, and **GKN** Aerospace have signed a multi-year agreement for the supply of thermoplastic flight control surfaces for Joby aircraft. This collaboration, signed at the Paris Air Show, marks an important step towards Joby's goal of using its aircraft to deliver a fast, quiet and convenient air taxi service in cities around the world. GKN Aerospace has been



JoeBen Bevirt (r), founder and CEO of Joby and GKN Aerospace President Civil Airframe, John Pritchard, at the signing ceremony at the Paris Air Show © GKN Aerospace

working closely with Joby on the application of an innovative thermoplastic concept specifically tailored to the Joby eVTOL aircraft. The flight control surfaces will be composed of a lightweight thermoplastic structure assembly, manufactured using Global Technology Centre in Hoogeveen, Netherlands, before transitioning to GKN Aerospace's facility in Chihuahua, Mexico. The final products will be delivered directly to Joby's pilot production line in Marina, California.



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Joby's design input as the

aircraft integrator, GKN

Aerospace will undertake

the detailed design of the

flight control surfaces.

The development and

initial production work

will be carried out at the

production method.

manufacturing process

will enable high-rate

#### Spirit AeroSystems to produce new HondaJet composite fuselage

Wichita, Kansas-based Spirit AeroSystems (Spirit) has announced it is to manufacture the composite fuselage and a composite bonded frame for the Honda Aircraft Company's HondaJet 2600 Concept that was first unveiled at the 2021 NBAA-BACE. Spirit provides cutting-edge solutions that are designed to both improve performance and safety, while reducing costs, making it one of the most innovative and reliable supplier of regional and business jet aero structures. Spirit covers the full lifecycle from design through to aftermarket support. The new HondaJet 2600 light jet designed by the Honda Aircraft Company aims to offer greater performance, comfort, and efficiency of typical light jets through the provision of a medium-sized jet experience. It has been designed to be the world's first light jet capable of nonstop transcontinental flight across the United States, with a quiet and spacious cabin suited for long-range travel and the ability to accommodate up to 11 occupants. The new



HondaJet 2600 Concept

light jet will deliver exceptional fuel efficiency, with up to 20% better fuel efficiency compared to typical light jets, and over 40% better fuel efficiency than medium-sized jets during typical operations. Spirit was formed when Boeing Commercial Airplanes sold its Wichita division to investment firm Onex Corporation in 2005. The company builds several important pieces of Boeing aircraft, including the fuselage of the 737, portions of the 787 fuselage, and the cockpit section of the fuselage of nearly all of its airliners. Spirit also produces fuselage sections and front wing spars for the Airbus A350.

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© HondaJet



#### Britten-Norman reveals plans to repatriate aircraft production to UK

New manufacturing jigs are in place at Britten-Norman's Bembridge facility in preparation for production output increase  $\bigcirc$  Britten-Norman

UK aircraft manufacturer Britten-Norman has revealed plans to increase production rates and to repatriate aircraft production to its historic home in Bembridge on the Isle of Wight. The move is a major change for the British SME which has been manufacturing its aircraft in Eastern Europe since the late 1960s. Britten-Norman will invest in new jigs and tooling to create two additional production lines as well as modernising production and decarbonising the site with new sustainable energy initiatives. The investment is in preparation for intensified interest in the Islander following the planned launch of an OEM, zero-emissions Islander aircraft in 2026 as well as wider interest that has resulted from the introduction of finance and leasing options for the resurgent sub-regional aircraft market. In the coming months the company will be embarking on a recruitment campaign, further boosting job creation in the UK's Solent Local Enterprise Partnership area. The focus will include aircraft fitters and technicians, production engineering and supply chain roles. The expansion will also create new traineeship and apprenticeship opportunities on the Isle of Wight and in South Hampshire. In addition to the rampup in production, the company will be investing in its supply chain and spare parts stock holdings to support its existing operators. "The project is a great success story for the British aircraft manufacturing industry. I am very proud to be involved in this next chapter at Britten-Norman" commented Chief Executive, William Hynett OBE. Britten-Norman will retain its 34,000 ft<sup>2</sup> stronghold at Solent Airport Daedalus, home of the final assembly line for the Islander. The site also provides OEM aircraft refurbishment, EASA Part 145 MRO services, international field servicing, and specialist avionics and mission systems integration. As a Garmin-approved dealer, the company offers services to the wider General Aviation community.





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TRAX is key to **accelerating** AAR's digital strategy

Part of AAR's aim in acquiring TRAX is to grow its digital tools. TRAX

Aircraft MRO and fleet management software specialist TRAX, provided *AviTrader MRO* with some additional details following the acquisition by the AAR Corp, focusing on the key priorities going forward and boosting the digital strategy.

ynergy is the concept that the value and performance of two businesses combined will be greater than the sum of the separate individual parts. And this concept holds true for the acquisition of TRAX by AAR. With AAR's focus on hardware (parts supply, repair work, MRO services, etc.), TRAX specialises in software (compliance tracking of safety and repairs of aircraft and components). This view is a simplification of the full competency of both companies. In the case of TRAX, the company has a full range of professional services to support the software, along with hosting options. And in the case of AAR, it goes beyond 'hardware' and extends to offering end-to-end solutions integration for the aviation market. Part of AAR's aim in acquiring TRAX is to grow its digital tools

and we believe such growth will serve to benefit TRAX customers, as well.

AAR's Chairman, President, and CEO John Holmes explained: "We believe we can support TRAX's continued growth by investing in its platforms and by leveraging our global relationships to help TRAX reach additional customers." He said the Trax acquisition also advances AAR's strategy to offer digital solutions focused on its core aviation aftermarket customers and such an expansion of both entities increases the capacity to develop enhanced digital offerings.

Another constructive collaboration lies in the sphere of materials management. TRAX has robust inventory and purchasing modules that help airlines and MROs maintain needed parts, so there are opportunities for AAR, as a parts supplier among its other services, to work with TRAX to provide parts more efficiently to aviation customers. We also see multiple opportunities for cross-selling of various products and services to the joint and complementary customer base.

TRAX will be able to benefit from AAR's large and expert global salesforce to expand its reach. We see potential to make the eMobility suite independent of the enterprise eMRO product and sold separately; to target the largest airlines that would now be more open to purchasing a critical mission software that is owned by a large, publicly traded company; and to use AAR's global government and defence footprint to open doors and provide expertise for this largely untapped market.

The key priority remains to provide customers with high quality, well-designed and functional solutions, this has not shifted, and we aim to build on this with AAR's support for our core business model. Both AAR and TRAX are keenly interested in expanding digital offerings to their aviation customer base so we will begin the process of assessing areas that can benefit from increased support and collaboration and this acquisition by AAR means TRAX will have access to MRO innovations. AAR has a strong reputation for expertise in the MRO industry, which can only benefit TRAX customers. We look forward to seeing how AAR can use its expertise to help develop new technologies and solutions that meet our customers' needs.

AAR's digital strategy includes increasing paperless operations. This is the direction we are observing in the aviation aftermarket ecosystem where AAR is an industry leader. TRAX's product line already features paperless maintenance applications and the implementation of these apps by its customer base has grown the past few years. The TRAX eMobility suite currently includes thirteen intuitive task-based apps, yet clearly there is room to add additional functionality, incorporate more advanced technology, and include artificial intelligence features. With AAR's support, TRAX can expand its development of these much sought after apps and tackle the wider market.

AAR's acquisition of TRAX also strengthens the combined company's position in the MRO market. The acquisition creates a more formidable competitor with a broader range of products and services, which can only benefit TRAX customers. We have confidence that AAR will continue to

invest in TRAX's technological capabilities and that we will develop new products that meet customer needs. As a result, TRAX can anticipate an acceleration of its innovative development road map to offer its customers cloud hosting, eMRO software enhancements, new eMobility apps, and integration that allows better access to AAR's parts and service offerings for materials management, among other possibilities.

Both companies have informed our customers that the acquisition is about pairing TRAX's world-class software solutions with AAR's expertise and global network, and further strengthening the infrastructure and product offerings. AAR's world headquarters will remain in Wood Dale, Illinois, and TRAX will continue to operate from Miami, Florida.

All TRAX points of contact, management, and employee teams will remain unchanged. TRAX has grown successfully as an independent company

**C** The combination of AAR's expertise, product offerings, focus on customer satisfaction, and financial stability, with TRAX's innovative solutions, creates a formidable force in the MRO industry.

TRAX President and CEO Jose Almeida

over the past decades, and AAR plans to maintain this independence while simultaneously providing capital and resources for TRAX's expected expansion and leadership and management will stay and be actively involved in the next stage. This decision reflects AAR's appreciation for the team's expertise and continuity and aims to facilitate smoother integration and transition for both companies and our customers. It also demonstrates AAR's strong commitment to the longterm viability and success of TRAX. AAR's financial stability and resources can provide the necessary support and investment to ensure that TRAX continues

to develop innovative technologies and innovative solutions that meet the needs of its customers. This will provide TRAX customers with confidence in the future of their partnership with the company.

TRAX President and CEO Jose Almeida stated: "Overall, we are excited about the acquisition by AAR. The combination of AAR's expertise, product offerings, focus on customer satisfaction, and financial stability, with TRAX's innovative solutions, creates a formidable force in the MRO industry. We look forward to the benefits that this acquisition will bring to our customers' business and operations, and we are committed to a long and successful partnership with AAR."

AviTrader MRO - June 2023

© TRAX



AAR has a strong reputation for expertise in the MRO industry.



UPS has been operating its vast fleet of factory delivered B757 freighters since 1987. © UPS

AviTrader MRO gathered industry experts to discuss how the aftermarket is shaping for Boeing 757 operators in support of the air cargo market.

#### By Keith Mwanalushi

B ack in March AAR Corp announced that its subsidiary AAR Supply Chain was acquiring nine ex American Airlines Boeing 757-200 passenger aircraft equipped with 18 Rolls-Royce RB211 engines and these acquisitions would enable AAR to continue to support the RB211-powered 757 cargo market.

AviTrader has observed that the RB211 engine values have spiked recently due to high demand for used serviceable materials (USM) and Jonathan McDonald, Manager - Classic and Cargo Aircraft at aviation advisory firm IBA observes pricing has remained buoyant as demand for good build engines remains strong in the - P2F sector. "Engine shop visit costs have escalated recently in line with other popular engines so traders with decent engines are going to be asking premiums on their pricing to help recuperate their costs." He says supply of Rolls-Royce engines will soon increase by at least 18 units due to the recent acquisition of the nine aircraft by AAR from American Airlines as parts

support for the freighter fleet.

On the RB211-535E4 engine, McDonald says it appears shop visit times are on the up with some taking over four months. Traders report that there has been a parts shortage for the RB211 meaning parts sell at premium pricing.

IBA data indicates that the lease market is apparently very strong for the RB211-535E4B. Lessors can expect lease rates of \$60k per month plus reserve and lessors report that if they had more engines they would be quickly placed.

For asset managers and MROs, B757

assets are attractive as feedstock to harvest engines and components to support customer programmes, comments Adam Guthorn, Managing Director at Alton Aviation Consultancy. Particularly as OEMs continue to face supply chain challenges that cause lead time delays and continue to escalate pricing on new materials, used materials provide substantial cost savings. "Companies such as AAR are able to acquire whole aircraft, manage the part-out process, and repair the harvested material through their repair network, which then allows them to provide cost-effective used

C The fleet generates strong MRO demand while, at the same time, a lack of retirements means fewer used materials available to operators and MROs. This supply and demand imbalance can lead to surges in USM pricing as customers bid up asset prices.

Adam Guthorn, Alton Aviation Consultancy

#### NEWS ANALYSIS

serviceable material and green-time engine solutions to their customers with shorter lead times," notes Guthorn.

Alton Aviation data from April 2023 suggests there were 357 in-service 757 freighters in the market, with the vast majority in active service - 332 (93%) versus 25 which are parked (7%). The 757-freighter fleet has an average of 29.5 years and with only a small number of additional P2Fs expected in the near-term as suitable feedstock is depleted, the fleet is expected to gradually be replaced by A321Fs in the long-term.

Over 70% of the 757F fleet is powered by Rolls Royce engines (256 aircraft), with over half of the fleet (146 aircraft) under 30 years of age according to Alton Aviation. "The younger aircraft should remain in service for at least another five to ten years, with Alton forecasting nearly 170 of the aircraft remaining in service by 2030 and for the RR-powered 757F fleet to generate over \$4B of total MRO spend in that timeframe," Guthorn anticipates.

Demand for engine MRO (and engine piece parts) is directly related to the utilisation of the underlying fleet. Guthorn explains that as Rolls Royce powered 757s (239 active freighters + 96 active passenger aircraft) continue to fly - the current active fleet is up to 90% of the pre-covid total. "The fleet generates strong MRO demand while, at the same time, a lack of

retirements means fewer used materials available to operators and MROs. This supply and demand imbalance can lead to surges in USM pricing as customers bid up asset prices," he adds.

Tom Crabtree, Managing Director at the Trade and Transport Group observes that the number of B757s heading for conversions is now dwindling and bracketed at around 10 to 15 units left and finishing within the next two years.

"The types now coming online from various competitors, or a number of non-affiliated conversion houses tends to anchor around two types going forward in the narrowbody freighter fleet; the B737 the A320 family, principally the A321 P2F conversions that are offered by EFW and Precision Conversions."

Crabtree highlights the B757's limited feedstock of aircraft that are viable and is somewhat being eclipsed by the efficiency of the newer types like the B737 NG and the A321. "These are lighter airplanes, and they are more fuel efficient but the one thing they don't have on the B757 is that it's bigger with a bigger wing and it's got more fuel capacity. The factory build freighter variants were built by Boeing from roughly 1987 through to around 2004 or 2005, somewhere in that time frame, of which there were about 80 built and I believe at least 75 plus are still in service."

Crabtree speaks keenly about the B757s



American was a major operator of the RB211-powered Boeing 757.



Tom Crabtree, Managing Director - Trade and Transport Group

freight capabilities - "it carries 15 pallets on the main deck, and I believe somewhere between 35 and 38 metric tonnes of gross payload capability. The conversions tend to be a lot less typically around 28 to 32 metric tonnes because the airframe was optimised for passenger carriage and it doesn't have quite the payload range capability of the production freighter, but it's still highly coveted for its volumetric capability as a narrowbody freighter serving routes that cannot sustain, say, widebody operations, but often have loads that are bigger than, say, smaller, narrowbody freighters like the B737."

The B757 has certainly proved its popularity over the decades but operators will no doubt be considering a replacement and the most obvious choice is the B737-800F and A321P2F - however, Crabtree mentions another possible candidate, the B737-900. There are a limited number of B737-900s that are no longer in production but are still in service with some major operators like United and Delta. "The B737-900 makes a very compelling freighter, and it would volumetrically come close but not match the A321. It's bigger than the -800 but slightly smaller than an A321. However, the B737-800 has a killer trip cost and that is why to a large degree it has been the favourite airplane relative to the A321 conversion space."

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## Deferred projects boost demand for **interior** refurbs

AviTrader MRO uncovers the status of recovery in the aircraft interior modifications market which was heavily impacted by the COVID-19 pandemic.

#### By Keith Mwanalushi

nyone involved in cabin services headed to Hamburg, Germany in June for the Cabin Interiors Expo; a gathering of airlines, aircraft OEMs, IFE system suppliers, seat manufacturers to name a few and keenly observed by MROs too, considering they play a key role in cabin modifications and refurbishments.

Clearly, the Covid pandemic took its toll on the cabin upgrade market as airlines prioritised their cash to stay afloat, we now see strong indications of a comeback as the aviation industry begins to recover, as Sohaib Ahmed, Programme Manager – Interiors at AJW Technique observes. "There has been some resurgence in the aircraft interior modification market, and technology is leading the way." He says airlines are focusing on enhancing passenger comfort and improving the overall passenger experience using technologies such as virtual and augmented reality to provide passengers with a more interactive and immersive experience.

"There has been an increased demand for upgrading aircraft seats, in-flight entertainment systems, and seating arrangements, incorporating more personalisation such as noisecancelling headrests and passengers



© Keith Mwanalushi

Sohaib Ahmed, Programme Manager - Interiors, AJW

having ambient light, which they can control from a panel." Another trend AJW are seeing in aircraft cabins is touchless technologies such as touchless lavatories, overhead bins having an opening sensor, and smart seatbelts.

Ahmed adds: "Sustainability is high on the agenda in the aviation industry, with sustainable cabin interior solutions using recycled textiles, bio-based composites,

( The materials used for any modifications must be compatible with the materials used in the fuselage. Incompatible materials can cause corrosion or weaken the overall structure of the aircraft. ??

Sohaib Ahmed, AJW Technique

#### AIRCRAFT INTERIOR MODIFICATIONS





Jose Pevida, Senior Vice President of Engineering and Product Development, HAECO Cabin Solutions

bio-resins, and the use of bamboo and hemp technology becoming popular with those focusing on a greener industry."

Jose Pevida, Senior Vice President of Engineering and Product Development at HAECO Cabin Solutions, has starting to see discretionary projects ramp up in demand, particularly in the twin-aisle market. "This market had been depressed severely during the downturn, but these deferred projects seem to all be coming back at the same time. We saw high interest in interior modifications at the MRO Americas show and airlines are having to plan further ahead for modifications and maintenance due to the capacity constraints in the MRO market in general," he notes.

Pevida also sees increased use of electronics in cabins, that is driving demand for equipment health monitoring for preventive maintenance – "In-flight entertainment in general is relatively reliable, but we see more demand for upgraded equipment as demands for bandwidth and content grow."

At AFIKLM E&M they have noticed different trends in the recovery market, including some aircraft staying in service longer than planned due to difficulties in new aircraft deliveries – "They stay actively longer, and they require some refurbishment or transition modifications for their interiors. Therefore, we see a good share of demand for smaller modifications," declares Thomas Sonigo, Head of Cabin Modification at AFI KLM E&M. Additionally, Sonigo observes the market pushing towards capability to modify latest generation of aircraft. "Some of the B787s or A350s are now on the agenda for new interior modifications. Another trend we see is that the supply chain recovery is taking much longer than expected and it is impacting current and future projects."

Sustainability is also increasingly entering the modifications space. At AFIKLM E&M, they are developing a tool that allows them to compare different scenarios of modifications in terms of overall CO2 footprint. "This pushes us to look at the full life cycle of interior design; weight, materials used, locations of our vendors, the recycle aspects, repairability, and so on and recycling parts is certainly our biggest leverage in designing new cabins. We do recycle as many parts as possible from previous design or dismantled aircraft. Our team of experts can optimise this aspect and we have an inventory available for the design teams," Sonigo continues.

#### AIRCRAFT INTERIOR MODIFICATIONS

AJW Group have also recently committed to the United Nations Global Compact (UNGC), the world's largest global corporate sustainability initiative. Global movements such as this are leading businesses to take more responsibility in working towards reducing the carbon footprint of the aviation industry and operating under sustainable business practices, and Ahmed says this is why AJW Interiors offers its customers a product such as SkyLeather® as a greener alternative to hide leather.

### Greater connectivity versus maintenance demand?

Passengers today are seeking greater connectivity around the cabin, seat, and increased touch points for interactivity, which may impact the level of maintenance performed. "There is an increased possibility of malfunctions or failures in these systems, which requires more frequent and specialised maintenance," comments Ahmed from AJW Technique. He says the addition of innovative technology and electronic systems in the cabin and seats means that maintenance personnel must have the technical expertise and training to maintain these systems properly.

"The installation may require modifications to the aircraft's existing infrastructure, such as the electrical system, which could affect other areas of the aircraft. This means that maintenance personnel must be knowledgeable about the entire aircraft system, not just the new equipment or systems. This includes preventative maintenance, such as software updates and system checks, to ensure the systems are functioning properly," Ahmed explains.

In addition, Ahmed says the increased touch points for interactivity mean



Malcolm Chandler, Head of Commercial and Marketing at Vallair

there is a greater likelihood of wear and tear on the cabin interior and seats – "This requires more frequent cleaning and maintenance to keep the cabin and seats in good condition," he adds.

Malcolm Chandler, Head of Commercial and Marketing at Vallair sees more complexities arising from the longer range narrowbody aircraft – "the complexities are increasing as improved passenger amenities and facilities become more common on these aircraft types. In the past, such connectivity features were limited to the widebody and long-haul sector."

Chandler also notes the modifications necessary are tightly controlled under the certification process, however, the de-modification required at the end of a lease period, is often not thought about. He gives an example of a few B737-800s that required the "Row 44" satcom system removing. "Removing the antenna is not a

Some of the B<sub>7</sub>8<sub>7</sub>s or A<sub>35</sub>os are now on the agenda for new interior modifications. Another trend we see is that the supply chain recovery is taking much longer than expected and it is impacting current and future projects.

Thomas Sonigo, AFIKLM E&M

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major task but due to the modifications, the de-modification necessitated the replacement of approximately four meters of crown skin, which in reality cost more than the original installation," he reveals.

At AFIKLM E&M they see customers being more demanding of a seamless connectivity experience throughout their travel. "It is leading to more complex integration between IFE, aircraft systems and even personal devices," notices Sonigo. He says the maintenance is impacted as it gets more difficult to identify "who should fix the issue" since multiple vendors are involved. "We have to be aware of not making the cabins too complicated or expensive to maintain once in operation," he adds.

Sonigo highlights that cabin services do not implement modifications that can compromise the integrity of the fuselage – "all modifications we design are staying within the allowable zones defined by aircraft manufacturers."

Ahmed indicates that when modifications are made to the cabin, such as adding new seats or changing the layout of the cabin, it can affect the weight distribution, which can lead to increased stress and load on certain areas of the fuselage, potentially leading to structural weakness or failure. To ensure the plane structure is reinforced



Thomas Sonigo, Head of Cabin Modification, AFI KLM E&M



There has been some resurgence in the aircraft interior modification market.

© AFI KLM E&M

properly when making modifications to the cabin, several considerations must be considered.

"Any changes to the weight or distribution of weight can affect the overall balance of the aircraft and potentially compromise the structural integrity of the fuselage," says Ahmed. Additionally, modifications to the cabin must be made considering the structural design of the aircraft as it must be able to withstand the additional stress and load caused by any modifications. "The materials used for any modifications must be compatible with the materials used in the fuselage. Incompatible materials can cause corrosion or weaken the overall structure of the aircraft. Lastly, any modifications to the cabin must be certified by the relevant aviation authorities and undergo rigorous testing to ensure they do not compromise the safety or integrity of the aircraft," he notes.

## Using technology to keep a lid on maintenance costs

Technology is enabling much more data-driven preventive maintenance programmes and these technologies are addressing challenges specific to cabin modifications by providing maintenance personnel with advanced tools and capabilities.

"More data is being collected and analysed than ever before, which keeps a lid on surprises and enables airline technical teams to focus on scheduled maintenance rather than surprises," remarks Pevida from HAECO.

Ahmed explains that predictive analytics technology analyses data from various sources predicting when maintenance needs to be done and augmented reality technology provides detailed information about cabin modifications, including installation instructions and maintenance procedures. "Both innovations are helping to ensure maintenance is performed correctly and efficiently to reduce aircraft downtime."

Innovations such as 3D printing technology can significantly reduce the components used and reduce production costs and assembly times. "These factors can benefit airlines by reducing their carbon footprint and improving profitability. Digitised manufacturing processes are changing the face of the industry with 3D modelling allowing the creation of virtual models of cabin modification enabling real-time testing of how cabin modifications might affect the structural integrity of the fuselage," Ahmed continues.

While technology is driving cabin modification and innovations, Ahmed also points out the complexity with the composites used in newer aircraft. "As certification is required to support any cabin modifications, integrators need to do additional analyses and submit more complex reports, and these are underpinned by ongoing technological advancements that will benefit the aerospace industry in the future."



Increased touch points for interactivity will impact how maintenance is performed.

© British Airways



OEMs like ATR are on track to achieve delivery objectives.

With OEMs rushing to meet demand for new aircraft, as testament to the huge rush for orders announced at the Paris air show, *AviTrader MRO* provides a recap of some key highlights from the MRO and aftermarket services sectors.

he Paris air show came back in full force this year to a pact audience of international aerospace companies and attendees, all jumping on the bandwagon of recovery. Indian carriers made the biggest noise. Indigo placed a whooping 500 A320 family aircraft order and Air India has firmed up orders with both major OEMs for 220 aircraft with Boeing and a 250 aircraft order with Airbus.

Air India's firm orders include 34 A350-1000, six A350-900, 20 Boeing 787 Dreamliner's and 10 Boeing 777X widebody aircraft, as well as 140 Airbus A320neo, 70 Airbus A321neo and 190 Boeing 737MAX narrowbody aircraft. The Boeing deal comes with a comprehensive suite of support services including managed parts for Air India, including B787 landing gear services. Boeing will also support Air India as it undertakes comprehensive interiors upgrades for its existing 787 fleet. The OEM will also train Air India pilots on the B737 MAX in New Delhi.

It seemed like an exceptionally good week for Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) which signed a string of announcements including a contract providing performance restoration shop visits for seven CF6-80C2 engines for cargo operator SF Airlines. Through this new cooperation, the two groups are continuing a successful partnership founded 15 years ago, over the course of which AFI KLM E&M has already performed heavy shop visits for 22 of SF Airlines' engines. Ton Dortmans, EVP KLM Engineering & Maintenance, said; "we are honoured that an operator of SF Airline's stature is renewing their confidence in us. This is a testament to the quality of our services, to our teams' commitment to defining solutions that meet the precise needs of our customers (including in the air freight sector), and to our ability to undertake heavy work scopes with flexibility and responsiveness."

Also in the cargo sector, AFI KLM E&M signed a contract with CMA CGM AIR CARGO to provide engine and component support for the two B777s recently added to its all-cargo fleet. The French/Dutch MRO will also maintain the components of CMA CGM AIR CARGO's A330F fleet including access to its dedicated pool. Additionally, AFI KLM E&M and



PAL has called upon AFI KLM E&M to provide support for its CFM56-5B engine stock.

© AFI KLM E&M

Philippine Airlines (PAL) announced the conclusion of an engine support agreement covering 32 CFM56-5B engines that power the Philippine flag carrier's fleet of Airbus A320ceo aircraft. The enhanced cooperation comes at a time of steady expansion for PAL, which has restored its global network of nonstop flights to destinations in Asia, North America, Oceania and the Middle East along with a robust domestic network within the Philippines.

Meanwhile, Liebherr-Aerospace are collaborating with Bharat Forge Ltd of India. The Liebherr product range covers air management systems, cooling systems, flight control and utility actuation systems, landing gears, hydraulic and transmission systems and electronics for aerospace application. And Bharat Forge, is a specialised engineering product manufacturer and is, inter alia, engaged in the business of manufacturing of critical performance and safety related fully machined forgings and sub-systems/ assemblies for the automotive, industrial and aerospace sector.

Both companies will enter a phase of joint analysis, discussions and negotiations in view of determining the appropriate way to join their efforts to develop business in India and for global requirements. Engine OEM CFM International said it was partnering with aircraft lessor Avolon to provide 80 CFM International LEAP-1B engines for Avolon's recent order of 40 B737 MAX family aircraft. The new aircraft are scheduled for delivery between 2027 and 2030. Gaël Méheust, CFM's President reported that the LEAP-1B was performing well in the market and delivering up to expectation in terms of fuel efficiency and utilisation, fulfilling the commitment made to operators.

Avolon, which has been a CFM customer since the company was launched in 2010, has a committed fleet of more than 400 CFM-powered aircraft in its portfolio.

And speaking of the LEAP engine, Sanad signed a landmark agreement with GE Aerospace and Safran Aircraft Engines in Paris to expand its MRO services offerings to LEAP-1A and LEAP-1B engines that power A320neo family and B737 MAX family aircraft.

The agreement provides for LEAP engine shop visit offload from both GE and Safran for two new generation engine types for the first time in the history of Sanad. With this agreement, Safran Aircraft Engines joins the list of long-term Sanad partners. This partnership further enhances Sanad's position as an integral player in the global MRO supply chain as the company has now established partnerships with all major OEMs.

Sanad, GE Aerospace and Safran Aircraft Engines have taken a significant step forward by expanding Sanad's MRO services to encompass LEAP-1A and LEAP-1B engines. These advanced engines are effectively designed to meet the challenge of decarbonising air transport with enhanced performance in terms of



Air India will be looking for significant support services.

#### COVER STORY

improved fuel consumption and reduced CO2 emissions. With this agreement, Sanad becomes the first certified LEAP MRO service provider in the SAMENA region, supporting the global LEAP MRO supply chain from its state-of-the-art facility in Abu Dhabi.

Mansoor Janahi, Managing Director and Group CEO of Sanad, said: "We are proud to strengthen our collaboration with GE Aerospace and Safran through this new LEAP agreement. This agreement brings latest engine technology to Sanad, enabling us to support a wider range of engines and to contribute to the UAE's position as leading global aviation hub. We are committed to delivering exceptional MRO services and looking forward to creating new opportunities for growth and innovation.

Separately, GE Aerospace while in Paris, announced its strategic cooperation with Garuda Indonesia, to restore and overhaul the airline's fleet of GE and CFM engines. Garuda and its subsidiaries, Garuda Group, GMF AeroAsia and Citilink, have signed an MoU with GE Aerospace that encompasses training and skills development, lease engine support and overhaul services for Garuda Indonesia's fleet of CFM56-7B and GE90-115B engines.

"This is a strategic step for Garuda Indonesia as a world class airline to



Sanad, GE Aerospace, and Safran AircraftEngines signed a landmark agreement.

© Sanaa

strengthen their fleet of GE and CFM aircraft engines and develop further skills for overhaul services with our support," said Kathy MacKenzie, Vice President, GE Commercial Programmes for GE Aerospace. "Indonesia is an important country for GE, and our support for Garuda Indonesia is a contribution to advancing this country."

The agreement will also support Garuda Group engineers to receive a training session from GE Aerospace experts to deepen aircraft engine and maintenance

knowledge, along with leadership skills, intended to strengthen Garuda's service improvement.

Garuda Indonesia is a long-time GE Aerospace and CFM customer. The airline began operating the CF6-50-powered McDonnell Douglas DC-10 in the mid-1970s and took delivery of its first GE90-115B-powered 777-300ER in 2013. Garuda Indonesia currently operates a fleet of 74 CFM56-7B and 16 GE90-115B engines, and its subsidiary Citilink currently operates a fleet of 76 CFM56-5B and 20 LEAP-1A engines.

Finally, in the digital passenger experience space, Bluebox Aviation and De Havilland Aircraft of Canada used the Paris platform to announce a collaboration agreement offering Bluebox's Blueview digital services platform as a new solution on Dash 8-400 aircraft.

According to a joint statement, the collaboration offers operators of Dash 8-400 aircraft the ability to deliver Bluebox's powerful digital passenger experience to passengers. Blueview, deployed on the Bluebox Wow wireless streaming system, can be offered as a new discrete service on the turboprops or as a way of extending a digital passenger experience available on other aircraft in an airline's fleet to passengers on Dash 8-400 aircraft, ensuring a consistent fleet-wide passenger experience.



CFM and Avolon sign agreement for 80 LEAP-1B engines.

AviTrader MRO - June 2023

## Q&A In the hot seat...

### Sam Sprules Managing Director AeroProfessional

#### What attracted you to this industry?

Coming from a family who were all airline 'lifers' and, despite being a keen plane spotter myself, I had intended to pursue a career elsewhere and started out in hospitality. However, it was not long before the lure of aviation brought me back in the form of flight crew recruitment. Other than my own personal interest, the aviation sector is an inherent growth industry. People's desire to travel, along with increasing globalisation of the industry, has resulted in constant increasing demand for air travel. Those working within the industry require skills and training which are internationally recognised. These two things making it by far the most interesting industry to recruit for. On the flip side, because of its very nature, aviation is heavily influenced by external forces, as we have seen most recently in the form of Covid-19. Whether it is a pandemic, oil prices, economic downturn or conflict, aviation is normally the first sector hit and the last to recover. This creates many challenges, but also excitement. At the end of the day, the aviation industry is such a vital cog in the infrastructure of all countries, and it is very satisfying to see how we support its growth by providing the candidates that keep it going.

### What does a typical day involve in your role?

As MD, I am ultimately responsible for all parts of the business. My day can take me

from working with our finance department on researching and establishing international payroll compliance in a certain country, to then rolling up my sleeves and supporting our operations and delivery experts with creating process and structure for a client airline's high-volume recruitment campaign. But, often, I like to get stuck into devising and implementing business strategies

for continued growth, and then spending time with our expanding team of passionate recruiters, helping to guide and coach towards achieving our shared objectives.

#### Briefly, what are the key services provided by AeroProfessional?

We provide recruitment services that have been honed and perfected specifically for the aviation industry. We have a great deal of experience in the areas of flight crew, cabin crew and engineers, both managing the recruitment process and providing contracting solutions for our clients. Our reach into the aviation labour market also extends to other niche skills that exist within aviation, such as CAMO, airline management and operations, aircraft leasing and brokerage. We also have a great network of executive talent that we use to help our clients secure c-level appointments.

Sam Sprules, Managing

Director, AeroProfessional

## How concerning is the engineering workforce shortfall in the aviation sector?

In a word...very. There is a general labour shortage in the aviation sector, but it is particularly prevalent where the skill is very niche and requires a high level of qualification and experience. Engineering falls into this category, and because of the level to which these people are trained, it is not a quick fix. That is what makes it so concerning.

To put into context, it is generally anticipated that around 610,000 new technicians (engineers, mechanics) will be needed to support the growing sector over the next

#### INDUSTRY INTERVIEW

20 years. However, employers are already struggling to fulfil current needs. This is exacerbated given that we are experiencing attrition at record rates; many took early retirement or found work in other sectors due to the pandemic. Engineering is an ageing workforce, with as much as one third approaching retirement and there is nowhere near enough new talent coming through, mostly due to a 2-3 year pause in the training pipeline, again due to the pandemic. This is before we even start talking about the effect of Brexit on the UK labour market.

#### What steps should be taken to address the problem?

There are three key areas of focus that need to be addressed. First and foremost, stemming the outflow of the current workforce and retaining these crucial skills is critical in the short term. The industry has spent years training these skilled individuals, and yet we are seeing them reject aviation in favour of rival industries. We need to find a way to not only retain them, but to reverse the trend and try to attract similar skillsets into our industry from those same competitor markets. Then looking to the future, we need to attract new talent into the sector and invest in the younger generation from an earlier stage. Finally, we need to review how we train new personnel and how this needs to evolve in line with new technologies and practices. All of this will require a great deal of investment, but that is what always underpins growth in any industry.



Difficulties with skills transfers between different regulators is a concern.

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#### We see trained technicians in some parts of the world struggling to find work abroad. Is there a lack of cohesion in terms of skills transfers between different regulators?

It is frustrating when at times we see an abundance of skills in certain geographical areas such Asia, and then a great need for these skills in other areas such as Europe and North America, but not being able to link the two together. All regulatory policy is based on safety and that is paramount, but there is a definite misalignment on regulation, mostly from one country to another. There are certain standards that are widely recognised, such as EASA and FAA as the gold standard, and ICAO on a minimum global level, but reaching full international harmony is ultimately not something that



Many MROs and airlines now have their own training academies to lure young talent.

is likely to happen any time soon. In some circumstances it is possible to have training qualifications and certificates 'validated' to allow the transition of a worker from one jurisdiction to another, but again this is quite restrictive, for example when considering bringing people to Europe. Regulatory difficulties are not the only cause, as there are also the logistical considerations that come with recruiting overseas. With work permit approvals taking months to complete in some cases, companies are hesitant to commit to something that comes with no real guarantee of a successful outcome.

#### What is your key advice for young people considering a career in aircraft engineering?

Anyone looking to embark on a career in aviation and aerospace engineering needs to understand that, based on current training methods and practices, learning, and developing the skills needed takes a great deal of time, dedication and focus. This means you need to be completely committed to achieving it, much as you would to become a doctor or lawyer. However, there are several ways to start the journey, such as graduate or apprenticeship schemes. There are independent training organisations that support MROs, airline and self-sponsored programmes, and many MROs and airlines now have their own training academies for engineering. What I would say is that it is a highly rewarding and interesting industry to be in.

## PEOPLE

## *»»»* on the move



John S. Slattery

Heart Aerospace, the Swedish electric airplane manufacturer, has appointed John S. Slattery as a nonexecutive chairman of its Board of Directors. Slattery, who currently serves as the Executive Vice President and Chief Commercial Officer at GE Aerospace, brings extensive industry expertise and a strong commitment to decarbonising air travel. In accepting the position,

Slattery expressed his enthusiasm for joining Heart Aerospace during this pivotal moment for the aviation industry. He emphasised the importance of acting with vision, courage, curiosity, and a sense of urgency to achieve carbon neutrality, acknowledging the responsibility to future generations. Heart Aerospace focuses on a segment of the market that is primed for disruption. Its innovative ES-30 regional hybrid electric airplane not only contributes to the decarbonisation of commercial aviation but also democratises travel by reintroducing commercial flights to underserved communities and airports facing service cuts. He hailed the value proposition of Heart Aerospace's offering, highlighting its potential to benefit everyone, including the environment, and likening it to a "blue ocean" strategy. Before joining GE Aerospace, a prominent provider of aircraft jet and turboprop engines and systems, Slattery served as the President & CEO of Embraer Commercial Aviation. Prior to that, he held various executive positions for fifteen years at leading commercial aerospace advisory firms, aircraft leasing companies, and aviation banking organizations.

International Aero Engines AG (IAE), a multinational consortium comprised of shareholders including Raytheon Technologies' business Pratt & Whitney, Pratt & Whitney Aero Engines



Kim Kinsley

International GmbH, Japanese Aero Engines Corporation and MTU Aero Engines, has named **Kim Kinsley** as its President. She succeeds **Earl Exum**, who held the position since 2020. Exum will become Chair of the IAE AG Board of Directors and continue serving in his role as Vice President, Mature Commercial Engines at Pratt & Whitney, a position he has

held since October 2022, developing strategies and execution to support customers, optimise product life and maximise value realised from Pratt & Whitney's mature engines portfolio. Kinsley, IAE's first female President, has concurrently been named Vice President, V2500 Programmes at Pratt & Whitney. She will assume both roles effective immediately and report to Exum. As president, Kinsley will lead the integrated programme structure to support the continuous improvement of Pratt & Whitney's V2500 programme, positioning the joint venture partners to best serve customers with more flexible offerings to the narrow-body segment. She will exercise leadership to ensure financial, business, technical, customer and partner commitments are achieved.

Farsound has restructured its senior team, strengthening it to support the next phase of global expansion. Farsound's business is growing rapidly and has recently moved into a new purpose-built state-of-the-art UK-headquarters and has also recently opened new facilities in the U.S.A. and Spain. To support the continued rapid growth of the business, a number of changes have been made to the senior team; **Kevin Sargent** will move from Executive Chairman to Non-Executive Chairman and **Chris Knott** has been appointed as Chief Executive Officer

## PEOPLE

## *»»»* on the move

for Farsound's global business. He was previously the Group Finance Director at Farsound for ten years, so brings a wealth of relevant experience to the role. Farsound continues to see strong global demand for its supply chain solutions as it continues to support the supply of fast-moving parts directly to the production lines of many of the world's leading aero engine MROs. Over the past few years Farsound's Group Sales Director, Lee Kelsey has expanded the international customer base and partnered with many of the world's flagship airlines. He has been appointed to a new role of Chief Operating Officer, overseeing sales, quality and global operations, ensuring total customer satisfaction and continuing the development of innovative products and services. Jonathan Medhurst is appointed as Chief Procurement Officer, responsible for Farsound's global inbound supply solutions and the continued development of supplier relationships. Given the current challenges in the global supply chain, this role has becoming increasingly important as Farsound continues to develop longlasting mutually beneficial relationships with all of its suppliers. A new Chief Financial Officer will also be joining the team later in the summer, and an announcement will be made on this role in due course.



Matthias Düllmann

SR Technics has appointed **Matthias Düllmann** as the company's new CEO. He will succeed **Jean-Marc Lenz** as of July 1, 2023. Lenz will remain working for SR Technics in a part-time senior advisory function. Düllmann joined SR Technics in 2017, serving as Global Head of Controlling for two years before assuming the CFO position in 2019. In this role, he is also responsible for SR Technics' strategy development and has played a major role in the transformation process of SR Technics towards an engine-focused MRO company. Prior to SR Technics, Düllmann worked for several years at a leading consulting firm. Before that he held various leadership positions, among others as Managing Director and CFO. Düllmann's position as CFO will be taken over by **Remo Voehringer**, currently Vice President Controlling at SR Technics. He has been with SR Technics since 2009 in various finance leadership positions. **Owen McClave**, currently SVP Operations, will be nominated COO. He joined SR Technics more than four years ago, with several decades of experience in Aerospace. These nominations also take effect on July 1, 2023.



aircraft lessor based in Fort Lauderdale, Fl., has welcomed **Eleanor Rodrigues-Smith** to its team. She joined Azorra in June 2023 as Vice President – Commercial Transactions with focus on leading a cross functional deal team to negotiate and manage all aircraft lease or purchase/ sale agreements from LOI to final lease agreement.

Azorra, the commercial

Eleanor Rodrigues-Smith

Rodrigues-Smith brings over 25 years of industry experience where she has held roles in Contracts, Marketing, Customer Support, Asset Management and Commercial. Prior to joining Azorra, Eleanor was the Vice President, Commercial at Nordic Aviation Capital. She started her career at Bombardier and participated in numerous development projects including the DHC-8-400 firefighter, CRJ and EMB 120 freighter conversion programs and A220 sales to lessors.



## The leading industry publication linking aircraft maintenance, the aftermarket, and aircraft operators

AviTrader MRO is a monthly digital magazine providing news and senior level analysis on the global commercial aviation MRO industry. Over the past decade the publication has grown to be a leading source of insight and analysis on the key issues facing the aircraft maintenance and aftermarket sectors.

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