MRO BUSINESS TODAY

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LATAM Airlines Group Selects Pratt & Whitney's GTF Engines to Power Airbus A320neo Family Aircraft, Enhancing Sustainability and Efficiency

Pratt & Whitney's GTF engines to propel LATAM's fleet towards reduced carbon footprint and improved operational performance.

LATAM Airlines Group S.A. ("LATAM") has chosen Pratt & Whitney's GTF engines to power additional A320neo family aircraft, expanding on their initial order of more than 40 aircraft in 2013. With the inclusion of remaining options, the deal is set to cover up to 146 aircraft. Pratt & Whitney will also provide engine maintenance services to LATAM through a long-term EngineWise® Comprehensive service agreement.

"At LATAM we are committed not only to connecting South America to the world, but doing so caring for the environment and reducing our carbon footprint. We are proud to enhance our partnership with Pratt & Whitney to power our A320neo family, which will allow us to do so, as we expect to grow this fleet over 100 strong in the coming years," said Roberto Alvo, CEO, LATAM Airlines Group.

Based in Santiago, Chile, LATAM is the leading airline group in Latin America, operating in Brazil, Chile, Colombia, Ecuador, and Peru. The airline also offers international services within Latin America, Europe, Oceania, the U.S., and the Caribbean. LATAM was the first airline in the Americas to operate the Airbus A320neo aircraft. Currently, LATAM operates over 80 Airbus A320neo aircraft powered by V2500 engines

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and 16 Airbus A320neo family aircraft powered by GTF engines.

"Our relationship with LATAM, including their predecessor LAN Airlines, dates back more than seven decades with the Twin Wasp engine on Douglas DC-3 aircraft," said Rick Deurloo, Commercial Engines president at Pratt & Whitney. "GTF engines are already delivering exceptional economic and sustainability benefits to LATAM and we look forward to providing even greater value in the years to come," he further added.

The Pratt & Whitney GTF™ engine, equipped with Collins Aerospace nacelle and accessories, offers the highest fuel efficiency and lowest greenhouse gas emissions for the Airbus A320neo family. GTF-powered aircraft can reduce fuel consumption and CO2 emissions by 16% to 20%, NOx emissions by up to 50%, and noise footprint by up to 75%.* The GTF engines are certified for operating with 50% sustainable aviation fuel (SAF) and have successfully undergone testing with 100% SAF. This positions GTF engines to contribute to further carbon footprint reduction, supporting the aviation industry's goal of achieving net zero emissions by the 2050s. Furthermore, Pratt & Whitney is committed to advancing even more efficient and sustainable propulsion technologies in the future, including the Pratt & Whitney GTF Advantage engine and beyond ■

Leonardo introduces upgrades on AWHero RUAS for multi-purpose maritime operations

The newly introduced features on Leonardo AWHero RUAS include a twin-engine heavy fuel powerplant, which improves efficiency, safety, and time between overhauls.

■ Additionally, AWHero has undergone enhancements in terms of survivability and cyber resilience.

Leonardo, a leading aerospace and defense company, unveiled the latest advancements in its AWHero RUAS (Rotary Uncrewed Aerial System) during a ceremony at SEAFUTURE 2023 held on the Italian Navy's Paolo Thaon di Revel PPA. The newly introduced features include a twin-engine heavy fuel powerplant, which improves efficiency, safety, and time between overhauls. The airframe modifications offer substantial operational and support advantages such as powerplant integration, increased payload bay capacity, an improved system and sensor integration, wider field of view, enhanced maintainability, and on-deck stability.

The AWHero system capitalizes on Leonardo's extensive experience in rotorcraft system development and integration, particularly in the field of uncrewed aerial systems (UAS) and naval applications. Notably, AWHero is the only RUAS in its class to have obtained military certification, demonstrating its adherence to globally recognized standards. The system has now undergone further developments to enhance its performance and capabilities, building upon the robust foundation established by its certification.

The system also boasts advanced sensor modularity, including the Leonardo Gabbiano TS Ultralight maritime radar, which provides unparalleled all-weather wide area coverage. Addition-

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ally, AWHero has undergone enhancements in terms of survivability and cyber resilience. These developments complement the certified and proven basic configuration of the system, which includes the rotor system, transmissions, core avionics, data-link architecture, and control station.

Gian Piero Cutillo, MD of Leonardo Helicopters, said "AWHero is part of a forward-looking roadmap that Leonardo is implementing to maintain its leadership in vertical flight applications in the frame of current and future technological evolutions, which will extensively reshape this industry. Within this roadmap, uncrewed systems and relevant enabling technologies (i.e. automation/autonomy, communications, sensors integration and fusion) are key elements in which the company has been significantly investing, while leveraging a fruitful collaboration with the Italian Military Authorities. The system enhancements unveiled today reflect the incremental yet firm move from basic design to CONOPS (Concept of Operations) focused configuration. This is particularly true for the relevant naval applications, which remain a priority market for these kind of systems, which are able to meet intelligence and situational awareness extension capabilities with an optimized use of resources."

AWHero is designed to support various assets involved in naval and multi-domain operations, including Intelligence Surveillance Target Acquisition and Reconnaissance (ISTAR), Anti-Submarine Warfare (ASW), Electronic Warfare, Communication Relay, Border Protection, Combat Support, and Force Protection. The system can be seamlessly integrated with naval combat management systems. Leonardo's integrated capabilities in rotary-wing platforms, system integration, UAS systems, support, and training services, along with proprietary technology, provide AWHero operators with unmatched potential for system growth, customization, and through-life cycle support benefits.

Since 2019, AWHero has been involved in maritime surveillance capability demonstrations as part of the OCEAN2020 initiative, a strategic research program supported by the European Defense Fund. The program focuses on naval surveillance technology and maritime safety, involving 43 organizations across Europe and led by Leonardo. The system has also participated in various capability demonstration initiatives in the RUAS domain in Italy, the UK, and Europe.

As the only European company capable of delivering complete solutions for uncrewed systems, Leonardo's expertise spans platform design, sensor development, mission systems, control stations, and certified low-risk, highly effective, fully integrated capabilities. The company plays a significant role in European uncrewed system programs and has demonstrated its capabilities in international exercises. Leonardo's commitment to advancing remotely-piloted and autonomous/semi-autonomous systems aligns with its strategic plan, "Be Tomorrow 2030," which focuses on the continuous development and integration of cutting-edge solutions across all domains ■

Metrojet Engineering Clark concludes NDT and base check on Bombardier Challenger 300 and 350 jets

The MEC NDT process on the Bombardier Challenger 300/350 involved inspecting the materials, components, and structure of the jet to detect any flaws or irregularities.

Metrojet Engineering Clark (MEC) has successfully completed non-destructive testing (NDT) and base check support for two Bombardier aircraft models, the Challenger 300 and Challenger 350. With a team of highly skilled engineers, MEC conducted thorough checks and NDT procedures on these aircraft, demonstrating their expertise and commitment to providing comprehensive services to their customers.

The base check and NDT procedures carried out by MEC were essential to ensure the airworthiness and safety of the Challenger 300 and Challenger 350. Over a period of 21 days, the MEC team meticulously examined the Challenger 300, while the Challenger 350 underwent the same process in just 3 days. The NDT process involved inspecting the materials, components, and structure of the aircraft to detect any flaws or irregularities, all without causing any damage or alteration to the aircraft's parts.

By successfully completing the NDT and base check support for these Bombardier aircraft, MEC has further strengthened its capabilities in the maintenance, repair, and overhaul (MRO) sector. This achievement allows MEC to expand its range of services and provide more comprehensive and reliable solutions to its customers. MEC's dedication to providing top-notch MRO services is evident in their investment in skilled personnel and advanced equipment. Their team of well-versed engineers ensures that every aspect of the aircraft is thoroughly inspected, maintaining the aircraft's performance and safety standards.

With this achievement, MEC continues to position itself as a trusted and reliable partner in the aviation industry. The completion of the NDT and base check support for the Challenger 300 and Challenger 350 further strengthens their reputation as an MRO provider that prioritizes quality, efficiency, and customer satisfaction.

MEC's successful completion of the NDT and base check support for the Bombardier Challenger 300 and Challenger 350 highlights their dedication to excellence and their ability to deliver reliable and inclusive services to their customers. As the aviation industry continues to evolve, MEC remains at the forefront, ensuring the airworthiness and safety of aircraft through their expertise and advanced maintenance solutions ■

AviLease acquires 13 Airbus and Boeing aircraft from Avolon

This strategic transaction between AviLease and Avolon includes a mix of narrow and wide-body aircraft, comprising seven Airbus A320neos, two A330neos, and a Boeing 737 MAX 8.

AviLease, the rapidly expanding global aircraft lessor fully owned by PIF, has made an exciting announcement regarding its latest acquisition. The company has successfully acquired 13 aircraft from Avolon, an international aircraft leasing company. This strategic transaction includes a mix of narrow and wide-body aircraft, comprising seven Airbus A320neos, two A330neos, and a Boeing 737 MAX 8. These aircraft types are highly sought after due to their fuel efficiency and demand in the market, making them attractive assets for AviLease's growth and development.

Fahad Al-Saif, Chairman, AviLease said, "AviLease embarked last year on its journey with ambitious aspirations to be a leading institution across the aviation leasing value chain, by establishing a diverse fleet of modern aircraft manufactured by leading global companies. The deal with the global leasing company, Avolon, is a true testament to our strength and unwavering purpose, and will provide us with further opportunities for direct expansion. At AviLease, we aim to contribute to the development of the aviation ecosystem in the Kingdom and enhance the financial sustainability of the sector, in line with the strategy of the

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Public Investment Fund, which focuses on unlocking the potential of promising sectors and enhancing their global competitiveness to achieve the goals of Saudi Vision 2030."

The acquisition of these 13 aircraft represents a significant milestone for AviLease. With a diverse and modern fleet, manufactured by renowned global companies, AviLease is positioning itself as a leading player in the aviation leasing industry. The company's strategic partnership with Avolon further strengthens its expansion plans and provides opportunities for future growth and collaboration.

Mr Edward O'Byrne, Chief Executive Officer, AviLease said, "This is a logical strategic next step for us. This transaction demonstrates AviLease's international expansion and its ability to originate both in the primary and the secondary

trading market. With this acquisition, our aircraft portfolio will reach 45 aircraft on lease to airlines globally. The lessee credit composition of the purchased portfolio is second to none and further diversifies our aircraft portfolio and lessee customers. This transaction also creates strong new relationships with partner airlines and opens an avenue for future transactions. We are thankful to Avolon's team to become a partner early in our journey."

Additionally, AviLease's commitment to the development of the aviation ecosystem in Saudi Arabia aligns with the goals of the Public Investment Fund and Saudi Vision 2030, aiming to enhance the sector's financial sustainability and global competitiveness.

Andy Cronin, Chief Executive Officer, Avolon said, "Trading aircraft is an important and consistent part of our growth strategy and we are pleased to be working with AviLease as a key partner. We continue to see strong demand globally as lessors and airlines seek to source supply against the backdrop of an ongoing shortage of new aircraft deliveries."

As AviLease continues to make strides in its journey, this acquisition marks a major step forward. The company's dedication to excellence, coupled with its growing aircraft portfolio and strong partnerships, positions AviLease as a key player in the global aviation leasing market. The demand for aircraft leasing remains robust, and AviLease is well-positioned to capitalize on the opportunities it presents ■

BOC Aviation handovers a solo Boeing 737-8 jet to latest customer Eastar Jet

The BOC Aviation customer based at Gimpo in Seoul, Eastar Jet offers services to Jeju Island in Southern Korea and since its establishment in 2009 has operated three Boeing 737-800 aircraft.

BOC Aviation Limited, a prominent aircraft leasing company, has successfully delivered a Boeing 737-8 aircraft to Eastar Jet Co. Ltd. This collaboration marks a significant milestone for both companies, as Eastar becomes a new customer while BOC Aviation continues to provide the latest technology aircraft to meet market demands. The aircraft is powered by CFM LEAP-1B engines.

Based at Gimpo in Seoul, Eastar Jet primarily offers services to Jeju Island in Southern Korea. Since its establishment in 2009, the airline has operated three Boeing 737-800 aircraft. The addition of the Boeing 737-8 to their fleet marks an important step forward in their growth strategy.

"We are pleased to participate in Eastar's growth story and to welcome it as a new customer as we continue to provide the latest technology aircraft," said Robert Martin, Managing Director and Chief Executive Officer, BOC Aviation. "Korea and Asia-Pacific are markets that are recovering their vibrancy as they enjoy renewed growth and this transaction is emblematic of the demand from customers that we are working with," he further added.

BOC Aviation, headquartered in Singapore with offices in Dublin, London, New York, and Tianjin, is a leading global aircraft operating leasing company. Their fleet comprises 635 aircraft that are either owned, managed, or on order. As of March 31, 2023, their owned and managed fleet has been leased to 86 airlines across 39 countries and regions worldwide. The company's commitment to delivering quality aircraft and supporting the global aviation industry remains steadfast.

"With the proactive cooperation of BOC Aviation, we were able to successfully deliver a Boeing 737-8 aircraft within the scheduled date," said Sang-Jong, Yoo, Chief Operating Officer of Eastar Jet. "We had experienced the operational efficiency of Boeing 737-8 by operating it for the first time in South

Korea. Starting with this Boeing 737-8, we will expand our routes and initiate substantial business expansion," he further added.

This partnership between BOC Aviation and Eastar Jet highlights the continued growth and potential of the aviation market in Korea and the Asia-Pacific region. As air travel recovers and demand increases, industry players like BOC Aviation are playing a vital role in providing the necessary resources and support to airlines. With their extensive fleet and global reach, BOC Aviation is well-positioned to meet the evolving needs of its customers and contribute to the development of the aviation industry as a whole ■

Image Courtesy : Satair

Predictive Engine Maintenance Management

98 **million terabytes of data** – that is what the OEMs, airlines and MRO service providers will have to grapple with, come 2026. This is the amount of data that is likely to be generated by the global fleet of commercial airlines, according to an Oliver Wyman MRO survey. Collating all this data and running analyses, aided by smart technology is the way forward for applying predictive engine maintenance and health monitoring systems in business processes of aviation companies.

All this load of engine sensor data, along with digital monitoring, artificial intelligence led big data analysis, use of cutting-edge technology like creation of Digital Twins (digital modelling of engines), are applied to achieve Predictive Engine Maintenance (PEM), or the abil-

ity to predict expensive and at times, critical failure before they occur.

Successful use of PEM is ultimately the ability to translate raw data into actionable insights based on meaningful information.

Digital Twins, Artificial Intelligence, IoT and more, are all the technologies in vogue that go into predictive engine maintenance management, making businesses processes more agile, adaptive and above all, allow businesses to remain viable. It is about gathering data, putting them through analytics, gaining key insights and making predictions about engine health and of course timely action taken.

For Rhonda Walthall, a Technical Fellow in Prognostics & Health Management at UTC Aerospace Systems, it is "Rather than being caught completely off-guard by maintenance requirements, predictive maintenance can offer you around a 15-day heads-up."

Its little wonder then, that OEMs, Airlines and MROs have embraced PEM more than ever, for reaping benefits that a capital-intensive business requires, and these are:

• By using this predictive approach, engine MROs can address and avoid issues that are expensive, and likely to cause Aircraft on Ground situations

• PEM also allows aircraft owners/ operators to set some of their maintenance cycles on actual needs rather than fixed time periods. In this way, substantial expenditure on maintenance is avoided, without compromising safety or aircraft availability.

Big industry players like OEMs and MRO providers like AFI KLM E & M, QOCO Systems and MTU Maintenance and similar, have all defined and refined their service offerings (using big data and cutting- edge technology) almost holistically, to benefit the entire industry.

What Do These Players Have on Offer

Since 2016, with their keen operational insights and data gleaned from aircraft engines, AFI KLM E&M have developed their own algorithms to provide advance warning of engine failures or of their components. They go on to provide relevant data to support engine health assessment to maximise engine 'Time-on-Wing,' according to Rik van Lieshout, Digital Products and Services Manager, at AFI KLM E & M. "AFI KLM E&M's main focus is to create value for its 200 airline customers by maximizing fleet availability and asset value," van Lieshout said.

MTU Maintenance on the other hand, is harnessing digital technology to effectively deliver PEM services that may be termed 'prescriptive,' based on data such as operational environments, derate, and engine performance. Accuracy in forecasting is achieved, concerning 'on-wing time' remaining for engines and as also optimal engine and unit removal time.

MTU Maintenance's full-scale performance analysis tool monitors and generates data pertaining to all engine parameters and a built-in alarm system that alerts users about engine conditions ahead of critical parameters' exceedance.

The company's 'scrap rate prediction tools,' based on engine and maintenance data, can predict default probabilities of high-cost material, according to Director of Industrial Engineering, Dr. Michael Bartlet.

QOCO Systems provides a data exchange platform that enables 'bidirectional maintenance and engineering data flows between operators, OEMs, and analytics providers.'

QOCO Systems, contributes to the PEM concept in a different manner. The

Image Courtesy : inuse.eu

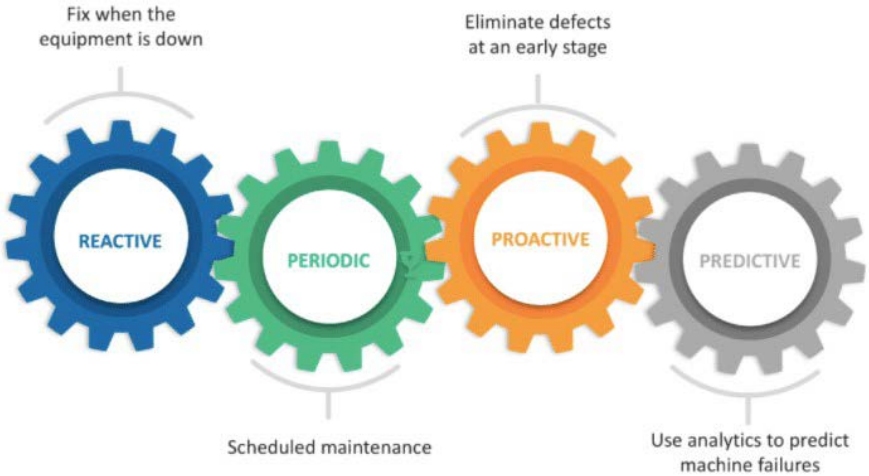
company focuses on, and propounds the idea of collaborating and sharing data. By this, airlines and OEMs can improve asset utilization making it mutually beneficial. Aircraft engines undergo extended time on-wing, planned maintenance schedules that are need-based, as also fewer and far between maintenance scheduling. The resultant benefits are leading to improved cost, and resource optimisation, efficiency and streamlined operations for the airline.

According to QOCO Systems' Ville Santaniemi – Customer success Manager and Partner, "To maximize results, data sharing between airlines and PEM service providers is essential."

Image Courtesy : AFI KLM E&M

PEM Trends & Benefits

PEM management is the engineering expertise linked to the knowledge of the operations that allows the interpretation of these data and information flows.



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"We see a trend towards working with continuous data at higher sampling rates in order to cover critical operational conditions and manoeuvres," says MTU's Bartelt.

So, what benefits does Predictive Engine Maintenance (PEM) reap in:

- Minimizes time spent on shop visits
- Substantial cost savings
- Maximizing aircraft availability
- Prevents AOGs
- 'Time on wing' for engines may even double with advanced digitisation
- Save on compensation to passengers
- Avoid tarnishing brand reputation – operational reliability

PEM enables proactive analysis, instead of reactive analysis.

Says MTU Maintenance's Bartlet, "we believe the next technology advancements in the MRO business will be driven by digitalization, and that is where the greatest development will take place across the industry."

Look at Rolls Royce's digital foray. The OEM uses AI forecasting to keep customers automatically informed to update their predicted maintenance deadlines for every engine component. This is Rolls Royce's proprietary digital information thread connecting not only every Rolls-Royce powered aircraft, but covers every airline operation, maintenance shop, and factory.

Towards Democratization of Data

The full realisation of predictive maintenance depends on readily available big data shared throughout the industry- OEMs manufacturers, airlines, leasing companies, and similar entities. Essential is to have a sense of ownership, and a working environment where being collaborative about sharing the data, is encouraged.

As Micheál Armstrong, CEO of Armac Systems, opines that "We need to have almost a taxonomy around this data so that we can all agree and share and benefit from this data. That is almost a bigger challenge than the algorithms."

The use of blockchain technology can democratise the data and protect people's confidentiality at the same time. The moment data becomes proprietary, the plot is lost.

All aircraft and engine manufacturers today offer data tools as service products, and therefore it calls for a focus on developing tools to best analyse data,

According to Rhonda Walthall, Technical Fellow in Prognostics & Health Management at UTC Aerospace, "Stakeholders are coming together looking for opportunities to partner together and to share data yet still protect their intellectual property." she says.

Some instances of commitment towards data sharing and collaboration are evident in Airbus' Skywise open platform, set up in 2017 with the objective of combining data from Airbus' in-service aircraft with airline and OEM data, in order to conduct in-depth analysis aimed at anticipating and opti-

mising processes such as maintenance. According to Airbus, the company tripled the fleet covered by Skywise in just a little over one year – from 28 airlines with a total of 3500 aircraft to 100 airlines with a total of 10.000 aircraft under contract by the end of 2019.

Data sharing is likely to have a trickle-down effect on the rest of the supply chain, including logistics providers who can now access valuable insights and plan accordingly. In the future, the idea is to have a 'digital thread throughout the lifecycle.'

Predictive maintenance is transforming the supply chain

Predictive maintenance for example can help determine the right moment to replace an engine part. This is critical because replacing too late can lead to unexpected failures, flight delays, cancellations, longer AOGs—not to mention, reduce asset availability.

Predictive Engine Maintenance and Positives for End-Customers

The end-customer is the air traveller who will spend on air travel, provided reliability and safety are assured. So how does Predictive Engine Maintenance impact the end-customer? For one, it can 1) Offer greater operational reliability, thus customers repose greater faith in a certain brand or airline company; 2) Delays and cancellations are less likely to plague customers; 3) Ensure greater safety for passengers; 4) When engines can be serviced, replaced, or overhauled before failure, airlines can dramatically reduce the risk of safety-related incidents.

Sustainability benefits

As the aviation industry moves towards a greener future, digitalisation and predictive maintenance are important elements for the engineering side of the industry. By reducing the need for maintenance schedule frequency, use of energy and resources is reduced, and the emissions footprint of engines and their parts' logistics is minimized. PEM management plays its part in the sustainability story.

Conclusion

A risk-averse aviation industry has found a safe ground in PEM, making judicious use of digital tools, for performance enhancement and that of safety. At the same time be able to control huge costs by being prudent that predictive maintenance allows.

Looking into the future, it is believed that Predictive Engine Maintenance could well define how aircraft are designed, operated, and serviced in all aspects. making AOG situations an exception rather than a rule or a common occurrence.

Expert speak: Success will be achieved only with full data integration throughout the entire product lifecycle and the resultant improvement in predictability of engine performance ■

Reference Credit:
AircraftIT.com
Satair.com
Avm-mag.com

ST Engineering Receives EASA Certification for ACCESS, Expandable Lavatory Solution Enhancing Inclusive Air Travel

The solution has received certification for installation on the Airbus A320 family and will be made accessible on Boeing narrowbody aircraft in the near future.

ST Engineering's ACCESS lavatory solution revolutionizes air travel with its expandable design, providing enhanced wheelchair accessibility and easy installation on aircraft.

ST Engineering has made an announcement regarding its Commercial Aerospace business. They have received the Supplemental Type Certificate (STC) from the European Union Aviation Safety Agency (EASA) for their groundbreaking cabin lavatory solution called ACCESS. Initially designed for the Airbus A320 family, ACCESS has been developed with passengers with reduced mobility (PRMs) in mind.

What sets ACCESS apart is its ability to expand, providing an additional 40% of space to accommodate a passenger in a wheelchair and their caregiver. This unique lavatory solution is the world's first of its kind. After the successful certification for implementation on the A320 aircraft, ST Engineering is now focused on making ACCESS available on the Boeing 737 platform.

Ms Ling Meng Geah, Director Programme Office, Cabin Interiors and Engineering Solutions at ST Engineering, said, "The EASA certification marks a significant milestone for us in bringing to market a viable cabin interior solution that makes air travel more inclusive. As we work towards more certifications and extending the solution to more aircraft platforms, we hope that like-minded operators will jump onboard with the adoption of ACCESS so that as many passengers with reduced mobility as possible can benefit from it."

To minimize retrofitting costs and make adoption easier for operators, ACCESS has been designed for simple installation. It requires no reduction in seat count or galley space and can be easily attached to existing structures, electrical connections, and systems. Additionally, once installed, the ACCESS lavatory can be deployed within seconds by individual crew members and easily returned to its original state when not in use. The human-centric design of ACCESS fulfills all the proposed requirements by the U.S. Department of Transport to enhance lavatory accessibility on narrowbody aircraft.

Furthermore, earlier this year, ST Engineering entered into a Letter of Intent (LOI) with Vaayu Group (Vaayu) to provide them with 20 units of ACCESS for installation on Airbus A320 and Boeing 737 aircraft. This partnership makes Vaayu the launch customer for this innovative cabin interior solution ■

GE upgrades Repair Solutions Singapore Center Scope to enhance Global HA Gas Turbines Services

The GE GRSS Center has now expanded its repairs scope to include HA rotor repair capability, a crucial service that ensures the long-term reliability and availability of H-class gas turbines.

GE's Gas Power business celebrated a significant milestone as it completed the repair and return delivery for the 100th set of Hot Gas Path components from its GE Repair Solutions Singapore (GRSS) Center. This accomplishment underscores GE's commitment to enhancing its supply chain capabilities and better serving its customers in the power generation sector. The GRSS Center, which received a $60 million investment in 2019, aims to become a global leader in power generation technology development, implementation, and repairs.

The GRSS Center has now expanded its repairs scope to include HA rotor repair capability, a crucial service that ensures the long-term reliability and availability of H-class gas turbines throughout their life cycle. With support from the Singapore Economic Development Board, GE's commitment focuses on strengthening repair capabilities globally, with a particular emphasis on Asia, where the H-Class installed base is rapidly growing.

Amol Mody, President of Services, Asia Pacific and South Asia, GE Gas Power said, "This project marks our unwavering focus to improve our supply chain capabilities and better serve our customers, which is crucial as GE's largest and most advanced gas turbine will continue to mature and age in the coming decades. Our HA advanced fleet is one of the most responsive and flexible in the industry and can be a great complement to variable renewables sources. In recent years, we celebrated significant growth of our HA gas turbine orders in Asia, mainly to support growing power demand while switching from coal-fired power generation. GRSS' HA rotors repair services will enable power producers to service operating assets with the latest technology, while benefiting from significant improvement to the lead time and support in their outage needs. By investing in our GRSS facility, our customers in Asia and around the world can benefit from high quality rotor services, with faster turnaround times, keeping their assets in reliable operation for years to come."

The gas turbine rotor is a critical component of the HA gas turbine and requires scheduled servicing over its lifetime to maintain optimum condition. The enhancement of GRSS's repairs scope is part of GE's global Rotor Life Extension program, which aims to extend the rotor's lifespan and enhance its efficiency by leveraging GE's expertise to determine the full residual part life. This capability will increase flexibility across GE's global repair network, catering to the growing installed base of HA gas turbines in Asia and worldwide. The new capability will reduce rotor maintenance costs and cycle time, enabling faster delivery to customers in Asia due to simplified logistics and regional proximity.

The GRSS Center has evolved from its origins in marine and offshore repairs in the 1970s to include power generation repairs and servicing of gas turbines. Over the years, the center has experienced significant growth, expanding its workforce from 250 to approximately 350 employees in just four years. With the goal of handling more complex repairs on HA turbines, the center aims to add further job positions. As a global center of excellence for HA repairs, GRSS is the first HA repair development center outside of the USA and one of the world's only four heavy-duty rotor service centers.

"We welcome GRSS' decision to introduce new rotor repair capabilities in Singapore for GE's largest and most advanced gas turbine to better serve their customers in Asia. GE's expansion is testimony to Singapore's strengths as a location for advanced manufacturing and repair activities. We look forward to deepening our strong collaboration with GE and GRSS", said Lim Tse Yong, Senior Vice President and Head, Mobility, Industrials and Conglomerates, Singapore Economic Development Board.

GE's decision to introduce new rotor repair capabilities in Singapore highlights the country's strengths as a hub for advanced manufacturing and repair activities. Mr. Lim Tse Yong, Senior Vice President and Head of Mobility, Industrials, and Conglomerates at the Singapore Economic Development Board, expressed their excitement about the collaboration with GE and GRSS, emphasizing the deepening of their strong partnership.

In addition to its HA repair capabilities, GRSS also serves as a global center of excellence for F-class bucket repairs and GE's largest F-class turbine blade repair service center. Furthermore, it is the largest GE Gas Power aeroderivative repair service center with combustor DVM coating. To strengthen repair capabilities in the region, the Advanced Manufacturing & Repair Technology (AMRT) Centre was established within GRSS in 2021, with a particular focus on the HA fleet.

GE's repair network, including GRSS and other repair shops in Asia, such as Phu My in Vietnam and PT GE Nusantara Turbine Services Shop in Indonesia, demonstrates the company's commitment to regional innovation, local talent development, and building local supply chains. These repair capabilities for heavy-duty and aeroderivative gas turbines in the region provide 24×7 support and quicker turnaround times for customers.

In conclusion, GE's completion of the 100th set of Hot Gas Path components and the enhancement of the GRSS Center's repairs scope to include HA rotor repair capability underscore the company's dedication to delivering high-quality services and supporting the long-term reliability of gas turbines. These initiatives strengthen GE's position as a leader in the power generation industry and reflect its commitment to innovation, customer satisfaction, and building strong partnerships with institutions like the Singapore Economic Development Board ■

Ramco systems establishes qatar subsidiary to drive digital transformation in the middle east

Global enterprise software Company expands into Qatar to empower local businesses and accelerate digital innovation in ERP, HR, and payroll.

Ramco Systems, a global enterprise software company, has announced the opening of its new subsidiary in Qatar. This strategic move aims to support and revolutionize the business landscape in the region by offering state-of-the-art ERP, HR, and payroll solutions. The inauguration ceremony took place in Doha and was graced by Her Excellency, Mrs. Angeline Premalatha, Embassy of India.

Qatar, known as one of the rapidly developing nations in the Middle East, presents immense growth opportunities for Ramco. By expanding its operations into this market, the company aims to solidify its position as a leading provider of enterprise software solutions. This expansion not only allows Ramco to better serve its existing clientele but also empowers local enterprises to embrace digital transformation and reap substantial business benefits.

"Qatar is emerging as one of the leading countries in the world in new technology adoption, innovation and digital transformation. The opening of our new office in Qatar is an exciting milestone for Ramco. We believe that our innovative solutions will empower businesses in Qatar and across the region, to achieve their objectives and scale to newer heights," said Sandesh Bilagi, Chief Operating Officer, Ramco Systems. "Ramco's commitment to innovation and operational excellence along with its customer-first approach will remain at the core of its operations in Qatar. The company is dedicated to providing comprehensive support and localized expertise to its clients, ensuring their success in adopting Ramco's solutions. With the inauguration of the new office, Ramco looks forward to building long-lasting partnerships, contributing to the economic growth of Qatar and making a positive impact in the region" he further added.

Through its local presence, Ramco seeks to meet the increasing demand for its enterprise solutions in the region. These advanced solutions will enable businesses to revamp their operations, enhance efficiency, and elevate the overall employee experience, all within a unified and standardized platform ■

Boeing inaugurates latest upgraded parts distribution site in Poland

The upgraded Boeing site offers advanced shipping and packing processes tailored to Boeing's partners, resulting in improved delivery times for commercial and military customers.

Boeing has announced the opening of a new Boeing Distribution Services site at Panattoni Park Rzeszów Airport III in Poland. This expanded facility provides more than double the storage space for aircraft parts compared to the previous location and strengthens Boeing's presence in Poland's Aviation Valley, a renowned industrial hub. The upgraded site offers advanced shipping and packing processes tailored to Boeing's partners, resulting in improved delivery times for commercial and military customers, including airlines, original equipment manufacturers, and maintenance, repair, and overhaul operations.

Boeing's Parts & Distribution Services portfolio encompasses more than 15 million parts, services, and customized solutions that minimize cost, risk, and complexity for production and aftermarket customers worldwide. The company continuously seeks to diversify its offerings, investing in regional distribution centers and developing platform-agnostic solutions to enhance customer service.

"Our goal is to expand our business in the vibrant Podkarpacie region and Europe, creating new jobs and opportunities for industrial partnerships," said Dr. Michael Haidinger, President, Boeing Germany, Benelux, Central & Eastern Europe.

Boeing Distribution Services has been operating in Poland since 2005, serving over 200 customers in the military and civil aerospace sectors. The Rzeszów headquarters stands as Boeing's second-largest distribution center in Europe, following the chemical and specialty materials facility in Hensteadt-Ulzburg, Germany.

In October 2022, Boeing inaugurated a state-of-the-art distribution center in Hensteadt-Ulzburg, Germany, which represents one of the company's most technologically advanced facilities. Together with the new site in Poland, these centers contribute to meeting the growing demand for parts and professional aviation services across Europe.

"We are focused on continuing to grow our distribution services capabilities by leveraging and expanding our global network," said William Ampofo, vice president, Parts & Distribution Services and Supply Chain, Boeing Global Services. "This further strengthens our ability to deliver the products and services our customers need, when and where they need them," he further added.

With a history of over 30 years in Poland, Boeing is a prominent global aerospace company. Its employees in Warsaw, Gdańsk, and Rzeszów contribute to the development, manufacturing, and servicing of commercial airplanes, defense products, and space systems for customers across the globe. As a significant partner of the Polish industry, Boeing maintains strong relationships with local partners, airlines, suppliers, as well as the Polish government and society ■

Trusting AI in engine maintenance planning

Although it is only one element that a fleet planner needs to oversee, engine maintenance planning can have huge repercussions if timed wrong, or if done without having trusted forecasts to rely on. Phil Cole, civil aviation business manager at Aerogility, a leading provider of maintenance scheduling systems, explores its complexities.

Financial cost, environmental impact and operational efficiency are all important considerations for an airline's fleet and maintenance planning team. Fortunately, intelligent MRO forecasting is being revolutionised with AI and evolving how the industry operates - maximizing efficiency and minimizing airline expenditure. Most importantly though, one thing planners must get right is using an AI solution that produces results it can trust.

Using AI helps to answer multi-faceted questions. As we know, engine MRO is often a balancing act. As an example, one scenario to resolve is if parts of a low-pressure compressor (LPC) need to be replaced by a certain date but parts of the low-pressure turbine (LPT) only need to be replaced by a different, later date, what is the solution? Replacing all the LPC and LPT parts at once means throwing away perfectly good and expensive LPT parts not yet at the end of their life. But bringing in the engine for LPC maintenance on one date and then bringing in the engine again for LPT maintenance later is also an expensive and disruptive option.

So how can AI help solve this problem?

Diving into digital twins

At Aerogility, we help airlines to solve such conundrums and forecast engine maintenance through AI, which turns the abundance of airlines' data into complementary, safe and trusted actionable insights. This involves using software to support fleet planning teams in playing out different maintenance scenarios to save time and costs, while enabling planning for any eventuality.

Aerogility's model-based AI technology allows airlines to create a digital twin of their organisation. This can be used to generate operational simulations, working in tandem with predictive and preventative maintenance systems. As a result, maintenance decisions can be taken based on a full range of variables.

Alongside using simulations to consider multiple factors and optimise when a scheduled maintenance or inspection should be carried out, planners can also introduce modifications or upgrade engine programs and can include plans for unscheduled events.

Trusting AI

Understanding AI and the results it produces can empower airlines to make faster, better-informed strategic and operational choices. To take these decisions with total confidence, users must understand the output from the AI based on the inputs it has received. The output might be a recommendation, an action or categorisation. In Aerogility's case, it could be KPIs and charts in response to model parameters.

This is important because relying on an AI's output means being certain its decision is reasonable and supported by adequately complete evidence.

This is a critical advantage of model-based AI. If AI takes decisions using its own self-learning, rather than a model supplied by people using it, then it cannot express its reasoning in a way that is accessible to people. Model-based AI can.

Over the next few years, it is likely we will see a convergence between data-driven and model-based approaches to AI in engine maintenance planning. Aviation companies don't have unlimited maintenance and engineering resources and so by using AI they can trust they can optimise schedules to ensure fleet availability without increasing costs or being wasteful with resources and components ■

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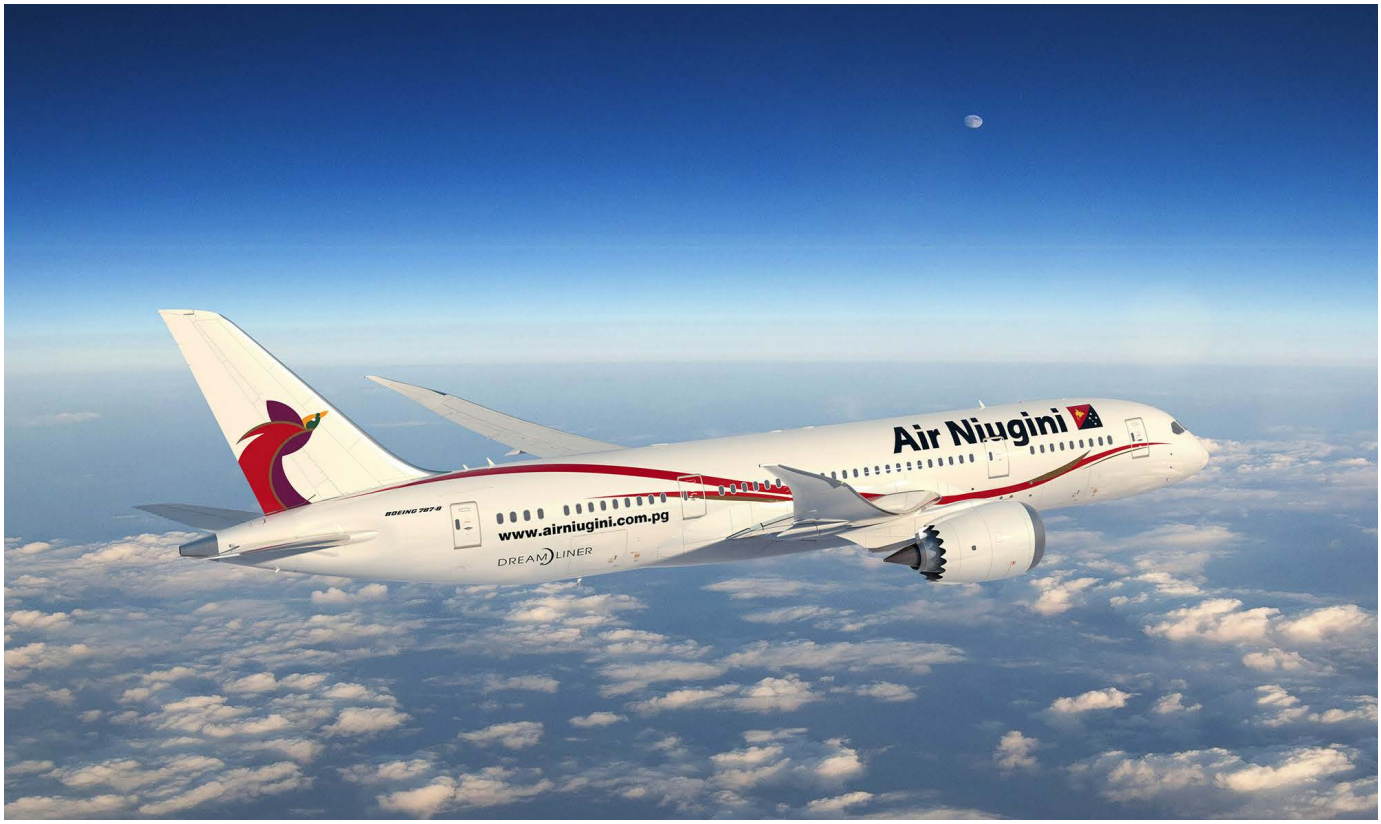

Boeing to deliver Two 787-8 Dreamliner jets to Air Niugini

Air Niugini will leverage Boeing 787-8's cutting-edge technology and expertise to enhance operations, expand reach across key markets, and provide an elevated travel experience.

Boeing and Air Niugini have announced a new order for two fuel-efficient 787-8 Dreamliners, supporting the expansion of the carrier's long-haul fleet. This strategic move will enable Air Niugini, the national flag carrier of Papua New Guinea, to introduce new routes from the Pacific island nation and enhance capacity for inbound tourism.

With this latest order, Air Niugini will leverage Boeing's cutting-edge technology and expertise to enhance its operations, expand its reach across key markets, and provide an elevated travel experience for its passengers. The introduction of the 787 Dreamliners marks an important milestone in Air Niugini's growth strategy and reinforces Boeing's commitment to supporting the development of the aviation industry in the Asia-Pacific region.

Gary Seddon, acting CEO, Air Niugini said, "Signing this contract with Boeing for the purchase of two modern, widebody 787 Dreamliners will enable Air Niugini to grow its network across Asia, Australia, and New Zealand and fulfill its mission as the premier airline in Papua New Guinea, providing the best air service in the region."

The Boeing 787 Dreamliner has garnered significant interest worldwide, with more than 85 customers placing orders for over 1,600 aircraft. Its exceptional market reception has solidified its status as the fastest-selling widebody airplane in history. Since its introduction in 2011, the 787 family's remarkable fuel efficiency, operational flexibility, and extended range have empowered airlines to open over 350 new nonstop routes.

Erika Pearson, Vice President of Commercial Sales and Marketing for Southeast Asia and Oceania, Boeing said, "The excellent capability of the 787 allows Air Niugini to open Port Moresby to more destinations, increasing tourism and economic growth in the South Pacific region. The Dreamliner's flexibility, outstanding efficiency, and unmatched passenger comfort will enable Air Niugini to provide improved long-haul connectivity to the islands."

The 787 Dreamliner sets itself apart with its innovative use of lightweight composite materials and advanced engines, resulting in up to 20% more passenger capacity while reducing fuel consumption and emissions by 25% compared to previous aircraft models. In a typical two-class configuration, the 787-8 Dreamliner can reach a range of up to 13,530 kilometers.

Boeing's collaboration with Air Niugini spans more than four decades, reflecting a longstanding partnership. Air Niugini operates a comprehensive domestic network from Port Moresby, covering Papua New Guinea, and offers international flights throughout the Asia-Pacific region, including destinations such as Australia, Singapore, Solomon Islands, and Fiji. The airline's existing fleet includes Boeing 737s and 767s ■

Air Tanzania Receives First Boeing 767-300 Freighter, Expanding Cargo Capacity and Enhancing country's growing cargo market

The delivery marks a milestone for Boeing as the first direct 767 Freighter shipment to an African carrier, empowering Air Tanzania's cargo operations and economic growth.

Boeing and Air Tanzania have joined in celebration as the airline receives its first 767-300 Freighter. The aircraft has arrived at Air Tanzania's hub in Dar es Salaam, marking a significant milestone in the carrier's ability to cater to the growing cargo market in the country. This delivery is also notable as it represents Boeing's first direct 767 Freighter delivery to an African carrier.

Air Tanzania's Managing Director, Eng. Ladislaus Matindi, expressed enthusiasm about the new addition to their fleet and said, "We are thrilled to welcome the 767-300 Boeing Freighter to our fleet. The 767 will meet the increasing demand for cargo transportation, which was previously reliant on passenger planes. With the 767, Air Tanzania can contribute to a more sustainable future and ensure timely delivery of time-critical cargo throughout Africa and beyond. We look forward to expanding our imports and exports industry, boosting national economic growth, and providing global businesses with opportunities to transport commercial cargo goods worldwide."

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The 767-300 Freighter offers excellent fuel efficiency, operational flexibility, and low noise levels. These features will enable Air Tanzania to support time-sensitive cargo schedules across Africa and beyond. With a range of 3,255 nautical miles and a revenue payload capacity of over 52 tonnes, the 767-300 Freighter is well-suited for the growing e-commerce and express cargo markets. As Air Tanzania aims to expand its imports and exports, especially for perishable goods, pharmaceuticals, and other time-sensitive products, this dedicated freighter will play a vital role.

Anbessie Yitbarek, Vice President of Africa Sales and Marketing at Boeing Commercial Airplanes, highlighted the benefits of the 767 Freighter and said, "The 767 Freighter will significantly enhance Air Tanzania's operations by providing greater efficiency and flexibility across its network. The airline's cargo customers now have a wider range of options as Air Tanzania improves freight connectivity between Africa, Europe, the Middle East, and Asia."

Air Tanzania currently operates commercial services within Africa and to destinations in Asia using its fleet, which includes two 787-8 Dreamliners. The airline has also placed orders for an additional 787-8 and two 737 MAX jets, demonstrating its commitment to expanding and enhancing its operations ■

Airbus to deliver five A330-900 and two A350-1000 jets to Air Algérie

By incorporating Airbus aircraft into its fleet, the A330neo and A350-1000 models, Air Algérie aims to capitalize on the flexibility and efficiency offered by these state-of-the-art aircraft.

Airbus has announced that Air Algérie, the national airline of Algeria, has recently placed a firm order for seven widebody aircraft as part of its strategic plan for commercial growth. This significant order highlights Air Algérie's commitment to expanding its services both regionally and on transcontinental routes. By incorporating Airbus aircraft into its fleet, specifically the A330neo and A350-1000 models, Air Algérie aims to capitalize on the flexibility and efficiency offered by these state-of-the-art aircraft.

The decision to operate the A330neo and A350-1000 will provide Air Algérie with several advantages, including significant operational savings. The A330neo, powered by Rolls-Royce Trent 7000 engines, offers a 25 percent lower fuel burn per seat, contributing to enhanced cost-efficiency for the airline. Furthermore, the commonality between the Airbus aircraft family enables greater flexibility in fleet management and maintenance operations, ultimately streamlining the airline's operations.

Passengers will also benefit from the exceptional features of the A330neo and A350 aircraft. The award-winning Airspace cabin, featured in both aircraft models, ensures a superior level of comfort, ambience, and design. Passengers will enjoy more individual space, enlarged overhead bins, state-of-the-art lighting systems, and access to the latest in-flight entertainment and connectivity systems.

The A330neo and A350 represent Airbus' latest generation of widebody aircraft. The A330neo, with its impressive range of 7,200 nautical miles (13,334 kilometers), is highly capable of flying long-haul routes without the need for intermediate stops. With a remarkable 1,775 firm orders from 130 customers worldwide, the A330 Family has established itself as the preferred choice for short- and medium-haul flights, dominating the market segment.

On the other hand, the A350 Family has earned its reputation as the world's most modern and leading long-haul aircraft family. Powered by Rolls-Royce's efficient Trent XWB engines, the A350 boasts an impressive non-stop flying range of 8,700 nautical miles (16,100 kilometers). Its outstanding performance has garnered 967 firm orders from 54 customers globally, making it one of the most successful widebody aircraft in history.

Air Algérie's decision to invest in the A330neo and A350 aircraft aligns with its ambitious growth plans and commitment to providing passengers with a superior travel experience. With these modern and efficient aircraft, Air Algérie is well-positioned to expand its regional and transcontinental services, catering to the evolving needs of its customers ■

Meeting Demand, Cutting Costs: The Rise of Aircraft Leasing in a Changing Industry

Leasing provides airlines with financial flexibility, capacity adaptability, and reduced maintenance costs.

The global aircraft leasing market is experiencing a significant surge, with projections indicating remarkable growth in the coming years. According to Statista, the market is estimated to reach a value of 295.18 billion U.S. dollars by 2029. This upward trend can be attributed to factors such as increased demand for air travel and airlines' quest to optimize costs. As the market expands, industry experts highlight the advantages of aircraft leasing, emphasizing its pivotal role in achieving sustainable and profitable operations for airlines.

Advantages of Aircraft Leasing

"Ensuring sustainable and profitable operations is crucial for any airline, and leasing can play a key role in achieving this goal," states Jurgita Lukauskiene, CEO, Aeroclass. "Leasing an aircraft instead of purchasing one offers several advantages, including increased financial liquidity, greater capacity flexibility, rapid expansion opportunities, fleet consistency, and reduced maintenance costs," he further added.

Flexibility Fuels Growth

Dr. Bijan Vasigh, Aeroclass instructor and Professor at Embry-Riddle Aeronautical University, explains that leasing has become increasingly favored by airlines for aircraft acquisition. Several major leasing companies dominate the industry, holding a significant market share and playing a prominent role. The flexibility afforded by leasing enables airlines to respond promptly to market dynamics and adjust their fleet sizes accordingly. This adaptability is a key

driver behind the industry's growth.

"Airlines have increasingly turned to leasing as a means of acquiring aircraft, rather than purchasing them outright," explains Dr. Bijan Vasigh, Aeroclass instructor and Professor, Embry-Riddle Aeronautical University. "The industry is dominated by several major leasing companies, which hold a significant market share and play a prominent role in the industry. The growth can be attributed to the flexibility offered by leasing, enabling airlines to adjust their fleet sizes based on demand and market conditions," he further added.

Rising Demand for Skilled Professionals

The growth of the aircraft leasing market is expected to create a parallel surge in demand for skilled professionals within the industry. However, this poses a challenge as the aviation industry already faces a talent shortage. Jurgita Lukauskiene highlights that Aeroclass has observed a surge in demand for leasing-related courses, covering topics such as aircraft management, maintenance, finance, and legal matters. Online training has emerged as a cost-effective alternative for individuals seeking to acquire fundamental knowledge or deepen their industry expertise without incurring substantial expenses associated with in-person training.

Jurgita Lukauskiene, CEO, Aeroclass said, "We have observed a surge in demand for our leasing-related courses, which cover a broad range of subjects including aircraft management, maintenance, finance, and legal matters. Due to the complexity of the field, training competent professionals can be a challenging and costly undertaking. Therefore, online training has emerged as a cost-effective alternative for individuals seeking to acquire fundamental knowledge or deepen their industry expertise without incurring substantial expenses associated with in-person training. This surge in interest indicates that the leasing market is gaining traction, and the demand for knowledgeable specialists in the field is likely to grow."

Aeroclass: Meeting the Training Needs

Aeroclass, as the first digital learning platform focusing specifically on the aviation market, addresses the industry's training requirements. The platform combines the latest advancements in IT, modern learning methods, and world-renowned instructors' expertise to create a virtual learning infrastructure tailored for the aviation industry. Professionals in the sector can access a variety of online courses that cater to industry newcomers, engineers, managers, and executives, allowing for flexible learning experiences anytime and anywhere.

Silvija Jakiene, Chief Communications Officer of Avia Solutions Group, the parent company of Aeroclass, emphasizes the significance of the surge in interest in leasing-related courses. This indicates that the leasing market is gaining traction, with a growing demand for knowledgeable specialists in the field. As the aviation industry continues to evolve, it becomes increasingly crucial for professionals to stay up-to-date with the latest developments and acquire specialized skills to excel in their roles.

Conclusion

The global aircraft leasing market is witnessing remarkable growth, driven by increased demand for air travel and the cost-cutting strategies of airlines. Leasing provides airlines with financial flexibility, capacity adaptability, and reduced maintenance costs. As the market expands, the need for skilled professionals in the aviation industry is expected to grow. Online learning platforms like Aeroclass play a vital role in meeting this demand by offering comprehensive training courses tailored to the industry's needs. With the aviation sector's talent shortage, such platforms provide a cost-effective and accessible solution for individuals seeking to enhance their knowledge and expertise in aircraft leasing.

Aeroclass is the world's first digital learning platform focusing on the aviation market. It combines the latest IT advancements, modern learning methods, and renowned instructors' expertise to create a virtual learning infrastructure tailored for the aviation industry. Aeroclass offers a variety of online courses for professionals in the aviation sector, providing a flexible learning experience anytime, anywhere. Aeroclass is part of the Avia Solutions Group, a leading aviation services provider with a global presence and a wide range of associated services ■

Honeywell's Ecofining technology to support BP in boosting SAF production around the globe

By adopting Honeywell's technology, bp aims to supply 20% of the global SAF market by 2030, supporting the aviation industry's decarbonization efforts.

Honeywell has announced a significant partnership with bp, as the energy company has selected Honeywell's Ecofining technology to support the production of sustainable aviation fuel (SAF) at five bp facilities worldwide. The installation of Honeywell UOP Ecofining technology will take place at bp sites including the Cherry Point refinery in Blaine, Washington; Rotterdam II refinery in Rotterdam, Netherlands; Lingen refinery in Lower Saxony, Germany; Castellón de la Plana refinery in Castellón, Spain; and Kwinana Oil refinery in Kwinana, Australia.

Ecofining, a proven and readily available technology, offers bp a cost-efficient solution to expand its SAF production from renewable feedstocks. By adopting Honeywell's technology, bp aims to supply 20% of the global SAF market by 2030, supporting the aviation industry's decarbonization efforts. SAF produced through Honeywell's Ecofining technology meets international standards and can be used as a drop-in replacement for conventional jet fuel without the need for engine modifications. Currently, it can be blended with fossil-based jet fuel up to a 50% concentration.

Nigel Dunn, Senior Vice President of Biofuels Growth, bp said, "bp has an established global biofuels business that is positioned for rapid growth utilizing Honeywell's technology. The world's demand for SAF is set to increase dramatically, and bp seeks to play an important role in helping the airlines to decarbonize."

The Ecofining process, developed in collaboration with Eni SpA, converts non-edible natural oils, animal fats, and other waste feedstocks into renewable diesel and SAF. This innovative technology can reduce greenhouse gas emissions by up to 80% compared to fossil fuels. Honeywell is committed to meeting the rapidly growing demand for renewable fuels and has expanded its portfolio to include solutions for various feedstocks, including SAF. In addition to Honeywell UOP Ecofining, the company offers Ethanol to Jet technology and recently introduced Honeywell UOP eFining, which converts green hydrogen and carbon dioxide into e-fuels.

"Demand for Ecofining has more

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than doubled in the last two years, and Honeywell has now licensed 35 Ecofining plants around the world with a total production capacity in excess of 400,000 barrels per day," said Lucian Boldea, president and CEO, Honeywell Performance Materials and Technologies. "Honeywell helped pioneer SAF production with its Ecofining process, which has been used to produce SAF commercially since 2016. The Honeywell UOP Ecofining process, developed in conjunction with Eni SpA, converts non-edible natural oils, animal fats and other waste feedstocks to renewable diesel and SAF, and can reduce GHG emissions up to 80% when compared to the emissions from fossil fuels1," he further added.

This partnership aligns with Honeywell's broader commitment to carbon neutrality. The company has pledged to achieve carbon neutrality in its operations and facilities by 2035. Honeywell has a strong track record of reducing

the greenhouse gas intensity of its operations and has long been dedicated to innovation that helps customers meet their environmental and social goals. In fact, approximately 60% of Honeywell's 2022 research and development investment for new product introductions was directed toward ESG-oriented outcomes for customers.

The collaboration between Honeywell and bp signifies a significant step forward in advancing sustainable aviation fuel production. By leveraging Honeywell's Ecofining technology, bp will contribute to the global effort to decarbonize the aviation industry, supporting a more sustainable and environmentally conscious future for air travel ■

Qatar Airways buys 3,000 metric tonnes of from Shell SAF Supply for Amsterdam Schiphol Airport

Qatar Airways will blend at least 5% SAF into its jet fuel supply for the fiscal year 2023-2024, in line with the oneworld alliance target of using SAF for 10% of combined fuel volumes by 2030.

Qatar Airways has entered into a partnership with Shell to procure 3,000 metric tonnes of neat Sustainable Aviation Fuel (SAF) at Amsterdam Schiphol airport. Under the agreement, Qatar Airways will blend at least 5% SAF into its jet fuel supply for the fiscal year 2023-2024, in line with the oneworld alliance's target of using SAF for 10% of combined fuel volumes by 2030.

This collaboration marks a significant milestone for Qatar Airways as the first carrier in the Middle East and Africa to procure a substantial amount of SAF in Europe beyond government mandates. Neat SAF has the potential to reduce full lifecycle emissions by up to 80% compared to conventional jet fuel, which translates to approximately 7,500 tonnes of CO2 reduction for Qatar Airways flights from Amsterdam during the fiscal year.

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Akbar Al Baker, Chief Executive, Qatar Airways Group said, "At Qatar Airways, we are strongly committed to supporting the industry's effort to ramp-up the use of sustainable aviation fuel, as one of the key pillars to decarbonise the aviation industry. Last year, we signed our first offtake agreement in the US, and now we are placing a multi-million US dollar SAF deal in Amsterdam to illustrate our SAF commitment and reiterate our calls for a more robust SAF supply chain across our global network. We remain steadfast in our ambitious target of 10 per cent SAF use by 2030 and this announcement, establishes another landmark for Qatar Airways that underlines the positive outcome of the industry's collaboration which is critical to accelerating the SAF supply and achieving our target. SAF is still 3 to 5 times more expensive than fossil-based jet fuel. This is why it is essential for all stakeholders to play their part in facilitating research & development of SAF facilities, enhancing economies of scale, providing financing and placing supportive policies".

In addition to the SAF procurement agreement, Qatar Airways enables passengers and customers to offset their flight emissions by purchasing high-quality carbon credits that meet the criteria set by the International Civil Aviation Organization. The airline currently invests in carbon credit projects that promote renewable energy and help reduce carbon emissions. Qatar Airways is also developing a solution to allow passengers and customers to offset their emissions by contributing to the cost of SAF.

"Qatar Airways and Shell have a history of collaboration, so it is fantastic to now work together on decarbonisation as we supply them with SAF for the first time," said Jan Toschka, President of Shell Aviation. "SAF is a key lever for decarbonising aviation, but scaling its supply and use requires concerted action from across the aviation sector. Today's agreement is a great example of the collaborative actions that are required to help accelerate aviation's progress towards net zero," he further added.

The partnership between Qatar Airways and Shell demonstrates their shared commitment to sustainability and reducing the environmental impact of aviation. By increasing the use of SAF, Qatar Airways is actively contributing to the decarbonization goals of the industry and reinforcing the importance of collaboration and supportive policies to drive progress towards a more sustainable aviation sector ■

Airbus to provide HBCplus agnostic connectivity solution on 50 new A350 jets for Emirates Airline

By integrating the HBCplus solution into their Airbus A350 fleet, Emirates will deliver a superior passenger experience with uninterrupted, high-bandwidth inflight connectivity.

Airbus has announced that Emirates, one of the world's leading airlines, has made history by becoming the first airline to adopt Airbus' HBCplus agnostic satcom connectivity solution. This cutting-edge technology will be fitted in Emirates' 50 new A350-900 aircraft, with the first delivery expected in 2024. As other airlines across different aircraft families follow suit, Airbus is gearing up to meet the increasing demand for HBCplus-equipped aircraft.

Airspace Link HBCplus, part of the Airspace Link open ecosystem, offers satcom-based off-board connectivity. This comprehensive solution, available for both line-fit and retrofit installations, initially supports Ka-band services. It enables airlines to connect to a range of Managed Service Providers (MSPs) through a certified terminal and radome, which are integrated into the aircraft structure.

Adel Al Redha, Chief Operating Officer, Emirates said, "We continue to strive for improvements and make good use of the evolving technology to support our product offering. HBCplus, offered by Airbus, will provide our Airbus A350 fleet with better integration and performance using the latest generation of connectivity and antenna. With the first of our 50 new aircraft joining Emirates' fleet next year, we look forward to providing our passengers with the latest standard of continuous high bandwidth inflight connectivity throughout their journey to enjoy a better experience."

Airbus' Vice President of Cabin and Cargo Programme, Andre Schneider, highlighted the significance of Emirates' selection of HBCplus as a flexible and agnostic high-bandwidth connectivity solution. He emphasized the collaboration with partners Inmarsat and Safran Passenger Innovations (SPI) to deliver a remarkable customer experience through lightning-fast in-flight internet.

The HBCplus solution was introduced in partnership with Inmarsat, a leading connectivity specialist, as the first managed service provider, and SPI, responsible for providing the Ka terminal and antenna. Looking ahead, Airbus plans to expand HBCplus to offer additional MSP choices that encompass both Ka- and Ku-band services.

Andre Schneider, Vice President of Cabin and Cargo Programme, Airbus said, "We are extremely pleased to welcome Emirates as the first airline to select our agnostic and flexible HBCplus high-bandwidth connectivity solution. As the OEM, we look forward to integrating and delivering state-of-the-art aircraft technology for Emirates together with our partners Inmarsat and Safran Passenger Innovations (SPI), to deliver a fantastic customer experience through lightning fast internet in-flight."

The adoption of Airbus' HBCplus by Emirates showcases the airline's commitment to staying at the forefront of technological advancements in the aviation industry. By integrating this advanced connectivity solution into their A350 fleet, Emirates aims to deliver a superior passenger experience with uninterrupted, high-bandwidth inflight connectivity. As Airbus, Inmarsat, and SPI work together to realize this vision, passengers can look forward to lightning-fast internet connectivity and an enhanced inflight journey.

This milestone agreement between Emirates and Airbus marks a significant step forward in the aviation industry's pursuit of cutting-edge connectivity solutions. It demonstrates the industry's continuous efforts to provide passengers with seamless and high-quality connectivity, enhancing the overall travel experience ■

Lufthansa Systems makes Southern Africa debut with Lido Solutions support for Airlink

Airlink (Pty) Limited has chosen Lufthansa Systems' flight operations products, including Lido Flight 4D, Lido mPilot, and Lido AODS, opting for their comprehensive one-stop-shop service.

Lufthansa Systems, a leading provider of aviation technology solutions, has recently announced its partnership with Airlink (Pty) Limited, a prominent South African airline. This collaboration marks Lufthansa Systems' entry into the Southern African market. Airlink (Pty) Limited has chosen Lufthansa Systems' flight operations products, including Lido Flight 4D, Lido mPilot, and Lido Airport Obstacle Data Service (AODS), opting for their comprehensive one-stop-shop service.

By implementing Lido Flight 4D, an advanced and interactive flight planning solution, Airlink (Pty) Limited aims to optimize its routes by considering crucial flight-related data such as fuel consumption, costs, and flying time. Lido Flight 4D enables individualized optimization of different flight phases and offers a range of automation options. The solution is equipped with cutting-edge features, including real-time data updates, integration of weather data, and fuel price updates, providing accurate and up-to-date flight plans.

Captain Tammy King, Executive Manager of Operations, Airlink (Pty) Limited, said, "We are delighted to partner with Lufthansa Systems. The additional features prioritize safety during take-offs and landings while focusing on optimizing the economic efficiency of every aspect of our flight routings. Lufthansa Systems' Lido Solutions will provide us with state-of-the-art technology to further enhance Airlink's operational processes and procedures."

Airlink (Pty) Limited will leverage Lufthansa Systems' pilot solution, Lido mPilot, to enhance safety and operational efficiency for its pilots. Lido mPilot is an all-in-one charting application that grants easy access to terminal charts, dynamically generated enroute maps, Airport Moving Maps, and all necessary operational documents. The electronically generated charts rely on a comprehensive worldwide geographic information database and aeronautical source data, ensuring precision and high quality.

"We are pleased to welcome Airlink (Pty) Limited as a valued customer of our Lido Solutions. Through this partnership we not only gain a reliable partner, but also enter the South African market – a market with a lot of potential, that will open up great new opportunities for us," added Marco Cesa, SVP Regional Management EMEA, Lufthansa Systems.

Additionally, Airlink (Pty) Limited will benefit from Lufthansa Systems' data solution, Lido AODS, which allows pilots to optimize take-offs and landings using electronic flight bags (EFBs). Lido AODS equips pilots with current information about runways and airports, enabling them to assess the suitability of planned runways for specific aircraft types and current load conditions. This becomes particularly crucial in situations such as engine failure, where pilots must make critical decisions regarding safe landings. By utilizing data from certified global resources, Lido AODS ensures the accuracy and reliability of its information.

This strategic collaboration between Lufthansa Systems and Airlink (Pty) Limited not only strengthens their partnership but also demonstrates Lufthansa Systems' expansion into the South African market. By leveraging Lufthansa Systems' state-of-the-art solutions, Airlink (Pty) Limited aims to enhance operational efficiency, prioritize safety measures, and optimize their flight routings ■

Boeing commences Upgrade of Radar on U.S. Air Force B-52 bomber jet

The program will equip the USAF Boeing B-52 with advanced radar features, enhanced navigation accuracy, targeting and tracking capabilities, and high-resolution mapping.

Boeing has announced that the first U.S. Air Force B-52 aircraft has recently arrived at Boeing to initiate the Radar Modernization Program (RMP), which aims to upgrade the radar capabilities of the iconic bomber. This program will equip the B-52 with advanced radar features, providing enhanced navigation accuracy, targeting and tracking capabilities, as well as high-resolution mapping. The upgraded radar system will also enable the aircraft to engage multiple targets simultaneously, akin to fighter aircraft capabilities.

"The B-52 brings unique, critical capabilities to the U.S. Air Force as they move to a future two-bomber platform strategy," said Jennifer Wong, director of Bomber Programs, Boeing. "By modernizing the B-52 radar, we're increasing the relevancy of the aircraft for the warfighter for close air support or strategic attack," she further added.

Boeing has made significant progress in the RMP, having successfully completed the Critical Design Review of the radar program according to schedule. As a result, the company has commenced low-rate initial production of the new radar system, which will undergo operational test and evaluation. The modernization efforts are being carried out at Boeing facilities in Oklahoma City and San Antonio.

The upgrades under the RMP include the installation of a new wide-band radome on the nose of the B-52, providing enhanced protection and support for the radar system. Additionally, the aircraft will feature two high-definition, touchscreen, large area displays, improving the overall situational awareness for the crew. The display sensor system processors will facilitate seamless integration between the radar and other B-52 systems, ensuring efficient data sharing and processing. Furthermore, the modern active electronically scanned array radar will serve as a key component of the upgraded system ■

Bell to deliver Six Bell 407GXi helicopters to Ministry of Defense of Argentina

The newly acquired Bell 407GXi helicopters will be utilized by the Argentinean Air Force and Army for Search and Rescue Missions.

Bell Textron Canada Ltd., a subsidiary of Textron Inc., has announced the signing of a purchase agreement for six Bell 407GXi helicopters. The contract was executed between the Ministry of Defense of Argentina and the Canadian Commercial Corporation, representing a government-to-government transaction. The newly acquired helicopters will be utilized by the Argentinean Air Force and Army for Search and Rescue Missions.

The Bell 407GXi is a renowned and proven platform, particularly suited for high-altitude environments, making it an ideal choice for Argentina's Military Search and Rescue operations. These helicopters will be configured in a utility setup, specifically designed to address the challenges posed by Argentina's mountainous terrain.

John Ramos, the Managing Director for Latin America at Bell Textron Canada Ltd., said, "The Bell 407GXi is a proven platform in high-altitude environments and will be pivotal to Argentina's Military Search and Rescue operations. All six Bell 407GXis will be outfitted in a utility configuration critical to rescue missions in Argentina's mountainous terrain."

With a workforce of 1,400 highly skilled employees, Bell Textron Canada Ltd. has established itself as a leader in the industry since its establishment in 1986. The company focuses on innovation, customer experience, and providing superior service and support to customers worldwide. Bell Textron Canada Ltd. is responsible for the current commercial production line, manufacturing helicopters such as the Bell 505, Bell 407GXi, Bell 429, and SUBARU Bell 412EPX. With over 5,600 commercial helicopters built and more than 1,000 aircraft delivered to Canadian customers, the company has proven its expertise and commitment to the industry.

"This announcement is a testament to the long-standing partnership of

Bell and CCC to deliver Canadian-built helicopters to customers around the globe. The Argentinian MOD will be well-served by the unmatched reliability and performance of its new Bell 407GXi fleet, and our team is delighted to enable their search and rescue mission," said Steeve Lavoie, Bell Textron Canada ltd.

Bell has a strong track record in production and sustainment support, with over 1,600 Bell 407 helicopters operating worldwide. The fleet has collectively accumulated six million flight hours and is actively involved in flight training, military operations, and para-public missions. The Bell 407GXi is equipped with the advanced Garmin G1000H NXi Flight Deck, which enhances situational awareness and reduces pilot workload by providing easy-to-read information at a glance. The incorporation of new IFR (Instrument Flight Rules) capability ensures all-weather operations, while maintaining the helicopter's versatility and effectiveness in multi-mission scenarios.

The purchase of the Bell 407GXi helicopters by Argentina's Ministry of Defense signifies a significant milestone in the partnership between Bell Textron Canada Ltd., the Canadian Commercial Corporation, and the Argentinean military. The acquisition will enhance Argentina's search and rescue capabilities, allowing them to conduct missions efficiently and effectively in diverse and challenging environments ■

Theo Panagiotoulias appointed as the new CEO of Star Alliance

Theo Panagiotoulias will succeed Charlotta Wieland, who has served as Star Alliance's interim CEO since January 2023 while on secondment from SAS – Scandinavian Airlines.

Star Alliance, the world's largest global airline alliance, has announced that Theo Panagiotoulias has been selected as its next CEO. With over 25 years of experience in the airline and aviation industry, Panagiotoulias brings a wealth of international expertise to his new role. He joins Star Alliance from Hawaiian Airlines, where he served as Senior VP for Global Sales and Alliances since 2014. Prior to that, he held various positions at American Airlines and was VP and GM (Asia Pacific) at travel technology provider Sabre Corporation. Panagiotoulias' extensive background makes him well-equipped to address the challenges and opportunities faced by the industry.

Scott Kirby, CEO of United Airlines and Chairman of the Chief Executive Board, Star Alliance said, "On behalf of the board of Star Alliance, I would like to congratulate Theo for being named the next CEO of Star Alliance. Theo's international commercial and airline experience have given him a good understanding of the challenges and opportunities facing our industry today. I believe he is the right person to lead Star Alliance into the future. On behalf of Star Alliance and its member carriers, I would like to thank Charlotta for her service to Star Alliance as interim CEO, and welcome her back to her seat on the Alliance Management Board."

Expressing his enthusiasm for his new role, Panagiotoulias highlighted the significance of Star Alliance's global reach and seamless passenger experience. He acknowledged the alliance's role in connecting over 200 million customers annually through its 26 member airlines, operating more than 16,000 flights daily. Panagiotoulias sees his appointment as an opportunity to work closely with the member carriers and continue to innovate as the world's leading airline alliance.

"Star Alliance connects the world," said Theo Panagiotoulias, CEO, Star Alliance. "More than 200 million customers fly with its 26 member airlines each year, on more than 16,000 flights each day. The Alliance has also led the revolution to promote a more seamless passenger experience. I am honoured that I've been chosen to lead the Star Alliance team and work directly with our 26 member carriers, as we continue to innovate as the world's leading airline alliance," he further added.

Panagiotoulias will succeed Charlotta Wieland, who has served as Star Alliance's interim CEO since January 2023 while on secondment from SAS – Scandinavian Airlines. With Panagiotoulias assuming the CEO position, Wieland will return to SAS and rejoin Star Alliance's Alliance Management Board as the representative for SAS. Panagiotoulias' official appointment is expected to take effect in the coming months, pending administrative processes and clearances.

The announcement recognizes Star Alliance's commitment to delivering a seamless and high-quality travel experience across its member carriers. In 2022, the alliance was honored with the title of World's Best Airline Alliance by Skytrax. With a focus on smooth transfers across a vast global network, the alliance also provides rewards and recognition for frequent international travelers.

Celebrating its 25th anniversary as the longest-running international airline alliance in 2022, Star Alliance achieved several important milestones. These included the launch of the world's first airline alliance credit card in collaboration with HSBC Australia and the establishment of an intermodal travel model, expanding the alliance's network beyond air travel to other transport ecosystems such as rail networks ■

Ontic names Brian Sartain as new Chief Operating Officer

With this new role, Brian will be responsible for overseeing the day-to-day operational aspects of Ontic's global manufacturing footprint and driving operational excellence.

Ontic, a prominent licensor and manufacturer of complex engineered parts for the aerospace and defense industries, has recently announced the appointment of Brian Sartain as its Chief Operating Officer (COO). With this new role, Brian will be responsible for overseeing the day-to-day operational aspects of Ontic's global manufacturing footprint and driving operational excellence. Brian Sartain will assume his new role as COO on June 5, 2023.

Brian Sartain brings a wealth of experience to his new position, having served as the Senior Vice President of Repair and Engineering Services at AAR Corp. In this role, he was responsible for various business areas, including Maintenance Repair and Overhaul (MRO), Engineering Development, and Manufacturing, leading a team of over 3,500 employees. Throughout his distinguished career spanning over 35 years, Brian has held executive roles in diverse aspects of global business, demonstrating expertise in P&L management, operational excellence, strategy, product development, and joint venture management.

Gareth Hall, CEO, Ontic said, "We are delighted to welcome someone with Brian's experience to Ontic. Brian shares our growth ambitions and has a proven track record of delivering sustained operational excellence. His expertise will enable Ontic to continue fulfilling our mission of providing a world-class service to our licensors and aviation customers."

Brian himself is excited about joining Ontic and supporting the company's growth trajectory. He recognizes the tremendous potential and sustained growth of Ontic as a major driving force behind his decision to join the organization. Brian sees the opportunity to contribute to the company's success by driving performance and delivering the exceptional service demanded by Ontic's customers.

Brian Sartain's appointment further strengthens Ontic's leadership team and positions the company for continued growth and success in the aerospace and defense industries. Ontic continues to solidify its position as a key player in the global aerospace and defense sectors, providing essential engineered parts to support critical operations. With the addition of Brian Sartain as COO, Ontic is well-equipped to enhance operational efficiency and maintain its commitment to delivering world-class service to both licensors and aviation customers ■

International CALENDAR 2023

2023-2024

Date	Event	Venue
14-15 June 2023	Dubai Heli Conference 2023	Dubai
04 Sept 2023	Airport Innovation conference	Riyadh
13-14 Sept 2023	AERO-ENGINES EUROPE	Madrid, Spain
22-23 Sept 2023	Aerospace & Defence MRO KARNATAKA	Bengaluru
25-27 Sept 2023	Airspace Integration Congress	Madrid, Spain
26-27 Sept 2023	Helitech Expo	London
26-28 Sept 2023	World Aviation Festival	Portugal
26-28 Sept 2023	MRO ASIA-PACIFIC	Singapore
17-19 Oct 2023	NBAA- BACE	Las Vegas, NV
01-03 Nov 2023	ATCA Global Conference & Expo	Washington, DC, USA
13-17 Nov 2023	Dubai Airshow 2023	DWC, Dubai
14-15 Nov 2023	Aerospace Tech Week Americas	Atlanta, USA
06 - 08 Dec 2023	Air Expo India	Indira Gandhi Intl Airport-New Delhi
20-24 Feb 2024	Singapore Airshow	Changi Exb Centre,Singapore
17-18 April 2024	Aerospace Tech Week Europe	Munich, Germany
02-04 June 2024	IATA AGM & World Air Transport Summit	Dubai, UAE

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