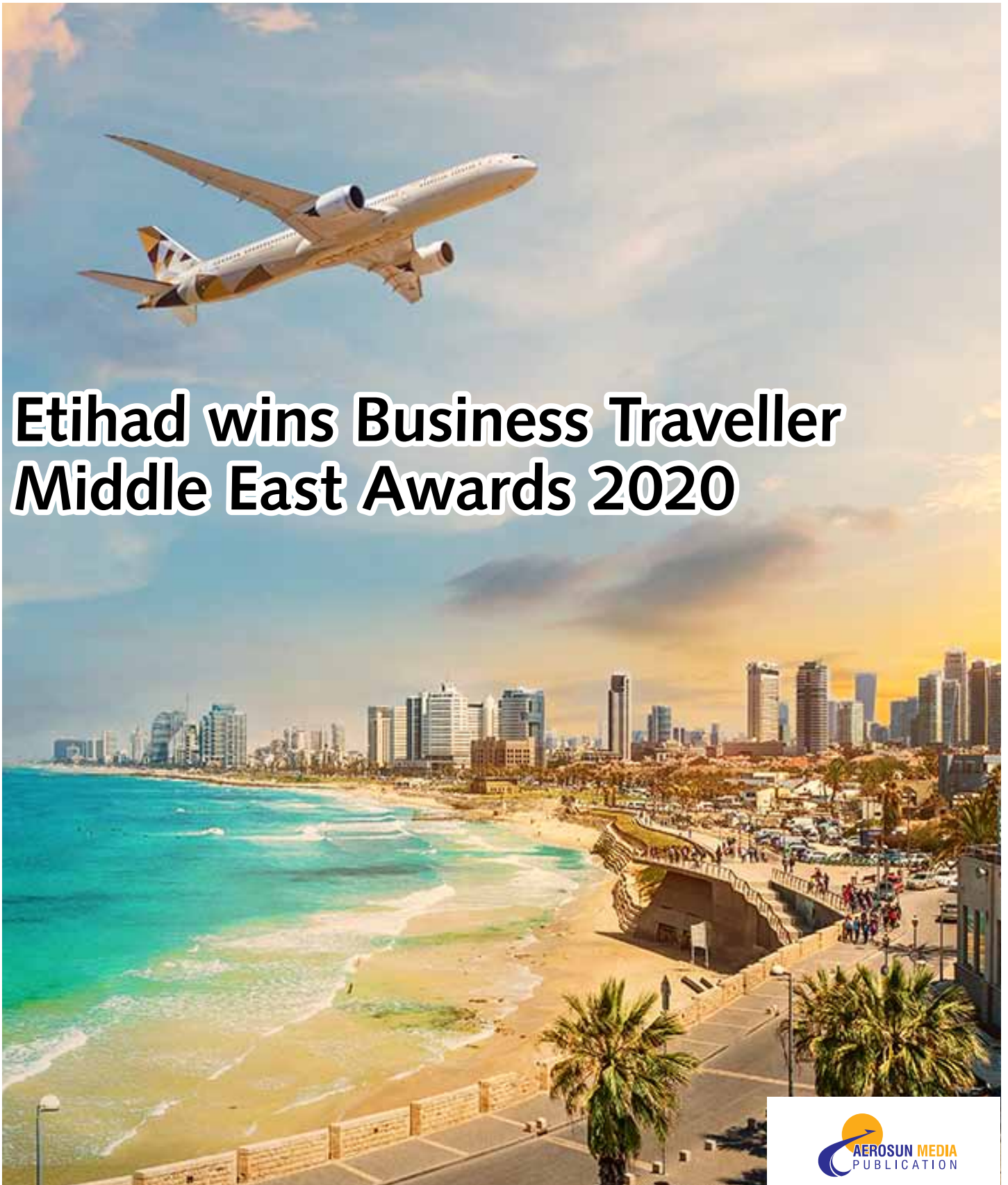


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Defence-industrial sector in Middle East ready for big action



Sunny Jerome
Managing Editor

The countries in the Middle East spend billions of US Dollars each year on defence, but the region is yet to develop a strong local defence manufacturing industry. According to data, Middle East countries imported as much as 99 % of their weapons and military supplies in 2006. However, since then, there has been a change in approach, with the aim of giving a boost to the defence manufacturing sector in the region, which would not only enhance their capabilities but also create more jobs for the local people.

In recent years, many Gulf nations, the UAE and Saudi Arabia in particular, have been seriously developing their own defence industries. In the UAE, the military regularly chooses to buy from domestic companies. Defence analysts have pointed out that this is a positive sign for investments in the country. Moreover, a robust defence industry would lead to economic diversification and strengthen the high-tech sector in the economy.

Meanwhile, rulers in the Middle East are also providing financing for the development of new weapons with foreign partners. Events such as International Defence Exhibition & Conference (IDEX) held in Abu Dhabi have displayed a preference for local contractors. Other landmark initiatives include the formation of a comprehensive defence and technology government-owned conglomerate EDGE by UAE in 2019 and Saudi Arabia inaugurating its own state-owned holding company, Saudi Arabian Military Industries (SAMI) in 2017. Saudi Arabia subsequently established the General Authority for Military Industries (GAMI) as a 'regulator, enabler, and licensor' of the nation's military industry and tasked with building a sustainable domestic defence sector. SAMI's goal is to become one of the top 25 military companies in the world. Saudi Arabia also wants half of its weapons to be sourced domestically by 2030, from about 2% in 2018. At the same time, UAE's target is to grow its domestic defence manufacturing from 10% in 2015 to 30% in 2030.

Another major event influencing the security scenario of the Middle East is the signing of a normalization agreement by UAE with Israel, which is already a major global player in the world defence market. A Bahrain-Israel peace deal followed.

All these developments indicate that the defence-industrial sector in the Middle East would be witnessing significant action in the coming days.

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Saab Delivers Second GlobalEye to UAE

Etihad wins Business Traveller Middle East Awards 2020



Etihad Airways, the national airline of the UAE, has been awarded 'Best Economy Class' and 'Best Frequent Flyer Programme' in Business Traveller Middle East Awards 2020.

Last year, Etihad transformed its Economy product and service by introducing enhancements to the dining experience and providing guests with greater control, choice and value by personalising their travel experiences. This accolade reinforces the airline's commitment to innovating Economy travel, in the same

way it has already done in establishing its award-winning Business, First and The Residence cabins.

The awards are also testament to Etihad Wellness, the airline's health and hygiene programme, which commits to providing travellers with peace of mind when flying during these unprecedented times. Specially trained Wellness Ambassadors, a first in the industry, offer reassurance to customers by sharing advice on travel wellbeing and details of the health and sanitisation measures that have been implemented

throughout their journey.

A year ago, Etihad Guest embarked on a

transformation journey to enhance its customer member experience, improving existing and introducing new benefits to deliver value in the air and on the ground. As a result of the pandemic, the programme has continued to evolve with the changing landscape. The Best Frequent Flyer Programme award cements the airline's efforts to recognise its members travelling or who are currently unable to travel by introducing added bonuses and flexibility, ensuring members Tier Status stays on track, plus new ways to earn Tier Miles on the ground with retail partners through their new mobile app. The programme has also helped members give back to the world with a recent campaign 'Your Special Guest'. Members were able to nominate people in their life who have gone above and beyond at this time for a chance to be sent a personalised gift.

The Business Traveller Middle East Awards 2020 was held virtually and results were based on reader votes. ■



Raytheon Technologies is positioned to speed innovation across domains



An armored fighting vehicle you can drive remotely. A mission computer that goes on anything. The eyes, ears and brains of a new generation of helicopters.

Those are among the topics that experts from Raytheon Technologies talked about at this year's virtual Association of the U.S. Army Annual Meeting & Exposition. The event marked the first time the company, formed in the April 2020 merger of Raytheon Company and United Technologies Corp., discussed and demonstrated the range and scope of what it produces for the Army – and what it plans to produce – both now and far into the future.

"With our larger size and scale, we're able to better leverage our billions in R&D investment across the company to more rapidly and innovatively develop technology differentiators that benefit customers like the Army," said Mark Russell, the company's chief technology officer. "We're in a position to immediately address the priorities of our defense customers faster and more efficiently than ever before."

The Optionally Manned Fighting Vehicle

It can do battle with drones, transport soldiers and take on tanks. It can see through smoke, rain snow and fog. The Lynx Infantry Fighting Vehicle will serve as the foundational design for Raytheon Technologies and American Rheinmetall Vehicles, contending for the Army's Optionally Manned Fighting Vehicle competition. The OMFV will replace the Army's aging fleet of Bradley vehicles.

"We are leveraging a design that was specifically optimized for the battlefield of the future," said Brad Barnard, director of OMFV at Raytheon Missiles & Defense.

Lower Tier Air and Missile Defense System

The Army's contract award for this missile-defense system was big news at last year's AUSA Annual Meeting. But this year the story is how far Raytheon Missiles & Defense has come in building it in such a short amount of time.

RMD has already delivered the first LTAMDS to the test site and has worked with the Army to give soldiers both an up-close look and a chance to provide vital early feedback.

"Soldier touchpoints" are among the many ways Raytheon Technologies' businesses incorporate user feedback into their work.

Common Open Secure Mission Computer

Mission computers make sense of what a vehicle's sensors are seeing and control the combat systems. But different platforms tend to have different computers. To get everyone operating on the same system, Raytheon Intelligence & Space has developed the Common Open Secure Mission Computer, abbreviated as COSMC and pronounced "cosmic."

The computer uses open architecture, making it easier and cheaper to maintain and update, and it's scalable and modular, meaning it can fit more or less anywhere. That adds up to an advantage we call "platform-agnostic" that allows different fighting forces to work with the same equipment.

"It's purposely designed and engineered to not be reliant on any physical instances of software or hardware," said John Stephens, RI&S product line manager for Secure Mission Processing. "It's scalable in size, it's scalable in performance, and it's scalable

in operating system and hardware construction. To really fit whatever that need is."

Future Vertical Lift

An important part of this Army initiative to replace aging helicopters is SWaP-C, or the optimization of size, weight, power and cost. And Raytheon Technologies' businesses are delivering on a number of fronts.

Collins Aerospace's lightweight armored pilot seats are crashworthy up to 50 Gs but offer a weight savings of about 30 percent; a new rescue hoist called Pegasus will have better aircraft integration to reduce drag.

A system called MOSARC integrates avionics using open-systems architecture, another major element of the Future Vertical Lift initiative. Open-systems architecture allows MOSARC to work on multiple types of aircraft, and it also makes it much easier to update the system with third-party modifications. A new vehicle management computer called Perigon also uses open-systems architecture to host multiple applications and reduce the number of electronic boxes on

Raytheon Missiles & Defense's StormBreaker® smart weapon approved for fielding on the F-15 Eagle



Raytheon Missiles & Defense, a Raytheon Technologies business, announced the StormBreaker® smart weapon has been approved for use on the F-15E by the U.S. Air Force's Air Combat Command. The fielding decision means that

F-15E squadrons can now be equipped with StormBreaker and deployed for missions.

"StormBreaker delivers an unprecedented capability to pilots in the field," said Paul Ferraro, vice president of Raytheon Missiles & Defense's Air Power business.

"The weapon gives airmen a significant advantage – the ability to strike maritime or land-based maneuvering targets at range in adverse weather."

StormBreaker features an innovative multimode seeker that guides the weapon by imaging infrared, millimeter wave radar, and semi-active laser in addition to or with GPS and inertial navigation system guidance.

"The weapon has proven itself in many complex test scenarios, against a variety of targets in extreme environmental conditions, and is now ready to fly," said Cristy Stagg, StormBreaker

program director at Raytheon Missiles & Defense. "With its multimode seeker and datalink, StormBreaker will make adverse weather irrelevant."

StormBreaker's small size lets fewer aircraft address the same number of targets compared to larger weapons that require multiple jets. It can also fly more than 40 miles to strike mobile targets, reducing the amount of time that aircrews spend in harm's way.

The smart weapon's initial fielding on the F/A-18E/F Super Hornet for the U.S. Navy later this year and integration for fielding on the F-35 Joint Strike Fighter are next for the program. ■

board.

Collins' Interiors business is contributing as well, with ergonomically advanced pilot seats, interior and exterior lighting to reduce drag, weight and power consumption, and customizable ice protection systems.

"Our customers can then redeploy those benefits in terms of weight savings into fuel for additional range, or additional payloads," said Phil Jasper, who leads Collins' Mission Systems business.

Pratt & Whitney is developing auxiliary and supplemental power technologies that will provide the power generation capacity the Army needs, including an optimized and integrated Power & Thermal Management System that will use onboard energy sources with better efficiency and reliability, while reducing both weight and long-term cost.

And Raytheon Intelligence & Space is producing a host of technologies for Future

Vertical Lift platforms including sensors, radars, artificial intelligence and machine learning systems, and electronic warfare tools.

DejaVM

The last thing you want to do with a mission-critical system is break it. But what do you do if you're trying to test its cyber resiliency?

Simple: you make a digital twin.

That's the thinking behind DejaVM, a new product from Raytheon Intelligence & Space that can emulate anything from a desktop computer to a weapon system. The idea is that red teams – cyber specialists who break into things to learn how to better defend them – can do their worst to the duplicate and apply the lessons learned to the real thing.

"The Army may come out with a new command and control system for air defense. DejaVM provides a digital version of these systems to

enable software and security testing without requiring access to physical hardware," said J.D. Johnson, a retired U.S. Army lieutenant general who now works as vice president of U.S. government integrated solutions for Raytheon Intelligence & Space. "Our approach helps find critical cyber vulnerabilities, and reduces the time and effort required to triage and mitigate those vulnerabilities. With its ability to rewind and replay, testers no longer have to struggle to determine what caused a problem – they can simply replay the tape."

Data analysis

Good data makes for good decisions. But when there's too much data, there's a risk of overlooking important insights.

Every minute of every day, sensors in space and across the landscape are providing the Army with information they need to plan missions

– exquisitely detailed data on weather, topography, the location of allies and adversaries, and so on. While that's all necessary, it can also cause a problem: cognitive overload. It's a little like asking a friend how their day was, then having them recite everything they did starting from the moment they woke up.

One example: Cognitive Aids to Sensor Processing, Exploitation and Response, or CASPER, software RI&S is developing to lighten the operator's workload and use automation to help make decisions faster. It enables operators to provide verbal cues to aid their decision making such as asking, "scan for fast boats," or "prioritize the surrounding threats."

"In today's data-driven battlespace, speed is the name of the game," Johnson said. "The side that can make the right decisions fastest has the advantage." ■

Airbus delivers A320 Family MSN10,000 to Middle East Airlines



Middle East Airlines (MEA) has taken delivery of Airbus' A320 Family aircraft with manufacturer serial number 10,000. MSN10,000 is the third A321neo to join the all Airbus MEA fleet, taking the fleet size to 18 aircraft. MEA received its first A321neo aircraft earlier in 2020 and will be taking another six A321neos over the coming months.

The handover of the aircraft took place in Toulouse in the presence of Mohamad El-Hout, Chairman and Director General of MEA.

"We are honoured to receive the state of the art A321neo with its distinctive serial number 10,000 coinciding with the 75th anniversary of Middle East Airlines and specially after receiving MSN5,000 back in 2012. Since we first acquired

an A320 Family aircraft in 2003, we have not only benefited from the outstanding operational efficiency of the aircraft but were also the first airline to introduce the wide-body cabin product on a single-aisle aircraft which has become a trend in the airline industry afterwards," said MEA Chairman and Director General, Mohamad El Hout. "Unfortunately, due to the current situation in Lebanon, this time we will not be able to celebrate the delivery of the MSN10,000 in Beirut, as we did with the MSN5,000, but I am sure that in these challenging circumstances, it is a ray of light, hope and motivation to surpass our nation's difficulties."

"Airbus is proud to continue building its long-standing partnership with Middle East

Airlines which already operates one of the most modern Airbus fleets in the world. As an all Airbus operator, MEA benefits from the Airbus' unique fleet commonality between aircraft families and is now adding the third highly fuel-efficient A321neo to step up the game. I admire the agility and the resilience of this company in this complex environment," said Christian Scherer, Airbus Chief Commercial Officer. "Delivering MSN10,000 is a milestone that demonstrates the success of the A320 Family and we thank our customers globally for their confidence in our products."

MEA took on MSN5,000 in 2012, after 23 years of Airbus A320 Family production. The next 5,000 took just another eight years to mark this significant MSN10,000

milestone – again with MEA. This achievement is a testimony of the industrial advancement and capabilities by Airbus and the popularity of the latest, even more efficient NEO version of the aircraft.

The airline's A321neo is powered by Pratt & Whitney's PurePower PW1100G-JM geared turbofan engines and is configured in a comfortable two-class layout with 28 seats in Business and 132 seats in Economy Class. It is also equipped with the latest generation in-flight entertainment system and high-speed connectivity. Incorporating the latest engines, aerodynamic advances, and cabin innovations, the A321neo offers a reduction in fuel consumption of 20% as well as a 50% noise reduction.



SpearUAV expands its Ninox Family, Unveiling the Ninox 40 Handheld



SpearUAV – an innovative company that develops and supplies unique UAS solutions for defense and HLS applications – is unveiling its handheld version of the Ninox 40 that was unveiled just two months ago. This revolutionary encapsulated drone system offers instant launch and provides immediate intelligence capabilities to any tactical unit, even if it is not equipped with a 40 mm grenade launcher or any other special equipment.

With its unique launching system, the Ninox40 Handheld can now provide advanced capabilities to various law enforcement agencies, such as police – for use in public safety and law & order applications, prison services – for management of any disorder or prison break

attempt, border guards – for situational awareness and securing sensitive infrastructure, and more.

Like the Ninox 40 micro-tactical drone system, the Ninox 40 Handheld requires no deployment. The system comprises an encapsulated drone and control unit; when launched at high speed, the drone immediately unfolds and stabilizes in the air, with no operator intervention required.

Specifically designed for single-user operation and weighing under 250 g – within regulatory limitations – it is lightweight enough to be carried in the soldier's vest during combat.

Advantages include:

Mission flexibility – Ninox 40 Handheld systems can be carried by any number of users

in a unit, according to mission requirements, delivering full ISTAR capability without being dependent on any other weapon or special equipment.

Safe and intuitive – the Ninox 40 Handheld is easy to use without any special training.

Ready for immediate use – the fully-ruggedized launch capsule can be carried in a vest or in a vehicle, or stored as is, remaining ready for immediate launch on the field during a mission, without any specific maintenance or preparations being required.

The Ninox 40 Handheld has a flight capacity of up to 40 minutes, extensive ISTAR capabilities, day and night camera for enhanced situational awareness, automatic tracking, and can be launched on the move and from under cover.

The new Ninox 40 Handheld joins the Ninox family of unique capsule drones, all of which feature breakthrough technology developed in-house at SpearUAV, with the aim of changing the battlefield and giving ground forces advanced and immediate capabilities," says Gadi Kuperman, Founder and CEO of SpearUAV. "This is the first drone in the world to be manually launched from a capsule, giving both combat soldiers HLS forces and law enforcement personnel situational awareness in a matter of seconds, for any mission in the field. We continue to develop the system to meet the specific needs of our customers, and new versions are already undergoing field testing."

UK MoD Awards New Military Bridging Contract to WFEL



WFEL, world leading supplier of rapidly deployable military bridges, has received a new contract from the UK's Ministry of Defence for the supply of 17 Sets of its MGB Medium Girder Bridges. This follows a review of the MoD's modular gap crossing capabilities, which aimed to draw together existing in-service capabilities into a single coherent capability.

These 17 new MGB bridging sets can be configured in several different ways to provide flexibility to the Commander on the ground. Configurations include concurrent deployment of both a 31-metre Double-Storey and a 5-bay Single-Storey version. The bridging systems will be deployed by the Royal Engineers and are available for use in both Military Operations and Emergency Disaster Relief scenarios.

The contract, worth more than £46 million, will not only provide continuing employment for 50 direct WFEL production-related personnel but is likely to create an additional 15 to 20 skilled and production support jobs.

It's also estimated that it will secure a further 100 jobs in the supply chain in the North of England and Scotland.

With over 500 systems already supplied to militaries around the world, the MGB is a modular military bridging system, providing interoperability with any other MGB of any age and is already adopted by many NATO members. MGBs were deployed jointly by U.S. Marines and U.S. Navy Seabees in Norway during Exercise Trident Juncture 2018, in one of the largest NATO exercises of recent times.

UK Minister for Defence

Procurement, Jeremy Quin MP, said: "This £46 million contract of new military bridges not only secures jobs within Stockport, but also supports a significant number of jobs in the wider UK supply chain."

"These bridges provide our Armed Forces with vital capabilities in both Military and Disaster Relief operations."

Maj Tom Exelby, of the Royal Engineers, said: "The MGB will provide light-weight medium gap capability to Very High Readiness forces and will form a significant element of the STRIKE Brigade's manoeuvre support capability. MGB was chosen for its versatility and deployability to meet the challenges of the future integrated operating concept."

The MGB contract will be fulfilled by Dec 2025, with the first two bridging sets delivered to the UK MoD by Dec 2021.

In 2018, the Australian

Defence Force also took delivery of several new MGBs, under its Land 155 programme, replacing those previously in service for over 30 years. The ADF chose double-storey, link-reinforced Medium Girder Bridge variants, spanning up to 49 meters, supplemented by additional portable Pier and Span equipment, allowing bridges of up to 76 meters to be constructed. MGB Walkways were also supplied, ensuring the bridges could be used in any civil emergency or disaster relief situation.

Land 155 also saw delivery to the ADF of WFEL's 46-metre 120 MLC DSB Dry Support Bridges, which can be launched by just 8 personnel within 90 minutes. The DSB allows a level of inter-operability with an ever-growing user base, proven in the field as temporary infrastructure in Iraq and Afghanistan.

MBDA launches VL MICA NG air defence system



The VL MICA NG system is based on the integration into the existing VL MICA system of the MICA NG (New Generation) anti-air missile, which began development in 2018 primarily to equip France's Rafale combat aircraft. The VL MICA system family – now adopted, in its naval or land-based versions, by 15 armed forces around the world – will consequently benefit from enhanced potential to counter future threats.

About the VL MICA NG system, MBDA CEO Eric Béranger said; "After two years of development on the New Generation MICA missile, we have acquired a deep understanding of the performance of this brand new air-to-air missile which allows us, in full confidence, to market its integration into VL MICA ground-to-air or surface-to-air defence systems. The total compatibility between the two generations of missile will allow armed forces to combine them with their existing systems, thus maximizing their return on investments."

Thanks to the technological innovations it incorporates, the new VL MICA NG system offers improved capabilities to handle atypical targets (UAVs, small aircraft) as well as future threats, characterised by increasingly low observable infrared and radio frequency signatures. Additionally, it will be able to intercept at longer distances the 'conventional' targets (aircraft, helicopters, cruise missiles and anti-ship missiles) already addressed by the current VL MICA system.

The dimensions of the MICA NG munition remain unchanged, allowing it to be integrated into existing VL MICA launchers.

The existing missile data link mechanisms are compatible with the increased kinematic performance of the missiles, enabling current VL MICA systems to be upgraded to VL MICA NG standard by simple software updates.

About the MICA NG missile

Based on an entirely new design, the MICA NG missile inherits the external dimensions and unique concept that has made the MICA anti-air missile such a success for a quarter of a century. This concept means MICA features either an infrared or a radio frequency seeker on the same common missile body, allowing the operator, at the moment of firing, to select the best option to respond to the tactics adopted by the adversary.

On the MICA NG, a new infrared seeker based on a matrix sensor will provide increased sensitivity, while a new radio frequency seeker with an active electronically scanned antenna (AESA) will allow for smart detection strategies. The lower volume of electronic components will enable the MICA NG to carry a larger load of propellant, significantly extending its range, and the new dual-pulse rocket motor will provide additional energy to the missile at the end of its flight, improving its manoeuvrability and its ability to intercept targets at long range. In surface-to-air mode, the MICA NG will be able to intercept targets over 40 km away. Finally, maintenance and ownership costs will be significantly reduced thanks to internal sensors that will monitor the status of the munition throughout its life cycle.

The MICA NG missile will be available in series production from 2026.

Thales Launches Airmaster C Ultra-Compact Airborne Surveillance Radar



The Airmaster C is the latest airborne surveillance radar from Thales and has a 30% lower SWaP (size, weight and power) than the other radars in its class.

The Airmaster C covers the full spectrum of land, air and maritime surveillance missions and offers state-of-the-art target detection capabilities; it is the subject of preliminary integration studies on joint light helicopter (Guépard) which are in progress.

Users benefit from innovative technologies, with a unique 2D AESA antenna based on SiGe (silicon-germanium) technology, and cognitive and predictive maintenance capabilities drawing on Thales's and the French Armament General Directorate's investments in artificial intelligence.

Threat detection, identification and surveillance missions depend on a force's ability to operate in any type of environment and all weather conditions. Drawing on its experience with the successful Master series of radars, Thales has developed a new, ultra-compact surveillance radar with enhanced target detection capabilities for fixed-wing aircraft, helicopters and UAVs. With its low integration and operating costs

and high availability and performance, the Airmaster C sets a new standard for airborne radars.

The nature of armed confrontation is constantly evolving. From the intrastate conflicts of the post-Cold War period to the asymmetric threats of the early 21st century and, more recently, the resurgence of rivalries between major powers, armed forces around the world must constantly adapt as they face different types of adversaries in a diverse array of environments: open ocean, coastal areas, remote deserts and urban spaces.

Responding to these rapid changes, Thales has developed the Airmaster C, a new surveillance radar with an ultra-compact, programmable 2D active antenna based on SiGe (silicon-germanium) technology. SiGe is much more energy efficient than other technologies used for AESA radars, and allows the radar to self-cool. Weighing less than 20 kilograms and housed in a single unit design, the radar has a 30% lower SWaP (size, weight and power) than the other radars in this class.

In addition to this breakthrough SiGe technology, other innovations are deployed. Multi-polarisation (a capability displayed by many cameras) will allow

the radar to automatically select the optimal settings to maximise detection performance on each mission. The radar also offers a simultaneous short-range and long-range detection capability, similar to the human eye, for instantaneous surveillance. With its 2D navigation and weather modes, the Airmaster C will also provide valuable navigation support in all types of environments and weather conditions.

The Airmaster C is a smart software-defined radar designed to reduce aircrew workload. With its autonomous sensors, self-learning functionality and the ability to analyse and classify huge volumes of data, the radar can automatically adapt to different uses, terrains and environments. The Airmaster C builds on the innovative design and proven success of the Master series.

Notified by the French Armament General Directorate (DGA), preparatory studies are being carried out by Thales in collaboration with Airbus Helicopters for the integration of the Airmaster C on board the Guépard helicopter. This is the future light joint army helicopter, which will have to carry out a wide variety of missions for the three French armies.

India – Sri Lanka Navy Maritime Exercise SLINEX-20 off Trincomalee



capabilities of our indigenously constructed naval ships and aircraft. Surface and anti-air exercises including weapon firing, seamanship evolutions, manoeuvres and cross deck flying operations are planned during the exercise, which will further enhance the high degree of interoperability already established between the two friendly navies.

SLINEX series of exercise exemplifies the deep engagement between India and Sri Lanka which has strengthened mutual cooperation in the maritime domain. Interaction between the SLN and IN has also grown significantly in recent years, in consonance with India's policy of 'Neighbourhood First' and Hon'ble PM's vision of 'Security and Growth for all in the Region (SAGAR)'.

Synergy developed during SLINEX exercises resulted in seamless coordination of joint SLN – IN efforts in September 2020 to render assistance to MT New Diamond, a Very Large Crude Carrier (VLCC), which had caught fire off the East Coast of Sri Lanka. The exercise is being conducted in a non-contact 'at-sea-only' format in the backdrop of COVID-19 pandemic.

The Eighth Edition of annual Indian Navy (IN) – Sri Lanka Navy (SLN) bilateral maritime exercise SLINEX-20 will be held off Trincomalee, Sri Lanka from 19 to 21 October 2020. The Sri Lanka Navy will be represented by SLN Ships Sayura (Offshore Patrol Vessel) and Gajabahu (Training Ship) led by Rear Admiral Bandara Jayathilaka, the Flag Officer Commanding Naval Fleet, Sri Lanka Navy. Indigenously built ASW corvettes Kamorta and Kiltan under the command of Rear Admiral Sanjay Vatsayan, Flag Officer Commanding

Eastern Fleet, will represent the Indian Navy. In addition, Indian Navy Advanced Light Helicopter (ALH) and Chetak helicopter embarked onboard IN ships, and Dornier Maritime Patrol Aircraft will also be participating. The previous edition of SLINEX was conducted off Visakhapatnam in September 2019.

SLINEX-20 aims to enhance interoperability, improve mutual understanding and exchange best practices and procedures for multi-faceted maritime operations between both navies. In addition, the exercise will also showcase

GA-ASI SeaGuardian Takes Flight



STANAG 4671 (NATO Airworthiness type-certification standard for UAS). This feature, along with its operationally proven collision-avoidance radar, enables flexible operations in civil (including ICAO) airspace.

The aircraft onboard sensors included the GA-ASI Lynx® Synthetic Aperture Radar (SAR), a Raytheon Intelligence & Space SeaVue Expanded Mission Capability (XMC) radar, a Raytheon Intelligence & Space Multi-Spectral Targeting System, a Leonardo Electronic Support Measure (ESM)/Electronic Intelligence (ELINT) SAGE 750, a Shine Micro Automatic Identification System (AIS), an Ultra sonobuoy receiver and a General Dynamics Mission Systems-Canada sonobuoy processor.

General Atomics Aeronautical Systems, Inc. (GA-ASI) concluded a set of maritime test flights over the sea-lanes off the coast of Southern California on September 11th, using the MQ-9B SeaGuardian® Remotely Piloted Aircraft System (RPAS). This was the first MQ-9B configured for surveillance operations over open-water, and served to demonstrate MQ-9B capabilities in the maritime environment.

"The SeaGuardian's debut demonstrated

persistent situational awareness in the maritime domain for our customers," said Linden Blue, CEO, GA-ASI. SeaGuardian is an MQ-9B SkyGuardian configured for maritime ISR mission.

The Southern California test flight demonstrated how SeaGuardian can be used for a variety of maritime missions, including surface search, subsurface search, littoral surveillance, anti-piracy and search and rescue. MQ-9B is all-weather capable, and compliant with

Thales launches world's first friend-foe identification system for the French Navy



Thales launches the TSA6000, the first IFF interrogator to use flat fixed-array active antenna technology. This new solution, unique in the world, provides 360° coverage around the vessel, with no trade-off in range capabilities, and an unprecedented and extremely fast identification capability.

Naval forces today need to be able to rely on new technology to make the best decisions when it matters most. Thales helps them conduct their missions more safely at every critical moment, building on its air surveillance expertise and in-depth knowledge of operational contexts to develop high-value end-to-end IFF solutions.

Based on a revolutionary all-digital flat fixed-array technology, the TSA6000 IFF identification system provides a smart 360° electronic scanning (or e-scan) capability enabling extremely fast identification of new types of threats.

The four-panel antenna design allows full 360° coverage, overcoming the problem of signal masking caused by a ship's topside infrastructure, especially if it has multiple masts.

Smaller and lighter, the TSA6000 is much easier for systems integrators to position and install on a vessel compared to IFF systems with rotating array antennas or fixed cylindrical arrays.

The TSA6000's panels are

independent from the radar system for even greater flexibility of installation and maintenance. Its modular, scalable all-digital architecture also simplifies support operations significantly: each panel comprises multiple modules for built-in redundancy and to help ensure the system is permanently available. In addition, the system has no mechanical or rotating parts, considerably increasing reliability, and reducing time to repair.

The TSA6000 is compliant with Mode 5, the new NATO secure identification standard. With this new product, Thales offers an ultra-high-performance identification capability with guaranteed

interoperability between NATO and allied forces for the decades ahead.

The TSA6000 will equip the French Navy's future FDI-class frigates from 2021 alongside the Sea Fire radar from Thales, which also has a flat-panel array. The radar / IFF combination will offer a near-instantaneous detection and identification capability against high-velocity threats.

As a global market leader in IFF identification, Thales provides a complete range of IFF solutions to meet the current and future needs of the armed forces. To date, over 20,000 IFF devices from Thales have been installed on 100 different types of land, air and naval platforms in 70 countries.

Lufthansa named 'Best European Airline Serving the Middle East' at Business Traveller Awards



Highlighting its success in sustaining service excellence in the region, Lufthansa has been named 'Best European Airline Serving the Middle East' at the prestigious Business Traveller Middle East Awards 2020 during a virtual ceremony held on 20th October 2020.

This award recognizes Lufthansa's

ongoing commitment to providing unrivaled offers and services to its corporate customers traveling to and from the Middle East, before and during the pandemic.

Commenting on this award, Heinrich Lange, Senior Director Sales, Gulf, Afghanistan and Pakistan, Lufthansa Group, said: "We are pleased to have

received this prestigious award, even more during this challenging period for the global aviation industry. Therefore, this recognition comes as a welcome encouragement for us to continue moving forward through the recovery phase. We remain committed in our efforts to continue serving the needs of business travelers in the region and being as Lufthansa Group the airlines of choice for flights to Europe and beyond, putting high priority on our safety, convenience and comfort."

Now in its ninth year, Business Traveller Middle East Awards is hosted by the region's leading travel and hospitality magazine, Business Traveller. Voted for by the magazine's readers, the awards aim to recognize and celebrate the achievements of the region's best companies in the travel and hospitality sectors over the last 12 months.



Etihad makes history by landing in Tel Aviv



Etihad Airways, the national airline of the UAE, will become the first GCC carrier to operate a commercial passenger flight to and from Israel, to bring Israel's top travel and tourism leaders to the UAE.

The historic flight, flown in partnership with the Maman Group, departed to Tel Aviv on 19 October, operated by an Etihad Boeing 787 Dreamliner aircraft for the three-and-a-half-hour journey from Israel to the UAE. The return journey to Abu Dhabi was on 21 October.

As a travel trade mission, the

flight took a group of tourism industry leaders, key corporate decision makers, travel agents, and cargo agents, along with media to experience Abu Dhabi and the wider UAE, at the invitation of Etihad Airways and representatives of Abu Dhabi's tourism industry.

This is the latest development in a growing cooperation between the two nations following the establishment of diplomatic ties, and the signing of the Abraham Accords between the UAE and Israel in Washington D.C. on 15 September. It also follows

Israeli national airline El Al's first symbolic commercial flight between Tel Aviv and Abu Dhabi on 31 August.

His Excellency Mohamed Mubarak Fadhel Al Mazrouei, Chairman, Etihad Aviation Group, said: "Today's flight is a historic opportunity for the development of strong partnerships here in the UAE, and in Israel, and Etihad as the national airline, is delighted to be leading the way. We are just starting to explore the long-term potential of these newly forged relationships, which will be sure to greatly benefit the economies of both nations, particularly in the areas of trade and tourism, and ultimately the people who call this diverse and wonderful region home."

Coinciding with the first commercial flight and in

celebration of the recent peace accords between the UAE and Israel, Etihad has become the first non-Israeli airline in the Middle East to launch a dedicated website for the Israeli market in Hebrew. Also available in English, the Israeli version of the airline's official website contains digital content including extensive information on Etihad's operations, product, services, and network. The site also includes an Abu Dhabi destination guide. The site can be viewed in Hebrew at www.etihad.com/he-il and in English at www.etihad.com/en-il.

As the UAE's national carrier, Etihad Airways is one of the world's leading airlines, acclaimed for its unparalleled service, industry leading cabins, and genuine Arabian hospitality.



All Nippon Airways Signs De Havilland Component Solutions Agreement



De Havilland Aircraft of Canada Limited ("De Havilland Canada") has signed a five-year De Havilland Component Solutions ("DCS") agreement with All Nippon Airways ("ANA") to support the operation of ANA's fleet of 24 Dash 8-400 aircraft. Under the agreement, De Havilland Canada will manage component maintenance, repair and overhaul (MRO) services for the fleet of aircraft. The DCS program will also provide access to a strategically located exchange pool, and an on-site inventory based at the airline's hub in Tokyo, Japan.

"We welcome the support that De Havilland Canada will be providing through the DCS program and we look forward to continuing our long-term relationship to enhance our Dash 8-400 aircraft operations," said Kenshi Hamada, Vice President & General Manager, Materials Management, ANA. "We

anticipate that the program will help us manage the life cycle costs of our fleet and enhance the in-service performance of our Dash 8-400 aircraft to the benefit of our passengers."

"We are delighted to welcome All Nippon Airways, a long-time operator of Dash 8 Series aircraft to the De Havilland Component Solutions program," said Amod Kelkar, Vice President, Customer Services and Support, De Havilland Canada. "Our Component Solutions program is highly adaptable to meet our customers' varied business models and we are confident that ANA, who have received our Airline Reliability Awards on 12 occasions since the Awards were introduced in 2007, will be able to further enhance their operations and benefit from the cost predictability and superior parts availability that the DCS program provides.

"Our customers continue to report that the cost-per-

flight-hour contracts and reduced, up-front capital expenses available under the DCS program, along with the support of our technical teams, expertise in warranty administration, planning and supplier management are all helping their operations and allowing them to focus on other key business activities," added Mr. Kelkar.

About the De Havilland Component Solutions (DCS) Program

The DCS program ensures cost-effective repair solutions and global accessibility to over a thousand different aircraft components positioned at strategically located distribution centers. The program can be tailored to accommodate each customer's requirements and environment including the availability of on-site component leases at customers' preferred bases and is designed to meet the growing demand for

customized repair solutions. More than 120 Dash 8 Series aircraft are enrolled in the program.

About De Havilland Aircraft of Canada Limited

With its acquisition of the Dash 8 aircraft program, Longview Aviation Capital has proudly relaunched De Havilland Canada, one of Canada's most iconic brands. De Havilland Canada's portfolio includes support to the worldwide fleet of Dash 8-100/200/300/400 aircraft, as well as production and sales of the Dash 8-400 aircraft. With its low carbon footprint and operating costs, industry-leading passenger experience and jet-like performance, the Dash 8-400 aircraft, which seats up to 90 passengers, is the environmentally responsible choice for operators seeking optimal performance on regional routes.

FL Technics Signs Support Agreement with Wizz Air Abu Dhabi



FL Technics, a global provider of integrated aircraft maintenance, repair and overhaul services, and part of Avia Solutions Group, has signed a long-term contract to support international low-cost carrier Wizz Air Abu Dhabi with complete Continuing Airworthiness Management (CAM) services.

FL Technics Engineering team is proud and happy to start a new chapter of collaboration between Wizz Air and FL Technics. There have been a few years since both engineering teams worked closely together on different modifications. These

initial projects and start of cooperation helped us to create a strong background that extended the partnership into CAM services.

"FL Technics is extremely glad to become a trusted partner of Wizz Air Abu Dhabi with such sensitive and important function as continuing airworthiness management. We are excited to share our solid experience in CAM field and strongly believe that this cooperation will positively support the successful development and growth of new Wizz Air subsidiaries, such as Wizz Air Abu Dhabi. Moreover, we are ready and passionate to extend our cooperation within

CAM field in other AOCs of Wizz Air", says Liudas Jurkonis, the Head of Engineering, Design and Technical Trainings of FL Technics.

FL Technics will perform continuous airworthiness management for Airbus A320 NEO and CEO family aircraft, and will provide full CAM services in accordance with the requirements of the General Civil Aviation Authority (GCAA) ensuring a proper control in AMOS system. The scope of work is not limited to full CAM services. It will also cover other engineering services, which Wizz Air requires on a regular and ad hoc basis.

"Wizz Air is very dynamic and progressive organisation – we expand and move fast. Therefore, we need a trustful and flexible partner to meet not only our high standards for continuous support, but also to meet our needs in this demanding and aggressive market. Being professional in your field is a necessity of any business, and that is why we have chosen to work with FL Technics to start our new subsidiary – Wizz Air Abu Dhabi," says Ljubomir Jesic, Senior Technical Services Manager of Wizz Air Abu Dhabi.

Boeing to Consolidate 787 Production in South Carolina in 2021

As the airline industry continues to address the impact of COVID-19, The Boeing Company said it will consolidate production of 787 jets at its facility in North Charleston, S.C., starting in mid-2021, according to the company's best estimate. The decision comes as the company is strategically taking action to preserve liquidity and reposition certain lines of business in the current global environment to enhance efficiency and improve performance for the long-term.

While Boeing's versatile 787 family has outperformed other widebody airplanes during the challenging market downturn, its production system has been adjusted to accommodate the current difficult market environment while positioning the 787 family to ramp up production as air travel

increases.

"The Boeing 787 is the tremendous success it is today thanks to our great teammates in Everett. They helped give birth to an airplane that changed how airlines and passengers want to fly. As our customers manage through the unprecedented global pandemic, to ensure the long-term success of the 787 program, we are consolidating 787 production in South Carolina," said Stan Deal, president and chief executive officer of Boeing Commercial Airplanes.

"Our team in Puget Sound will continue to focus on efficiently building our 737, 747, 767 and 777 airplane families, and both sites will drive Boeing initiatives to further enhance safety, quality, and operational excellence."

The company began assembling 787-8 and 787-9

airplanes at its Everett site in 2007, and brought the North Charleston facility on line as a second final assembly line in 2010. However, only the North Charleston site is set up to build the larger 787-10 model. Production of the smaller 787 models will continue in Everett until the program transitions to the previously-announced production rate of six airplanes a month in 2021.

In July, Boeing announced an in-depth study into the feasibility of producing 787s at a single location. The review examined the impacts and benefits to Boeing customers, suppliers, employees and the overall health of the production system. The 787 study is part of an enterprise review underway to reassess all aspects of Boeing's facility footprint, organizational structure, portfolio and investment mix, and supply

chain health and stability.

This analysis confirmed the feasibility and efficiency gains created by consolidation, which enables the company to accelerate improvements and target investments to better support customers.

"We recognize that production decisions can impact our teammates, industry and our community partners," said Deal. "We extensively evaluated every aspect of the program and engaged with our stakeholders on how we can best partner moving forward. These efforts will further refine 787 production and enhance the airplane's value proposition."

Boeing said it is assessing potential impacts to employment in Everett and North Charleston and will communicate any changes directly to its employees.



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EASA approves increased take-off weight variant of the A330-900



Airbus has achieved certification from the European Union Aviation Safety Agency (EASA) for its latest A330neo product enhancement enabling longer range: the 251 metric tonne Maximum-Take-Off Weight (MTOW) variant of the A330-900. With more range and even better economics, the new variant now offers a significant 650-nautical mile boost in range – or six tonnes more payload – when compared with the A330-900's current 242-tonne version.

This increase in range responds to evolving market needs, enabling airlines to benefit from the unique economics of the A330neo for even longer missions – flying efficiently on routes

from 20mn to over 17 hours. It also means that now the A330neo Family offers airlines even more flexibility with a wide range of certified MTOW options, ranging from 200 to 251 tonnes. Corsair will be the first airline to operate this most capable A330neo. With this new A330-900 offering, operators will have the necessary range and capacity to capitalize on longer routes while rationalising their fleets.

François Kubica, A330 Chief Engineer says: "Airbus is always supporting its customers to find solutions by advancing our products. With the new 251 tonne weight variant the A330neo is more flexible than ever to meet their current and future requirements."

Overall, the new MTOW option makes the A330-

900 the perfect fit for longer trans-Pacific or Asia-Europe routes. The -900 is the longer-fuselage A330neo version, seating 260-300 passengers in a typical three-class cabin configuration. Certification at the new 251 tonne weight for the shorter-fuselage A330-800 – which accommodates 220-260 passengers in a three-class configuration – will take place next year to enable airlines to open up even longer range transpacific routes while delivering the lowest seat-mile cost in its category.

To achieve the 251t capability, Airbus has retained 99% spares commonality, with the MTOW increase achieved through a combination of weight-neutral structural reinforcements and landing gear adaptations. Modifications to the nose

and main landing gear have also enabled Airbus engineers to extend their time-before-overhaul (TBO), prolonging the previous 10-year interval to a new 12-year timeframe, thus resulting in significant maintenance savings.

A330neo is now powering the family into the future with its new engine and wing technology to drive a step-change in performance and economics – 25% lower fuel burn and CO2 emissions when compared with the previous generation aircraft. Moreover, by retaining the 'same type rating' and having 95% spares commonality, it can seamlessly fit into any existing A330 fleet, while its new Airspace cabin offers the perfect space for passengers and airlines.

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Falcon 6X Wins Prestigious Interior Design Award



Dassault Aviation's new Falcon 6X recently won the prestigious International Yacht & Aviation Award for interior design, underscoring the unique level of comfort and spaciousness offered by the ultra-widebody twin. The 6X will set a new industry benchmark for cabin comfort, long-range performance and flying efficiency, with the largest cabin cross section of any purpose-built business jet.

"This prestigious award reflects the innovative manner in which our in-house Design Studio conceived the Falcon 6X cabin, which entailed going well beyond simply improving the aircraft's interior

decoration," said Dassault Aviation Chairman & CEO Eric Trappier. "With extensive input from customers, our engineers rethought the entire interior design process, employing a sensory design approach that will completely redefine the passenger flight experience."

Sensory design manages air, light and sound in innovative ways to maximize health and wellness. In the Falcon 6X, it played a key role in selecting materials, textures and finishes, laying out furniture and furnishings, defining interior lighting and color schemes and designing cabin contours.

The cabin's flowing uninterrupted lines, innovative furniture design, flush surfaces,

and recessed technology provide a cozy, clutter free interior designed to enhance the feeling of spaciousness and facilitate productivity and relaxation during long intercontinental trips.

Upholstered areas throughout the cabin are covered with micro-perforated fabrics, woven textiles and 3D fabrics designed to offer protection from microbes and absorb sound. Materials and finishing are optimized to absorb or reflect light in a way that ensures a soothing, pleasant ride. Smart-control mood lighting varies color patterns in accordance with the type of activity, time of day and season.

Passengers sit in an ergonomic "cocoon" where all electronic functions are within easy reach. Recessed controls light up when a hand is near and dim when not in use. Side-panel charging pockets accept personal devices of all types and sizes. Patented retractable arms hold tablets, freeing hands for other activities like dining.

The cabin has 30 extra-large windows with nearly 5,000 square inches of glass — more than any other aircraft in its class — which bathe the cabin of the 6X with natural light while providing unprecedented views of the ground below. An overhead skylight, the first in business aviation, illuminates the normally dim galley area.

The IYAA awards are sponsored by design et al, a prominent UK design magazine published by The Design Society. Established in 2005, The Design Society helps interior designers promote their work to a wider audience and reflects all sectors of the design profession. Awards are judged by industry professionals, designers and customers.



Airbus September 2020 commercial aircraft orders & deliveries



Airbus delivered 57 commercial aircraft in September 2020 (14 in April, 24 in May, 36 in June, 49 in July and 39 in August) versus 71 aircraft over

the same period in 2019. Year to date, Airbus has delivered a total of 341 aircraft (18 A220s, 282 A320 Family, 9 A330s and 32 A350s), which is a reduction of around 40% compared to the same period in 2019 (571 aircraft deliveries).

In the first three quarters of 2020, Airbus booked a total

of 300 net commercial aircraft orders compared with 127 net orders in the equivalent 2019 period.

Airbus backlog stands at 7,441 aircraft compared to 7,133 at the same point in time last year.



Gulfstream Extends Contract for Low-Carbon Sustainable Aviation Fuel



Gulfstream Aerospace Corp. announced it has extended its contract with World Fuel Services to continue providing the business-jet manufacturer with a steady supply of sustainable aviation fuel (SAF) produced by World Energy.

Gulfstream President Mark Burns announced the deal today during the Virtual 2020 Business Aviation Sustainability Summit to discuss pathways to accelerate the market for SAF. Per gallon, SAF has at least a 60 percent smaller carbon footprint than conventional jet fuel on a lifecycle basis.

This contract extends Gulfstream's original multiyear purchase agreement, which was the first of its kind in business aviation when it was signed in 2015. Since March 2016, Gulfstream has used SAF for its Savannah-based fleet, which comprises corporate, demonstration, completion, Customer Support and flight test aircraft. The company has made more than 650 flights with an SAF-JET A fuel blend, flying

more than 1.3 million nautical miles and reducing carbon dioxide emissions by approximately 1,700 metric tons.

"This renewal marks another step in our ongoing commitment to promoting positive change in our industry," said Mark Burns, president, Gulfstream. "Reducing our impact on the environment by using SAF is a move we all should consider making. Creating a sustainable future for aviation is a responsibility we share, and we appreciate the leadership, innovation and collaboration of World Energy in helping Gulfstream — and the industry at large — fulfill that responsibility."

Gulfstream's sustainability strategy helps support industry goals established by the National Business Aviation Association, the General Aviation Manufacturers Association and the International Business Aviation Council. The goals are a 50 percent reduction in carbon dioxide emissions by 2050 relative to 2005 levels; a 2 percent improvement in fuel-efficiency per year from 2010 to 2020; and carbon-

neutral growth from 2020 onward.

The renewable fuel used by Gulfstream is produced by World Energy at its refinery in Paramount, California, from a feedstock of agricultural waste, fats and oils. Fuel and aviation services provider World Fuel Services manages the logistics, including distribution of SAF to Gulfstream on both U.S. coasts. In addition to using the 30/70 blend of low-carbon, drop-in SAF at its Savannah headquarters, Gulfstream makes it available for customers at its Van Nuys and Long Beach, California, service centers. SAF is the only fuel on-site at Gulfstream Long Beach, which also uses it for completions and delivery flights.

"The innovative partnership between Gulfstream and World Energy paved the way for a larger sustainability movement," Burns said. "For almost a decade, we have leveraged our collaboration with World Energy to increase awareness and availability of SAF around the world. We look forward to continuing that work."

Sanad signs One Billion agreement with Pratt & Whitney and IAE

Sanad, an industry leader in aerospace engineering and leasing solutions, and a wholly owned subsidiary of Mubadala Investment Company (Mubadala), announced a new one billion dirhams deal with Pratt & Whitney and International Aero Engines (IAE). The new agreement will see Sanad Aerotech providing IAE with expanded MRO services for its V2500 engines, which powers the Airbus A320 family of aircraft.

The announcement of the new deal came during the Global Aerospace Summit in Abu Dhabi, where industry leaders convened to discuss the

impact of COVID-19 on the aerospace, defence and space industries. This agreement expands the cooperation between Sanad and IAE in the field of maintenance, repair and overhaul (MRO) of aircraft engines. Under the agreement IAE, the manufacturer of V2500 engines, will offload V2500 engines for MRO services to Sanad's state-of-the-art facility in Abu Dhabi Airports Free Zone. This step reaffirms the confidence of major global OEMs to collaborate with Abu Dhabi's resilient aerospace sector especially during turbulent times.

Commenting on this new

agreement, Mansoor Janahi, Deputy Group CEO, Sanad, said, "We are signing this new agreement at a critical stage in the history of the aviation industry. This agreement is another testament on Abu Dhabi's established position as a reliable global centre for the aerospace industry and its state-of-the-art engineering services. With many global companies reformulating their relationships with their partners in line with the lessons learned from the pandemic, it seems that flexibility, sustainability and the capacity to deal with crises qualifies the aerospace sector in the UAE to re-enforce its position as

a preferred partner for major international companies. Sanad Aerotech has demonstrated the distinction of its engineering teams that were able to meet customer needs in addition to dealing efficiently with the disruptions that resulted from the pandemic."

Dave Emmerling, Vice President, Commercial Aftermarket at Pratt & Whitney, said, "The relationship between Pratt & Whitney, IAE and Sanad is strong and we look forward to continuing to strengthen it for years to come. We expect our V2500 customers will benefit greatly from the MRO services provided by Sanad."



Aircraft interiors specialist, Andrew Newell, joins Bii.aero as Sales Director



Expanding provider of aircraft parts and services for the commercial, governmental/military and rotary aviation sector, Bii.aero, has appointed Andrew Newell as Sales Director. Newell brings a highly specialised expertise in the aircraft interiors sector and is tasked with setting up a new centre of excellence at Bii. Management of consignment stock is

another area of focus for Newell as Bii's warehousing and logistics management is increasingly utilised by third parties seeking flexible support partners.

"We're focused on our own teardown programmes as well as working with lessors and airlines who are looking at ways to streamline their reconfigurations cost-effectively" says Justin Blockley, Commercial Director – Bii. "Andrew has encyclopaedic knowledge of surplus materials which can be accessed by design agencies tasked with interior modifications for the entire spectrum of commercial aircraft. This is particularly valuable at a time when aircraft transitions to new owners begin to intensify as a result of COVID-19 and we anticipate that this will start to happen in the next few months."

Newell comments that actively trading aircraft interior rotatables within the MRO, leasing and airline markets requires deep insight across a wide range of electronic electromechanical and mechanical

components. "Understanding the complex processes relating to the interchangeability of parts across modern commercial aircraft is one aspect, managing repairs with trusted workshops to maximise life is another. We also have our eye on the gradual introduction of PMA parts into the sector which will be a logical step as airlines seek to conserve cash while preserving reliability.

"Because Bii is an agile and independent company, we see an opportunity to build a team to support retrofits reconfigurations and major checks, When air travel picks up this will be an increasingly important part of our business."

Prior to joining Bii.aero, Andrew Newell was Vice President/Accountable Manager of Leki Aviation with global responsibility for the sale of all aftermarket materials and the creation and development of 25 Repair Centre/Leki Tech that specialised in the repair of electronic and mechanical cabin equipment.

Israeli Pavilion at IDEX & NAVDEX : agreement signed with ISDEF



To increase defence cooperation between UAE and Israel, IDEX has signed an agreement with ISDEF to organise an Israeli pavilion at IDEX & NAVDEX 2021. This is for the first time in the history that Israel is invited to participate in a defence event in the Middle East.

ISDEF, the largest Israeli Defence, Homeland Security (HLS), and Cyber Expo, and part of the Avnon Group, will be the exclusive promoter of IDEX and

NAVDEX to Israeli defence, security, and technology companies.

IDEX and NAVDEX will provide opportunities for both countries to gain exposure and a deeper understanding of available technologies from both Israel and the UAE and collaborate in the business and security sector. An important step towards recognition of leading technologies and exports promotion.

ISDEF will be the IDEX agent in Israel which will be preparing, organising

and hosting the Israeli pavilion at the exhibition.

After establishing the diplomatic relation between UAE and Israel last month, both the countries have signed four agreements during the first high-level visit from the Gulf state to Tel Aviv recently. Emirati Finance Minister Obaid Humaid al-Tajer and several senior officials from the UAE were accompanied by United States Treasury Secretary Steven Mnuchin for the first high level visit.

Sanad – Etihad deal expands new partnership with \$ 900 mn



Sanad, an industry leader in aerospace engineering and leasing solutions, and a wholly owned subsidiary of Mubadala Investment Company, and Etihad Airways, the UAE's national carrier, have closed a new spare engine deal which

further cements Abu Dhabi's position as a self-sustaining international aviation sector hub.

The announcement of the new deal came during the Global Aerospace Summit in Abu Dhabi, where industry leaders convened to discuss the

impact of COVID-19 on the aerospace, defence and space industries. The new deal, which expands the US\$ 900 million-plus partnership between Sanad and Etihad Airways for additional spare engines and rotatable components, includes a sale-and-leaseback (SLB) agreement for an additional GEnx engine and a Rolls Royce Trent XWB engine, with a second XWB spare option.

Sanad will also provide access to increased B787 rotatable components and extended terms for existing GEnx spare engine agreements.

Troy Lambeth, Group Chief Executive Officer of Sanad, said: "Despite the extraordinary challenges the industry is currently facing, this deal confirms Sanad's long-term commitment to support our industry partners. We remain fully committed

to Etihad Airways, and this agreement expands and deepens our portfolio with more entry-into-service asset types including our ninth GEnx, and our first Rolls Royce XWB spare engine."

Adam Boukadida, Chief Financial Officer of Etihad Aviation Group, added: "This latest collaboration between Sanad and Etihad Airways underlines the effectiveness of two leading Abu Dhabi aviation companies working together to achieve a successful and long-term result for Abu Dhabi as we continue in our shared mandate to further establish our home base as a global aviation hub. Sanad continues to be a trusted and reliable partner for Etihad Airways and its continued support is well aligned with our long-term plans and fleet strategy."

Saab Delivers Second GlobalEye to UAE



Saab delivers the second GlobalEye Swing Role Surveillance System to the United Arab Emirates on 30 September 2020.

This follows Saab's delivery

of the first GlobalEye aircraft in April 2020 to the United Arab Emirates, which has ordered three GlobalEye aircraft. The initial contract was signed in late 2015.

"Completing the second

GlobalEye delivery in five months is a testament to Saab's in-house expertise as aircraft manufacturer, sensor provider and large system integrator. I am proud to contribute to the United Arab

Emirates' airborne surveillance capability with GlobalEye, which is the most advanced solution of its kind", says Micael Johansson, President and CEO of Saab.

GlobalEye is Saab's new airborne early warning and control solution. It provides air, maritime and ground surveillance in a single solution. GlobalEye combines Saab's new Erieye Extended Range Radar and a range of additional advanced sensors with the ultra-long range Global 6000 aircraft from Bombardier.

Alexis Dufermont joins APOC Aviation as Director – BD



APOC Aviation, the innovative leasing, trading, aircraft component and part-out specialist, has appointed industry professional Alexis Dufermont, as Director of Business Development. He will be responsible for expanding and diversifying APOC's global customer network and the development of new routes to market for the organisation's

rapidly growing A320 and B737 inventory of parts.

Supported by significant investment, APOC Aviation, is actively seeking opportunities to provide focused aircraft component, landing gear and engine support to airlines and other industry operators and Karim Grinate, Vice President – Component Sales, at APOC believes that Dufermont's extensive experience will be

a great asset to the team. "With over fifteen years in the specialist component support sector, Alexis brings great drive and energy as well as in-depth industry knowledge. He has previously held positions in sales, purchasing, contract presentations and negotiations and his role will not only be to showcase APOC's capabilities but also to mentor the sales teams across the business."

In his previous position as Sales Director – Contract Services at AJW Aviation, Dufermont was accustomed to developing integrated component solutions for a wide range of customers of all sizes and global locations, and he sees this a core strength. "At this challenging time for the aviation sector I see opportunities to bring what APOC has created in the after-market to the attention of significant operators, MROs and brokers. The approach to business is innovative and contemporary, gathering global followers via their crowd-funding successes, and

they use robust benchmark technologies to interrogate industry trends and identify unique opportunities – that excites me. In addition, The Netherlands' approach to customs, logistics and commerce in general means APOC is ideally suited to serving both the European and international markets."

The fact that APOC Aviation is still a relatively young company was also a crucial deciding factor says Dufermont. "Throughout its short five-year history, the business has seen fantastic year on year growth and even during this pandemic it has had the confidence to seize and secure investment partners. This means not only that the business has a phenomenal stock of modern, latest-tech commercial spares, but also the ambition and focus to look ahead to a new world in aviation and prepare for those market needs. There's a lot to do of course, but we have a new saying – 'every customer is welcome'."

Pune Airport to Get New Terminal Building with Enhanced Capacity



In order to cater the continuous surge in passenger traffic and ease congestion at the airport, AAI has undertaken the construction work for a New Integrated Terminal Building at Pune Airport. With massive built up area of more than 5,00,000 sq. ft., the new terminal will be

constructed at an estimated cost of Rs. 475 cr.

The swanky new terminal building will be able to process 2300 passengers (1700 Domestic & 600 International) during peak hours. Equipped with five boarding bridges, 34 Check-in Counters and In-line Baggage handling system, the terminal will be an energy efficient building with 4-Star GRIHA Rating.

To provide a delightful experience to the passengers, 32000 Sq. ft. space for provision

of for F&B and retail outlets has also been provisioned inside the airport. Construction of a huge canopy on the city side of the existing building & new building is part of the project, which will give a magnificent look to the airport from city side. The project also includes construction of service yard of 3800 sq. m, Underground Tank of capacity 10 Lakh litre, Sewage Treatment Plant (STP) of capacity 1130 Kilo liters per day (KLD), and landscape area of 12000 sq.m on city side beyond

the canopy.

To enhance the passengers' convenience, a Multi- Level Car Park (Ground plus three storeyed +2 basement floors) with a cost of Rs. 120 Cr is also under construction. With the parking capacity of 1024 cars, the facility will be connected to the departure area of existing building with a sky bridge with provision of escalators & elevator at building side for dropping/going up. The work for Multi-Level Car Park (MLCP) is likely to be completed by April, 2022.

The first L-159 after PP16 works delivered to the Czech Air force

Aero Vodochody handed over to the 21st Tactical Air Force Base Čáslav the first of 16 single-seat L-159 ALCA aircraft, which are undergoing periodic work after sixteen years of operation (PP16), the operation of those light combat aircraft will be extended by another eight years on the basis of a contract with the Czech army.

A contract for repairs of single-seat L-159 aircraft for a total of 1.6 billion crowns (EUR 60 million) was signed in 2019 at the IDET trade fair in Brno. "We are now delivering the first finished aircraft, we currently have another 8 aircraft in different stages of work-in-process and another L-159 should arrive in Aero to be overhauled at the end of this year. Deliveries of aircraft will run at regular intervals until the end of 2022 so as to ensure the operability of the L-159 fleet and the defence capability of the Czech Republic," said Jan Štechr, vice president of Aero Vodochody for MRO business.

In addition to the prescribed work, Aero Vodochody also provides number of upgrades to the L-159 aircraft. One of them is adjustment for use of NVG (night vision goggles): adaptation of the cockpit and installation of internal and external airplane lighting (positional, anti-collision and formation lights). Aero cooperates with the Czech army to make the whole L-159 fleet NVG compatible in a near future.

Another upgrade is installation of ESIS – Electronic Standby Instrument System, able to substitute several



standby instruments and provide the pilot with attitude, airspeed, altitude, vertical speed and heading data in the event of a panel failure.

L-159 in service of Czech Air Force

Czech Air Force is currently operating 16 single seat L-159 aircraft, 5 double-seat L-159T1 and 3 double-seat L-159T2 for advance training.

L-159

L-159 aircraft mates Aero's long-term experience in development and production of military jet aircraft, in the category of which Aero represents historically the largest producer in the world, with latest advances in avionics, engine and aircraft systems technology. The L-159 is a light multi-role combat aircraft designed for a variety of air-to-air, air-to-ground and reconnaissance missions. The aircraft is equipped with

a state-of-the-art multi-mode radar for all-weather, day and night operations and can carry a wide range of NATO standards stores including air-to-air and air-to-ground missiles and laser guided bombs. The two-seat L-159 is a derivative of the single-seat L-159, primarily designed for Advanced and Operational/Lead-In Fighter Training. The L-159 configuration can also be tailored to customer specific requirements and adapted to needs of basic training as well as combat missions including air-to-ground, patrol and reconnaissance missions.

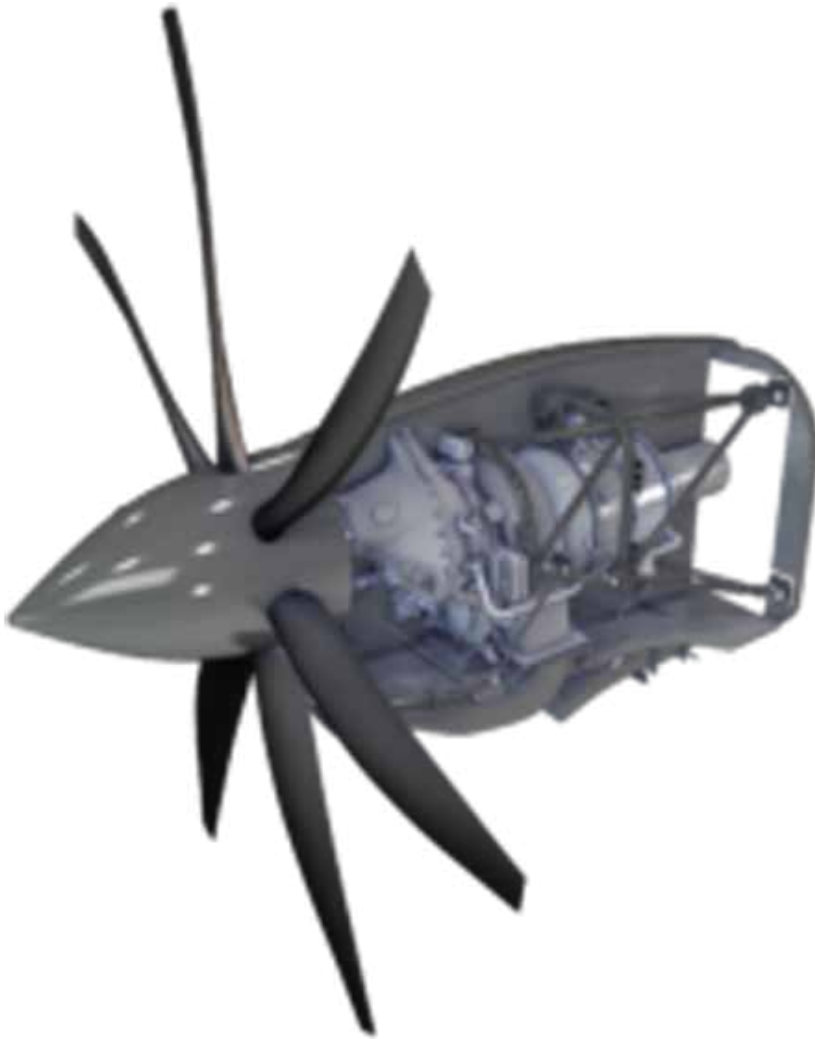
AERO Vodochody AEROSPACE

AERO Vodochody AEROSPACE a.s. focuses on the design, manufacturing maintenance, overhaul and upgrade of military and civil aircraft and is the largest aviation manufacturer in the Czech Republic and with

history since 1919 one of the oldest aerospace companies worldwide. In the field of military aircraft, Aero has been a reliable long-term partner to many of the world's air forces and it has a strong position on the market of military training and light combat aircraft.

With a track record of 11,000 aircraft produced over the last 100 years, a broad coverage of dozens of military operators and demo teams, a huge existing fleet of L-39 Albatrosses and with a brand new aircraft, the L-39NG now, Aero is maintaining its positioning as a leader in the jet training market. In the field of civil aviation, Aero collaborates with many of the world's largest manufacturers in a diverse range of projects. More recently, Aero became a full partner in several risk-sharing programmes, taking responsibility not only for the production of structures but also for development.

Safran Helicopter Engines strengthen its European team around Ardiden 3TP with ITP Aero in Spain



Safran Helicopter Engines and the Spanish aero-engine company ITP Aero have signed a Memorandum of Agreement (MoA) to cooperate on Ardiden 3TP, a turboprop engine suitable for European military applications – specifically the unmanned, training and transport sectors. The Spanish aero engine specialist strengthens the European team with Safran Helicopter Engines, and ZF Aviation Technology in Germany.

Ardiden 3TP is a 100% European solution based on

Safran's Ardiden 3 core engine and featuring technologies developed through its Tech TP technological demonstrator, which ran for the first time in June 2019.

Alvaro Santodomingo, ITP Aero Defence Business Unit Executive Director, said: "A collaboration with Safran Helicopter Engines in this engine is an important opportunity for us. Our aero-engine technologies and capabilities will significantly benefit this engine propulsive system, lowering operating and maintenance costs, while

supporting future Spanish industrial capabilities".

Commented Florent Chauvancy, Safran Helicopter Engines EVP OEM Sales, "We are proud to welcome ITP Aero into this exciting project. We are committed to delivering the Ardiden 3TP, a 100% European engine featuring high levels of design maturity and competitive operating and maintenance costs. It will be designed, built and supported by highly-experienced teams using state-of-the-art industrial capabilities in Germany, Spain and France. For European

nations seeking to protect their national interests, in civil or military fixed-wing programs, Ardiden 3TP is the natural choice."

The Ardiden 3TP will be optimized for operation at medium and high altitudes, up to 45,000 feet, and be easy to operate — thanks to a unique throttle and Full Authority Digital Engine and Propeller Control (FADEPC) controlling power and propeller pitch. MT-Propeller will contribute to the propeller.

It is based on Tech TP, a Clean Sky 2 research and innovation programme validating the technologies necessary to develop a new-generation turboprop. Since June 2019, tests have progressed at a steady pace. Featuring a compact and lightweight architecture, Tech TP offers

15 per cent lower fuel consumption and CO2 emissions (over current engines). It is one of the first Clean Sky 2 demonstrators to enter its test phase. More than 20 partners from eight European countries are contributing to the project.

The Ardiden 3 is a new-generation core engine in the 1,700 to 2,000 shp power range. Two EASA-certified models, the Ardiden 3C and 3G, have completed over 10,000 hours of tests, confirming high levels of design maturity and competitive operating and maintenance costs. In addition, more than 250 Ardiden 1 engines have flown over 200,000 hours. The Ardiden 3 features a remarkably compact modular architecture, a best-in-class power-to-weight ratio and a low cost-of-ownership.

AMMROC marks first Aircraft delivery from the new Al Ain MRO facility



AMMROC, the leading provider of military maintenance, repair, and overhaul (MRO) services in the region, announced the delivery of the first C-130 aircraft from its new state-of-the-art MRO depot in Al Ain.

The company is set to deliver nose-to-tail advanced MRO services, and holds the capability to modify and upgrade multiple aircraft types. The C-130 aircraft delivered from the Al Ain facility underwent a Programmed Depot Maintenance (PDM) to increase its capability through extending the aircraft lifecycle. This is the first of many PDMs that are scheduled to take place at this world-class facility.

With the capability to support more than 35 different aircraft types,

both fixed and rotary wing, AMMROC's facility offers one of the region's largest military and civil MRO hangar capacities – spanning an area of 36,500 sq m. It is also the only certified Lockheed Martin Service Center for C-130 aircraft in the region, and is at the forefront of aircraft PDM and integrated fleet sustainment services in line with its wider mandate to support the UAE and other regional markets.

In March 2020, AMMROC inducted a CN235 and an A330 Multi Role Tanker Transport (MRTT) aircraft, marking the launch of the 1-square-kilometre operations facility.

Speaking on the development, Khalid Al Breiki, President of Mission Support at EDGE and Chairman of AMMROC, said: "AMMROC

is leveraging its engineering excellence and cutting-edge solutions to establish new regional benchmarks for military operations. The delivery of the first C-130 aircraft from our state-of-the-art facility highlights our capacity to meet the dynamic needs of our customers as we further strengthen our credentials as an industry-leading MRO innovation hub."

"This facility is testament to AMMROC's vision to be the leading regional centre of excellence that provides aircraft sustainment solutions in MRO and upgrade services. Progressing on the Abu Dhabi Economic Vision 2030, we also look forward to building on our STEM initiatives and creating a highly skilled local workforce that takes the national aerospace and defence industry to new

heights", he added.

Incorporating four multi-purpose hangars, over 30 back shops and a specialised environmentally controlled strip/paint facility, AMMROC's MRO hub is also unique in serving as a dedicated Black Hawk depot facility that provides nose-to-tail MRO capabilities, inclusive of rotors and transmissions, blades, engines, components and aircraft sub-systems.

AMMROC is part of the Mission Support cluster within EDGE, the advanced technology group for defence and beyond. In July 2020, EDGE announced that it had entered into a conditional agreement to acquire the remaining 40 per cent stake in AMMROC, held by Lockheed Martin Corporation and Sikorsky, a Lockheed Martin company.

MIDDLE EAST DEFENCE & AEROSPACE DIRECTORY



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