ARABIAN ARROSPACE

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN THE MIDDLE EAST, NORTH AFRICA AND TURKEY www.timesaerospace.aero **HOW MROS** CAN MAINTAIN THEIR MOMENTUM



PAGE 12



UAE signs iet China

jet China trainer deal PAGE 30



TECHNOLOGY

Paving the way for the eVTOL take-off PAGE 43











THE PERFECT PLACE

FOR BUSINESS AIRCRAFT

AUCH • LONDON • BASEL • ZURICH • ISTANBUL • BODRUM • BEIRUT • RIYADH





ISSUE 1 VOL 16 | FEBRUARY - APRIL 2024

and introduce third party services is an indicator of the

Published by



Times Aerospace Publishing Ltd 3-4 Rumsey House Locks Hill Bochford Essex SS41RR LIK Tel: +44 (0)1702 53 0000 Fax: +44 (0)1702 53 3088

Website: www.timesaerospace.aero

Mark Brown

Display Advertising

Grant Lee

Circulation Dept: Clare Brown

Editor-in-chief: Alan Peaford

Deputy Editor: Marcelle Nethersole

Consultant Editor: Mark Pilling

Editorial head office

Aerocomm Ltd, Norths, Rectory Road, Orsett, Essex

COVER:

DAE Engineering CEO
Jeff Wilkinson sees growing role for MRO

Advertisers

Advoidioon	
AERQ	2
AIME & MRO Middle East 2024	51
AJW Group	15
AMAC Aerospace	IFC, 1
Andorra Village	52, 53
Aviation Africa 2024	47
Aviation India 2024	48
Bahrain International Airshow 202	4 5
CFM International	
DC Aviation Al-Futtaim	24, 2
Egypt International Airshow 2024	22
Embraer Commercial Aviation	2
General Authority of Civil Aviation	2
of Saudi Arabia (GACA)	
Jewers Doors Limited	41
Joramco	OBC
Liebherr	38
Rolls-Royce	16, 17
Satcom Direct	9
Saudia Technic	44, 45
SES	6
Skyplan Aviation Academy FZCO	10
SOFEX Jordan 2024	28
TP Aerospace	32
Vallair	IBC
VMS Aero	40





niggles affecting the airline industry in the region. But over the last decade there has been significant investment from airlines who developed their own shops,

MIDDLE EAST DRIVES MROS TO A NEW LEVEL

shape of things to come. If Middle Eastern airlines – both large and small – are to continue to achieve their goals, it is essential that there is a robust MRO industry to support them. It is in the interest of OEMS to ensure they can offer the latest equipment support and at the same time encourage employment and training in the engineering disciplines to help the region take its place on the world stage.

The Dubai Airshow once again lived up to all of the expectations and seemed the biggest and the best. Visitors from all over the world came to show wares or to find out just what all the fuss is about.

I spoke to people from South America, Africa, Oceania and Europe who were on their first visit and could not believe the potential opportunities and the level of achievement already reached. Roll on 2025 for the next one.

Meanwhile, with the issues affecting security in the Middle East, no wonder the World Defense Show in Saudi Arabia – the second edition kicks off on February 4 – is sold out.

We will be there with another Show Business daily paper and you will be able to see this on our website both in English and Arabic.

Safe landings.

Alan Peaford, editor-in-chief



wasn't so long ago that MRO was one of the biggest

from OEMs who have partnered in the region, and from

for the aircraft interiors and the aerospace engineering

businesses, which takes place in Dubai March 5-6, the

single roof.

focused their energies on attracting new customers.

independent providers who have shaken off cobwebs and

At this year's AIME-MRO Middle East collocated event

players both established and new will come together under a

In this issue we hear from Jeff Wilkinson, former CEO of

owners of Joramco, the largest independent provider in the

Etihad Engineering and now CEO of DAE Engineering,

Also from Sanad, the Abu Dhabi business – once the

now a player in its own right. CEO Mansoor Janahi, is

engine division of the Gulf Air partnership GAMCO – but

determined that the company's investment into supporting

the world's most modern engines will drive it to a new level.

former SAEI, is seeing the company's MRO Village take

In Saudi Arabia, more investment into Saudi Technic, the

shape and extend beyond the services to the national carrier.

And Emirates plans to build new facilities at Dubai South







04 Business brief: Regional round-up.

AIR TRANSPORT

11 Golden rules: GACA's sweeping new rules that are set to "unleash" Saudi Arabia's aviation sector.

12 Growth plan: CEO Antonoaldo Neves plots a competitive course for Etihad's fleet and network

14 Air force: Air Arabia's growth story continues with one of its largest deals.

18 Royal family: Royal Jordanian looks to improve its fleet.

18 Maroc role: Royal Air Maroc's plans huge expansion of its fleet.

20 Pick and mix: Why EgyptAir chooses Boeing and Airbus.

23 Nile polish: New CEO's mission to bring stability and confidence back to Nile Air.

26 Round-up: Air Cairo targets new destinations; Libya's Burag Air looks to

▲ DEFENCE

29 Show stopper: The incredible rise of the World Defense Show.

30 Sharp Edge: Young organisation's partnerships and major orders.

31 Falcon flies: UAE signs for 12 Hongdu L-15 Falcons.

▲ FOCUS ON MRO

33 Double top: Pack your bags for MRO Middle East and AIME.

34 COVER STORY:

DAE Engineering's Jeff Wilkinson takes a hard look at an industry in transition

36 Engine driver: Sanad takes maintenance levels to new heights.

36 Building the future: Emirates' \$950m engineering complex at Dubai World Central.

▲ BUSINESS & GENERAL AVIATION

39 Suite dream: ExecuJet's DWC facility ups the ante for luxury.

40 SAF flight: Jetex and Shell boost access to SAF, and Abu Dhabi Aviation flies a helicopter using SAF.

42 Round-up: UAE/Russian helicopter partnership; Electric air taxis in Abu Dhabi and Dubai; eVTOLs in Saudi Arabia.

▲ MANUFACTURING

46 Sector appeal: Morocco's growing aerospace industry.

AIRPORTS

49 Bul's eye: Behind the success of Instanbul, Europe's busiest airport.

50 Taking off: UAE minister Sarah Al Amiri on why the space sector is crucial to the region's aerospace industry.

55 On the radar: Edge signs MoU for UAE's Sirb satellite project.

56 All in a dau: Stefan Buschle, Jet Aviation

◆ EMBRAER

Accelerate Efficiency Opportunity

E2 Profit Hunter. Commercial aviation is evolving rapidly and providing new and

exciting opportunities. Delivering up to 25% reduction in fuel burn and the lowest

level of carbon emissions, our E2 family of aircraft are enabling airlines to enter

new markets and launch new routes, sustainably, profitably, and at speed.

embraercommercialaviation.com

#AccelerateOpportunity #E2ProfitHunter

business brief

DAILY NEWS UPDATES ON WWW.TIMESAEROSPACE.AERO

brands, plus they will learn hospitality and life skills from the best trainers in the business."



Al solutions

Etihad Airways has become one of the first airlines to use artificial intelligence (AI) to enhance safety management systems. The initiative is part of a partnership with Mohamed bin Zaved University of Artificial Intelligence (MBZUAI) to establish joint training programmes, research exploration, and develop AIpowered solutions to support and enhance Etihad's safety processes.

Etihad's AI-powered platform collects and analyses data including flight reports, maintenance, and training activities to accelerate and refine existing safety processes.

Sustainable retrofit

Dubai Airports and Etihad Energy Services have entered a collaboration comprising an innovative retrofit initiative and an extensive solar integration project.

Paul Griffiths, CEO of Dubai Airports said: "Dubai Airports is steadfast in our commitment to facilitating efficient global air

connectivity while prioritising environmental sustainability at Dubai International and Dubai World Central, Our collaboration with Etihad Energy Services on energyefficient projects represents our dedication to embracing innovative and sustainable practices. These endeavours align with the UAE's strategic initiative to achieve Net Zero by 2050."

Flynas record results

Flynas reported increased results for its performance in 2023 compared to the previous year 2022. The airline took delivery

of 19 new aircraft during 2023, upscaling fleet size to 64 aircraft, an increase of more than 35 per cent, which enabled it to move forward with implementing its strategic plan for growth and expansion under the slogan "We Connect the World to the Kingdom."

Consequently, flynas launched 57 new destinations and routes to 10 countries during the year, inaugurated its fourth operations base at Prince Mohammed bin

Abdulaziz International Airport in Madinah, and increased seat capacity by 22 per cent for domestic and international flights.

Pegasus delivery

In December, Airbus successfully delivered its first Airbus A321neo assembled at its newest A320 family final assembly line (FAL) in Toulouse. The A321neo, which will be operated by Pegasus Airlines, is the first delivery from Airbus' latest state-ofthe-art production facility, located in the former A380 "Jean-Luc Lagardère".

Working together

The first military drills between Qatari Eurofighter Typhoons and Pakistani Chengdu J-10Cs took place in January. The aircraft are operating together as part of the Zilzal-II air exercise currently being hosted by Qatar. The exercise is believed to be the first overseas deployment of the Pakistani J-10 fleet, which entered service in March 2022.



Hani El Asad, president, Middle East and Africa, SITA and A.T. Srinivasan, Qatar Airways Group CIO, sign the deal. IMAGE: SITA

Qatar boosts connectivity and security with SITA

Qatar Airways has partnered with SITA to transform the airline's global network infrastructure with state-of-the-art secure access service edge (SASE).

As part of the transformation SITA will deploy its secure SD-WAN (Software-Defined Wide Area Network), SITA Connect Go. which offers, scalable, and secure access to airline systems and applications by connecting infrastructure outstations and airports, to Qatar Airways' hybrid cloud infrastructure, and to the airline's partner systems.

A.T. Srinivasan, Qatar Airways Group CIO, said: "Qatar Airways is always looking for innovative technology solutions that will enable the group to optimise day-to-day network operations with increased speed, reliability, security, and flexibility thereby enabling best-in-class connectivity across key operations."



LEAP



We know you're different.

With over 35 years' experience in the CFM56 and LEAP engine market, the SES team appreciate the diverse challenges operators encounter on a daily basis, which is why we don't have a one-size-fits-all approach.

Every customer's requirements are different and that is why we offer bespoke engine leasing solutions that will precisely meet your needs. So, how can we help?

tran

Ivan Graydon Chief Technical Officer

SES. The CFM Specialist Lessor

Fly Certain

ImPressive

Flydubai has enhanced its onboard experience with the introduction of PressReader.

This allows passengers to enjoy complementary access to a wide selection of PressReader's digital magazines through the carrier's inflight entertainment system on board 70 per cent of Flydubai's fleet.

Over the next few months, the carrier will roll out the service on additional aircraft.

CUAS exercise

Defence technology expert MARSS, played a prominent role in a counter-unmanned aerial system (CUAS) exercise carried out by the US and Saudi Arabia in January.

The Red Sands Live Fire Exercise 23.2 operation sought to strengthen military relations between the US and Saudi Arabia while showcasing how different technologies could defeat varied attacks.

It also served to develop UAS combative procedures while increasing the defensive readiness of the two nations against emerging UAS threats.

Top of the OTPs

Oman Air has been named the most punctual airline in the Middle East and Africa for 2023, scoring an outstanding 92.5 per cent ontime performance (OTP).

The rankings, published in the 2023 On-Time Performance Review by global aviation analytics leader, Cirium, measured performance data collected from more than 600 sources of real-time flight information.

It's the second consecutive time the Muscat-based airline has taken the top spot, having scored 91.3 per cent during



Dubai Airports and Etihad Energy Services have entered a collaboration comprising an innovative retrofit initiative and an extensive solar integration project.

Anticipated to generate significant annual energy and water savings, these projects at Dubai Airports play a pivotal role in shaping a more eco-friendly and sustainable future for the

Paul Griffiths, chief executive officer of Dubai Airports, said: "Dubai Airports is steadfast in our commitment to facilitating

efficient global air connectivity while prioritising environmental sustainability at Dubai International and Dubai World Central. Our collaboration with Etihad Energy Services on energy-efficient projects represents our dedication to embracing innovative and sustainable practices. These endeavours align with the UAE's strategic initiative to achieve Net Zero by 2050 and with the aviation industry's united effort to continue decarbonising operations, to collectively forge a path towards a brighter and more sustainable future.

Smart crew

Qatar Airways has

IMAGE: DUBAI AIRPORTS COMPANY

introduced an in-house application that enables cabin crew to deliver personalised experiences to passengers, such as flight information, and customer and service information. This allows cabin crew to view passengers' profiles, including privilege club members and oneworld members, as well as all special service requests and preferences for a more personalised and integrated journey with the airline. The application also empowers cabin crew by providing access to up-to-date digital training materials.

Turkey's engine order

Turkish Airlines will order 100 Trent XWB-84 engines and 40 Rolls-Royce Trent XWB-97 engines. This will make Turkish Airlines the

world's largest operator of Trent XWB engines. The Trent XWB-84-powered A350-900s, Trent XWB-97powered A350-1000s and Trent XWB-97-powered A350F will be delivered between 2025 and 2033. The engines' health and maintenance will be covered by the Rolls-Royce comprehensive TotalCare service.

Silicon Valley lab

work on its Silicon Vallevbased technology innovation lab. Through establishing a lab in Silicon Valley, the airline aims to monitor and assess on site the latest technological advancements worldwide. This move will further strengthen the company's global competitiveness and fortify its firm commitment to technological innovation.

Pegasus Airlines has started



Guy Adams, managing director of NATS Services and Ahmed Alzahrani, the CSO of SANS shake on the airport capacity contract.

NATS the way to do it

Saudi Air Navigation Services (SANS) and the UK's NATS have signed an agreement to collaborate on a capacity enhancement study at King Khalid International Airport. The signing, in November, is to serve as an indication of the organisations' mutual intention to collaborate on projects regarding air traffic management (ATM), with the "aim of ensuring the secure expansion of air traffic throughout Saudi Arabia." the two organisations said.

Ahmed Alzahrani, the CSO of SANS, said: "This collaboration will leverage NATS expertise and digital solutions, to unlock new possibilities in airspace management and seamless flow of air traffic in the Kingdom."

Guy Adams, managing director of NATS Services, said: "The Kingdom of Saudi Arabia has ambitious plans for the future of its aviation industry. By collaborating with SANS, we can help deliver the safe and efficient capacity growth that the Kingdom is seeking."



business brief

DAILY NEWS UPDATES ON WWW.TIMESAEROSPACE.AERO

Turkish Airbus order

Turkish Airlines has placed an order for 220 Airbus aircraft, made up of 150 Airbus' A321s and 70 A350 widebody aircraft. The A350 order is made up of 50 A350-900s, 15 A350-1000s and five A350F freighters. This follows two orders from the airline for 10 A350-900s in September and four A350-900s in July 2023. This latest order will take Turkish Airlines' total order book for Airbus aircraft to 504, of which 212 are already delivered.

Maldives partnership

Etihad Airways and Maldivian have signed a strategic bilateral interline partnership, unlocking access to 16 holiday destinations in the Maldives beyond the main island of Malé.

Etihad's chief revenue officer, Arik De said: "Facilitated by smooth connections from Malé, Etihad customers can easily transition to Maldivian's services, reaching a wide range of domestic destinations."

AJET ops

Turkish Airlines' whollyowned subsidiary AJET is set to commence flights in March. Established in 2008 to meet the air transportation needs of Anatolia with advantageous options,



Morocco hits the heights with aerospace summit

AMDIE, GIMAS, Morocco Now, ABE and BCI Aerospace organised the 7th edition of the Aerospace Meetings Casablanca (AMC) in October. The theme, "Morocco: take your business to new heights", portrayed the Kingdom's vision and strategy.

The Aerospace Meetings Casablanca (AMC) was an excellent opportunity to create bridges between all operators in the aeronautical sector established in Morocco.

It gathered more than 650 participants and 250 companies representing 20 countries, including Airbus, Boeing, Safran, Pratt & Whitney and Collins Aerospace. International clients and equipment manufacturers (notably a delegation from GIFAS) shared their subcontracting needs to strengthen or establish partnerships.

AnadoluJet, a successful brand of Turkish Airlines, will conduct its operations under the name "AJet Air Transportation" as a wholly-owned subsidiary of Turkish Airlines.

ArcosJet's all set

Lilium, a developer of the first eVTOL jet, has appointed Dubai-based ArcosJet as the exclusive authorised dealer for private sales for the Lilium Jet. ArcosJet will cover the UAE, Israel, and Republic of Cyprus.

The agreement includes a

commitment fee payment to Lilium and grants ArcosJet exclusivity on private sales. With this agreement, ArcosJet becomes Lilium's first reseller in the Middle East and its fifth global The AMC has also become a platform to support small and medium-sized industries by showing them how Morocco can be an alternative. It has now reached a level of maturity that allows it to seize all the opportunities offered in aeronautics sector through five ecosystems: assembly, EWIS, engineering, MRO and engines.

Several themes were addressed during AMC 2023, including the rise of operational excellence in Morocco, quality human capital, a key factor in industry 4.0 and even cybersecurity.

Morocco is consolidating its positioning as an industrial hub with more than 140 companies operating in the aeronautical and space ecosystems – employing 20,000 people.

Software solution

Riyadh Air has signed a strategic agreement with Swiss Aviation Software to leverage their aviation maintenance and engineering software solution AMOS.

Peter Bellew, Riyadh Air's chief operating officer, said: "We are building our technical capabilities to ensure readiness for our first flight in 2025. We plan

to pioneer the use of AMOS to drive our sustainability plans from day one integrating it to enable fuel and carbon saving across our fleets."

Swiss Aviation Software's CEO Fabiano Faccoli added: "Riyadh Air will be the first digitalnative airline and we are very much looking forward to leveraging AMOS' full potential."

AIR ALGÉRIE STRENGTHENS ATR DIGITAL MAINTENANCE SYSTEM

Air Algérie and ATR have signed a digital maintenance documentation package to strengthen the airline's maintenance documentation system. It will also optimise the maintenance and engineering operations for its fleet of 15 ATR aircraft.

A new service provided by ATR to its operators, this three-year digital maintenance documentation contract will provide customers with raw data of line maintenance publications in XML format, to be uploaded into the airline's maintenance information system via 'AMOS', the comprehensive solution designed by Swiss-AS to optimise the digitalisation of airline maintenance management.

Laid Bouchama, technical director of Air Algérie said: "This three-party cooperation ensures that we all benefit from the greatest expertise in terms of on-the-ground operations, engineering insights and digitalisation, to the benefit of our passengers who will appreciate the reliability of our service."







Enhance Your Passenger Experience

You expect your inflight internet to be as fast and reliable as it is at home or in the office. Wherever you fly.

SD offers high speed connectivity enabling you to stream your favorite video and audio services, watch live TV, make video calls, transfer large files and access your corporate VPN.

- Connecting You Beyond All Expectations -

satcomdirect.com | +1 321.777.3000





Enroll in the Programme to Secure Your GCAA Flight Dispatcher License.

GCAA-Approved Flight Dispatch Training

At Skyplan Aviation Academy, our programs are fully approved by the General Civil Aviation Authority (GCAA), ensuring you receive certification recognized across the industry.

Flight Dispatch Recurrent Course

Stay ahead of the curve with our top-tier Flight Dispatch Recurrent Course, designed to keep seasoned professionals at the forefront of aviation best practices and regulatory requirements.

Flight Dispatch Initial Course

Kickstart your aviation career with Skyplan's comprehensive Flight Dispatch Initial Course. Learn from the best to become the best in an industry where precision and expertise are paramount.

Visit our website, call us, or email us to register and learn more about our programs.

www.skyplanacademy.com

Tel. +971 (0) 4 257 0630 Email: dubaicampus@skyplanacademy.com



STRATEGY

The General Authority of Civil Aviation (GACA) is implementing comprehensive aviation reforms in Saudi Arabia to help fuel the Kingdom's air transport growth, innovation and passenger service levels. Mark Pilling takes a closer look.

SAUDI: THE SHAPE OF WINGS TO COME

ollowing an extensive consultation process with aviation sector stakeholders, GACA announced in October sweeping new rules that will "unleash" the Kingdom's aviation sector.

"GACA's transformation of Saudi Arabia's aviation economic regulations will drive further investment, growth, and performance across the aviation sector," said His Excellency Abdulaziz Al-Duailei, GACA president.

"The regulations will enable the realisation of the Saudi Aviation Strategy, which is mobilising \$100bn in investment from public and private sector sources by 2030."

"The regulations create an open, dynamic and competitive market, setting a level playing field for global operators and investors in the Kingdom. These changes will create more competition, choice and value for passengers and consumers," explained Al-Duailei.

GACA serves two main functions that shape the air transport market in the Kingdom, providing strategic oversight of the Saudi Aviation Strategy and through GACA's core role as an aviation regulator, which was aided in 2020 with the separation of its mandate from airport system operator to strategic regulator.

"These changes will reduce the cost of doing business in the air transport sector," said Awad Al Sulami, executive

vice president for economic policies and logistics services at GACA. "The regulations will benefit the airline industry, His Excellency Abdulaziz Al-Duailei achieving greater "The regulations create transparency and an open, dynamic and predictability in licensing competitive market." processes and in economic conditions such as through a new airport pricing regime.

IMAGE: GACA

"The aim of GACA's reforms on air transport more broadly are to encourage more market entrants who can meet the unprecedented demand in the Kingdom, by relaxing certain economic policy requirements and processes to reduce the operational costs of airlines," he explained.

GACA has also reformed the rules on market entrant requirements for airports, said Al Sulami. "Qualifying rules for airport operators have been expanded to support the privatisation of the Kingdom's airports," he explained.

Airports will be enabled to propose charges in line with the new economic regulations and will have more flexibility to diversify revenues by growing non-aeronautical revenues.

These changes provide the regulatory building blocks to enables the Kingdom's broader airport privatisation agenda, which is being led by the National Center for Privatisation.

There are changes in the air cargo sector too. "The Saudi Aviation Strategy is enabling the Kingdom to grow its transit air cargo share of the regional market to 25 per cent, capitalising on Saudi Arabia's strategic location connecting three continents and its position as a major cargo market," said Al Sulami.

Currently, Saudi Arabia only captures 33 per cent of its total demand for air cargo goods and only seven per cent of the total Middle East air cargo transit market. Air freight will grow more than five-fold from 0.8 million tons today to 4.5 million tons by

Freight capacity is being supported by an increase in warehouse capacity to six million tons, and the launch of free zones with globally-competitive incentives, including the launch of Riyadh Integrated in 2022. The strategy is bringing leading international logistics providers and multinational corporations to the Kingdom.

The rule changes "will provide a robust and comprehensive regulatory infrastructure for commercial relationships that support ground handling and cargo services, by introducing service level agreements between airports and service providers, including minimum operational performance and quality KPIs,"

GACA has adopted a 'general freedom of access' principle on airport operators for regulated ground handling and air cargo services. This means all of the Kingdom's airports are open for licensed service providers.

"We are already seeing significant interest from international operators and investors, and we expect a significant increase in competition within air cargo and ground services as the regulations are adopted that will support further growth in this sector," noted Al Sulami.

Finally, this year the regulator introduced a reform strengthening passenger rights, elevating the Kingdom's regulatory regime to be the most comprehensive in the region, said GACA.

The raft of reforms will be phased in over 18 months, and the regulations will be supported by an implementation plan communicated by GACA to sector operators, said Al Sulami. GROWTH

Etihad Airways anticipates growth in both its fleet and network over coming years as CEO Antonoaldo Neves plots a new course for the UAE's national carrier. **Alan Dron** investigates.

PLANE SPEAKING

What kills is to have too many planes. I've never seen an airline fail because they didn't order planes.

ANTONOALDO NEVES

s airline competition in the Middle East hots up, with new and existing Saudi carriers increasingly seeking to challenge the Gulf 'Big Three', Etihad's CEO is bringing in major changes at the Abu Dhabi-based carrier.

After 15 years of expansion and an unsuccessful attempt by a former CEO to establish a network of partner airlines that led to huge losses, Neves' immediate predecessor Tony Douglas slowly rebuilt the airline's balance sheet by shrinking it into what he described as a 'medium-sized, full-service carrier'.

Neves has reversed that course and is once again aiming for growth.

While he said it would be wrong to comment on his predecessor's policy, he noted that Etihad's first 15 years was strongly growth-oriented.

"We had five years of restructuring. It's very hard to be restructuring and at the same time to be discussing growth. We still have the same shareholder [Abu Dhabi sovereign wealth fund ADQ], so it's part of the same journey," Neves said.

Under the new plan, Etihad's fleet and route network will expand.

At present, the airline has around 80 aircraft. Under its Vision 2030 plan, that number could double. Exact numbers remain confidential, but around 30 aircraft will arrive over the next three years

And although the airline is thought of as primarily a long-haul carrier, it is often forgotten that it has a fleet of 23 Airbus A320s for regional and medium-haul routes. These, admitted Neves during an interview at the Dubai Air Show, are now decidedly elderly.

The airline has around 40 Airbus A321neos on order that will start to arrive from Q1 2025, although it has been suggested that some may be allocated to Air Arabia Abu Dhabi, Etihad's joint venture with low-cost carrier Air Arabia.

However, Neves is clear that he has no intention of expanding too quickly, or too far: "In my experience, what kills is to have too many planes. I've never seen an airline fail because they didn't order planes. I've maybe seen the loss of opportunity here and there [but] airlines fail



because of ordering too many. That's why lessors exist. You can source aeroplanes when demand comes.

"We lease every now and then. We like to keep a balance between owned and leased aircraft – 40:60 or 60:40. I don't like to be too rigid," he said.

Expanding the network is the airline's greatest priority at present. "We're trying to add around 10 destinations a year for the next seven years and get to 120 or 140 in the long term."

This is one of the reasons behind bringing back four of the airline's fleet of 10 Airbus A380s, which were mothballed during the pandemic. However, each of the high-capacity A380s that is operated on the Abu Dhabi-London Heathrow sector releases two Boeing 787s that can be used to open up new routes elsewhere. New destinations for 2024 will include Boston and Nairobi

Simultaneously, Etihad is planning to strengthen its existing network. "We're going double-daily to all destinations in Europe, like Frankfurt, Milan and Rome. We're doing the same in southeast Asia." Neves said.

Short-haul services to India and the Middle

East will also grow: at the start of January, for example, Etihad added Kozhikode and Thiruvananthapuram in southern India to its route map, taking its destinations in that country to 10.

"I'm a strong believer that an airline has to have a strong network. The first product the customer buys is the network – the schedule, the fleet and where you're going to. Our plan is to grow 10-11 per cent compound over the next seven years. If you can do that in a steady way, we believe we can deliver great results."

In January, Neves told WAM, the UAE national news agency, that Etihad's passenger numbers would rise from 13 million in 2023 to 18 million by the end of 2025, the same as in 2017, when it operated 110 aircraft. (Immediately before the pandemic hit, in 2019, the company carried 17 million, as it scaled down.) The long-term plan is to reach around 30 million.

These numbers mean that the newly-opened (and much-delayed) midfield terminal at Abu Dhabi International Airport will be badly needed.

"Midfield brings three very important aspects. Firstly, the customer experience – it's designed in a way that it doesn't feel that large, but at the same time, it's roomy, it's luxurious," he said.

Secondly, the new terminal will be significantly more efficient. The irritation of being bussed to and from aircraft will be consigned to the past, as all aircraft will be able to use airbridges. That will reduce minimum connecting times by 10 to 15 minutes – a useful operational improvement.

"Thirdly, the old terminal handles around 27 million passengers a year and it's at capacity. The new terminal will be 45 million. If we're going to triple our numbers to 33 million, and double our fleet over the next seven years, we're going to need that terminal."

This expansion means Etihad will have to find many new personnel.

"We're fortunate; Abu Dhabi's ability to attract people is amazing. We can hire people in South East Asia, Europe, Africa. Very few airlines have that benefit, to have a value proposition that speaks to those geographies. This year, we hired 1,500 people. Next year, we'll hire at least 1,000, including around 200 pilots."

The planned doubling of the fleet means there will be plenty of opportunities for new aircrew to progress: "We're in that sweet spot where I can tell every co-pilot that joins today that in seven years you're going to become a captain."

Etihad has previously emulated Emirates and Qatar Airways by following the super-connector

model, switching aircraft in Abu Dhabi. Neves is changing this.

"I don't believe in the super-connector model. I don't believe in a model that's based only on connections, or a model for long-haul that's based on point-to-point flying. I don't think it's one or the other.

"I think sometimes we try to put airlines into boxes – economy, premium etc. We have so many segments that we want to address."

Etihad faces tough competition in attracting passengers. Emirates and Qatar Airways are well-known for their standards of in-flight service, while Saudia has noticeably upped its game in this respect in recent years. And the new Riyadh Air, which is scheduled to take off in Q2 2025 and is run by Neves' predecessor, has said that it intends to surpass those standards.

Etihad is already improving its inflight product to compete: "We've invested a lot in the past six months in our Wi-Fi. I was on a video conference on one of our flights for four to five hours with no problem. "It's still not where we want it to be [but] there's a new-generation solution that's coming.

"We've also improved our catering. We're one

of the few carriers serving hot meals to many destinations from the GCC. Our net promoter score" – an internationally-recognised measure of passenger satisfaction – "went up [in summer 2023] by seven points compared with last year."

"If we get economy right, we're going to do business eve<u>n better."</u>

Etihad, of course, is famous for having introduced "The Residence", an onboard suite with separate sitting and sleeping areas, together with an en-suite shower.

However, Neves is adamant that the same attention to quality has to be given to customers at the 'back of the bus'.

"We have to focus on all cabins. I can't lose one passenger to the competition," he said.

"When I go and see the product, the first thing I look at is economy. I tell people, 'If we get economy right, we're going to do business even better.' That's where we're going to win the game. Be more efficient than other airlines in the region and, at the same time, deliver the best customer conside."

An indication of how seriously Neves takes this can be seen from the fact that every Thursday at 9am he has a two-hour guest committee meeting – the only two-hour slot in his calendar: "I spend those two hours reviewing every detail of our guest experience. I know every detail by heart," he said.

12 13

GROWTH

Air Arabia's consistent growth story is continuing as it builds up its main Sharjah hub, expands at its other bases, and increases its fleet. **Mark Pilling** reports.

Air Arabia Sharjahs ahead



Air Arabia and its CEO Adel Ali showed off one of its Airbus A321LR single-aisle aircraft at the Dubai Airshow.

del Ali may have just put pen to paper on one of his airline's largest ever deals, committing to 240 CFM International Leap-1A engines to power its existing order for 120 Airbus A320neo family aircraft, but the chief executive of Air Arabia is calmness personified.

The interview with *Arabian Aerospace* took place in the gleaming 215-seat cabin of Air Arabia's latest A321neo, a cool sanctuary away from the crowds and heat of the flightline during November's Dubai Airshow.

The new A320neos, consisting of 73 A320neos, 27 A321neos and 20 A321XLRs, will begin arriving in the second half of 2025, explained Ali. They will take Air Arabia's fleet total well beyond 100 aircraft. At the end of 2023 it was operating 71 A320s and A321s.

The new aircraft's fuselage was sporting a special emblem celebrating the airline's two decades of existence. The carrier first took to the air in October 2003 with an A320 service from its Sharjah International Airport base to Bahrain.

Its new A320neos will be delivered at a pace perfectly in tune with Air Arabia's steady, but deliberately unspectacular strategy with a focus on profitable growth. For instance, over its 20-year history the Middle East's first

ever low-cost carrier has only averaged adding just three-to-four aircraft a year to its fleet.

Over the years, it has branched out from its Sharjah roots, but this city, with a population of about two million is the third largest in the UAE after Abu Dhabi and Dubai and "still represents more than 60 per cent of our overall operation," said Ali.

In the UAE market, Air Arabia is happy with its bases at Sharjah, Abu Dhabi, and Ras Al Khaimah, and it makes "no sense" to look at another UAE base.

"With those three I think it's sufficient," said Ali. "The distance of travelling is not far so there is no point. It you want to get anywhere to fly Air Arabia [in the UAE] it's probably a 45-minute drive, maximum, between these airports."

And Sharjah has a role as Air Arabia adds bases. "It has the infrastructure to support all our other hubs," said Ali. "We built it over the last 20 years [with that in mind] so that it becomes much more user-friendly and with technology to support every hub that we have."

In its first year of operation Air Arabia transported 200,000 people through Sharjah, a number that mushroomed to 10 million a year by the end of 2023, said Ali. And there is room for more growth, a fact recognised by HH Sheikh Dr Sultan bin Mohammed Al Qasimi, supreme council member and ruler of Sharjah, who approved a project to expand Sharjah's congested airport in June 2023.

According to Ali, this capacity is needed with Sharjah's capacity being increased to 22 million by 2025-26. The airport has a design capacity of eight million passengers.

In 2024, Air Arabia will take seven Airbus 320s to bolster its 45-aircraft strong Sharjah operation, said Ali. Outside of the UAE, its second base to be launched was in Morocco, where it bases nine A320s, topped up with another four-five units in the peak summer months. "In 2024 we are going to put at least three additional aeroplanes there," said Ali.

Its Egypt base has four aircraft. "The plan is now that [Egypt's] currency model is stable we hope to put more aircraft in Egypt in 2024 as well," he added. All its other bases, such as Abu Dhabi, Ras Al Khaimah, and in Pakistan, will receive more A320s in 2024, with only its operation in Armenia staying static at two aircraft until the political situation there is clearer.

Ali views the air transport transformation under way in Saudi Arabia as extremely positive and there could be an opportunity to establish an airline there, but not now.

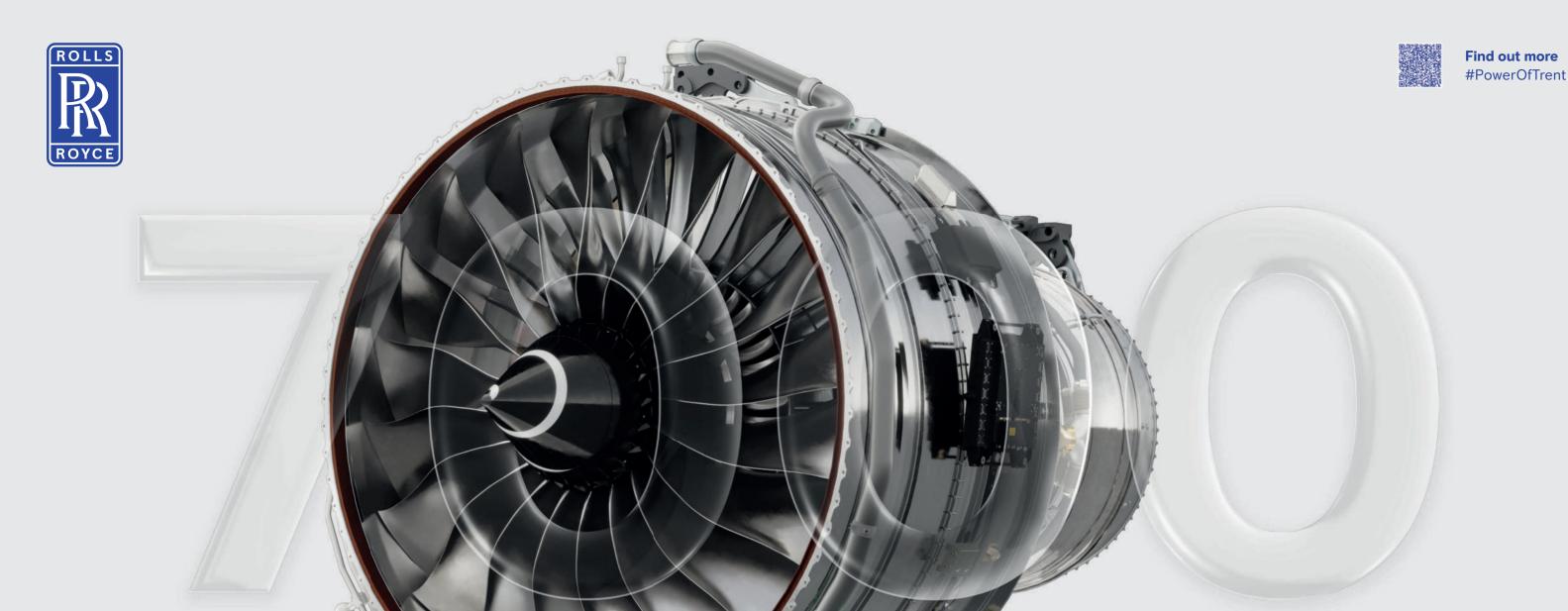
"At the moment, with all the airlines that they are announcing and putting in place, for us it is good to fly to and from Saudi, but we don't feel there is a route to go and set up a hub," explained Ali. "I think what is important is that we don't rush in too many places. And not every opportunity that comes along do you want to pick up because then you lose focus. It is important to really wait and see what is worth doing."



AJW Group is the world-leading independent component parts, repair, lease, engine, flight hour programme, and supply chain solutions integrator, transforming efficiency in commercial, business and defence aviation.

With hubs and offices on every continent - including AJW Technique, a state-of-the-art component MRO facility in Montreal - nose to tail, we have you covered.

ajw-group.com



TRENT 7000

KEEPING COOL UNDER PRESSURE

Our Durability Enhancement package more than **DOUBLES** engine time on wing.

At the heart of the package is a re-engineered High Pressure Turbine Blade incorporating the very latest in advanced blade cooling design.

This is already proving itself in service by enabling the highest engine efficiency and delivering improved durability for our customers.



FLEET DEVELOPMENT

Orders for a renewed and updated fleet are under way as Royal Jordanian seeks to navigate the increasingly difficult geopolitical environment in the region. Alan Dron investigates.

Royal Jordanian's turbulent refleet plan

R oyal Jordanian has never had an easy time in business. Geopolitics have frequently intervened to make the airline's operating environment more difficult than that of rivals. And it finds itself in competition not only with Arab airlines with some of the world's highest standards of inflight service, but also, increasingly, with low-cost carriers.

The airline's CEO is continuing his policy of building a route network in the Levant region, feeding passengers in and out of the airline's Amman hub. The Levant—comprising Iraq, Israel, Jordan, Lebanon and Syria—contains around 100 million people, a good catchment

To improve its offering, Royal Jordanian has an extensive re-fleeting programme under way, with the aim of expanding from its current total of just under 30 aircraft to around 45 over the next few years. "For every two aircraft that come in, one will go out," said CEO Samer Majali.

The airline, which was one of the first to operate the Boeing 787 and has seven 787-8s in its fleet, signed an order at last November's

Dubai air show for six, larger 787-9s. These should start to arrive in O2 2025.

It also intends to upgrade the earlier 787-8s, including installing wi-fi (an option not available when it originally purchased them) and bringing them up to the same standard as the new 787-9s. The refurbishment will cost between \$8-10 million per aircraft, Majali said, "because we want to keep them until 2030".

In the mid-market bracket. Airbus A320neos and A321neos will replace A320ceos, although this process is not going smoothly. The delivery

delays that have hit so many airlines have also affected Royal Jordanian. "Unfortunately, Airbus has not done a great job," he said. "We should have started getting deliveries in May 2024, and they've been delayed until November 2024. So, we're very disappointed with Airbus for that."



Samer Maiali: He plans to introduce two new aircraft for every older one leaving the fleet.

If there are no further delays, the first three should arrive by the end of this year, hopefully followed by a further 12 in 2025.

Majali says the airline's route map means that it will not have to opt for the longer-range A321LRs or XLRs. However. two of the A321neos will have an extra fuel tank added "just in case we have missions beyond eight hours."

Royal Jordanian is considering putting its new-generation Airbuses, with their improved operating economics, on Indian routes; in the past the airline had

to use its 787s "and that was a bit too much". Meanwhile, for short-haul services, eight Embraer E2s – four E190s and four 195s – will replace four older-generation E170s and E190s. The airline is considering adding a further two E2s to that total.

Given Royal Jordanian's relatively small fleet,

operating a third type is an added complication, Majali accepted.

However, the smaller Embraer is cheaper to operate on a trip-mile basis. This means that "the upside is the ability to raise frequencies.

"For example, [from Amman] to Erbil, instead of four flights a week with the A320, I can fly daily with the E190. That's a big product advantage for us.

"This aircraft also allows us to test new routes...with the cheapest aircraft available." And, although relatively small, the Embraers can fly into Europe.

Europe is the source of some of Royal Jordanian's most profitable routes and the carrier intends to improve its European options by operating some all-economy class aircraft there, to stimulate the important inbound Jordanian tourism market.

Jordan has a 400km border with Israel and the Palestinian territories, he noted, but explained that even as Jordan is stable, due to the country's proximity to the Gaza conflict, people associate conflict with the area.

The outbreak of the fighting saw an immediate drop of up to 15 per cent in reservations, particularly from European tour

He compared the situation to the United States, where mass shootings are an increasingly common problem. "If something happens in a shopping mall in Maine, does that mean that you shouldn't visit anywhere in the US?"



Inside story: The re-fleeting plan also includes refurbishing the cabins of Royal Jordanian's existing Boeing 787-8s, to keep them viable until the end of the decade. PICTURE: ROYAL JORDANIAN

Abdelhamid Addou: Preparing for a huge fleet royal air maroc expansion IMAGE: BILLYPIX Inset: At present, the bulk of RAM's narrowbody fleet consists of Boeing 737-800s. IMAGE: AL AN DRO

Maior new aircraft orders, a growing route network and the expansion of its home hub are all on Royal Air Maroc's horizon as it enters the new year.

Alan Dron reports.

his year will see the start of Royal Air Maroc's (RAM) plans for a huge expansion of its fleet, with a request for proposals (RFP) to manufacturers being issued in the first quarter of 2024.

The RFP has been slightly delayed – last October, RAM chairman and CEO Abdelhamid Addou said it would appear

by the end of 2023 – but the North African carrier is determined to become a major player, not just regionally but globally, by expanding its fleet from around 50 aircraft to 200 by late next decade. Boeing provides most of RAM's current fleet, notably the 737-800, of which the airline operates 28.

RAM READIES TO BOOST FLEET NUMBERS These are now approaching middle age, having

been acquired between 11 and 15 years ago. The first MAX 8s are starting to appear, to supplement the previous-generation models.

The airline's widebody fleet is younger and dominated by the 787, of which RAM has nine in service. In November, the airline revealed that it had bought two more examples - 787-9s from Boeing. The US manufacturer had previously listed the aircraft as having been acquired by an unidentified purchaser.

The remainder of the current fleet is made up of a single 767 freighter, four Embraer E190s, six ATR 72-600 turboprops and two Beech 100 King Airs.

Even before the new, major orders are placed, what Addou described as two smaller 'bridge' contracts are in the works for 12 further 737s four MAXs, four pre-owned 737NGs, and four further 737NGs with densified interiors for dedicated tourism routes. These aircraft will be brought in over the next couple of years to provide additional capacity. The airline is also looking at buying three or four dedicated freighters.

Increasing inbound tourism to Morocco is one

major factor behind the planned huge increase in

Another is an ongoing increase in trade within the African continent. "For the past 25 years, our king has had a very strong strategic development [plan] to develop South partnerships, with more than 1,000 deals signed," Addou said.

As part of that growth in intra-African trade, state-owned RAM is planning to expand its presence in the continent. It already flies to 40 of Africa's 53 countries, but now it aims to fill in the white spaces on its route map.

Given Morocco's history as a French possession, it had been "very natural" for RAM to first expand into fellow French-speaking nations, the CEO said. "Now, we need to go to English-speaking countries." The airline is particularly looking at southern and east Africa. where English is the lingua franca.

RAM is again considering flights into the Kenyan capital, Nairobi, having served it,

unsuccessfully, in the past. It is also considering Zimbabwe, Namibia and Mozambique.

To help fulfil this extended network, as well as making Morocco a hub for transit traffic in and out of the continent, RAM's home base, Casablanca's Mohammed V International Airport, will need to grow. With this in mind, "We're planning a new tender, to build a new terminal and taxiway, to be ready by 2028." This will double the airport's capacity to 28 million passengers a year.

"We believe Casablanca can become one of the major hubs in the region. We're already a hub, but a regional hub. We have a very strategic geographic location." Casablanca's position makes it well-placed to tap in to traffic flows to and from Europe and the US, he said.

A strengthened hub would also allow RAM to play a greater role in the Oneworld airline alliance, which it joined in 2020. "We have a strategic, revenue-sharing partnership with Qatar Airways and Oneworld is working very well.

"When you're a mid-sized airline like us. having big partners like British Airways, Iberia and Qatar Airways is going to lift us up."

18 19



PROCUREMENT



Egypt's national airline is prepared to trade off the complexities of a disparate fleet in order not to find itself suffering the engine reliability problems that have hit many other airlines.

Alan Dron reports.

EgyptAir is prepared to accept the disadvantages of a heterogenous fleet, to help hedge against the engine problems being experienced by several newgeneration aircraft types, the airline's chairman said.

EgyptAir Holdings chairman and CEO Yehia Zakaria made the comments after the airline announced two aircraft deals at last November's Dubai airshow – one for 18 leased Boeing 737 MAX 8s and the second for the purchase of 10 Airbus A350-900s.

Announcing the Airbus order, Zakaria said that the A350-900s will be delivered between 2025-2027. They will be powered by Rolls-Royce Trent engines.

The internal configuration has not been detailed, but the new twinjets will carry 340 passengers – the A350 can typically carry between 300-410 passengers, depending on model and cabin layout. Zakaria said the new aircraft would be used on long-haul sectors, including Shanghai and Los Angeles.

They will be funded from the company's internal resources and are likely to augment, then eventually replace, the airline's current Boeing 777-30 flagships.

The 737 MAX 8s, meanwhile, will be acquired from US-based Air Lease Corporation, with deliveries from early 2025 and through 2026. The MAX 8's longer range, compared with the 737-800s that make up the bulk of the airline's short-haul fleet, will enable them to fly further into Europe and Africa, allowing the company to open new routes with lower costs than using widebody equipment.

The new Airbuses and Boeings will be used to increase the fleet rather than replace existing aircraft, as the company seeks to scale up from its current 80-plus aircraft to 125 by 2028.

However, this means that the Egyptian national carrier will have an even more varied fleet, including Boeing 777s and 787s, earlier -800 variants of the 737 and Airbus A220s, A320/321s and A330s.

Asked if the company was not facing the complexities of

an increasingly fragmented line-up, Zakaria said: "Of course, but we like diversity of aircraft. We don't like to put all our eggs in one basket."

Both the CFM International LEAP and the Pratt & Whitney GTF families of new-generation turbofans have experienced significant problems in recent years, with unexpectedly poor durability – particularly in hot, dusty conditions – and, in some cases, risks of component failure.

These have led to much more frequent engine inspection regimes and shop visits, creating major scheduling problems for some carriers.

This situation has been a factor in EgyptAir holding back from disposing of some of its older aircraft, such as Airbus A330-200s and -300s and Boeing 737-800s. The latter type, for example, uses the CFM56-7B, which Zakaria praised as a very reliable powerplant. For similar reasons, "We will keep the A330" – with its previous generation engines – "for as long as we can."

Every cloud has a silver lining and problems with newergeneration engines may provide a windfall for the company's long-established engineering arm, which handles considerable amounts of third-party work. Among airlines that send their engines for overhaul and repair are Turkish, RwandAir, Saudia, Flynas and TAP Portuguese, Zakaria noted.

The larger fleet is required to enable EgyptAir to increase its route network. It flies to around 70 destinations at present but plans to increase this to around 100 over the next four years.

A tourist typically "doesn't care about the type of aircraft [he's flying on], he just cares about whether it's clean and the seats are good and the IFE works." Most passengers are not clamouring to be on the latest-generation aircraft, he said. "But if they find that the seats or something else are in bad condition, they won't come back."

Tourism is a significant component of Egypt's economy, with 18 million visitors predicted to arrive in the country this year and EgyptAir plans to increase the percentage of those visitors using its flights.





NORTHROP GRUMMAN

ARABIAN AEROSPACE

Arabian World Events

Armed with a new leader, plans for more regional services and the introduction of cargo aircraft, Nile Air is seeking its niche in a tightly-regulated market. **Mark Pilling** investigates.

Bypt's Nile Air is hoping it will be granted more traffic rights to continue its post-pandemic recovery, explained its newly-appointed chief executive, Richard Tan, to *Arabian Aerospace* at the 56th Arab Air Carriers' Organisation in Riyadh in late October.

The Nile Air role is Tan's first as an airline CEO. The Singaporean is an aviation veteran with a CV that has seen him hold a variety of C-suite positions in aviation at businesses as diverse as Emirates In-flight catering, Hong Kong Airlines, SATS and Singapore Airlines.

He arrived in September 2023 at Nile Air with the carrier engaged with Egypt's CAA about gaining more route rights, especially to European destinations, which is not an easy task, and one that the airline has been grappling with for years.

"We have given them our [route] wish list and explained why it will be good for Egypt to allow us to grow," said Tan, including the all-important feat of bringing visitors and foreign currency to the country. The hope is that new rights will be granted for fresh destinations to be served in 2024.

The carrier may be the country's largest private airline, but it is a small player carrying just 110,000 passengers a month on its fleet of four leased Airbus A320ceos and two A321ceos. This enables it to capture a tiny three per cent share of the country's passenger market, said Tan. The point is that Nile Air is hardly a threat to flag carrier EgyptAir.

Nile Air has gradually built up a modest scheduled network, with just two routes to Europe. A service from Cairo to Stockholm began in early 2022 while a connection to Cologne in Germany started in October 2023. Both are served twice weekly.

The carrier's most extensive scheduled network is from Cairo to Saudi Arabia, where it operates to 12 cities and generates around 30 per cent of its traffic, said Tan. This is mostly origin and destination traffic today, but the addition of European services is aimed at developing a connecting product to the Kingdom.

Nile Air is also targeting routes to north and east Africa, as well as central Asia, said Tan.

The airline began operating in 2011, but has found consistent growth difficult operating a limited scheduled network due to the difficulty of gaining traffic rights and facing setbacks such as currency devaluations in Egypt and the impact of the pandemic.

Tan was appointed in August by
Nile Air's majority shareholder and
prominent Saudi businessman Dr Nasser
Al Tayyar with a mission to revive the carrier
following tough times of the pandemic.

With scheduled routes tough to launch, Nile Air has diversified into leisure operations

MEET MR NICHE GUY

working with the large European tour firms and is looking to acquire two Airbus A320 PTF aircraft to develop shorthaul air cargo activities, said Tan.

The airline is scouring the lease market to find the A320PTFs to arrive in H1 2024 in addition to another two passenger A320s in the second half of 2024, he said.

Nile Air is aiming to carry 1.4 million passengers in 2023, said Tan, with traffic mainly unaffected to date by the war between Israel and Hamas. The main impact so far has been a reduction in bookings from European leisure customers.

"I have been brought in to bring stability and confidence back to the airline. We were battered by the pandemic and are now in a rebuilding situation," he said.

"As a non-Egyptian leading the transformation of the company, my management style and approach is to build trust and focus on teamwork rather than individual efforts," explained Tan.

"As is often the case, many organisations rely on individuals' responsibilities to achieve their goals, but in many cases the lack of accountability makes the difference between a good and an excellent outcome," he added. "So, I try to instil a culture of accountability while also encouraging the development of critical-thinking skills."

Financially the airline is recovering, and it returned to the black in 2023 despite the impact of high fuel prices, said Tan.

If Nile Air is successful in gaining traffic rights the plan is to increase its fleet up to 10 aircraft by 2027.

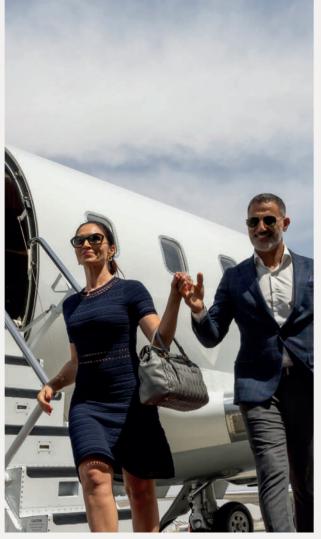
I have been brought in to bring stability and confidence back to the airline. ▲

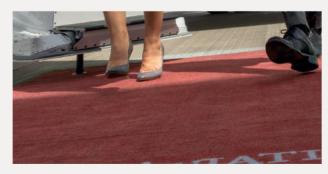
RICHARD TAN

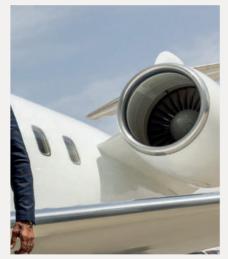


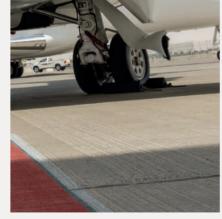












An Unrivalled Aircraft Management Service...

Is proudly offered by DC Aviation Al-Futtaim

Operational in Dubai since 2013, we have been a consistent centre of excellence for quality business aviation operations in the Middle East.

Managed by a senior team of business aviation executives, DC Aviation

Al-Futtaim operates and manages aircraft, providing an exceptional range of capability, performance, and the satisfaction that comes with unmatched levels of customer service.

Get in touch with our team today to experience our passion for excellence.



ROUND-UP

Air Cairo is planning a significant increase in its African network, as it aims to more than triple the size of its fleet over the next decade. Alan Dron reports.

FLEET GROWTH KEY TO CAIRO'S AMBITIONS

gyptian hybrid carrier Air Cairo has opened three new African destinations since December and is actively planning more in the next few years.

"Africa is new for us." assistant commercial director. revenue and pricing, Ahmed Aziz said. Air Cairo began services to Dakar (Senegal) and Ouagadougou (Burkina Faso) last December, together with Tangiers (Morocco) in January this year. The airline is also actively looking at beginning services to Tanzania.

In 2021, Air Cairo flew just

six aircraft. By the end of 2023 that number had ballooned to 22 Airbus A320s (nine ceos and 13 neos), three Embraer E190 regional jets, plus six ATR 72 turboprops. Three more A320neos are due to arrive this 2024.

The fleet growth will enable the Cairo-based carrier to rapidly ramp up its ambitions. After saying early in 2023 that it planned to reach 60 aircraft by 2027, it went further at last November's World Travel Market in London and said that it now aims to have 110 aircraft by 2032.



Air Cairo operates around 300 domestic flights a week to destinations including Luxor, Aswan, Hurghada and Sharm El Sheikh, using its ATRs, while the Embraers are used for shorthaul international services around the Middle East and to Europe. The A320s undertake longer sectors, notably into Europe.

"We're going to build our network to connect from Europe, to the Middle East, to Africa, not only for tourists but for VFR [Visiting Friends and Relatives]," Aziz said.

Air Cairo also plans to increase its links to Saudi Arabia, with one particular target sector being pilgrims traveling to the kingdom to perform haj and umrah.

The conflict in Gaza has had an adverse effect on Air Cairo.

"Definitely it has affected us," said Aziz. "It has affected Egypt as a destination."

Air Cairo is keen to emphasise that Egypt remains stable, despite the proximity of the Hamas-Israel conflict.

LIBYA'S FIRST PRIVATE AIRLINE CATCHES THE AIRBUS

Libya's Buraq Air has acquired its first Airbus A320 as it seeks to expand its services within and from the strife-wracked North African nation

Until recently the airline, which is based at Mitiga, outside the capital, Tripoli, has been a long-time Boeing 737 operator, having flown early -200 models in the early part of the century and now operating single examples of the 737-400 and -800.

However, the company has now picked up an 11year-old model, previously mainly employed in the Far East, from a leasing company. According to Flightradar 24 data, the aircraft underwent predelivery maintenance at East Midlands Airport in the UK and was then ferried to Istanbul Atatürk Airport in Türkiye in September prior to being re-registered in Libya ahead of delivery to Libya in October.

Burag Air – Its name comes from the burag, a creature on which the prophet Mohammad is believed to have flown from Mecca to Jerusalem lays claim to being the first privately-owned Libyan airline, established in November 2000, with its initial services connecting the country's oilfields to its major cities.



Boeing 737-800

International services followed, with its initial route being to Istanbul, followed by the development of a more comprehensive domestic network encompassing Labrag, Tobruk and Sebha. Aleppo in Syria and Rabat in Morocco followed.

Several variants of the 737 were acquired for these services and the company has been a faithful user of the US narrowbody since then, which makes the arrival of the new A320 more surprising, given the increased costs that will accrue from operating a single aircraft of a different type, with its different operating and maintenance requirements.

Burag Air currently flies a small international

scheduled network, notably to Istanbul, together with additional charter services to destinations such as Alexandria and Tunis.

Recent tasks have included repatriating Bangladeshi migrants who had illegally entered Libya and had been detained before being returned to their homeland.

It has also undertaken flights in support of Canada-based helicopter operator CHC, which provides rotor-wing flights for oil companies.

Multiple attempts to contact the airline for more information on its new fleet addition went

Airlines, take control of your digital onboard experience





AERENA Experience Studio

Up until now the maintenance of the passenger experience has been a slow and cumbersome process. Updating content takes months, even years. This results in high costs for girlines. But now new developments await the industry. The expectations of the passengers are changing. Cabin innovations are taking up speed. The meaning of cabin digitalisation and how it can be leveraged to the airlines' advantage are being rethought. **AERQ** shows its expertise in cabin digitalisation with its modular and open IT platform AERENA. AERENA offers the passengers the seamless and personalised digital experience onboard they

A digitised cabin is the baseline for an impactful passenger experience. Yet what the passenger perceives as a digitised cabin is only a small part. The real digitalisation process goes on in the infrastructure hidden beneath. A forerunner in this field is AERQ with AERENA Experience Studio.

Update vour media

New media content supply chain standards shorten content processing from 60 to 90 days to less than a week. Combined with advanced analytics capabilities from AERENA Experience Studio, it allows an overall pro-active digital experience management and media content curation. All based on the latest media consumption data. Airlines can thus provide passengers with the most engaging media content selection.

Customise your UI

AERENA Experience Studio introduces the concept of dayto-day UI configuration. Airlines can now design their user interface flexibly. Together with their content service providers, airlines can also easily manage and prioritise content types for passenger groups. This enables the creation of just-in-time content collections. Airlines can also manage the order of displaying content and UI customisation for branding purposes.

Manage your apps

AERQ takes a new approach to app integration based on cloud solutions, automated processes, and virtual environments. Making it possible to deploy apps to the aircraft in a much faster and cost-saving way than before. Apps can now be deployed within days instead of months so that airlines have the control over the digitised cabin at their fingertips. AERENA Experience Studio presents an end-to-end process from development to deployment. Apps can be requested, customised, and deployed exactly to fit airlines' requests and needs. Airlines gain a maximum of **flexibility and acceleration** in the app integration process. This allows them to constantly adapt the digital onboard offerings to their passengers' needs.

All it takes AERENA Experience Studio allows airlines to design their choice of media content,

user interface, and applications in the independent and flexible way. One login only makes it possible to adjust

individual aircraft to entire fleets at the push of a button. With AERENA Experience Studio airlines gain freedom and flexibility to create their own unique digital onboard experience. At the same time, they keep complete, intuitive, and agile control over this experience. All it takes is days. All it takes is AERENA.



Meet us at AIME 2024 | Dubai | 05 - 06 March | Booth 631



THE SPECIAL OPERATIONS FORCES

EXHIBITION & CONFERENCE

NETWORKING FOR GLOBAL SECURITY

2-5 SEPTEMBER, 2024
AQABA INTERNATIONAL EXHIBITION
CONVENTION CENTRE AQABA, JORDAN



DEFENCE A

SHOW PREVIEW

As the defence world heads to Riyadh for the World Defense Show (WDS) Alan Peaford talks to the show's organisers about what lies in store.

The purpose-built site outside Riyadh has expanded to meet the growth for this month's sell-out second edition of the World Defense Show. MAGE: WDS

The purpose-built site outside Riyadh has expanded to meet the growth for this month's sell-out second edition of the World Defense Show. MAGE: WDS

WDS ON TOP OF THE WORLD

ven the most optimistic of Saudi Arabia's strategists must be stunned by the incredible rise of the ambitious World Defense Show (WDS), which takes place outside Riyadh on February 4-8.

Although its very name suggested where those ambitions lay, the unexpected size and attendance of the 2022 debut event has been followed by a total sell-out for the 2024 edition.

It will once again feature all five defence domains with space as a leading attraction at the event.

The show was created by Saudi's General Authority of Military Industries (GAMI) as a platform for discussion and partnership to help the country move towards its vision 2030 goal of localisation and 50 per cent of all defence spending.

Chief executive of WDS, Andrew Pearcey, is unfazed by the industry's response to the show, noting that the show's positioning, alongside the Kingdom's Vision 2030 for aerospace and defence, is appealing to business not just in the region, but further afield.

"One of our core challenges is to really position as one of the leaders in technology, and showcase the latest in technology," Pearcey said.

"We have a strap line of 'Equipped for Tomorrow,' and one of the new features is the 'future of defence hub'. This hub has a number of companies coming in: The SMEs; the research technology companies; the universities; this is where the new ideas are coming from. It's an area where you'll see everything from research to innovation, and then how that then gets developed.

"Saudi Arabia is an exciting place. And indeed,

some of the companies in the Kingdom itself are there with some great new ideas and inventions," Pearcey said. "I'm really looking forward to seeing those companies pitch their ideas on the stage. And we're bringing the larger prime companies who may make those investments to come and watch those pitches."

A full conference programme will run throughout the show following the Future Defense Leadership Forum, which takes place on the eve of the show, led by HE Ahmad Abdulaziz Al-Ohali, governor of GAMI.

Among the daily events, WDS builds on the huge success of the 2022 International Women in Defense programme, with a great programme spearheaded by HRH Ambassador Reema, the Kingdom's ambassador to the United States. It



■ Saudi Arabia is an exciting place. And indeed, some of the companies in the Kingdom itself are there with some great new ideas and inventions. ▲ ANDREW PEARCEY

will also feature Heidi Grant, vice president of defense global growth and engagement at Boeing Defense, Space and Security (BDS), and a raft of national diversity champions and industry figureheads including Maj. Gen. Adel Al-Balawi, head of Armed Forces Education and Training Authority, KSA.

"Women are a very important part of defence," said WDS chief commercial officer, Amanda Stainer. "We all know that they're running businesses supporting the armed forces. We're delighted that ambassador Rima is coming back. There are some great speakers who will talk about the industry, some of the challenges they had to focus on, but how they now are succeeding and how young women are also coming through in the industry.

The event is truly of global interest, and has seen substantial increases in the size of country pavilions.

"We have seen burgeoning international interest, with increased pavilions from Canada, France, Italy, Nigeria, Portugal, South Korea, Spain, Sudan, and the UAE. The Greek, Chinese, and Indian pavilions have all doubled in size, while the Czech Republic pavilion is 145 per cent bigger." Pearcey said.

Countries who are exhibiting at WDS for the first time, include Bahrain, Denmark, Kuwait, Oman and Turkey. "The global defence landscape is evolving and the growth in the World Defense Show underscores the international focus on the Saudi Arabian market," Pearcey said.

defence A

DUBAI AIRSHOW DUBAI AIRSHOW

As the focus grows on the development of home-grown talent and the building of indigenous defence manufacturing businesses across the Gulf, there can be no greater role-model than UAE's Edge Group, as **Alan Dron** discovers.

THE EDGE OF EVERYTHING – ON LAND, SEA AND AIR

Mansour AlMulla:

"The aim is to have

coordination "between air.

land and sea.".

Dubai's biennial air show is a great barometer for seeing the development of locally-owned business. With a major presence on the show floor the progress of UAE defence group, Edge, was apparent with new partnerships and major orders announced for the young organisation.

"Over the last two years we've been achieving \$5bn of order intake, in terms of opportunities that have been secured," said managing director and CEO of Edge Group, Mansour AlMulla. "We're very proud of this because this creates an incentive to further innovate.

"Our portfolio started with 25 products in 2019 when we consolidated a lot of the defence industry in the UAE. In 2022, that had risen to around 120

products. Today, we're at 159, with around a 50-50 split between products that are in development, or ready for production.

"Our focus continues to be on autonomous solutions, be it air, land or sea – drones, uncrewed surface vessels or uncrewed ground vehicles. Then, there are smart weapons – guided missiles and what have you. We also focus on electronic warfare (EW). We started with zero EW products, today we have more than 10 that are ready to be deployed and around another 10 under development. We've come a long way. We've become a pretty sophisticated player in this industry."

Edge's achievements have been all the more impressive, said AlMulla, as from the start of its existence, it has been competing with global, wellestablished rivals.

Artificial Intelligence (AI) "plays a big role in our plans". Edge is aiming for its Hunter family of drones, for example, to have a swarming capability, with multiple drones 'talking' and coordinating with each other in attack or defence.

The aim is to have coordination "between air, land and sea. That's ultimately where we want to get to"

Edge has a particular interest in Brazil, where it saw from an early stage the possibility of strong partnerships with what AlMulla described as the like-minded mentality of local companies there.

It has taken a 50 per cent shareholding in Brazilian smart weapons and high-tech systems specialist SIATT to cooperate in the development and production of the national surface anti-ship missile (known by its Brazilian acronym MANSUP).

Developed in co-operation with the Brazilian

navy, the initial 70km-range MANSUP will undergo its final trial before the end of the year before production starts.

However, during the November airshow, the partners signed a letter of intent with the Brazilian navy for the sale of the both the original and the extended-range version (200km) of MANSUP, which has been developed to meet the needs of both the Brazilian and UAE navies. The deal, if it proceeds to completion, will be worth \$165 million.

Additionally, Edge says it is currently in advanced discussions with several potential export customers for MANSUP-ER.

The deal is the first to emerge from the cooperation agreement signed by Edge and the

Brazilian Navy at the LAAD defence exhibition in Rio de Janeiro in April this year for the co-development of advanced long-range anti-ship missile technology.

"Edge is continuously pushing the boundaries to become a major market player in high-tech defence systems," said AlMulla.

"Our expanding partnerships in Brazil, particularly with the Brazilian Navy, are enabling us to leverage our experience and expertise to develop advanced defence capabilities and other related technologies across multiple domains. We are confident that the MANSUP-ER system will disrupt the domination held for years by existing incumbent solutions."

In the air, the group has a range of aerial platforms handling tasks such as intelligence, surveillance and

reconnaissance (ISR). It has rapidly moved from concepts to building real platforms that have demonstrated the carriage and dropping of weapons.

That range will be enhanced by Edge's acquisition of significant shareholdings at the end of the year in two companies whose products dovetail with Edge's expertise.

The group has taken a 50 per cent stake in Poland's Flaris, with the aim of converting the European company's high-speed personal jet to an unmanned system, while also taking a majority 52 per cent stake in Switzerland's Anavia, which manufactures VTOL systems.

"Incorporating Flaris' engineering capabilities and a broad range of jets into our ecosystem is a strategic move for Edge that will mark our expansion into jet engine manufacturing and advanced aviation technologies, and add significant value to our high-tech portfolio," AlMulla said.



wo years ago, the UAE had flagged an interest in acquiring 12 trainer aircraft from China for its Al Fursan aerobatic team.

And at November's Dubai show the UAE government formalised a contract with the China National Aero-Technology Import and Export Corporation (CATIC) for 'the purchase of airshow aircraft and its accessories' worth almost half a billion dollars.

When the UAE announced its plan for 12 Hongdu L-15 Falcons, it came barely three months after the 2021 Dubai International Air Show, when one performed in the flying display and another sat in the static surrounded by weapons.

This batch of 12 will replace the Italian-built Leonardo MB 339NATs, currently flying with the UAEAF&AD's Fursan Al Emarat aerobatic team. However, a further 36 are on option to be split equally between advanced flying training and light attack.

This has annoyed both France and the USA, because any further purchase of the Chinese aircraft will need to lead into both the Dassault Mirage 2000 and eventually Rafale, and the Lockheed Martin F-16. Both are concerned over security implications.

In the past, the UAE has purchased the Wing Loong II unmanned combat air vehicle from

Chinese L-15s shake tradition with AL Fursan order

An announcement by the UAE government at the Dubai Air Show in November is sending shock waves through the defence industry as **Alan Warnes** reports.

CATIC (China National Aero-Technology Import & Export Corporation), but never gone so far as buy an actual aircraft.

So why now? The reason appears to be that there were no other options. The Leonardo T346 was side-tracked because a deal fell through in 2009 amid controversy even though the aircraft was selected.

As a result, the competition was between the Aero L-39NG and L-15, but the NG wasn't yet ready for a full evaluation. The L-15 was and participated in evaluation trials, during the lead up to the 2021 Dubai Airshow, when UAE pilots flew the aircraft 'about 30 times' according to one source.

Discussions involving UAEAF&AD commander Major General Ibrahim Nasser Mohammed al-Alawi continued at the event on the type's possible acquisition that led to the selection three months later, and subsequent contract signature.

Initial plans were to have the L-15s in country

for this year's Dubai Air Show, but this is not expected to happen now, and the Fursan Al Emarat aerobatic team will fly with their old MB339NAT mounts, which are now running low on spares. As a result, the seven aircraft that usually make up the team was reduced to five at the Bahrain Show in November 2022.

The team made up of flying instructors from the Al Ain Academy first appeared at a graduation ceremony on January 21, 2010, although their flying routine was restricted. A week later, it made the first official appearance at the annual Al Ain airshow. Over the intervening years, they have attended the Dubai air show and other important displays in the Middle East, and are now venturing to Europe, to fly the UAE flag.

At IDEX in February, a large model of an L-15 was found at the CATIC stand, and upon close scrutiny you could see there were a couple of major changes to the actual aircraft, obviously requested

by the UAE. An air-to-air refuelling probe had been fitted, while there were wide area displays in both cockpits. The latter had been displayed at the CATIC stand at the November 2021 Dubai Air Show, when a CATIC insider spoke about some of the improvements of the L-15 in the training role since the jet appeared at Dubai Airshow in 2017.

"There is now an embedded tactical training system, a mission planning system – where the pilots can load the mission profiles onto the aircraft and then debrief afterwards." He continued: "There is a datalink added so that instructors on the ground can work scenarios with the students while flying the jet in the air, as well as a much-improved head-up display with a wider screen."

The jet's Motor Sich AI-222 engine has suffered supportability issues in the past, but CATIC two years ago thought they had resolved them by looking to Ukraine to replace some parts of the engine supplied by the Russians. It's unclear if the Russia-Ukraine War would have affected that new process, but it is likely.

30 31

INCREDIBLY RIDICULOUSLY UNBELIEVABLY

SIMPLE

WHEELS AND BRAKES
IT'S THAT SIMPLE

TPAEROSPACE.COM

FOCUS ON Cargo MN

he normal optimism of a new year looks positively downbeat compared to the outlook for 2024 in MRO circles. As MRO Middle East and AIME approach, Chuck Grieve sees more than just a hangar-building boom.

A YEAR THAT'S FULL OF MIDDLE EASTERN PROMISE

The forecast that the Middle East MRO market will overtake China's in the next decade, capturing 11.5 per cent of global demand, may have surprised many. It shouldn't have. The writing has been on the wall for some time.

As industry leaders and decisionmakers pack their bags again for Dubai, and what promises to be the biggest edition yet of MRO Middle East and Aircraft Interiors Middle East (AIME), the impact of two conflicting pressures – demand for travel and sustainability – are playing out on the regional stage.

Burgeoning future demand for MRO services, fuelled by major aircraft orders from Gulf and Turkish carriers, has encouraged airline and independent MROs to invest in expansion with new facilities, notably in Jeddah, Dubai, Abu Dhabi and Amman, and new partnerships with OEMs and top-tier suppliers.

Expansion, but not at any price: sustainability is no less a talking point in MRO than elsewhere in aviation, especially after COP 28 in Dubai, and there's growing pressure to translate the talk into action.

Aside from adopting general 'green' practices, aftermarket suppliers can expect airlines to lean on them for 'green' gains, such as positioning spares pools closer to where they're likely to be needed.

There may also be a rethinking of the strategy of flying aircraft halfway around the world for heavy checks, in favour of using MROs located along their routes. Joramco and Turkish Technic, for example, have long used the location argument to win customers, as has Egyptair Maintenance and Engineering.

But taking services to the customer is also gaining traction, says Sanad chief executive Mansoor Janahi. He said the focus is on "local fulfilment", which translates into



Live! theatre presents a full programme of keynotes, presentations and panel discussions between industry leaders.

IMAGE: TIMES AEROSPACE

creation and expansion of capacity and capability not just at Middle East bases but further afield, in Asia and Africa for example, where the Abu Dhabi-based engine specialist already has a foothold.

Regionally, he sees benefits for everyone in the MRO supply chain from the hangarbuilding boom. Echoing Saudia Technic's captain Fahd Cynndy, he said: "I see this very much as an opportunity for cooperation, tapping into the capabilities that companies like ourselves have [to] enhance the ecosystem and bring further growth."

Ensuring there is capacity within the region to handle this growth is among topics that will be aired at MRO Middle East when the two-day exhibition and conference opens on March 5 at the Dubai World Trade Centre. Last year's record event welcomed 6,400 attendees from 97 countries, and prompted organisers to add 2,000 square metres to accommodate more exhibitors, a meeting zone and extended airline lounge, and a larger area for SMEs and start-ups.

The popular Go Live! theatre presents a full programme of keynotes, presentations and panel discussions between industry leaders. Industry observers will be interested to hear the views of C-suite panellists from Joramco, Riyadh Air and Turkish Technic on whether capacity will be sufficient for demand in the near future.

Elsewhere in the packed agenda are discussions, including the boom in India and its potential impact on the Middle East, benefits of new technology, workforce and supply chain challenges, and the regional market for passenger-to-freighter (P2F) conversions.



AIME 2024 returns with a host of successful programmes and features, such as the VIP airline programme and the Onboard Hub where delegates can learn about innovative products and services. As always, networking is "top of the agenda", says organiser Tarsus Aerospace, an Informa Group company.

Reflecting the evolution of the interiors market, AIME this year welcomes exhibitors and speakers focused on the new themes of cabin management systems and touchless technology, along with cleaning and sanitisation. They join the core themes covering every aspect of interiors, from concepts to execution of designs and the materials that go into them.



further growth."

f you're not

There's enough MRO work out there for everyone, but not everyone is in a position yet to benefit.

DAE Engineering's Jeff Wilkinson takes a hard look at an industry in transition. Report by Chuck Grieve.

HANGAR MANAGEMENT

IT'S A KEY PILLAR TO MAINTAINING OUR GROWTH

s Middle East aerospace news goes, a new hangar at Joramco's Amman base was never going to compete with the Emirates and Flydubai announcements about building massive new MRO facilities at Dubai South, or even the fresh investment in Saudia Technic's MRO Village.

That doesn't bother Jeff Wilkinson. What matters to him, as Chief Executive Officer of DAE Engineering, the majority owner of Joramco, was the approach of the five customers immediately after the Joramco hangar's Airbus A380 capability was revealed at the Dubai Airshow. "They were all asking for the A380 slot based on nothing more than hangar capacity," he told *Arabian Aerospace*.

That reinforces his view that the independent MRO is not overly threatened by the "phenomenal" new developments in Dubai and Jeddah. In fact, the expansion that's driving them "is music to our ears."

As he sees it, as long as the OEMs are having trouble keeping up with deliveries, and growth opportunities within the airline markets, airlines will keep flying older aircraft, which need more maintenance.

Airline-affiliated MROs already have too much work to handle in-house; consider the new deal Joramco has just signed with Emirates covering nose-totail Boeing 777 maintenance services through the end of 2025, or the extension of its partnership with Gulf Air. The view from Wilkinson's desk could hardly be better.

Senior executives over the world are fond of telling interviewers – often as an afterthought – that their company's most important asset is its people. Some you suspect don't mean it, but not Wilkinson.

Having the right people, and enough of them, remains one of the biggest competitive advantages – the "secret sauce" – of Joramco, the Amman-based MRO that he led until 2021 - and remains close to through his current role.

In a nutshell, Joramco does not suffer



on the up: Growth for DAE Engineering's business in Jordan.

IMAGE: JORAMCO

the "manpower drain" affecting the majority of MROs in an industry where the problem of finding enough qualified technicians to both support growth and replace the aging workforce – a storm gathering for many years – hit crisis proportions in the wake of Covid-19.

Says Wilkinson: "We see what's going on in the UK and Europe. They've got great facilities but can't get the manpower. It's a similar story in Asia and the South East in particular."

Funnily enough at a recent industry event "I made an off-the-cuff comment recently: 'If you're not making money now in MRO, you've got a fundamental problem.' If you can control your manpower, it's 'game on'." – sadly not everyone has this luxury it appeared.

"The difference [at Joramco] is we've got an abundance of space, lots of (Joramco and other Technical colleges trained) local manpower, and the unhindered support of the local authorities and ministries to invest and grow. All of those make a winning formula.

Wilkinson moved into his present role in 2021, after four years at the helm of Joramco, to concentrate on the expansion of DAE Engineering, a division of Dubai Aerospace Enterprise. He had been headhunted by DAE in 2017 to take over as chief executive of Joramco shortly after the group acquired its shareholding, and is credited with transforming the business by creating the strategy and overseeing the

development that set the MRO on its path to becoming the leading independent aftermarket provider that it is today, doubling its man-hours but quadrupling its revenue over the last 6 years.

Leaving the day-to-day business to his successor, Fraser Currie, has allowed Wilkinson to focus on such areas as strategic opportunities, future customers, pricing and "what's coming over the hill". He confirms DAE is "still actively looking for the right expansion opportunities." Opportunities abound, he says, but "these things don't happen overnight."

The airline-MRO relationship is a cycle, which at the moment is tilting toward airlines taking some maintenance in-house, mainly citing cost and control. Flydubai, for example, is reaching a tipping point where carrying out its own heavy maintenance makes sense to its owner. "We were a supplier for many years," says Wilkinson. "Some of our engineers work for them. We wish them well."

But he observes that for every MRO that tries to grow and diversify, another closes down. Global players are struggling even three years after the Covid meltdown. "I could reel off a list of companies where they have the hangar capacity but not the manpower, or they have manpower but are too expensive, or they have cash-flow problems due to seasonality.

"There will be more consolidation, more players falling out – our opportunity".

It's no secret that DAE Engineering is interested in growing its business outside Jordan, and receives "several" approaches a year from MROs hoping to replicate the Joramco success. The challenge is finding the right fit. Says Wilkinson: "DAE isn't going to get involved in a company for the sake of 'let's go again'.

"We've identified a few possibilities. The issue at the moment is even MROs that are struggling are still putting a very high market value on what they think their worth".



34

CONTINUED FROM PAGE 34

technicians has not gone unnoticed by other MROs in the region with fewer domestic human resources.

Wilkinson has noticed a pattern of attrition in the ranks of technical staff that didn't exist before the pandemic. "We have two or three companies now that actively target our staff. The good thing is they all have quotas. They're not going to break a 1.000-employee organisation, but if someone takes eight or ten mechanics in one batch, it hurts us.

"Current pressure on MRO slots, and widespread outsourcing of heavy checks, are such that our own customers poaching engineers qualified on the relevant types would be counter-productive. If a customer were to take staff from us, they'd only be damaging themselves."

Construction has started at Queen Alia International Airport (QAIA) on the new \$25-million hangar designed to handle Joramco's venture into passenger-tofreighter (P2F) conversions as an authorised Boeing 737 conversion centre.

Conversions are "a good market and it will help us," said Wilkinson. "It's just another part of the jigsaw that eventually when aligned will serve us well."

Amman, as he frequently reminds us, is "geographically perfect – three hours into Europe, three hours to cover the whole Middle East. Boeing wanted to bring [P2F conversion] close to the customer, and there you go."

Making the new hangar A380-capable was a strategic decision: "The A380's going nowhere anytime soon," said Wilkinson. "I'm not looking for the 12-year checks to come [to Joramco] - that's specialist work that needs an airline MRO ideally. But there are things on an A380 – wing corrosion, spars, structural and Cabin modifications – that I would be very interested in."

"I believe the time will come when somebody comes knocking on the door and says 'I have an A380 and we need some structural work, please help.' I would be devastated [to turn away business] to have saved \$2 million (the price differential in the hangar height) on not building the capability for an A380 over the B777.

"We're following the Dubai philosophy: 'Build and they will come'".

In summarising as Wilkinson looks back and into the future: "I've been in companies when I started out where there's been downsizing, and I didn't like it. Dubai Aerospace with their support and vision and Joramco with their relentless growth, this is the enjoyable environment."

Mubadala's aerospace engineering business Sanad is extending its maintenance capabilities into new industry segments while pushing to lead the region's engine MRO provision. Chief executive Mansoor Janahi talks to Alan Peaford.

Sanad reshapes the future with Mubadala milestone

We aim

to shape

a more

cohesive and

collaborative

aviation

industry rooted

in engineering

excellence and

technological

innovation.

MANSOOR

JANAHI

bu Dhabi-based Sanad has been quietly getting on with the business of aircraft engine maintenance for close to four decades. As GAMCO, ADAT, IS&S, it had been steadily providing support to airlines such as Gulf Air and Etihad.

But now, as part of Mubadala, the company's sound financial footing that has led to investment in equipment, training and facilities has seen Sanad grow its capabilities so much that it was globally recognised by Rolls-Royce as its most improved provider.

As it expands its capabilities into new engine types it is also breaking new ground into a fragmented marketplace – airports.

At the November Dubai Air Show, Sanad's chief executive Mansoor Janahi said the company had signed a deal with the European technology giant Thales that expands Sanad's MRO services into the dynamic fields of airport security, air traffic control and digital operation.

"Our strategic alliance represents a significant milestone in Sanad's journey," Ianahi said. "By collaborating with an industry leader, we contribute to sustaining efficient operations at some of the busiest airports in the Middle East and Africa.

"We aim to shape a more cohesive and collaborative aviation industry rooted in engineering excellence and technological innovation." he said.

Describing that maintenance market as "seriously fragmented," he said "There is a significant requirement for either the modernisation of airports or the development of new airports.

"We always look at it from a technical/maintenance angle. So, what we see today is that growth is going to happen, whether it is in the region, or even globally."

Sanad and Thales will collaborate closely to enhance air traffic management and advance airport operations in the Middle East and Africa by deploying innovative systems and MRO services.

But while the new direction drives excitement into the business, it is an investment into supporting the newest technologies in the aircraft engine world that holds the most promise.



International Leap 1A and 1B platforms. Janahi said the 5,000 square metre (54,000 square foot) centre has "substantially increased the operational capacity" of its workshop, giving it capability to service up to 200 engines annually. The new facility has already completed MRO services for a Leap 1B

Sanad CEO Mansoor Janahi: On a mission to develop a global reputation IMAGE: BILLYPIX

engine operated by Flydubai.

The new centre follows the announcement of an agreement with GE Aerospace and Safran Aircraft Engines in Iune at the Paris Air Show and opens at a time when demand for narrowbody support in the region is growing

Aviation Week's 2023 Commercial Fleet and MRO Forecast showed 426 Leap engines in service with operators in the Middle East region, and claims this will grow to nearly 2,000 by 2032.

The Leap engine family is expected to generate \$106.8bn in MRO spending over the next decade.

Ianahi said the LEAP launch backed his goal of a balanced portfolio. Already having developed a global reputation for MRO on the IAE V2500 engine for the Airbus A320 family - aircraft fly from the US and Mexico to Abu Dhabi for overhaul - the company is also growing its Rolls-Royce Trent 700 and GE's GEnx numbers.

An example of the growth is shown with the Trent 700 which powers the Airbus A330 fleet. "We did 24 Trent engines in 2022, 42 in 2023 and we expect 50 in 2024," Janahi said.

Ianahi sees the expanding business reaching across South Asia, Africa and following an investment in Indonesia, South East Asia as well. But it won't all be in Abu Dhabi. "I believe partnerships will play a huge part in out future," Janahi said.

"Global traffic is growing at 3.6 per cent. And the Middle East at six per cent. Engine maintenance is valued at \$64 billion with 10.6 per cent of it coming from the the Middle East. At the end of the day, we are an enabler to the aviation ecosystem and sustainability as well," Ianahi said.

"Having an MRO centre in the UAE is a significant step towards making our operations more sustainable," said Flydubai chief operating office Mick Hills. "It provides us with in-country solutions. reducing the need to send engines overseas for maintenance, which aligns with our commitment to operational efficiency."

WORK TO START ON EMIRATES \$950M MRO

Construction is due to start imminently on Emirates Engineering's new \$950 million engineering facility in Dubai World Central (DWC), where it will take up one million square metres – one-seventh – of the Mohammed bin Rashid (MBR) Aerospace Hub.

The new engineering complex will be one of the largest and most advanced of its kind to be operated by any airline, boosting Dubai's world-class aviation infrastructure.

It adds another mega-project in the region's burst of capacity-building. Completion of phase one is expected in 2027: need will govern the scope of phase two, which could double capacity.

Meanwhile, Emirates' stablemate Flydubai has also announced plans for its own \$190 million MRO facility in DWC (see sidebar). Its hangar and workshop are expected to be in service by the last quarter of 2026.

Emirates said its facility will be a centre of excellence for commercial aviation



MRO complex: Artist's impression of Emirates' planned million-square-metre maintenance facilitu at Dubai World Central. IMAGE: EMIRATES

engineering services in the Middle East, with spare capacity potentially offered to third parties. It currently supports the fleets of 30 other airlines at its Dubai international (DXB) base and outstations.

Sheikh Ahmed bin Saeed Al Maktoum, **Emirates Group chairman and chief** executive, said in the project's announcement at the recent Dubai Airshow that the "significant" investment will give

FACILITY AT DUBAI WORLD CENTRAL

Emirates self-sufficiency in MRO and other engineering requirements, resulting in "operational stability and flexibility, and quality assurance".

Project consultant is the widelyexperienced ADP Ingénierie (ADPI), a subsidiary of Paris-based Groupe ADP, which over the last 40 years has built a substantial Middle East portfolio as "a long-term partner" for airports throughout the region including both Dubai hubs.

Phase one of the project covers eight maintenance hangars and one paint hangar, all capable of handling any size of commercial aircraft up to code F (Airbus A380), an engine run-up facility, 20 support workshops, plus extensive storage and administration offices.

It will be equipped for the full gamut of specialist aircraft engineering services, from routine checks to bespoke paint jobs, light to heavy maintenance, engine repair and testing, full cabin fit-outs and aircraft conversions. Initially the new complex will handle spill-over work from the existing Emirates Engineering Centre at DXB and heavy maintenance.

The Emirates fleet of 250 aircraft comprises Airbus A380 and Boeing 777 types, with more than 300 more on order, including Boeing B787s and Airbus A350s.

Sustainability plays an important role in the design of the new complex. Features will include use of green build materials, solar panels on roofs across the entire campus, and recycling systems for oils and wastewater - areas in which project consultant ADPI is a leader. Philippe Martinet, head of its Dubai business unit. told Arabian Aerospace that Groupe ADP is committed to reducing carbon footprint throughout a project's lifecycle

Cost benefits, efficiencies expected at Dubai LCC

Low-cost carrier (LCC) Flydubai expects "significant reductions in operational costs" from having its own in-country heavy maintenance set-up in Dubai South.

"This increased level of control will result in reduced downtime as maintenance tasks can be efficiently planned and executed, minimising any disruption to our flight schedules and enhancing overall operational reliability," said chief operating officer Mick Hills.

Flydubai received its CAR-145 base maintenance approval from the Dubai General Civil Aviation Authority (GCAA) in 2022, and plans to expand its workforce of 455 line maintenance engineers by more than 50 per cent to a total of 685 over the next 12 months.

The LCC operates a fleet of 80 Boeing B737 aircraft and will take delivery of more than 150 additional aircraft by 2030, including 30 examples of its first widebody type, the Boeing B787-9 Dreamliner. This will give it limited fleet commonality with Emirates, leading commentators to speculate that the two Dubai airlines could benefit from shared MRO and spares pooling. Flydubai has previously outsourced maintenance to Emirates Engineering and MROs in Abu Dhabi and Jordan, among others.

36 **37**

LUXURY TRAVEL

The future of luxury business aviation has taken off at Al Maktoum International Airport as ExecuJet Middle East opens its new flagship headquarters. **Marcelle Nethersole** discovers more.

ExecuJet finds the suite spot

xecuJet Middle East, a partnership between Alpha Middle East Holdings and Luxaviation Group, officially opened the first phase in December of its new facility at Al Maktoum International Airport (DWC), which will focus on modern luxury for the business aviation market.

ExecuJet made a name for itself in the region over two decades ago, offering a range of services including aircraft management for private and commercial registered aircraft, aircraft charter and fixed base (FBO) operations.

Now it is setting the bar for future luxury private travel with its new flagship facility.

The 15,000 sqm (161,000 sqft), three-story facility will offer a Majlis lounge and a VIP lounge adjoining a conference room; several exclusive suites, including a presidential one, a spa offering a wide range of treatments; and a cocktail/cigar lounge.

Describing the terminal as a "significant milestone" in the company's "journey to redefine luxury aviation," Patrick Hansen, CEO of ExecuJet parent Luxaviation Group, said:

"This new facility is a first of its kind in the region and is a testament to our belief in the enduring growth and importance of the private aviation sector in the region and beyond. We believe it is fundamental to continue to drive improvements and efficiencies, as we maintain the Group's focus towards the highest quality which ultimately results in the overall premium services that our clients expect and, more importantly, experience."

LIEBHERR

ExecuJet Middle East spokesperson, Khalid Al Hai, board member added that visitors to the facility are

expected to discover 'cutting-edge technology, unparalleled luxury, and an extraordinary preview of the future of luxury aviation.'

"The DWC facility represents the future of luxury aviation in the Middle East. For over two decades, we have witnessed the evolution of the business aviation market in the region," he said.

"We are dedicated to providing our clients with an unmatched experience, and this new state-of-the-art facility, which is the first of its kind in the region, embodies our commitment to that goal, while also providing a diverse array of offerings designed to cater to an extensive range of travellers."

ExecuJet also houses a fully-equipped, air-conditioned 7,000 sqm hangar, complete with state-of-the-art security systems, onsite meeting rooms, and storage facilities.

The facility is adjoined by an independent MRO facility,

In and out: Aviation luxury at ExecuJet's new facility.

where, in terms of ExecuJet's Middle Eastern fleet, it has more than 20 aircraft available for charter, including Dassault jets - Dassault acquired ExecuJet's MRO business in 2019.

Execujet MRO Services Middle East actually completed work on a Global 6000 in January that included an extensive cabin interior refurbishment, installation of a new satcom system and an airframe heavy maintenance check. This particular airframe maintenance check – which comes due once every 120 months – is one of the heaviest one can do on a Global 6000, as it also includes a full landing gear overhaul

Speaking about the new FBO at Al Maktoum International Airport Dumani Ndebele, regional FBO director for ExecuJet Middle East, said: "Once the FBO is fully operational, the 60/40 percent movements split between the ExecuJet FBOs at Al Maktoum International Airport and Dubai International Airport will switch to 40/60 percent, given the attractiveness and convenience of the new facility."

Swift and sustainable

Establishing

in the region

capability

Our network of qualified partners for Liebherr heat transfer services is growing. This collaborative approach is consistent with our drive to reduce MRO carbon footprint and aims at processing equipment locally to avoid lengthy inter regional transportation. Our customers can therefore continue receiving OEM quality heat transfer services, at optimum turnaround times as part of an eco-responsible MRO initiative.

www.liebherr.com

LIEBHERR

Aerospace

Liebherr-Aerospace & Transportation SAS • 408, avenue des Etats-Unis 31016 Toulouse (France) • Phone +33 5 61 35 28 28 • info.aer@liebherr.com • liebherr.com

March 05 - 06, 2024, Dubai, UAE

Booth no. 1240

HEBHERR

GENERAL AVIATION

SUSTAINABILITY

ALLIANCE BOOSTS SAF ACCESS IN MIDDLE EAST

Building on the success of supplying SAF at selected locations in Europe, Jetex in partnership with Shell Aviation will offer aircraft operators and private owners the possibility of significantly reducing emissions on flights operated from its flagship private terminal in Dubai.

Anuradha Deenapanray Chappard reports.

A ccording to Adel Mardini, founder and CEO of Jetex: "Bringing SAF to the United Arab Emirates is a milestone achievement."

This initiative was announced during the "Year of Sustainability" in the UAE.

Jetex's environment strategy focuses on reducing carbon emissions, and recycling and adapting the latest green technologies across its global network. The company's efforts to address climate change challenges are aligned with IATA's net zero target.



The partnership WILL deliver SAF at DWC for the first time.

For Doris Tan, general manager Asia and Middle East, Shell Aviation, private business customers can create a concentrated, highimpact demand for SAF.

"Additionally, expanding the availability of SAF to new locations is equally important, which is why it's been highly rewarding to work with Jetex to enhance our SAF capabilities in the Middle East by delivering SAF at DWC for the first time." Tan said.

Adel Mardini and his team are fully committed to progressing the company's

sustainability agenda. Jetex recently signed an agreement with 360 Jet Fuel to offer sustainable aviation fuel (SAF) book and claim option to its customers globally. The innovative 360 GREEN FUEL book and claim platform will offer greater flexibility and accessibility to SAF.

The new agreement takes Jetex a step closer to being fully carbon-neutral globally and to achieving 65 per cent SAF market share by 2050.

Furthermore, on the sidelines of the last Dubai Air Show, Jetex unveiled a new flagship private terminal at Abu Dhabi's Al Bateen Executive Airport, the region's only dedicated private jet airport. It is conveniently located with centre-of-town road connectivity, and provides rapid access to Abu Dhabi's key financial, tourist and entertainment destinations.

Al Bateen Executive Airport is one of five airports managed and operated by Abu Dhabi Airports. According to Elena Sorlini, its managing director and interim CEO: "The renovation of the VVIP Terminal at Al Bateen further strengthens the luxury service offering to passengers."

FIRST SAF-POWERED ROTORCRAFT FLIGHTS IN UAE AND MIDDLE EAST

The United Arab Emirates are investing massively in Sustainable Aviation Fuel (SAF) to reduce their dependency on fossil fuels the impact that aviation has on global carbon emissions.

Abu Dhabi Aviation (ADA) accomplished two flights with a Leonardo AW139 helicopter powered by SAF, last November.

This a first in the UAE and Middle East. ADA's commercial intermediate twin-engine helicopter was powered by aviation fuel blended with SAF.

00000

"We reaffirm ADA's commitment to supporting the UAE's efforts in the aviation sector to ensure sustainable growth and its adoption in the future", says Nader Ahmed Al Hammadi, Chairman of Abu Dhabi Aviation.

According to Gian Piero Cutillo, Leonardo
Helicopters' Managing Director, the SAF flights in
the UAE have shown what's possible in support of
the rapid evolution of sustainability requirements in
aviation. "This technology can deliver real benefits
in the region and widely across geographies, for all
missions and can be readily available. We're
committed to joining forces with authorities, energy
industry leaders and rotorcraft service providers to

incentivise the use of SAF to sustain carbon footprint reduction."

The civil aviation sector in the UAE is making significant strides towards enhancing the use of SAF. The first helicopter flight using SAF is an important step in the decarbonisation process in the aviation sector.

"At the third ICAO Conference on Aviation and Alternative Fuels, which was hosted by the UAE, the world witnessed the launch of the Dubai Framework for Sustainable Aviation Fuel, which represents the beginning of the path towards a more sustainable future in aviation, aiming to achieve our ambitious goal of reaching zero emissions by 2050", underlines Saif Mohammed Al Suwaidi, Director General of the General Civil Aviation Authority.

ADA and Leonardo have been collaborating for over 15 years with the operator acquiring a total of 33 aircraft to date, most of which are AW139s powered by two Pratt & Whitney Canada PT6C-67C engines.

ADA's fleet of Leonardo helicopters was extended to comprehensive localised support, maintenance, and overhaul services in the UAE a decade back with the AgustaWestland Aviation Services Joint Venture as well as training and simulation capabilities.

ANURADHA DEENAPANRAY CHAPPARD





GENERAL AVIATION

ROUND-UP ROUND-UP

The Russian evolution

The Ups and Downs of an UAE/Russia Helicopter Partnership. David Oliver reports.

Russia's VRT500 was the first light civil helicopter to be developed since the failure of the Mil Mi-34, of which only 23 were delivered by mid-2003, compared with the estimated production of 425 called for in Russia's 1992-2000 civil aviation development plan.

Vertolety Rossil Technologies (VRT) was established in 2006 as a subsidiary of Russian Helicopters, and displayed a mock-up of the VRT500 at the MAKS-2017 international air show when production was planned to take place at the Ulan-Ude Aviation Plant. The target was to capture 15 per cent of the two-tonne global civil market, 700 helicopters, by 2030. The VRT500 was a light single-engine helicopter with coaxial-rotor scheme and take off weight of 1,650kg.

The helicopter featured a spacious transport and cargo cabin with a capacity of up to five passengers equipped with the state-of-the-art interactive avionics suite. The helicopter would be capable of reaching speeds of up to 250km/h, have a flight range of up to 860km and carry up to 730kg of payload. The helicopter was being

developed in the following configurations: passenger, utility, cargo, training, VIP and EMS.

VR-Technologies partnered with Italian company ItalDesign Giugiaro to support the development of the VRT500 helicopter. Best known for its automobile design work, ItalDesign also offers product design, project management, and testing services. The VRT500 featured design criteria inspired by the automotive world, combined with engineering solutions deriving from the helicopter industry, as well as utilising the latest composite construction elements.

The Malaysian company Ludev Aviation ordered five VRT500 helicopters during the MAKS-2019 air show in August 2019 and in November Rotorcraft Nordic of Sweden placed an order for ten VRT500 helicopters in a baseline configuration. The helicopters were scheduled to be delivered before 2023.

Avio Aero was awarded a US\$300m contract to provide the main transmission system and Liebherr-Aerospace signed an agreement to supply environmental control system for the helicopter in September 2019. In November, Pratt & Whitney Canada was selected to deliver 630shp PW207V turboshaft engines for the VRT500 helicopter, followed by Thales Aerospace, which was preferred to deliver its FlytX avionics suite for the helicopter in January 2020.

In 2019, the United Arab Emirates Strategic Development Fund (SDF) stated that it would acquire a 50 per cent stake in VR-Technologies, and the partners planned to inject €400 million into the business. That agreement resulted in the formation in 2020 of a Singapore offshore company, Aeroter Pty Ltd, into which the VR-Technologies assets were injected. It was jointlyowned by Russian Helicopters and the SDF.

Russian Helicopters sold a 50 per cent stake in VR-Technologies LLC to Aeroter Pty Ltd in July 2021, which signed a contract with the Swiss company Brunner to provide its first Novasim



A later VRT500 mock-up designed by ItalDesign Giugiaro.

virtual reality full-motion simulator in the VRT500 helicopter configuration in November 2021.

At the same time the UAE SDT invested €400 million for a 50 per cent stake in Russia's VRT500 helicopter programme with production planned to take place by ItalDesign in Italy. In November 2021, Tawazun Economic Council, the UAE's defence and security industry enabler, signed a letter of intent (LoI) to purchase 100 VRT500 helicopters from Aeroter at a total value of €216.9 million for use across some government entities. The delivery of the 100 helicopters was expected by the end of 2023.

The LoI also entailed setting up of a helicopter service centre in Abu Dhabi, in collaboration with an Emirati Company.

However, by the time Russia invaded Ukraine in February 2022, a prototype had yet to make its first flight and no VRT500 helicopters had been produced.

Due to Ukraine-related sanctions which prohibit the import of western engines and avionics to Russia, Brunner withdrew from with the VRT500 programme and in October 2023 the UAE withdrew from its involvement and now plans to develop and produce the VRT500 helicopter in the UAE under the management of the UAE's SDF.

ARCHER TARGETS 2026 FOR MIDNIGHT'S RUN

At the Dubai Airshow, Archer and the Abu Dhabi Investment Office announced their plans to make the United Arab Emirates Archer's first international launch partner. Electric air taxi operations will start in Abu Dhabi and Dubai in 2026.

Anuradha Deenapanray Chappard reports.

When we met Tom Muniz, Archer's chief operating officer, at the last Paris Airshow, he gave us an insight into the American company's strategy in this promising region.

"We've seen huge interest and potential in the Middle East. There's so much growth there. They want to be innovative and invest in new technologies especially in the big cities and aviation hubs." Muniz said.

A few months later, founder and CEO Adam Goldstein unveiled Archer's plans to bring electric air taxis to the UAE in his keynote address at the Dubai Airshow.

Midnight, its 100 per cent eVTOL, was displayed alongside its competitors' products in the pavilion dedicated to future urban air mobility at both shows.

Archer's goal is to transform urban travel, replacing 60–90 minute commutes by car with estimated 10-20 minutes electric air taxi flights that are "safe, sustainable, low noise, and cost-competitive with ground transportation".

Midnight is a piloted, four-passenger aircraft designed to perform rapid back-to-back flights with minimal charge time between flights.

"We looked into the technologies that really drive the performance, the differentiators and there are three key areas; the engines, the batteries and the software," Muniz told *Arabian Aerospace*. These are



all in-house and the rest is provided by its global supply base.

Billy Nolen. who joined the Archer team after serving as acting administrator of the Federal Aviation Administration (FAA) till June 2023, has been "instrumental" in the certification process.

"We need to know how to keep a leadership in aviation. Policy is the way to make this happen," CEO Adam Goldstein pointed out during the recent Global Aerospace Summit.

Archer also signed a MoU with Air Chateau

International, covering the planned purchase of up to 100 Midnight aircraft worth around \$500m at the last Dubai Airshow. The parties will explore opportunities regarding the infrastructure investment required for these planned operations.

The strategic relationship aims at further strengthening Archer's development strategy in the region. Archer intends to build an engineering centre of excellence to support the growing advanced air mobility industry in the UAE and across the Middle East.

PARTNERSHIP ON THE EVE OF URBAN LANDMARK

Eve Air Mobility and flynas, the leading low-cost airline, are paving the way for eVTOL operations in Riyadh and Jeddah.

Johann Bordais, CEO of Eve, said this groundbreaking journey with flynas will advance the future of air mobility in Saudi Arabia.

"This partnership represents not only a milestone in our shared vision for sustainable air travel, but also a commitment to shaping a more efficient, ecofriendly and accessible transportation landscape," Bordais said.

By joining forces with the pioneering company in this field, flynas will contribute to the Vision 2030 sustainability goals and the ambitious targets in the aviation sector set by the Kingdom.

"This sustainable solution is in line with flynas' strategy to adopt initiatives with sustainable impact on the environment, society and economy, in parallel with the national goals to neutralise greenhouse gas emissions by 2060," said Bander Almohanna, CEO and managing director of the multi award-winning airline.

Currently, flynas operates more than 1,500 weekly flights to around 70 domestic and international destinations. This collaborative effort and the launch of eVTOL flights will provide travellers with another option for urban transportation.

Eve Air Mobility, backed by Embraer, is dedicated to accelerating the urban air mobility ecosystem with a holistic approach through a comprehensive global service and support network.



Eve is pursuing its collaboration with regulators, customers, air navigation service providers, fleet operators, vertiport developers, airports and other UAM stakeholders globally. It aims to advance concepts and develop technology to support initial operation and scaling of UAM operations from an ATM perspective.

Eve has engaged Atech, Embraer's air traffic control technology and system integrator company to support the development of the urban ATM software solution.

Eve has also signed an agreement with Kookiejar, a Swedish-based vertiport developer. It marks Eve's

first urban ATM agreement in Dubai. As Rob Weaver, urban ATM global business development lead at Eve rightly points out, UAM relies on infrastructure within the lower air space as well as accessible takeoff and landing spots – vertiports.

"In Dubai, we're looking forward to working with Kookiejar as they combine expertise in both ground and air infrastructure." Weaver said.

According to Wassaf Akhtar, chief technology officer at Kookiejar, this will provide "equitable airspace access" on the network of vertiports for eVTOLs.

ANURADHA DEENAPANRAY CHAPPARD

42 43





Your MRO Partner of Choice Saudia Technic







Saudia Technic

Partnered with the national airline of Saudi Arabia, Saudia Technic serves regional and global clients from a network of more than 50 locations around the globe. For more than 60 years, Saudia Technic has been a regional leader in the provision of aviation services, leveraging technical expertise, logistic capabilities, and supply chain to deliver end-to-end aircraft maintenance, repair, and overhaul solutions.











MANUFACTURING

MOROCCO

46

Regional security challenges are the main concern for Morocco's armed forces and it obtained increased access to defence technology thanks to improving defence ties with France and the United States, and has received military training and equipment from both. **David Oliver** reports.



Boost for Moroccan aerospace industry

orocco's relative stability

defence companies such as Airbus, Safran and
Thales to establish aerospace manufacturing and orocco's relative stability has attracted western

The aerospace industry sector currently accounts for some 142 companies with 17,000 employees that have a turnover of around US\$2 billion in exports. In 2020, Morocco's aerospace industry ranked 36th globally and third in the Middle East and Africa region.

The Moroccan government has actively supported the development of the aerospace industry, implementing initiatives and offering incentives to attract foreign investors. The government has also invested in infrastructure development, including the creation of aerospace industry clusters like the Midparc Free Zone near Casablanca.

The Moroccan government has also placed an emphasis on developing the infrastructure and resources necessary to attract maintenance, repair and overhaul (MRO) companies to its Technopark in Casablanca and the Mohammed VI Tanger-Tech City, being built by the China Communications Construction Company (CCCC).

In 2018 the French aircraft manufacturer Daher invested €15 million (US\$16.4 million)) in its third plant in Morocco in the Tangier Free Zone, near the airport. It supports production for international aerospace programmes partnered by Daher and provides a platform to meet the needs of customers like Airbus Commercial Aircraft, Airbus Helicopters and Dassault.

In addition, some of the major MRO companies in Morocco have established training centres to enhance the skills of their workforce.

The Belgian Orizio Group, formerly the Blueberry Group, has been operating in Morocco since 2012 through its subsidiary Sabca Maroc, which recently announced its investment of more than €17 million (US\$18.6 million) in the construction of a new 16,000 square metre facility, which will house Pilatus, Airbus and Dassault aerostructure assembly lines in the Nouaceur area. It also participated, in co-operation with the Moroccan Air Force, to the modernisation of its fleet of Dassault Mirage F1C/E and Alpha let training aircraft.

A joint venture, Maintenance Aero Maroc (MAM), was formed between Morocco, Lockheed Martin and the Orizio Group in 2022, to carry out MRO of Moroccan Air Force Lockheed Martin F-16C/Ds and C-130H Hercules. This project represents an additional development of the Orizio Group in the Kingdom of Morocco and the partnership includes the construction of a 15,000 square metre maintenance, repair, overhaul and upgrade (MRO&U) centre for military aircraft and helicopters at Benslimane Airport for the first time and supports the creation of up to 300 jobs.

A joint venture, Maintenance Aero Maroc (MAM), has been formed between Morocco, Lockheed Martin and the Orizio Group, to carry out MRO on Moroccan Air Force F-16C/Ds and C-130H Hercules.

In 2021 Morocco confirmed a US4.25 billion contract for 24 Boeing AH-64E Apache attack helicopters. Deliveries will begin in 2024 and Morocco has an option for 12 additional helicopters. The Moroccan Administration of National Defense and Boeing signed an industrial agreement in February 2023 as part of the extension of the acquisition programme of AH-64 Apache Helicopters. Boeing is already a partner of the MATIS Aerospace joint venture which produces aircraft wire bundles and harnesses in Morocco.

In June 2023, Pratt & Whitney Canada launched an affiliate, Pratt & Whitney Maroc, and is building a new facility in Casablanca's MidParc Free Zone that will cover an area of 130,000 square feet. According to Pratt & Whitney it will be built according to state-of-the-art efficiency principles, both in terms of quality and cost, employ up to 200 staff and is due to open in 2025. The components factory would allow the company to increase its presence and strengthen its relationship with its customers and partners in the region.



BRIDGING SKIES AND LEVERAGING GROWTH

Diving the breakthrough for a flourishing African aviation industry

To find out more please contact Mark Brown: E: mark.brown@aviationafrica.aero **T**: + 44 (0) 1702 530 000 | **M**: + 44 (0) 7889 100 987







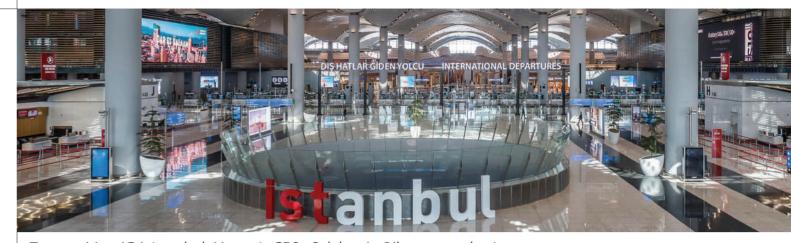






www.aviationafrica.aero





Team spirit – iGA Istanbul Airport's CEO, Selahattin Bilgen, on what's behind the success of Europe's busiest airport. Chloë Greenbank reports.

'Bul market laid bare

7hen Kadri Samsunlu resigned from his role as CEO of iGA Istanbul Airport in September 2023, V it was a sudden and unexpected departure. He had been at the helm since the facility opened in 2017, making a valuable contribution to its success.

Stepping into his shoes was no small order, but Selahattin Bilgen has risen to the challenge as CEO. With a background in corporate and investment banking, Bilgen was a long-term insider at the airport, having worked as CFO since its inception.

Describing himself as "sincere, patient and hardworking," Bilgen notes these are qualities that resonate across the whole iGA Istanbul team.

"We started from scratch with iGA. It's one of the largest start-up airport projects. We began with around 100 employees and now there's more than 11,000. I've been here since the start in 2014, as have many in the management team, so we're all passionate about what we're doing. It is this team culture that has contributed to the airport's year-on-year success," Bilgen told Arabian Aerospace.

Having served 76 million passengers in 2023, the airport, which prides itself on being accessible to all passengers, marked its third consecutive year as the busiest airport in Europe (Istanbul is a city of two halves, straddling the banks of Asia and Europe). Also ranking among the top 10 busiest airports in the world, it is now targeting 85 million passengers in 2024.

"The airport has grown rapidly, but there is still huge potential on the aeronautical side," said Bilgen, referencing North and South America as well as China as under-tapped markets.

Prior to the airport's opening, there were no Chinese carriers serving Istanbul, now there are four. "We are in talks with airlines including Delta and Transat, as well as Asian carriers, to expand our network further," he revealed. "Our strategy is to demonstrate that we are strategically positioned within three hours flying time from around 160 key destinations and that we have capacity to serve airlines at peak hours. What's more, our fees for airlines are three times cheaper than London Heathrow."



Selahattin Bilgen: "It is this team culture that has contributed to the airport's year-on-year success."

Bilgen also alluded to Turkey's strong domestic market and Istanbul's status as a popular transfer hub, with iGA working alongside multiple carriers to develop a "transfer bundle package".

Given the Turkish capital's status as a major hub for cruise ships, plans are also afoot to collaborate with Istanbul's Galataport Cruise Terminal to develop a 24/7 passenger transfer service between the airport and seaport. The airport also aims to become a regional cargo transit centre and launched its Airport Cargo Stakeholder Platform at the end of 2023 to facilitate the digitalisation of air cargo procedures.

Additionally, there is a strong focus on non-aeronautical revenues. As well as an impressive duty-free shopping area that resembles more of a shopping mall, the departures terminal also boasts a Youth Lounge offering a PlayStation, audio system and table football. There's even an airport museum showcasing Turkish culture, which is currently exhibiting 316 works, and a library thanks to a collaboration with the Ministry of Culture and Tourism and Istanbul Technical University.

Meanwhile, those wanting to catch up on some rest can choose between comfortable television viewing areas, Sleepods, Napzone areas or the airside YOTEL Istanbul Airport.

Sustainability is also high on the agenda for Bilgen as he explained: "We have already committed to being net zero by 2050. It won't be without challenges, but being a relatively new airport has provided us with a huge advantage. Our 1.4 million sqm terminal building has been Gold LEED certified since opening and we have committed to International Finance Corporation (IFC) Performance Standards on environmental and social sustainability. Looking ahead, we are installing a solar array to power our entire electricity consumption, which we hope to complete by the end of 2024."

"As human beings we want meaning in our working lives," he said. "Achieving this through developing the largest airport from scratch and enabling millions of people to travel and connect with each other every year has been a thrilling ride so far.

"I'm no stranger to working 18-hour days but I love it. I thrive on the energy that ricochets throughout the team and now I want to enhance that spirit."



AVIATION

AND SUBCONTINENT

12th - 13th June 2024

JW Marriott Hotel

Aerocity, New Delhi

How India's aviation renaissance can achieve global ambitions

SAVE THE DATE & JOIN US IN NEW DELHI

To find out more please contact Mark Brown: E: mark.brown@aviationindia.aero **T:** + 44 (0) 1702 530 000 | **M:** + 44 (0) 7889 100 987

www.aviationindia.aero

STRATEGY

Sarah Al Amiri, UAE minister of state for public education and advanced technology and chair of the UAE Space Agency, explains to **Steve Nichols** how investment in space is leading to economic advantages.

How UAE's space agency is reaching new heights

he recent Dubai Air Show gave a very visible indicator of how important the space sector is becoming to the region's aerospace industry.

The progress has come as no surprise to Sarah Al Amiri, UAE minister of state for public education and advanced technology and chair of the UAE Space Agency.

"We are investing quite heavily in the space industry to establish it as a prominent economic sector within the country," Al Amiri said.

"We need to further build up capabilities for designing and developing spacecraft from a commercial perspective and build a comprehensive eco-system that falls around that. We are also working on the further utilisation of space data for commercial use.

"This is rippling into other areas and will provide services and products for other sectors," she said.

Al Amiri added that they are also continuing to work on the UAE's space exploration programme, which will act as a "catalyst for change and act as a driver for scientific research".

"We now have a national space fund that will develop capability and capacity, funding different programmes and projects. These include the UAE mission to the asteroids (EMA)."

The UAE Space Agency said EMA is scheduled to launch in March 2028 and will fly past six asteroids in the main asteroid belt before arriving at a seventh in 2034 where it will release a lander to touch down on the surface. EMA will have a narrow launch period of just three weeks in March 2028.

global space & satellite forum

It will fly a five billion kilometres (around three billion miles)

route via Venus in July 2028 and Earth in May 2029, before going by the main belt asteroids Westerwald, Chimaera and Rockox between February 2030 and January 2031.

Al Amiri said that plans are now well under way for the UAE asteroid mission and the mission is reaching a critical review stage. They have also "onboarded" new team members to continue their knowledge transfer programme for the mission.

"We have also run three or four 'Space Means Business' programmes where we have opened up opportunities to provide hardware and services for the asteroids mission. Two contracts have been awarded so far so that the mission can move forward." Al Amiri said.

The UAE will also soon have a constellation of synthetic aperture radar (SAR) satellites, which it is funding to help the private sector.

The national space fund, announced last year, will pave the way for the research and construction of the 'Sirb' satellites – Sirb is the Arabic term for a flock of birds.

The constellation of SAR satellites will create highly-detailed radar images of land use, ice cover and surface changes, with a wide range of scientific and commercial applications.

Scientists can use the data to trace oil spills, track maritime vessels and monitor crop yields, a government statement said.

"By lowering the risk of entering into this business and offsetting the costs of various programmes, we can help enable the development of the country's space industry," she said. "On the Emirates mission to the asteroid belt we are working with individuals who have experience in the space sector.

"We are funding their capabilities in terms of their development and providing a contract while they are developing their capacity. They will get to the point where they have a company that is up and running and can compete commercially.

"We are also working on a downstream enablement programme, on spacecraft development, and working on space services in the private sector.

"We needed a global venue to exhibit our capabilities and so we partnered with the Dubai Air Show as a natural progression of our growth and to showcase the opportunities open in the sector," she said.

We are investing quite heavily in the space industry to establish it as a prominent economic sector within the country.

SARAH AL AMIRI



Connecting the airline supply chain

REGISTRATION OPEN

SCAN THE QR CODE OR VISIT MROMIDDLEEAST.AVIATIONWEEK.COM TO REGISTER TODAY









Luxury Redefined: Unleash the Ultimate in Modern Urban Living

Indulge in the epitome of modern luxury living at Andorra Village Compound, an exclusive haven located a mere 10 minutes from King Khaled International Airport in Riyadh. With 1200 modern luxury Villas and Apartments, Andorra Village is not just a residence; it's a lifestyle crafted for those who seek sophistication and convenience.

Our meticulously designed residences cater to individuals and families, offering fully serviced

properties for both short and long stays. Every dwelling is a testament to contemporary elegance, providing a seamless blend of comfort and style.

Step into a world of leisure with our exceptional amenities. Andorra Village boasts 17 indoor and outdoor pools, each a tranquil oasis offering a respite from the hustle and bustle of city life. Dive into luxury, unwind, and let the soothing waters rejuvenate your senses.

For the fitness enthusiasts, our compound is equipped with a state-of-the-art gymnasium and sports facilities. Enjoy a spirited game of football, basketball, or tennis, and stay active in an environment designed to inspire a healthy lifestyle.

Indulge your senses further with our retail shops, bringing a diverse shopping experience to your doorstep. Savor the culinary delights at our exclusive restaurants or pamper yourself at our wellness, salon, and spa centers. Andorra Village is not just a residence; it's a destination that fulfills your every need.

Beyond the luxurious amenities, Andorra Village's strategic location ensures seamless connectivity. With King Khaled International Airport just a short drive away, residents enjoy the convenience of easy travel and access to the city's vibrant offerings.

Andorra Village Compound is a sanctuary of modern luxury, where every detail is thoughtfully curated to enhance your living experience. Welcome to a lifestyle of comfort and indulgence, welcome to Andorra Village Compound—where your home is a reflection of your refined taste and a retreat from the ordinary.

CONTACT PERSON:

Mr. Fawzi Sakr, Leasing Manager

T: +966 50 900 1200

Mr. Shamsher Ali Siyab, Head of Leasing

T: +966 55 3037734

Email: sales@andorravillage.net

ADDRESS:

Andorra Village Compound, Ar Rimal, Al Janadriyyah Road, 4535 – 6963 Riyadh SA, Dist 13454, Saudi Arabia.

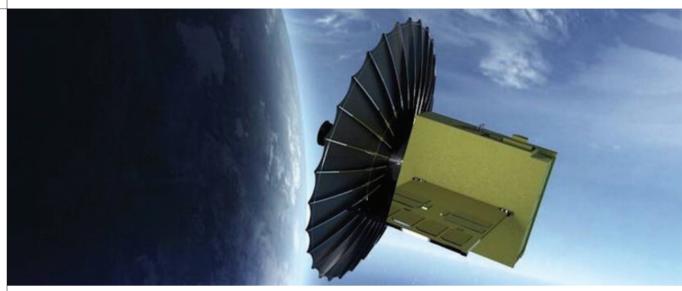


www.andorravillage.net www.andorravillage.net





An artist's impression of a Sirb SAR satellite.



SAR DEAL SWITCHES ON THE SATELLITES

The United Arab Emirates Sirb satellite project received a boost with a contract with a UAE-based company to develop and manage the programme.

Steve Nichols looks at the benefits this will bring.

he UAE Space Agency and Abu Dhabi-based Edge signed a memorandum of understanding (MoU) in November to implement the Sirb programme – a constellation of three synthetic aperture radar (SAR) satellites. Sirb is the Arabic term for a flock of birds.

The constellation of SAR satellites will create highlydetailed radar images of land use, ice cover, and surface changes, with a wide range of scientific and commercial applications. The first satellite launch will be by 2026.

The three satellites will use advanced imaging technology to achieve high-precision results and support a wide range of scientific and commercial applications, from monitoring environmental changes to natural disaster management and mapping.

SAR satellites can capture images during the day and night regardless of atmospheric conditions. Scientists can use the data to trace oil spills, track maritime vessels and monitor crop yields, a government statement said.

When the project was launched Sarah Al Amiri, minister of state for public education and advanced technology and chair of the UAE Space Agency, said: "SAR technology leapfrogs traditional imaging satellites, providing more powerful imaging using X-band radar technologies, allowing us to continue observations day and night, through fog and cloud cover as well as combining observations to create big data pictures simply not possible through conventional imaging.

"These small-scale satellites are more agile, faster to develop and more powerful – an indicator of the types of new generation systems that technology is now making possible."

The project aligns with the UAE government's directions to create opportunities for national companies, including

start-ups and small and medium enterprises (SMEs), in the private sector.

Under the guidance of the UAE Space Agency, Edge has announced the formation of a local consortium of key players in the UAE's private space sector and national centres, fulfilling one of the primary objectives of its strategic partnership with the agency.

Edge has assumed the prime contractor role with an added focus on the SAR payload development. Yahsat and Bayanat will implement the management of satellites, operations, data and space applications, while the National Space Science and Technology Center (NSSTC) at the UAE University in Al Ain will contribute by providing assembly, integration, and testing (AIT) operations.

The consortium will continue to expand its collaboration with other industry players, SMEs, and start-ups "to further enhance the collective expertise and capabilities of the programme".

Salem Butti Al Qubaisi, director-general of the UAE Space Agency, said: "Our partnership with Edge is a strategic step in growing the UAE's private space sector.

"The establishment of this local consortium is a cornerstone in our mission to implement the Sirb programme and foster a competitive and innovative commercial space sector. Through strategic collaborations with the UAE's major private space players and national centres, we are promoting the growth of a knowledge-based economy and ensuring that the UAE's talent and expertise are central to our regional and global leadership in the space domain."

Mansour Al Mulla, managing director and CEO of Edge Group, said: "At Edge, our sights are set on enhancing our capabilities and playing a transformative role in the national and global space sector. The signing of this MoU is an important first step and lays the foundation for strategic investments and partnerships which will accelerate the 'Sirb' programme.

"By uniting the foremost local players in the sector, we are fostering national research and development (R&D) and driving the nation's ambitions for a competitive space ecosystem."

The Sirb initiative is part of a Dh3 billion (\$820 million) space fund that was set out last year.





ALL IN A DAY

Stefan Buschle

Marcelle Nethersole talks to the head of maintenance sales EMEA.

What services does Jet Aviation provide?

Since our beginnings with one hangar in Basel in 1967, to our 50 locations and five lines of business today, we are committed to the highest standards in customer service, safety, and sustainability.

Jet Aviation is a subsidiary of General Dynamics with some 4,000 employees and a comprehensive network of business aviation services at key local and international airports. Our offerings include maintenance, aircraft management, aircraft sales, charter, completions, defence, FBO, and staffing.

How is business aviation for the company in the Middle East?

Jet Aviation has been in the Middle East for over 40 years. We have many long-term customers in the region across all lines of business, and our local and customer on-site presence allows us to foster and prioritise personal and long-lasting relationships. sometimes over generations.

We have a strong FBO network with five locations in Dubai and Saudi Arabia representing gateways to some of the most important economic, political, and cultural sites in the region. We also have one of our global maintenance hubs in Dubai with a 600 square meter facility based at Dubai DXB.

In 2023 we saw more requests for larger cabin refurbishment, structural repair projects, avionic modifications, and upgrades at our fixed-wing maintenance site in Dubai and have adapted and expanded our capabilities to match.

We are also committed to our presence in Saudi Arabia and are exploring the significant growth opportunities in the Kingdom.

In addition, we continue to grow our line maintenance footprint in Abu Dhabi and Jeddah primarily to support our sister OEM Gulfstream.

Jet Aviation has recently introduced automated, Al powered drone inspections in maintenance services. pioneering this technology in the business aviation

industry.

What challenges does the company face in the Middle East?

While the available business aviation infrastructure in the Middle East is very developed and competitive, especially in Dubai, there's certainly opportunity for further expansion.

Specifically, in maintenance, there's a growing demand for additional capabilities in the region. Over the past year we have announced a number of expansions in our maintenance services in the Middle East, such as improved techniques and equipment to cover eddy current and ultrasonic inspections, expanding on-site borescope capabilities, and adding modular tail docking capability to the base maintenance hangar in Dubai. as well as extended line maintenance capabilities in

How does the company meet customer needs?

We are committed to the region and continuously realign and improve our services and our product portfolio based on customer demands and market

In 2023 we have seen more requests for larger cabin refurbishment, structural repair projects, avionic modifications, and upgrades at our fixedwing maintenance site in Dubai and have adapted and expanded our capabilities to match.

There's also a growing demand to support local line maintenance at our client's home bases.

How do you see the future of business aviation?

Jet Aviation is committed to continuous improvement and innovation. As an example, Jet Aviation has recently introduced automated, AI powered drone inspections in maintenance services. pioneering this technology in the business aviation

We are currently using AI drones at our Basel facility and aim to expand the use of automated drone inspections across our MRO network.

As a company, we continue to explore more sustainable options for our customers, and more sustainable ways of operating our sites, such as reduced energy consumption. To broaden access to Sustainable Aviation Fuel (SAF) where it is not physically available yet, we offer Book & Claim at all our FBOs in the Middle East as a viable alternative.

What does a typical working day involve for you in your role?

My primary target is to support my sales team to excel in their roles and ensure our facilities are well loaded throughout the year. While I'm lucky to have some of the best talents in the industry in my team, we constantly review the way we

work, and search for possibilities to improve how we serve our clients best.

The other big priority is to get as much personal feedback from our clients, which means that I travel regularly to get as much "facetime" as possible.

One world of experience



Airframe maintenance Cabin refurbishment Engine & aerostructure repair shops Engine & airframe part-out Parking & storage Aircraft painting Training

Airbus A320 | A330/340

B737 42/72



Asset management Cargo conversion Material management Aircraft spare parts



View our new digital

Luxembourg | Montpellier | Châteauroux



We are Expanding!



Hangar 7 soon



www.joramco.com.jo

Q Queen Alia International Airport - Jordan

