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KEY TO THE KINGDOM

BOEING STRENGTHENS ITS TIES WITH SAUDI ARABIA

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Oman
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Pilot clocks
up 5000
hours in
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A world of
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CAN AL-MEER TAKE QATAR TO THE NEXT LEVEL?

Everybody wants to shake hands with Badr Mohammed Al-Meer.

The new Group CEO of Qatar Airways, who took over as the head of the Doha-based carrier in November 2023, is top of the meetings list for airlines, suppliers and media alike, not simply because he is taking the reins of one of the industry's leading carriers, but because he comes after the 27-year reign of one of the industry's greatest airline leaders, the iconic, His Excellency Akbar Al Baker.

Qatar Airways is undisputedly the airline that Akbar built. Not single-handedly, but this utterly driven, shamelessly meticulous and intensely demanding leader propelled himself, his team, partners and suppliers, to create the 5-star airline, airport and business of today.

So, the person coming after generates great interest. What will they be like? What will their business style be? Can we do business with them? And, inevitably, will they be like Akbar?

Badr Al-Meer steps into the hot seat at Qatar Airways as a virtual industry unknown, despite running Doha's Hammad International Airport since 2014.

As the handshakes, meetings and phone calls mount up he is turning from an enigma to a real person. And people like what they see.

Badr Al-Meer is about as 180 degrees different to Akbar Al Baker as you could get.

Gone is the "personality CEO" with strident, often controversial statements, and a strict regime and standards for employees and suppliers.

It is replaced by a person with a softer manner, who

outlined his brave new world for Qatar Airways v2.0 on day one, telling employees in a personal letter that he wants "a culture of trust and empowerment. My vision as a CEO is to listen to the employees."

Less than a year into the job Al-Meer was asked at a recent media roundtable at the Farnborough Air Show if his approach is working. "The best answer for this question is ask the cabin crew around you – they have wider smiles," he replied, referring to the team scattered round the room.

One jolly event is hardly proof, but there is certainly an air of reset at Qatar Airways, which is what Doha wants from Al-Meer on many fronts.

Now it is time for a CEO to take Qatar Airways to the next level; a politically savvy, customer-led, employee-focused operation fit for the challenges of a highly demanding business environment.

This is a worrying development for the airline's competitors. In early July, the carrier reported its best annual results in its history with a net profit of US\$1.7 billion.

That result is from the legacy of Akbar's airline team. At Farnborough Al-Meer said: "We are talking about a company that has a strategy in place, and whoever takes over should continue the strategy of the company.

"We have different personalities, but at the end of the day the end result should be the same; to continue to have the best airline in the world and to have the best financial and commercial return in the industry. This is our project."

Can Al-Meer grab the reins and make Qatar Airways even better? Our hunch is that he can.

Mark Pilling, Consultant Editor

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**Asaad Al Jomoai,
who heads up
Boeing Saudi Arabia.**

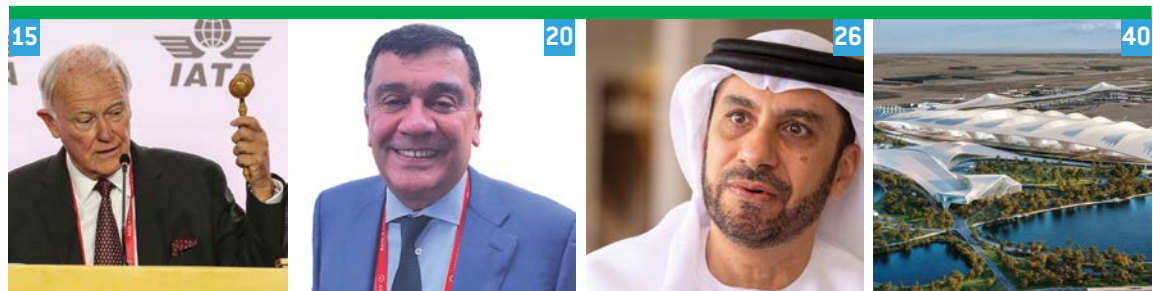
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Captain Hassan Alhammadi:
 “Mitigating the adverse effects of turbulence is an industry-wide challenge and obtaining accurate and live data is key in this endeavour.”
IMAGE: EMIRATES AIRLINES

Emirates ready to ride the storm

Emirates has joined IATA’s Turbulence Aware Platform. It will also be the first airline to integrate the IATA platform within the latest version of Lido mPilot, the mobile navigation solution from Lufthansa Systems.

The airline has also equipped more than 140 aircraft with the required onboard software to automatically share turbulence reports with all airlines contributing data to the platform. All new aircraft joining the Emirates’ fleet over the course of the next few years, such as the Airbus A350 and Boeing 777-9, 777-8 and B787, will be enabled to participate in the programme.

Captain Hassan Alhammadi, divisional senior vice president, flight operations Emirates Airline said: “This is only the beginning, and we are progressing with plans to integrate more cutting-edge technologies to elevate the flying experience even further, so our customers can enjoy smoother journeys.”

Humanitarian support

Qatar Airways and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) have signed an MoU to help support humanitarian endeavours.

Qatar Airways group CEO, Badr Mohammed Al-Meer, said: “Our cargo division is set to provide transportation of aid and emergency materials to our network of more than 170 destinations and 70 freighter destinations. Qatar Airways continues to commit to fulfilling its humanitarian role through collaboration and advocacy through the coming years.”

Yahsat satellites

Yahsat, the UAE’s flagship satellite company, has contracted Airbus Defence and Space for its new geostationary telecommunications satellites, Al Yah 4 (AY4) and Al Yah 5 (AY5). Airbus will design and build the AY4 and AY5 satellites based on the Eurostar Neo platform.

The flexible multi-band payloads can be fully reconfigured while in orbit, capable of adjusting the coverage area, capacity and frequency “on the fly” to meet evolving mission scenarios.

Both AY4 and AY5 satellites will offer secure governmental communications over a wide geographical area across the Middle East, Africa, Europe and Asia.

Tomorrow’s world

Turkish Airlines has launched its sustainability brand “Tomorrow On-Board.”

The carrier said the sustainability brand represents the scope of its future goals and aims to present this comprehensive vision to passengers and investors as part of the corporate culture.

Chief investment officer of Turkish Airlines, Levent Konukcu, said: “This initiative embodies our commitment to reducing our environmental impact and enhancing

sustainability practices across all our operations to leave a better world for future generations.”

Qatar Airways profit

Qatar Airways Group has reported the strongest financial performance in its 27-year history, announcing record profits of US\$1.7 billion for its 2023/24 financial year.

The airline group reported historic net profits of US\$1.7 billion during the 2023/24 fiscal year, with a total revenue of US\$22.2 billion, representing an increase of US\$1.3 billion – up six per cent compared with last year.

Pegasus seats

Acro Aircraft Seating has won a contract with Pegasus to line-fit 50 Airbus A321neo aircraft. Deliveries to the low-cost Turkish carrier will start in the first quarter of 2025, with the inaugural order completed by the end of 2029, and the potential for 50 further aircraft to follow soon after.



100 Lilium eVTOL Jets set for Saudia Group

Saudia Group and Lilium signed a binding sales agreement in July for 50 Lilium Jets, with options for the purchase of 50 more.

The sales agreement marks the largest of its kind in the MENA region and represents an important industry milestone as the largest reported firm order of eVTOL aircraft by an airline that plans to operate the aircraft. It signals a substantial commitment to electric aviation from a world-leading operator, as well as a clear preference towards the superior performance, economics, and passenger experience expected to be provided by the Lilium Jet.

The agreement includes a schedule of deposit and pre-delivery payments, timeline of future deliveries, guarantees on aircraft performance, and provisions on spare parts, maintenance, and repairs. In addition, the parties intend to sign a comprehensive “Lilium POWER ON” agreement for aircraft fleet maintenance and support services.

Klaus Roewe, CEO of Lilium, said: “The Middle East is a priority for Lilium, and Saudi Arabia will be a very large and exciting market for electric, high-speed regional air mobility.

RAM's longest route

Royal Air Maroc (RAM) is to resume direct flights from Casablanca to São Paulo. This is the airline's longest-planned non-stop route. The flights will commence from its hub at Casablanca Mohammed V International on December 7, 2024 and will be operated three times a week with the Boeing 787 Dreamliner.

Turkish A321 order

Turkish Airlines has signed a lease agreement with lessor AerCap for 10 new Airbus A321neos.

The airline is currently awaiting the delivery of 194 A321neos it has on order direct from Airbus.

"We are happy to further enhance our fleet with 10 new Airbus A321neo aircraft through our partnership with AerCap," said Turkish Airlines chairman, Prof. Ahmet Bolat. "This addition aligns with our strategy to continue offering our passengers a modern and efficient travel experience while supporting our ongoing expansion plans for new routes and increasing the frequency of existing ones."

Saudi ecosystem

Embraer is to help with the development of an aerospace ecosystem in Saudi Arabia, along with the Kingdom of Saudi Arabia's National Industrial Development Center (NIDC), AHQ Group. The agreement focuses on the adoption of Embraer aircraft by the Kingdom of Saudi Arabia as well as on potential technological cooperation, supply chain and human capital development between the organisations to achieve excellence in products and services, evaluate industrial capabilities and new business opportunities.



KUWAIT FLEET ADDS LAST OF 30 CARACAL HELICOPTERS

Kuwait has received two Caracal helicopters – the last batch of 30 aircraft Kuwait had contracted with Airbus Helicopters for in August 2016. Twenty-four of the new helicopters will be operated by the Kuwait Armed Forces and six by the Kuwait National Guard.



Saudi Arabia orders four A330 Multi Role Tankers

Saudi Arabia has ordered four additional Airbus A330 Multi Role Tanker Transport (MRTT) aircraft for the Royal Saudi Arabia Air Force (RSAF).

The first of these aircraft will enter into conversion at the beginning of 2026 and will enter into service with the RSAF in 2027 to carry out air-to-air refuelling and transport missions. "This new order demonstrates the high level of customer satisfaction with the A330 MRTT", said Jean-Brice Dumont, head of air power at Airbus Defence and Space. "This is the third contract signed by Saudi Arabia for the A330 MRTT, making the RSAF one of the largest MRTT operators in the world."

The contract also includes a logistics support package with spare parts, training services and service support for the four new aircraft.

Stop wastage

IATA is collaborating with the Aviation Sustainability Forum (ASF) to launch a standardised cabin waste composition audit (CWCA) platform to be launched in September 2024.

CWCA audits have already been trialled in two waves, covering 25 flights (short, medium, and long-haul). ASF conducted the audits based on a methodology developed by IATA. Preliminary results indicate that the sector is generating more than 3.6 million metric tonnes of cabin and catering waste annually, with 65 per cent being food and beverage waste. Untouched meals account for 18 per cent of all waste.

RoSPA award

Bahrain International Airport (BIA) has been awarded with the Royal Society for the Prevention of Accidents (RoSPA) health and safety award for the fourth consecutive year.

Bahrain Airport Company (BAC) CEO, Mohamed

Yousif Al Binfalah said: "The award reflects the airport community commitment to safety and the diligent work our team members' contributions to adhere to the best industry health and safety practices. At BAC, the safety of passengers and staff is a top priority, and we strive to work with our partners to maintain the highest standards at the airport."

Dubai University Lab

A state-of-the-art laboratory will be established at the University of Dubai aiming to promote collaborative efforts and research in advanced air mobility (AAM).

EANAN Al Samma, a UAE-based technology company, signed a MoU with the University of Dubai (UD), Xi'an Jiaotong University (XJTU) and Zhuzhi SRJL Materials Laboratory to foster international cooperation in applied sciences and expand the dissemination of academic and research information.

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Raytheon upgrades

Raytheon, an RTX business, has been awarded a major reconnaissance system upgrade contract for an air force customer in the Middle East region.

This is the 12th nation in the Middle East and North Africa region to use Raytheon’s advanced multi-spectral reconnaissance pods.

The award, which will be contracted via U.S. foreign military sales (FMS) channels, involves upgrading existing DB-110 electric optic/infra red pods designed for fast jet operations, including Boeing F-15 and Lockheed Martin F16, to the advanced MS-110 configuration and providing improved ground station exploitation features associated with the SCI-toolset suite of software tools.

Turkish 777 orders

Turkish Airlines has ordered four more Boeing 777 aircraft. The airline will now operate 12 777 freighters.

“This new investment in expanding our cargo fleet underscores our commitment to meeting the growing global demand



Engine room: Etihad Engineering’s first batch of aircraft maintenance trainees. IMAGE: ETIHAD ENGINEERING

On The Job students are just the job...

Etihad Engineering welcomed the first batch of aircraft maintenance trainees in July from Vision Concept Aviation Training Institute (VCATI).

The students graduated after completing their aircraft maintenance on-the-job experience (OJE) programme.

The OJE programme is managed by Etihad Engineering Technical Training, the onsite training facility of the company which trains more than 10,000 aviation professionals through more than 600 courses every year.

“The aviation sector is booming and the demand for highly-skilled and well-trained professionals is higher than ever in our MRO business,” said Adrian Guirey, senior manager of Etihad Engineering Technical Training.

“Our aircraft maintenance on-the-job experience (OJE) programme with VCATI enables us to usher in the next generation of aviation professionals who will become qualified and highly-competent aircraft engineers, filling the talent gap in the industry,” he added.

for air freight services,” said Turkish Airlines chief cargo officer Ali Türk.

“The addition of these Boeing 777 Freighters will not only enhance our operational capabilities, but also serve as another step in our strategic vision to reach the top of air cargo sector worldwide while maintaining our leading position with our unparalleled service and

efficiency for our customers across the globe.”

Saudi AMS sector

Eve Air Mobility and Saudia Technic have signed an MoA to explore the potential demand of MRO activities for eVTOL aircraft in the region.

Fahd Cynndy, CEO of Saudia Technic, said: “This

MoA is in perfect harmony with Saudi Vision 2030, as it aims to establish Saudia Technic and Eve as leaders in the air mobility sector (AMS) in Saudi Arabia and the broader Middle East. By adopting cutting-edge technologies and seamlessly incorporating them into their operations, they are defining a new benchmark for aviation excellence in the region.”

Riyadh partnership

Riyadh Air and Singapore Airlines have signed an MoU to establish a new partnership between the two airlines. The carriers will explore opportunities for interline connectivity on each other’s services, subject to regulatory approval. They will also work on other potential areas of commercial cooperation.

Flydubai’s expansion plans stunted by delays in Boeing’s delivery schedule

Flydubai announced in July that its expansion plans have been ‘significantly impacted’ by Boeing’s latest update regarding ongoing delays in its aircraft delivery schedule.

The carrier is currently evaluating its route development plans and potential frequency revision across the network due to a lack of new aircraft deliveries over the next few months. flydubai urges Boeing to honour and renew its commitment to meet its delivery obligations.

Ghaith Al Ghaith, chief executive officer at flydubai,



IMAGE: FLYDUBAI

said: “We are extremely disappointed to learn that Boeing will not be able to fulfil its commitment to deliver more aircraft for the

remainder of the year. Boeing’s short-noticed and frequent delivery schedule revisions have hindered our strategic growth plans

resulting in significant disruptions to our published schedules.

“The reduced capacity will ultimately affect our

customers as well as our projected financial performance.

“We urge Boeing to take immediate action and implement measures to stabilise its production and delivery processes to avoid further delays while upholding the highest standards.”

Flydubai’s plans for this year were initially based on the commitment to receive 14 new aircraft. The carrier said it continues to explore all possible avenues to mitigate the impact of these delivery delays.

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Boeing is pressing ahead with plans to expand operations in Saudi Arabia – including production of two of the materials most used in aircraft construction, aluminium and titanium. Alan Dron reports.

BOEING SHOWS ITS METTLE...

The Kingdom of Saudi Arabia will be the aviation market to watch over the next decade. A new national airline, expanding existing carriers, a host of new airports and a new national maintenance repair and overhaul (MRO) ‘farm’ are all parts of a jigsaw that will create a complete aviation eco-system.

The reason for this huge spurt in growth is Vision 2030, Saudi Arabia’s vast national initiative to diversify its economy away from the oil and gas sector. Having seen from neighbouring Dubai how aviation can be a driving force behind an economy, Saudi Arabia aims to surpass their achievement.

Vision 2030 brings huge potential opportunities for aviation companies. But, in return for access to government contracts, Saudi Arabia is demanding that multi-national companies set up regional headquarters within the country if they wish to be considered for these deals.

All such companies must have a certain mass of executives who are able to take decisions on deals. In Boeing’s case it now has more than 100 personnel in Saudi Arabia directing the company’s strategic direction in the country.

Boeing Saudi Arabia is now a distinct entity from its wider Middle East operation. Heading up the new organisation is Asaad Al Jomoai. It’s the second stint at Boeing for Al Jomoai, who until 2021 was the company’s in-country lead for international strategic partnerships, responsible for developing Boeing defence localisation opportunities, business growth and localisation obligation fulfilment. He also held the position of VP strategy and business development, Boeing Saudi Arabia.

“When I left in 2021, it was kind of a career change, to actively contribute to Vision 2030,” Al Jomoai said. “I was offered a job by the minister of investment as a senior advisor, directly working for him.”

His role was as managing director of the country’s Global Supply Chain Resilience Initiative (GSCRI), inaugurated under the auspices of the Crown Prince, Mohammed bin Salman Al-Saud and which aimed to establish Saudi Arabia as a major supply chain hub.

This, says Al Jomoai, is a role to which the country is well-suited, when one considers its strategic location, skilled workforce and financial situation.

However, in 2023, he was approached by the then-president of Boeing Saudi Arabia, who was retiring and asked Al Jomoai for his permission to put his name forward in the company’s succession plan. He duly returned.

As part of the wide-ranging plan to transform Saudi Arabia into a centre for aviation, Boeing is part of a plan to start production of two of the materials most used in aircraft construction, aviation-grade aluminium and titanium.

The company has several industrial partnerships with local companies and the plans to produce the two metals were the most recent and most exciting of these.

Al Jomoai has signed an MoU with the country’s ministry of investment. In aluminium, Boeing is technical partner in an over-arching deal that will allow a Public Investment Fund (PIF)-managed company, Ma’aden, to produce the metal. “Boeing is helping create the entity that will eventually become the manufacturer of the material.

“We hope to reach an agreement between PIF, Boeing and two ministries by the end of the year.”

Boeing may be one of the companies to which Ma’aden supplies aluminium, although this is not yet confirmed.



Meanwhile, another MoU signed last year aims at exploring the potential investment and development collaboration opportunities between Saudi holding company Tasnee and Boeing to advance the aviation-grade titanium alloy value chain in the kingdom.

In a joint venture with Japanese company Toho, Saudi Arabia already produces titanium sponge. The aim is to make greater use of the material by melting and forging it into products that can be used in aircraft.

Boeing, of course, has a long relationship with Saudi Arabian Airlines (Saudia) and now has a new one with the country’s new flag-carrier Riyadh Air. The two airlines last year ordered a total of 121 Boeing 787s (78 firm and 43 options) between them.

Since then, however, Saudia and its low-cost subsidiary Flyadeal have announced orders for 105 Airbus A320neo-family narrowbodies, an indication of the intense competition between the two OEMs.





“ We hope to reach an agreement between PIF, Boeing and two ministries by the end of the year.”

ASAAD AL JOMOAI

At the time of writing, a long-awaited substantial order from Riyadh Air for narrowbodies had still not been announced and Boeing was in negotiations with Saudia for a substantial batch of freighters – again, in competition with Airbus.

Saudia has indicated to the contenders that it is anxious to conclude a deal for cargo aircraft – the choice is likely to be between the Boeing 777F and the Airbus A350F – to stake a claim to a portion of the rapidly-growing e-commerce market.

Since the pandemic, “E-commerce has gone through the roof,” Al Jomoai noted. “[Saudia] know that their mandate is that by 2030 they want to be able to reach 4.5 million tonnes of cargo, either transiting through Saudi Arabia as a hub, or issued from Saudi Arabia.”

Getting into the booming e-commerce market is the business driver that the airline repeatedly mentions, with an emphasis on swift deliveries of dedicated cargo aircraft to minimise what the airline feels is a growing loss of business opportunity.

On the military side, Boeing is keen to sell its latest version of the F-15 Eagle fighter, the F-15EX, to Saudi Arabia. This would join the substantial fleets of earlier variants – the F-15S and SA – in the service’s inventory.

“We’re actively engaged with the Saudi government to explore the sale of the F-15EX,” Al Jomoai said, while accepting that Boeing faces tough competition from the Eurofighter Typhoon

(which is already in RSAF service and the Dassault Rafale (which has been bought by the UAE and Qatar).

If Saudi Arabia does opt for the F-15EX, Boeing would also be keen to sell the country its new-generation T-7 trainer, being co-developed with Saab, as the preferred lead-in trainer to the heavy fighter. Boeing is also looking closely at possible Saudi interest in the KC-46 Pegasus tanker and the CH-47 Chinook medium-lift helicopter.

However, one of the most far-reaching – and startling – ideas being mulled by Boeing’s Saudi operation is the possible restarting of production of the C-17 strategic airlifter.

□ □ □ □ □

Production of the immensely capable – but fearsomely expensive – C-17 ended at Boeing’s Long Beach, California, plant in 2015, after 279 had been built, 223 of them for the US Air Force. The aircraft was exported to several nations, but not Saudi Arabia.

Now, however, discussions are ongoing over the possibility of restarting production of the C-17 in the kingdom.

While many hurdles would have to be overcome before any such resumption of production could take place, Al Jomoai said that the idea was not just a pipedream.

Even if the idea is practicable, the costs involved in recreating an assembly line, re-establishing a supply chain and recreating the necessary skills in a production force would be immense.

But if any country has the resources to do it, it is Saudi Arabia.

The project could take the form of “co-development, co-production of some capability, whether the C-17 itself or something similar.” He has asked Boeing to look at the cost of resurrecting a production line and then proposing that to the Saudi government “as a co-investor or even a full investor”.

No western nation has produced a successor aircraft in the C-17’s class and Boeing has said in the past that it still receives enquiries from nations about restarting production. In the Gulf, the UAE operates a fleet of eight, while Kuwait and Qatar have two each.

A major prize would be an order from the Royal Saudi Air Force (RSAF), whose largest transport aircraft at present is the Lockheed Martin C-130, whose payload, at 19 tonnes, is around 25 per cent of the C-17’s 74 tonnes. The RSAF has a large fleet of 33 increasingly elderly C-130Hs, which will have to be supplemented or replaced in the not-too-distant future.

“We’re in the midst of this process, looking at how much it would cost,” Al Jomoai said. “That, I assure you, is no joke.” ▲



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Dubai and Emirates finally got the honour of hosting the IATA AGM in June, with aviation's mission to reduce emissions at the top of the agenda. **Mark Pilling** and **Alan Dron** report.

IATA hammers home the net zero message

“I always wanted one of these,” declared Sir Tim Clark, as he was presented with a replica gavel as a memento of his role as president of IATA’s 80th AGM, hosted by Emirates in Dubai. It is a long-standing tradition that the IATA director general, in 2024 this was Willie Walsh, hands over this small wooden hammer, along with a base, which when struck resounds with a reassuring clunk as a matter of business is concluded.

The AGM president’s position is assumed by the host airline in a ceremonial role. However, the novelty of wielding the IATA gavel and presiding over a meeting of their most hallowed peers is one that all airline CEOs cherish, even those with the longevity of Emirates airline president Tim Clark, whose stellar career has brought enough honours and awards to fill several trophy cabinets.

Clark has wanted to bring IATA’s premier annual gathering to Dubai for years. It is incredible that one of the world’s largest and significant global air hubs, home to one of the globe’s most powerful airlines, had never hosted the AGM until this year.

Clark had offered to host the 2022 AGM, which had to be moved from Shanghai at short notice because of travel restrictions in China in the aftermath of Covid.

That rescue mission was grabbed by Akbar Al Baker’s Qatar Airways and a year later it was Turkish low-cost carrier Pegasus Airlines that hosted the event in Istanbul. Both Doha and Istanbul have welcomed IATA twice since 2008, a fact that has not gone unnoticed by Clark.

But he did not have to wait long, and the timing for Dubai and Emirates was good.

Firstly, the air transport industry, albeit facing the usual long list of challenges, is in strong growth mode, with Emirates itself logging record profits in 2023.

Secondly, just weeks before the AGM, Dubai’s ruler Sheikh Mohammed bin Rashid Al Maktoum gave the green light for a huge \$35 billion expansion of Dubai World Central – Al Maktoum International (DWC), the Emirate’s newest airport, that will see all traffic transferred there from the existing hub at Dubai International in the early 2030s.

DWC, with an annual capacity of 260 million passengers, will be the shiny new home of Emirates, enabling it to grow unconstrained and repel the threat of rivals in Doha, Riyadh and Istanbul.

Finally, for 74-year-old Clark, time was running out for this industry luminary to sit on the podium at an AGM.



HE Abdulla bin Touq Al Marri: “As climate concerns continue to intensify finding sustainable solutions for air travel has become unparalleled.”



Sir Tim Clark of Emirates was the president of IATA's 80th AGM.
ALL IMAGES:IATA

SUSTAINABLE SOLUTIONS TOP THE AGENDA

In his keynote speech upon opening the AGM, HE Abdulla bin Touq Al Marri, UAE minister of economy, wasted no time in highlighting the industry's top agenda item: the climate crisis.

"As climate concerns continue to intensify finding sustainable solutions for air travel has become unparalleled," he told delegates. "The entire industry needs support from governments and the private sector, particularly in funding and production infrastructure to produce and deploy sustainable aviation fuels and other potential alternatives.

"The UAE is at the forefront to shift to a low carbon economy model with aviation as a key component diversifying away from oil and tackling climate change and is among the top priorities of our leadership," stated Al Marri.

With the oil sector representing 74% of GDP in 2023, the UAE's motivation to accelerate the transition to a low carbon economy is clear.

"The UAE is committed to being a part of the solution to the climate crisis and to decarbonise the industry. We believe that partnership and collaboration with the private sector are crucial to achieving our economic and sustainability goals," said Al Marri.

In his annual report at the AGM, Walsh said simply: "Achieving net zero carbon emissions by 2050 is existential, not optional."

It has been said before at IATA's annual gathering that many levers are needed to meet the target, so it was not surprising Walsh reiterated that "Sustainable Aviation Fuel (SAF) is our biggest decarbonisation lever to 2050.

"To be blunt, governments must deliver concrete measures to facilitate the exponential ramp-up of SAF they are calling for – while not forgetting all the other decarbonisation measures that are needed," Walsh told delegates.

"We have consistently held that aviation is a global industry that needs global solutions to the global problem of climate change," stressed Walsh. "I emphasise the plural on solutions. Variety is key. Everybody does not need to use the same solution. But we do need a set of solutions that are globally recognised and accepted to take on the journey to net zero carbon emissions."

Walsh set out a list of eight characteristics of such solutions that will be needed.

Continued
on Page 16 ▶



Willie Walsh: "Achieving net zero carbon emissions by 2050 is existential, not optional."

CONTINUED FROM PAGE 15

Among them, he said measures must be science-based. He was referring to Europe's intention to force airlines to report their non-CO2 impacts and described this "as putting the cart before the horse. There is scientific consensus that we need more humidity data to quantify the impact of contrails. Getting that actual data must be the priority."

He also argued that "more taxes are not the solution. Governments spent years agreeing every aspect of CORSIA (ICAO's Carbon Offsetting and Reduction Scheme for International Aviation). It was to be the market-based measure to address international aviation's climate change impact."

However, despite ICAO specifically saying CORSIA should stand to avoid a patchwork of measures these are appearing, especially in Europe. "There is no end to the parade of fragmented green tax proposals. Most recently, Denmark brought in a new green tax and Germany increased its travel tax. We need policies that enable people to fly sustainably, not ground all but the rich with taxes – taxes that will have no positive environmental benefit."

Walsh concluded that while the list of asks appears daunting, he did point to the progress made. "We have CORSIA, the only global market-based measure to address climate

change. The challenge is to make it work. We have SAF, a proven clean alternative to jet fuel. The challenge is to ramp up efficiently with diverse feedstocks and production methods.

"We have a common commitment with governments to decarbonise by 2050. The challenge is for governments to deliver enabling policies. And lastly, we have many possible pathways to net zero. The challenge is to promote them all and move forward," he concluded.



Turning this into numbers, speaking to *Arabian Aerospace* at IATA, Abdul Wahab Teffaha, secretary general of the Arab Air Carriers' Organisation, said his association has calculated that airlines globally will see their energy costs rise four per cent by 2030 as they acquire SAF in the mandated quantities required and pay for offsets via CORSIA.

Projecting forward to 2050, excluding inflation, as mandates increase "our total [energy] cost for airlines, SAF, Jet A-1, everything, will increase by about 35 per cent," said Teffaha, with an inevitable impact on ticket prices.

"How will that reflect on the growth [of

aviation] and more importantly how will that reflect on the contribution to the economy in terms of GDP and job creation?" he asked.

"There are measures that can alleviate some of the burden," said Teffaha. "Number one is to have one standard of emission reductions around the world, not a multitude of standards, such as the UK, European Union and so on... it is up to the regulators to do that."

The airline chiefs speaking on the CEO panel at the AGM all agreed the 2050 net zero target will be met. They have to say that frankly as all IATA members have signed up to it. Only Clark of Emirates would go any further, saying "2050-ish".

His tongue-in-cheek comment comes from observing the divergence at political level between major blocs like the US, Europe, the UK or Australia, about the best route to net zero.

"That's why it's 'ish', because I don't think there is anybody in this room who is not minded to fulfil what we are driving to in 2050," said Clark.

"But it requires so many players to come into the mix and on the same page at the same time doing the right thing. What we are finding is a splintering of the thought-leadership in the way we go about sustainability – it's driven by politics; it's driven by socioeconomics and a number of other things." ▲

STRONG GROWTH RETURNS TO THE REGION

As bodies like AACO and IATA strive to make the airline voice heard on the frontline of global climate change policy, at the macro level the industry is recovering strongly, and will exceed 2019 traffic levels this year for the first time.

Kamil Al-Awadhi, regional vice president, Africa and The Middle East, IATA, told a media briefing that passenger traffic for Middle East carriers has fully recovered.

IATA is predicting 9.3 per cent traffic growth for Middle East carriers in 2024. "Although airlines continue to add capacity, yields remain healthy and the demand for travel remains buoyant and looks set to continue apace," explained the association.

"Geopolitical risks are the main threat, especially to the Levant carriers. The Gulf carriers are relatively less impacted unless tensions between Iran and Israel escalate," added IATA.

IATA forecasts that passenger numbers for the region's airlines will double, reaching 530 million in 2043. Traffic will grow at an average annual rate of 3.9 per cent over the 2023-2043 period.

While Dubai was hosting the IATA gathering for the first time, it was announced that India will host the 2025 event for the third time. Previous visits were in 1958 and 1983. Specifically, the host will be rising low-fare carrier IndiGo, with the AGM taking place in Delhi in June 2025.

"With record aircraft orders, impressive growth, and world-class infrastructure developments, India is firmly on the trajectory to become the world's third largest aviation market within this decade," said Walsh. "With such bright prospects, it's the perfect time for the IATA AGM to return to India and witness these exciting developments first hand."

■ NEW IATA CHAIR

Along with the Indian host announcement, it was also revealed that Pieter Elbers, CEO of IndiGo, has assumed his duties as chair of the IATA Board of Governors (BoG) for the usual one-year term. He succeeds RwandAir CEO Yvonne Manzi Makolo who will continue to serve on the BoG.

Elbers has been CEO of IndiGo since September 2022. Prior to joining IndiGo, he served for eight years as president and CEO of KLM.

IATA also announced that Luis Gallego Martin, CEO of IAG, will serve as chair of the BoG from June 2025, following Elbers' term. ▲



Kamil Al-Awadhi: Passenger traffic for Middle East carriers has fully recovered.

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“We are effectively more than tripling in size in a very short time.”

STEVEN GREENWAY



IMAGE: FLYADEAL.

Greenway tweaks Flyadeal's growth plan

As it grows internationally, and moves to capture pilgrimage traffic, Saudi Arabian low-cost player Flyadeal is adapting its model. New head Steven Greenway talks to Mark Pilling.

Preparation for its first widebody aircraft order, a revalidation of the network plan, expanding its distribution approach to traditional agency channels, plus moving into Hajj and Umrah flights, have all been part of Steven Greenway's busy first six months at Flyadeal.

When he officially took the reins at Saudia Group's LCC arm on January 1, Greenway, a 25-year veteran of the airline and travel business, found a carrier with a strong growth profile and an ambitious owner.

It is a clichéd phrase, acknowledged Greenway, but his mission is “to take Flyadeal to the next level,” he said, speaking to *Arabian Aerospace* on the sidelines of the IATA annual general meeting in Dubai in early June.

“Think of Flyadeal as a teenager. It's no longer an influencer, no longer a startup, but with 30-plus aircraft it's not yet an airline of scale,” he explained. “The mission ahead of us with all the [order] announcements sees us grow from the 32

we have today to 100 within five years, net.”

Saudia unveiled an order for 105 Airbus A320neo family jets in late May, with 39 A321neos and 12 A320neos pencilled in for Flyadeal. Greenway talks about “net” fleet as it has extended the leases on its fleet of A320ceos to retain these types as the new Airbuses arrive and it has an existing delivery stream of 10 A320neos.

“So, we are effectively more than tripling in size in a very short time,” he said. To put that in perspective, Flyadeal will exceed in a decade what it took nearby flydubai 15 years to achieve, said Greenway.

“You don't see that type of accelerated growth anywhere else and to do that, to do it safely, to do it profitably, and to do it with all the constraints that are in the ecosystem, such as pilots, suppliers or the supply chain: It's a real challenge. That's the mission.”

Flyadeal's fleet boost is driven by an aggressive 10-year network plan that began with

The eight team: Flyadeal management led by CEO Steven Green (centre) with representatives of Airbus in Toulouse, France, taking delivery of one its latest A320neos.

IMAGE: FLYADEAL.



capitalising on the Kingdom’s sharp 10-15 per cent growth in domestic traffic since the pandemic. Today the carrier’s traffic is split 80:20 in favour of domestic.

There is plenty of headroom to sustain the domestic growth trajectory, however the aim is to reach traffic parity by 2030 as more international routes are launched, said Greenway.

His first task as CEO was the revalidation of the carrier’s network expansion ambitions, which were paused during Covid. That plan is solid, and it is resuming growth “at a clip”.

However, there will be changes, specifically “in the way we sell,” he stated.

This will see a move away from the “age-old formula of LCCs which is predominantly digital channels,” said Greenway. For a digital economy like Saudi Arabia this is fine, but as Flyadeal expands internationally “we must be more flexible in our sales and distribution approach.

“For example, if you are an Egyptian and you want to work in the Kingdom, I guarantee they don’t have a credit card. So how can they transact with us?”



This new approach will see Flyadeal entering one of the global distribution systems, which Greenway will reveal soon, and it will become part of IATA’s billing and settlement plan to support sales via other channels including airlines. Full membership of IATA is therefore on the cards too.

“We will work with more third parties like online travel agencies and offline travel agencies, strengthen our GSA [general sales agent] network and introduce a holidays programme,” said Greenway, with the latter a reinvention of its online distribution strategy.

Much of this is a “classical” airline distribution

approach, acknowledged Greenway, as the carrier seeks to expand its sales reach. “We accept that there are some inefficiencies and some cost issues around these things, and we just have to manage them properly.”

Acquiring further aircraft is important for Greenway, who has 88 either in the fleet or on order today. Over the coming six months he expects this number to go above 100 as his team secures new aircraft in what is a “heated market” with more orders or via lessors. This will address the carrier’s “fleet deficit” in the 2027-28 period.

From the time of the AGM to year-end, Flyadeal will take delivery of six A320neos.

Greenway is also picking up on the natural dynamics of the large Saudi market, where various cities feature high volumes and low yield and how to best serve this demand. “We are looking at long-haul in terms of [operating] widebodies,” he explained, pointing to his experience of the long-haul, low-cost airline concept at Singaporean carrier Scoot.

This is another shift from the traditional LCC model, but one the market opportunity may justify.

“It does not work everywhere, but we are considering how we can make it work, for example, worker traffic from south-east Asia and India, pilgrim traffic, and outbound traffic from the Kingdom to key destinations like London,” he said.

Flyadeal is evaluating this idea carefully, recognising the market conditions and operating model are key to success. The aim is to make a widebody fleet order by year-end with the likelihood of an order for at least 10 aircraft.

The carrier has been gaining experience with widebodies this summer as it conducts its Hajj flights using wet-leased Boeing 777s and A330s from various operators.

Building a Hajj programme is an important and new move for Flydeal, said Greenway. The carrier operated its first Hajj flights in 2023. “We have more than tripled in size this year where we have five dedicated leased widebody aircraft and we did over 200 flights and 30,000 pilgrims in the first month [May],” he noted.

“I intend to double this again next year,” he added, not just during the intense Hajj period, but the year-round Umrah pilgrimage. “Our focus is what we can do all year round in terms of offering a pilgrim product.” Pilgrim tours are organised through tour operators meaning this operation is somewhat “old school”, which Greenway applauds as it makes for good business.



Flyadeal will manage this flying with a combination of its own fleet, where Greenway plans to allocate around 10 per cent of its aircraft available for charters in what is effectively a “reserve” fleet, plus wet leases. Having more A320s available enables this move and ensure the resilience of its scheduled operation.

In terms of its network growth outside Saudi Arabia, Flyadeal will focus on the GCC countries. “Firstly, there are lot of countries, such as Kuwait, Bahrain, and Lebanon, which we haven’t even touched yet, so there are a lot of potential destinations,” said Greenway.

“Secondly, we will increase frequencies on routes that are performing well, such as Dubai. Beyond that its about moving into bringing worker traffic into the country, so sub-continent India and tourist traffic into south-east Europe. Africa is also a real interest area for us.” ▲

Mohamad El-Hout, his management team and his hardy carrier are in crisis mode, again, at Lebanon's Middle East Airlines (MEA). **Mark Pilling** reports.

MEA BATTLES THROUGH YET ANOTHER REGIONAL CRISIS

MEA is hardly a stranger to managing an airline in troubled times and is thrust into them once more as the Israel-Gaza war, which erupted in October 2023, brings safety concerns and affects traffic.

From a business point of view the timing is unfortunate, with MEA making a profitable recovery out of the pandemic. However, the Beirut-based carrier is familiar with uncertainty as Lebanon has land borders with Israel and Syria and the geo-political issues that swirl around these countries.

Amid this turmoil, MEA is carrying out a fleet modernisation, and like many other carriers is facing delivery delays from its aircraft supplier Airbus. But with a quarter of a century at the helm of MEA, making him one of the longest-serving airline heads globally, let alone in the Middle East, Mohamad El-Hout is unfazed.

"We are used to crisis," he stated. "Delayed delivery [of aircraft] is the easiest problem that we are facing. The war, the risk and the crisis management are major issues that we are living with. But we are a resilient company and a resilient country.

"We have passed through much more difficult times, and we believe we have the financial ability to go through this challenge," he said, speaking to *Arabian Aerospace* on the sidelines of the IATA AGM in Dubai in early June.

"The most important thing is that this war has an end, and we can see a ceasefire in Gaza in the near future."



Despite the challenges faced over the years, considering its location MEA has performed strongly for years under El-Hout's leadership.

"Last year was a good one for us compared to a year before," he explained. "From 2002, until now, we have been making profit every year, except for 2020. But since the beginning of the Gaza war, we have been affected a lot."

Not only have passenger volumes fallen, but it has faced the problem of war insurance, meaning some aircraft would not be covered and at risk if operated in Lebanon.

At the beginning of the war, MEA was forced "to reschedule our network and park more than half of our planes outside Lebanon," said El-

Hout. While the situation has eased, the airline continues to park six out of its 23 aircraft outside of the country.

The carrier is now flying about 80 per cent of its planned schedule, with many night stops factored into an adjusted timetable to enable aircraft to park overnight at airports such as Istanbul, Cyprus and in Georgia.

Whether MEA can sustain its profitability this year "depends on the summer," said El-Hout. The carrier has not released audited results yet for 2023 but was profitably at the operating and net levels.

"If the war spreads, no. If the war is contained, yes," he said of the profit outlook. The hope is that a strong summer will make up for the lost traffic earlier in the year.



Despite operating in a war zone, and taking all the necessary precautions, El-Hout said that government and intelligence sources indicate that neither Beirut airport nor aircraft there will be targets. "We believe that the war will be continue to be targeted and contained," he noted.

In terms of aircraft deliveries, MEA continues to modernise its fleet, taking delivery of its latest Airbus A321neo in March. It is parked at Airbus in Hamburg until MEA feels the time is right to induct it into the fleet.

MEA is the launch customer for the long-range XLR version of the A321neo and will receive its first one of five in 2026, later than the original 2023-24 timeline, said El-Hout.

The delivery of four new A330neos will take place in 2026-2028, he said.

MEA will keep its existing fleet to "make up for the delay in the delivery of the Airbus aircraft".

Mohamad El-Hout: "The war, the risk and the crisis management are major issues that we are living with. But we are a resilient company and a resilient country."

IMAGE: MARK PILLING





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ME joins the queue as Boeing focuses on fixing production issues

Boeing's list of accidents and incidents in recent years has seen the US manufacturer coming under increasing stress. **Alan Dron** visited the company's Seattle home as it attempted to explain how it is solving quality problems in its aircraft.

Middle East airlines face continued delays in deliveries of Boeing aircraft as the US company grapples with the problems that led to the loss of a door plug on an Alaska Airlines Boeing 737 MAX 9 in January.

The company says that its production philosophy is changing from prioritising getting aircraft out of the factory door, to a focus on fixing gaps that had appeared in its quality system after the pandemic.

Prior to the Farnborough Air Show, company executives faced an audience of international journalists at its Seattle home as they attempted to explain what it is doing to eliminate the problems in its production lines.



Boeing has come under fire for months over delays in deliveries of its aircraft (Airbus has experienced similar problems, but not to the same degree as Boeing).

Middle East airline chiefs have complained about the delays to Boeing aircraft affecting their growth plans – none more so than Emirates'

president Sir Tim Clark, who has made increasingly sharp comments on the lack of visibility over deliveries of Boeing's new-generation 777X widebodies.

Clark has made it clear that Boeing has to get back to basics, rapidly find answers to its problems and has warned that the US manufacturer is drinking in the last-chance saloon when it comes to disappointing major customers such as Emirates.

Boeing, still recovering from the crash of two 737 MAX aircraft belonging to Indonesia's Lion Air and Ethiopian Airlines in 2018 and 2019 respectively, was rocked by the loss of a door plug shortly after Alaska Air flight AS1282 took off from Seattle's SeaTac Airport on January 5.

It quickly became known that the cause of the incident, which miraculously resulted in no fatalities, was a lack of retaining bolts on the door plug, which covered an emergency exit that was not required on that particular model of 737.

The plug had been removed by personnel at Boeing's Renton factory to fix a fault that had not been picked up at the Wichita factory of fuselage

subcontractor Spirit Aerosystems. When the fault had been fixed, the plug was replaced ... but without three of the four required retaining bolts. The door eventually worked loose before blowing off over Seattle.

The incident has galvanised Boeing into a root-and-branch review of its procedures, quality control and training.

An overhaul was already under way before the accident, but has been widened. This was partly through a recognition that many new staff with little or no experience of aviation have been hired post-pandemic.



However, while 'foundational training' to give new staff basic levels of skills had been addressed "What I think we didn't realise at the time was that we also needed to enhance 'on-the-job' training," said vice-president for safety, Elizabeth Lund. Trainees are now paired up with more experienced staff on the factory floor.

And, rather than waiting until fuselages arrive at Renton from Spirit before checking them for

MOROCCO'S AEROSPACE ECOSYSTEM SOARS

Morocco ranks among the world's most dynamic aerospace ecosystems with a diversified supply chain. Leading aerospace groups are tapping into this thriving market which offers numerous opportunities.

According to Forbes, Morocco's aeronautical industry is on "a remarkable trajectory, poised to become a leader in the global aerospace sector".

Today, around 142 companies operate in the four ecosystems of the sector: assembly, the electrical wiring interconnect system, MRO and engineering. With an export turnover of \$2 billion and a local integration rate of 40 per cent, this sector employs 20,000 people trained in dedicated national institutes.

With strategic location advantages, government support, skilled labour, and strong partnerships with leading aerospace companies, Morocco offers a fertile ground for investment and growth.

Shimco, a Canadian aerospace company, has chosen the MidParc industrial zone, around 30 km south of Casablanca metropolis, to implant a new 15,000 m² plant. It will manufacture peelable and solid shims, pins, bushings, washers, brackets, spacers and small parts, mainly for the global aerospace and defense industries.



Strong handshake: Jean-Paul Alary, CEO of Safran Aircraft Engines and Hamid ADDOU, Chairman and CEO of Royal Air Maroc Royal Air Maroc and Safran Aircraft Engines strengthen their partnership. IMAGE: RAM

According to Peter Voss, CEO of Shimco, Morocco offers many advantages – "production, costs and logistic location near to Europe and Africa".

Figeac Aéro, the leading partner of major aerospace manufacturers inaugurated last February a new production unit of 4,000 m² in Casablanca to produce high value-added parts for the nacelle used in Airbus A320neo powered by LEAP-1A engines.

The facility is now ready for series production and will ramp up to reach cruising speed by the end of

2024. The new production unit is the result of close cooperation between the group's French and Moroccan teams and those from Safran Nacelles.

Moreover, Spanish Aerospace group Aciturri has recently taken a strategic initiative to install a new site in 2024 following the acquisition in 2023 of Midparc-based GOAM Industrie.

The Midparc industrial zone will also welcome the first German group. "Böllhoff's choice to set up in Midparc is motivated by the performance of the business model it offers, allowing it to co-locate part of its production in Morocco, especially in the presence of the strong demand for the kingdom," explained Benbrahim El Andaloussi, CEO of Midparc.

Swedish Trelleborg Group, specialising in the manufacture of sealing systems for the aeronautics sector, will also set up a new industrial unit in Morocco, worth 11 million euros.

As Ryad Mezzour, minister of industry and trade underlined, these partnerships contribute to "the strengthening of Morocco's industrial competitiveness, while promoting significant local integration".

Finally, in May Safran and RAM celebrated the 25th anniversary of its engine MRO shop with an extension of their partnership. ▲



Boeing has come under fire for months over delays in deliveries of its aircraft – such as the 777.

IMAGE: ALAN DRON

defects, that checking process now takes place – with increased Boeing oversight – in Wichita. All these measures, however, have taken a toll on aircraft production rates. Boeing was until recently building 38 737 MAXs a month, together with 10 787s. The company is currently assembling around 18-20 737s and just five 787s.



This means more delays in deliveries to already irritated customers. During the briefing session, a 737 and 787 for Oman Air could be seen on the Renton assembly line and the Everett flightline respectively. Whether they will meet their previously-announced delivery slots remains to be seen.

However, the emphasis has understandably now changed, said Katie Ringgold, Boeing’s VP and general manager for the 737 programme: “My focus is not on rate. I’ve told my customers that, I’ve told our employees that.”

It seems as though Middle Eastern airlines may find themselves waiting even longer for their aircraft. ▲

NOUVELAIR AND TUNISAIR PURSUE EXPANSION STRATEGY

Tunisian airlines have anticipated a surge in visitors including diaspora tourists during summer 2024. Nouvelair and Tunisair have announced ambitious flight programmes to facilitate and enhance air travel.

The national carrier Tunisair has scheduled more than 17,000 flights and around 2.7 million seats. This represents an increase of 19 per cent compared with the 2023 summer season. The recovery trend observed in 2023, following a 20 per cent increase in the number of passengers, confirms an accelerated growth in the tourism sector. It will perform even better in 2024 according to estimates.

Early this year, the CEO of Tunisair nevertheless affirmed that the national company “has come a long way”. The restructuring plan is still being implemented (debt reduction, social plan, digitalisation, recommissioning and strengthening of the aircraft fleet and new international routes).

To ensure its flight plan, Tunisair has accelerated MRO services of its aircraft.

At the same time, Tunisair has improved its offer by reopening regular routes such as a weekly flight to Lisbon, two flights per week between Tunis and Zurich, and a weekly flight from Djerba. Nantes will also reinforce its network.

The programme also includes increasing



Ambitious: Nouvelair recently unveiled new routes to serve the European market.

IMAGE: AIRBUS - C BRINKMANN

frequencies to several French destinations, namely Lyon, Marseille, Nice and Paris-Orly. Tunisair is also strengthening its African and Middle East network with more flights to Bamako, Casablanca, Conakry, Oran and Tripoli. More flights are also planned to Istanbul, Madrid and Venice.

Tunisair plans to open more international routes to China and the United States by 2026 to boost its financial recovery.

For its part, the country’s first private company Nouvelair recently unveiled an ambitious development plan to consolidate its network with new routes to serve the European market.

According to its managing director, Chokri Zarrad,

these additional routes are part of “the growth strategy initiated in 2023 with the launch of 15 routes to five countries”.

Nouvelair will serve Barcelona, Madrid and Hamburg with two weekly flights, and Brussels from Monastir and Casablanca (three weekly flights). The company offers nearly 40 cities to fully meet the travel appetite of its customers.

The private airline operates from Tunis, Monastir and Djerba. It flies to more than 130 airports in over 30 countries covering three continents.

These measures were eagerly awaited as air transport still faces financial difficulties and competition despite renewed dynamism. ▲

Newly-appointed CEO Con Korfiatis has accepted the challenge of turning the loss-making Oman Air into profit. He talked to **Alan Dron** about his plans.

OMAN'S TASK MASTER

In early summer every year, something unusual happens on the south-west coast of Oman. The coastline around Salalah, Oman's second city, catches the edge of the Indian Ocean monsoon. Rain and mist descend, lowering the temperature to around 25°C when the rest of the Arabian Peninsula is heading towards 45°C. The rain turns the scrubland in this part of the country green; streams and rivers even start to run through the region's wadis.

This phenomenon is known as the "khareef". And just as the "khareef" transforms the countryside, there are hopes that a new restoration plan can transform the fortunes of Oman Air.

The national carrier has been a loss-maker for years. The government has underwritten its losses, but made it clear some years ago that it intended to gradually reduce its financial support.

At the time of writing, precise financial figures for Oman Air's 2023 performance had not been released, but airline chairman Saeed Al Mawali, who is also the country's minister of transport, communications and information technology, said that losses were reduced by 25 per cent compared with 2022.

According to local media, he added that the improvement in the company's financial performance had been achieved without resorting to borrowing from banks or receiving government support.



In late 2021, Oman Air's then-CEO, Abdulaziz Al Raisi, told *Arabian Aerospace* the airline had successfully undertaken a transformation plan that had seen expenses substantially reduced, partly through renegotiation of contracts with major suppliers and by introducing multi-tasking for personnel. Overall, he said, this had seen the company's costs slashed by a remarkable 29 per cent.

Late last summer, however, Al Mawali announced a new transformation plan, with greater emphasis on increasing yield and



The company's long-haul fleet is currently based around the Boeing 787-8 and -9.

IMAGE: OMAN AIR

focusing on widebody aircraft, and break-even now planned for 2027.

Al Raisi, together with several senior executives and board members, left the company and, in May this year, Oman Air appointed Con Korfiatis, the former CEO of Saudi Arabian LCC Flyadeal, as its new boss.

During his seven years at Jeddah-based Flyadeal, Korfiatis expanded the carrier to a 30-strong fleet and it began to expand internationally.

So, what lies ahead for Oman Air?

"We're a 30-year-old legacy airline that's never really come into the modern era. That's really the core of it," Korfiatis told *Arabian Aerospace* at June's IATA AGM in Dubai.

Like Al Mawali, Korfiatis reckons it will take three to four years to reach the point where the company is no longer loss-making.

Work to improve the airline's performance had started before he arrived, he said. External consultants were brought in to create the strategy behind the transformation and a small group of personnel was put together to oversee it.

"The board decided that they needed a whole new management team and some more senior people are coming in the next few weeks.

"Transformation has its challenges. There are a lot of things that have to come together. Your whole

eco-system and all your stakeholders have to come on the journey with you. There are some difficult decisions to make in that time, but improvement opportunities are most definitely there.

"We'll come through the programme, and we'll come through it in a better state than we are in today."

The airline will have to "right-size". This means looking at all the airline's organisational structures, to get it to the point where it is a viable organisation that is fit for the modern era.



This will probably mean that some current staff are surplus to the requirements of the new, leaner company, but plans will likely be developed to re-deploy them. This could involve upskilling affected personnel, or trying to find positions for them elsewhere in the country's aviation eco-system.

The transformation plan will require careful attention to the route network. Prior to Korfiatis' arrival, Al Mawali announced that Oman Air would drop multiple routes, including several to the Indian subcontinent, while opening new ones or increasing frequencies on some existing sectors.

Like most Gulf carriers, Oman Air has significant amounts of traffic to and from the



IMAGE: BILLYPIX

“Transformation has its challenges. There are a lot of things that have to come together. Your whole eco-system and all your stakeholders have to come on the journey with you.”

CON KORFIATIS

The company retains a batch of Boeing 737-800s, which will be phased out as their lease agreements come to an end.

IMAGE: OMAN AIR



subcontinent, driven by a combination of workers travelling to and from expatriate posts in the region and ‘visiting friends and relatives’ traffic.

“Before I arrived there had been a look at the network and some significant changes made. There was some early stuff done about cost improvement and some progress was made late last year and in Q1 2024.

“We’re now looking at taking things to a much deeper level. We’re turning over a lot of stones that weren’t turned over in the first phase and we expect to see a lot more savings. I can already see a bunch of things.”

On the positive side, Korfiatis points to several factors that he intends to ensure are retained in the company. “From a customer-facing perspective, we’ve got something really sound – a good soft product, good catering and one of the best on-time performance ratings in the region.”

Backing up the CEO’s estimation is the fact that Oman Air regularly wins industry awards for the quality of its product, notably for its in-flight staff and its business class cabin.

Oman Air has always had a mix of point-to-point and transit routes, said Korfiatis. “With the schedule adjustments we’ve made, it’s a little more biased towards point-to-point, but transit routes are still important to us.”

Much of that point-to-point traffic is tourism,

which Oman wants to develop, aiming to almost double its current annual total of almost six million visitors to 11 million by 2040. New hotels are being built and the government sees Oman Air as an important enabler of the tourism sector.

Oman Air operates into four domestic airports at present, while other airstrips in the country currently lack terminals and infrastructure: “There are opportunities to develop traffic to those areas that are under-exploited.”



The new airport in the capital, Muscat, provides a good experience for originating and departing passengers, as well as those transiting, said Korfiatis. Both types of flights remain relevant and “I don’t see us biasing to one more than the other.”

When it comes to its fleet, Oman Air has an all-Boeing inventory, consisting of Boeing 787-8s and -9s for long-haul services and a mix of 737-800s, -900s and MAX 8s for shorter routes. In March, the airline stopped flying its 10 Airbus A330-200 and -300s. At the time of writing, three of the Airbuses were grounded, while the other seven were leased to Qatar Airways, to provide it with additional capacity.

“That’s less about a long-term fleet decision,

more about the fact that no transformation I’ve seen succeeds through growth,” Korfiatis explained. “You’ve got to strip away things, fix the foundations and then grow.”

In the longer term, there has to be fleet simplification, he added. “We’ve got two different types of 787 with three [cabin] configurations and two types of A330s with three configurations. We’ve got to simplify the fleet.”

A decision on whether to base the long-haul fleet around either the 787 or the A330 will be made soon: “That’s something we’re running numbers on right now.”

The older 737s “come off-lease progressively from this year to 2026, and we will be all MAX. At some point, we will need more narrowbodies.”

The airline carried more than six million passengers last year. With the adjustments that have already been made to the fleet, “It will be less this year, but in the medium term, once we’ve got through the transformation, we need to be performing, we will get back to growth. In Vision 2040 for Oman, aviation is an enabler. We will grow to be a larger airline than we were.”

Just as the “khareef” brings green shoots of growth to the Omani countryside, Oman’s government will be hoping that the transformation plan also spurs new growth in the national carrier.

GROWTH

The arrival of Airbus A350s, refurbished aircraft and strong traffic demand, gives Emirates Airlines confidence it has the tools for its next growth spurt.

Mark Pilling digs deeper.

Emirates raises the bar again

It has been a breath-taking few months, even by the high standards of Dubai's global mega-carrier Emirates, with record profits, the announcement of a long-awaited move to a new home, the arrival of a brand-new widebody fleet, and hosting the IATA annual meeting.

There are, however, workarounds for Emirates, which are unlikely to cramp its growth too much, but will have significant cost and product implications as it spends billions on refurbishing Airbus A380s and Boeing 777s and copes with an increasingly-congested Dubai International Airport (DXB).

Announced in April, the \$35 billion being spent on Dubai Al Maktoum International Airport (DWC) will enable it to replace DXB within 10 years. But is it too late?

"The good thing is that a decision is made, we're moving forward, and we'll try to cope with what we have with a bit of a tweak," said Adnan Kazim, deputy president and chief commercial officer of Emirates, interviewed at the IATA AGM.



"Luckily, we are investing while we are in DXB with widebody aircraft and we continue to do that so we can fully optimise the stands and the slots available at DXB," added Kazim. "But I would not look at it as being late. The government has seen this timing as the right one – it opens the horizon for us.

"It is the platform that will take us to the next level in terms of growth because by then Dubai airport will have reached saturation," said Kazim. Emirates could have coped with the new airport today, he noted, adding "that's how bullish we are about the future.

"This is the unique thing about Dubai, it always raises the bar and takes things to the next level."

By March 2025 another example of Emirates raising the bar will be in place with 10 Airbus A350s in service. The initial batch of 65 A350s in total in the order book are the -900 regional version of the aircraft. The plan is for the first ones to fly on short and medium-haul routes from September to destinations such as Kuwait, Mumbai and Edinburgh.

Emirates will take delivery of 35 of the A350-900 regionals, designed for routes of 7-8 hours in length, and from summer 2025 the first of 30 A350-900 ultra long-haul versions for 15-hour stage lengths.

The delivery times of the A350s have slipped, as has the arrival of its first Boeing 777Xs, which is creating "in the short-term a bit of turbulence for us which is frustrating," said Kazim.



▼ **The government has seen this timing as the right one – it opens the horizon for us.** ▲
ADNAN KAZIM

IMAGE: BILLYPIX

Back in 2021, Emirates recognised that supply chain and aircraft delivery delays could hamper its growth and damage its product quality, so it took the early decision to enter a huge refurbishment and retrofit programme. This has risen from 120 to 191 aircraft in total with the investment rising from \$2 billion to \$3 billion. "It was about managing our own destiny," said Kazim.

Emirates is still in the dark on delivery dates for the first of 205 aircraft from its long-delayed 777X order. Kazim said the date has slipped again from Q4 2025 into sometime in 2026.

Emirates is seeing strong demand this summer, but is mapping out the future where the market will "normalise in terms of seasonality and demand," said Kazim. "But we are more driven by the expansion of the company to many domains that we have not been able to enter," he explained.

"I think the A350s will influence that change as we serve many new secondary and medium-sized markets. They bring a new flow for us which we don't have today. This will create new opportunities and is about the long-term growth of the company."

■ **Dubai moves with the times – Page 40**

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eVTOLs

The UAE is vying to be the market leader in e-VTOL operations as two leading industry manufacturers make their presence known. **Ella Nethersole** finds out more.



Archer's battery-powered eVTOL taxi demonstrator. IMAGE: ARCHER AVIATION

Middle East's eVTOL statistics

The Middle East is becoming one of the fastest-growing regions for e-VTOL operations with the oil rich region splashing the cash to make sure it is at the forefront of future air travel. The UAE and Saudi Arabia, in particular, are becoming the big players in the e-VTOL/revolutionary urban air mobility (UAM) markets.

Two sites, in Dubai and Abu Dhabi, have been identified as initial locations for the new generation of e-VTOL aircraft that are predicted to become part of the aeronautical landscape in the coming decade.

US e-VTOL aircraft manufacturer Joby signed a definitive agreement with Dubai's Road and Transport Authority (RTA) to launch air taxi services in the Emirate by early 2026, with Joby targeting initial operations as early as 2025. It has also signed an agreement with Skyports, which will design, build and operate four initial vertiport sites across Dubai.



Now another US provider of e-VTOL aircraft, Archer Aviation has a big ambition, to transform urban travel, replacing 60- to 90-minute commutes by car with estimated 10- to 20-minute electric air taxi flights.

In May, the company signed a framework agreement in the emirate, and it plans to launch commercial air taxi operations in the UAE as soon as next year, including in-country manufacturing, operations and training across the region.

The company, in collaboration with ADIO, plans to

commence air taxi operations with Archer's Midnight aircraft. It has already signed an MoU with Etihad Training that lays the groundwork for a partnership to recruit and train prospective pilots to fly aircraft across the UAE.

"This substantial agreement with Abu Dhabi is a pivotal moment for Archer's commercialisation efforts across the Emirates, as it provides the catalyst to accelerate the launch of our electric air taxi service in the UAE as soon as late 2025," said Archer founder and CEO, Adam Goldstein.

"With Abu Dhabi's support, we are poised to continue leading the transformation of urban transportation in the Emirate and across the globe."

Chinese manufacturer EHang, which develops and manufactures autonomous aerial vehicles and passenger AAVs, is also tapping into the Middle East market.

The company's pilotless e-VTOL aircraft EH216-S successfully completed its first passenger-carrying demo flight in Abu Dhabi in May – this actually marked the first-of-its-kind demonstration in the UAE and Middle East.

Additionally, the EH216-F (for high-rise firefighting) and EH216-L (for aerial logistics) demonstrated their debut flights in the UAE.



Huazhi Hu, founder, CEO, and chairman of EHang, said: "After securing the approval for passenger-carrying demo flights and conducting the debut flight, we will actively foster collaboration and communication between the General Authority of Civil Aviation (GCAA) and the Civil Aviation Administration of China to expedite the progress towards commercial flights of our pilotless aircraft in the UAE, which will become a milestone in the advancement of Abu Dhabi and the global air mobility sector."

In June, the company, along with technology provider Front End, also successfully demonstrated its first unmanned air taxi trial in Mecca – paving the way for future implementation of smart mobility solutions in the Kingdom.

EHang worked together with GACA, in collaboration with the Ministry of Transport and Logistics Services, the Ministry of Hajj, and the Ministry of Interior, to make a step towards a more efficient and sustainable Hajj.

Abdulaziz Al-Duailej, president of GACA, said: "The trial marks a major advancement in integrating AAM solutions into Saudi Arabia's aviation landscape. This trial acts as a proof of concept for multiple use cases and contributes to various AAM roadmap initiatives."

Hot on its heels will be Archer, who is already in talks with the Saudi authorities about establishing a foothold in the Kingdom too.

Planning ahead: Adam Goldstein, Archer, and Badr Al-Olama, ADIO, sign a framework agreement to launch air taxis in the UAE.

IMAGE: ARCHER



eVTOLS CAN BOOST SAUDI ARABIA'S ENVIRONMENTAL VISION

Saudia Arabia highlighted its aviation ambitions and strategy during the Future Aviation Forum held in Riyadh last May. The rapid deployment of eVTOLs is part of the Kingdom's Vision 2030 to become a global leader in tackling pressing environment and transport challenges.

Saudi Arabia has signed numerous agreements with leaders in urban air mobility to support its tourism development plan and growing transportation needs in its major cities. According to latest estimates the Kingdom will manage 150 million visitors by 2030, among which roughly half will come from abroad.



As Abdulaziz A. Al-Duaiej, president of the General Authority of Civil Aviation (GACA) of Saudi Arabia points out, an innovative, sustainable, multimodal transportation system is the bedrock of the Kingdom's aviation sector strategy. He says that integration of innovative air transport patterns will enhance the mobility experience and quality of life in urban areas.

Saudi minister of transport and logistics Saleh Al Jasser earlier announced that pilgrims visiting Saudi Arabia for the Hajj season will have a unique opportunity to travel by flying taxis.

The urban mobility ecosystem is evolving rapidly.



The Eve and Saudia-Technic MoA signing-ceremony.

IMAGE: EVEAIRMOBILITY

Saudia Group has contracted the purchase of 100 Lilium jets, to shuttle between King Abdulaziz International Airport in Jeddah and airstrips in Makkah hotels near the Grand Mosque and other holy places.

Parties concerned are working together for the safe integration of these new modes of transport into the local unmanned aircraft system traffic management (UTM) system.

"This is an important step in the framework of

efforts to improve the air transport sector in the Kingdom, as this initiative will contribute significantly to stimulating the sustainability of the tourism sector in the Kingdom, through emissions-free aviation," said Abdullah Al-Shahrani, director of corporate communications and spokesman of Saudia Group.

Eve Air Mobility and Joby Aviation have signed new partnerships with Saudi Arabia. The deals cover aircraft sales, maintenance, assembly and eVTOL services in the kingdom.



Mukamalah, a subsidiary of oil and gas giant Saudi Aramco signed a memorandum of understanding to add an unspecified number of Joby's four-passenger eVTOL vehicles to its fleet.

Archer recently signed a pact with the Abu Dhabi Investment Office for multi-million dollar investments to speed up planned commercial air taxi operations in the UAE.

Volocopter's eVTOLs are also slated to play a pivotal role in NEOM's smart and sustainable multimodal mobility system.

These innovative initiatives show Saudi Arabia's determination to harness cutting-edge technologies to enhance transportation options and provide a seamless experience to visitors. ▲



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ROUND-UP

EGYPT CHECKS OUT TAI HURJET TRAINER

With flight testing now well under way, Turkish Aerospace has stepped up the marketing effort around its Hurjet advanced jet trainer.

This began taxi tests on March 18, 2023 and flew for the first time on April 25, 2023. TAI aims to produce 6-7 aircraft in 2025, when first deliveries to the Turkish Air Force are planned to begin, and 24 aircraft per year from 2026.

The aircraft will make its international air show debut at Farnborough, and will also participate in the Egypt International Airshow at El Alamein International Airport, between September 3-5, 2024.

Lt. General Osama Aksar, Egypt's chief of the general staff visited TUSA's facilities in April, and inspected the Hürjet advanced trainer/light combat aircraft on the ground before witnessing a flight demonstration.

The Turkish Aerospace Kaan fifth-generation combat aircraft is also making progress, the first prototype of Turkey's first indigenously developed jet fighter having made its second flight on May 6, 2024.

The Kaan (also known as the National Combat Aircraft) had made its maiden flight on 21 February 2024, powered by two General Electric F110-GE-129 turbofans, though an indigenous power plant is planned for the production version. ▲



Above: The Hurjet advanced jet trainer will fly at the Egypt International Airshow.

IMAGE: TAI

Left: The Boeing F-15EX Eagle II may meet the RSAF's future fighter need.

IMAGE: 412TH TEST WING PUBLIC AFFAIRS / WIKIPEDIA



US-SAUDI SECURITY PACT AND BOEING F-15EX FOR RSAF?

Saudi Arabia had been moving towards a normalisation of relations with Israel, with US encouragement, before the war in Gaza disrupted the process. Saudi Arabia is now believed to be tying the normalisation of relations with Israel to progress on the establishment of an independent Palestinian state, which Israel has ruled out.

Washington is understood to have offered an unprecedented security treaty to Riyadh to 'sweeten the deal', including US defence assistance, and access to 'top end' US defence equipment, while Saudi Arabia would allow expanded access to its bases, and would undertake to prevent the construction of Chinese bases inside the kingdom.

□□□□

A treaty like this would require a two-thirds majority in Congress to become law, which would be unlikely without Israel-Saudi normalisation, but the US and Saudi Arabia are also pursuing a separate Defense Cooperation Agreement which would not need approval from Congress. This would facilitate

further arms sales, and would enable intelligence sharing, and enhanced co-operation on counter-terrorism and countering Iran.

One potential Saudi acquisition could be of the Boeing F-15EX Eagle II, being offered by Boeing to meet the RSAF's 'Future Fighter' requirement, which has seen BAE Systems, Boeing, and Dassault each offering 54 aircraft. The RSAF needs to replace some 60 or so surviving F-15C/D Eagles, but also needs to replace a similar number of remaining Tornados, and it seems likely that the Future Fighter requirement will result in the procurement of up to 48 Typhoons, in addition to the 54 new fighters.

On April 2, 2024, the *New York Times* reported that the Sultanate of Oman was showing interest in acquiring the Dassault Rafale F4, though a procurement of additional Typhoons, to augment the 12 aircraft already in service would seem more likely, and there may be a requirement to upgrade the RAFO's Lockheed Martin F-16C/Ds. Elsewhere in the GCC, Bahrain received its first three Block 70 F-16s in March. ▲

REVOLUTIONARY US DRONE OPERATING FROM AL DHAFRA

The USAF's Unmanned Long-endurance Tactical Reconnaissance Aircraft (ULTRA) has been flying operational missions from Al Dhafra Air Base in the United Arab Emirates, probably over Yemen, and perhaps Gaza and Afghanistan.

ULTRA is an unmanned, low-cost, ultra-long-endurance, intelligence, surveillance, and reconnaissance (ISR) platform, conceived by the Air Force Research Laboratory (AFRL) Center for Rapid Innovation (CRI) and developed in conjunction with DZYNE Technologies Incorporated.

The aircraft is based on a "previously manned commercial sport glider," and uses low-cost commercial-off-the-shelf (COTS) avionics, electro-optical/infrared and radio-frequency sensor payloads.

Because ULTRA operates at lower altitudes it is able to use cheaper, lower performance sensors than traditional HALE UAVs.

It has an endurance of more than 80 hours while carrying a 400-lb payload, allowing it to "conquer the tyranny of distance" that inhibit the operational use of current unmanned platforms at the ranges required in the Pacific, for example. ▲



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PEOPLE

A former US Navy Boeing F/A-18 Hornet pilot, now flying with the Kuwait Air Force (KAF) recently passed a major flying milestone. **Alan Warnes** met him.

Kurt the king of the Hornet

Kurt 'Beavis' McClung, a F/A-18C/D instructor pilot serving with the KAF, surpassed an incredible 5,000 flying hours, on March 5 this year.

"I flew the Hornet for the first time on April 5, 1996 and during my years serving the US Navy I deployed to the region flying F/A-18s on two aircraft carriers – the USS John F Kennedy (CV-67) and the USS Theodore Roosevelt (CVN-71).

"There were also four detachments to Afghanistan in the EA-6B Prowler electronic warfare aircraft," he said.

So 'Beavis' was no stranger to the region when he joined the KAF in February 2017. Employed by Boeing to train Kuwaiti Hornet pilots, he said: "It's similar to flying with the US Navy, the big exception of course is the day/night carrier qualifications that takes a significant investment in time and resources.

"Most of the pilots here in Kuwait speak excellent English, which is very important because the entire syllabus and the manuals/emergency procedures are in English."



He teaches students the art of basic flight manoeuvring (BFM), which is essentially "one versus one" dogfighting.

"Sometimes it is scripted where one aircraft starts offensive or defensive with one aircraft behind the other. It includes 'high aspect' work which is when you get three-four nautical miles from each other and turn in with unknown speed. It is unscripted.

"I normally try to teach the students and point out mistakes they are making while fighting to help them out. Sometimes that's difficult to do when pulling 7.5Gs!" he said.

'Beavis' does most of the training with the F/A-18 initial training squadron 61.

"We all work out of the same pool of aircraft so if someone comes back after a long time down, it is usually the KAF instructor pilots that get them current again.

"It's true that the KAF's F/A-18C/D Hornets are old (they were delivered between January 1992 and August 1993 in the wake of Gulf War I), but they are in excellent shape. The new F/A-18E/F Block 3 Super Hornets will arrive this summer.

"This will be a huge upgrade for the KAF with the new APG-79 (active electronically scanned array radar) and large area display, Link 16 etc.

"The older ones have been upgraded as we go, but the new ones will be really nice."

On his future flying 'Beavis' said: "I'll try to stay in tactical aircraft for as long as my body holds up and as long as my



▼ I came to Kuwait to fly Hornets as a bit of a family adventure for a year, en-route to flying airliners. I enjoyed it so much that we stayed for 7½ years. ▲

KURT 'BEAVIS' MCCLUNG

IMAGE: KURT MCCLUNG

family allows. We just completed a month of BFM with the KAF and it definitely takes a toll on the body.

"I still love to do it every day and don't see that changing anytime soon. It really is a dream job to be able to fly high-performance fighter aircraft as a civilian. I never take that for granted."



Of his experiences in Kuwait, 'Beavis' who has flown a total of 7,000 hours in all aircraft, said: "I came to Kuwait to fly Hornets as a bit of a family adventure for a year, en-route to flying airliners.

"I enjoyed it so much that we stayed for 7½ years. We've had the chance to travel the region and the world as a family. I would not trade this experience for anything!

"My career has definitely been non-standard, but it's been a blast. I can't say I've seen it all, but I have seen most of it. Sometimes the students surprise you in good and, more often than not, bad ways too, but it's all part of the job."

'Beavis' is now set to take on another challenge, flying the mighty Boeing F-15QA Eagle II as a flight instructor for the Qatar Emir Air Force. "It will be challenging to become a student again and learn a new aircraft. It is also very exciting as it is a very capable aircraft with amazing performance," he said.

"That said, I will be sad to leave Kuwait and the Hornet."

So a new set of challenges for this legend that he will surely succeed with. ▲

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EMIRATI MIRAGE 2000-9E JETS SET FOR MOROCCO

France may approve the cession of 30 Mirage 2000-9E fighter jets by the United Arab Emirates (UAE) to the Royal Moroccan Air Force (RMAF).

A deal has been in the spotlight since the visit of the minister of foreign affairs, Nasser Bourita, in France, last April.

This decision further strengthens the military cooperation and diplomatic relations between Rabat and Paris. However, the transfer can only take place when the UAE takes delivery of its first Rafale F4s, which is scheduled for 2027.

□□□□□

The cession of the Mirage 2000-9s had been brought up by the UAE during negotiations for the purchase of the Rafale fighter jets. These jets were upgraded through contracts notified by Abu Dhabi to Dassault Aviation, Thales and MBDA.

In December 2021, the United Arab Emirates (UAE) signed a historic deal with France, for the acquisition of 80 Rafale F4 fighter jets and 12 military helicopters. This purchase represents the largest international order for the Rafale jet, worth \$18 billion, since it entered service in 2004.

The agreement was signed by French president Emmanuel Macron and Abu Dhabi Crown Prince Sheikh Mohammed bin Zayed Al Nahyan. This deal consolidates the strategic partnership between the



On the move?
The Mirage 2000-9.
IMAGE: DASSAULT

two nations while contributing to regional stability.

Since then, countries like Iraq, Greece, Egypt and Morocco have been mentioned for the cession of the Mirage 2000.

The Mirage 2000-9 is a multi-mission aircraft equipped with a RBY-2 radar. It can carry the Shehan laser-designation pod, MICA air-to-air missiles, guided bombs, and, above all, the Black Shaheen cruise missile (the "export" version of the SCALP-EG).

The Royal Moroccan Air Force presently operates

two-dozen MF2000 Mirage F-1s and two-dozen F-5s, both extensively overhauled, upgraded, and modernised. These support its modest fleet of two dozen advanced F-16C/D block 52+ aircraft.

Morocco is increasing the military capabilities of its armed forces, especially the Moroccan Royal Air Force, for geopolitical and defence purposes. Military stability in the region is vital to ensure the Kingdom's leadership and sustain its economic growth.

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As a major non-NATO ally of the US, Jordan is attempting to stabilise relations with both Israel and Iran with defence capability. **David Oliver** reports.

Jordan trapped in the middle

The regionalisation of the conflict in Gaza has increased security pressure on Jordan.

In the past few years, Jordan has engaged in a low-key confrontation with Iran's allies and networks of influence in Syria and Iraq, including drug cartels, which have increased their smuggling activities this year.

Iranian-backed militias operate across western Iraq and southern Syria, where they continually attack US facilities. The drone strike on the Jordan-based Tower 22 American military base was conducted from Iraq by one of these groups.

Jordan has a close bilateral defence relationship with the US, including a 2021 co-operation agreement and there are more than 3,000 members of the US armed forces stationed in Jordan as part of the US Central Command's "Operation Inherent Resolve", with squadrons of USAF Boeing F-15E Strike Eagles and Lockheed Martin F-16C Fighting Falcons, and a unit of General Atomics' MQ-9A Reapers, operating in the country.

Currently, the security issues for Amman are domestic protests, including demonstrations in support of Gaza and to advocate for the termination of relations with Israel.

Iran and its partners in various Arab countries have also attempted to destabilise Jordan by spreading misinformation about Amman's role in the crisis and by highlighting its relations with Western countries.

However, the Iran-backed militia Islamic Resistance in Iraq announced its intention to mobilise 12,000 Jordanian fighters against Israel. While Iran has violated Jordanian airspace during its air attacks against Israel launched in April 2024. Amman responded by shooting down UAVs over its territory, both to defend its sovereignty and to protect Jordanians from any threat they might pose.

At the same time some of its Arab neighbours have criticised the monarchy for joining a Western coalition in protecting Israel from air attacks.

The move, however, sent a clear message to both Israel and Iran that Jordan was not interested in taking part in a regional war, and the king said he would not allow his country to become a 'theatre of war' which has strengthened its standing in western capitals.

Jordan's armed forces inventory mainly comprises older systems and procurements have been in small numbers, typically second-hand or donated. While its air defence capability is limited, equipped with some 100-point defence surface to air missiles (SAM), most of which are Russian systems approaching obsolescence. These include the 9K35 Strela and 9K38 Igla with a unit of MIM-23B Phase III I-Hawks.

On the face of it, the Royal Jordanian Air Force (RJAF) appears to be the best equipped service, although many of



Top: Jordan's fleet of Lockheed Martin C-130 Hercules transports has been reduced to only two currently in service.

Above: The RJAF in the only Middle East air force operating the Russian Mi-26T heavy-lift helicopter.

IMAGES: DAVID OLIVER

its aircraft are in store and offered for sale. It is equipped with 60 combat capable Lockheed Martin F-16AM/BM Fighting Falcons, while 10 AT-802 Air Tractors are its main intelligence, surveillance and reconnaissance assets. Two Airbus AC235 light gunship aircraft delivered in 2014 are one of the types offered for sale.

The RJAF's transport fleet includes a single Ilyushin Il-76TD Candid, and seven Lockheed Martin C-130 Hercules, five of which are in store along with two Airbus C295Ms. Its training fleet comprises 14 Grob 120TPs and 12 Pilatus PC-21s with 12 BAe Hawk Mk63s in store and offered for sale



The RJAF has 29 Bell AH-19 Cobra attack helicopters, 12 of which have been upgraded and are in service while the remainder are in store awaiting sale, along with six MD530Fs.

The RJAF is one of the few air forces that operate the Mil Mi-26T heavy-lift helicopter, two of which are in service along with 20 Sikorsky UH-60A/M Black Hawks with five UH-60Ls in store.

Ten Eurocopter AS332M Super Pumas are being withdrawn from service, while three Leonardo AW139 and 11 Airbus Helicopters' H135M multi-role helicopters are current. Training is carried out on five Bell 505 JetRanger X and 12 Robinson R-44 Raven IIs. Its unmanned assets include 12 Schiebel S-100 Camcopters and some Chinese CASC CH-4B armed UAVs, but again these are reported to be in store, offered for sale.

Jordan has played the middleman in the region, balancing its relations with its Middle East neighbours and the West for generations and continues to do so. ▲

AIRPORTS

On a recent tour of the new Zayed International Airport in Abu Dhabi, **Chloë Greenbank** found out why the new terminal heralds the emirate's intention to be a key player on the global aviation stage.

ZAYED'S X FACTOR



When Zayed International Airport (formerly known as Abu Dhabi Airport's Terminal A) officially opened its doors for operations in November 2023, it solidified Abu Dhabi's status on the global aviation stage, providing a gateway through which the Emirate can share its heritage with the world.

Six months on and the airport has gone from strength to strength. Described as one of the largest and most complex airport projects to date for architectural firm Kohn Pederson Fox, the X-shape of the 742,000 sqm terminal was created to improve operational efficiency and passenger flow with an average curb-to-gate walking time of 12 minutes.



Each pier of the X is themed depending on whether it points towards the desert, sea, city or oasis. Elena Sorlini, managing director and CEO Abu Dhabi Airports, described the architecture as having a "strong connection with the natural environment of the Emirate."

The terminal's undulating roof (famed for its cameo appearance in Mission: Impossible Dead Reckoning when Tom Cruise raced across it) is reminiscent of the desert's rolling sand dunes. It also creates a canopy that drapes over the terminal's façade, reducing the need for external shading devices.



High-performance glass helps control glare and heat from the desert sun and contributes to the terminal's energy efficiency. Inside, the large-span structural arches and largely column-free interior create an expansive space and future-proofs the terminal for different layouts. Although the current passenger capacity is 45 million per year, the ability to expand this to 65 million is already factored into Abu Dhabi Airports' master plan.

When illuminated at night the imposing structure, which is elevated 50m above ground, can be seen from some 1,500m away. Speaking to *Arabian Aerospace* during a tour of the new terminal, Nathalie Jongma, Abu Dhabi Airports head of aviation development declared it "an iconic landmark in the region".

Accents of Abu Dhabi continue to reflect a sense of place within the terminal. The giant 22-meter-tall Sana Al Nour, a Barjeel structure inspired by the

wind towers of the Gulf region and traditional Islamic architecture, greets passengers as they pass through the departures hall. Meanwhile, in the arrivals hall an eye-catching sculptural staircase offers a dramatic welcome.

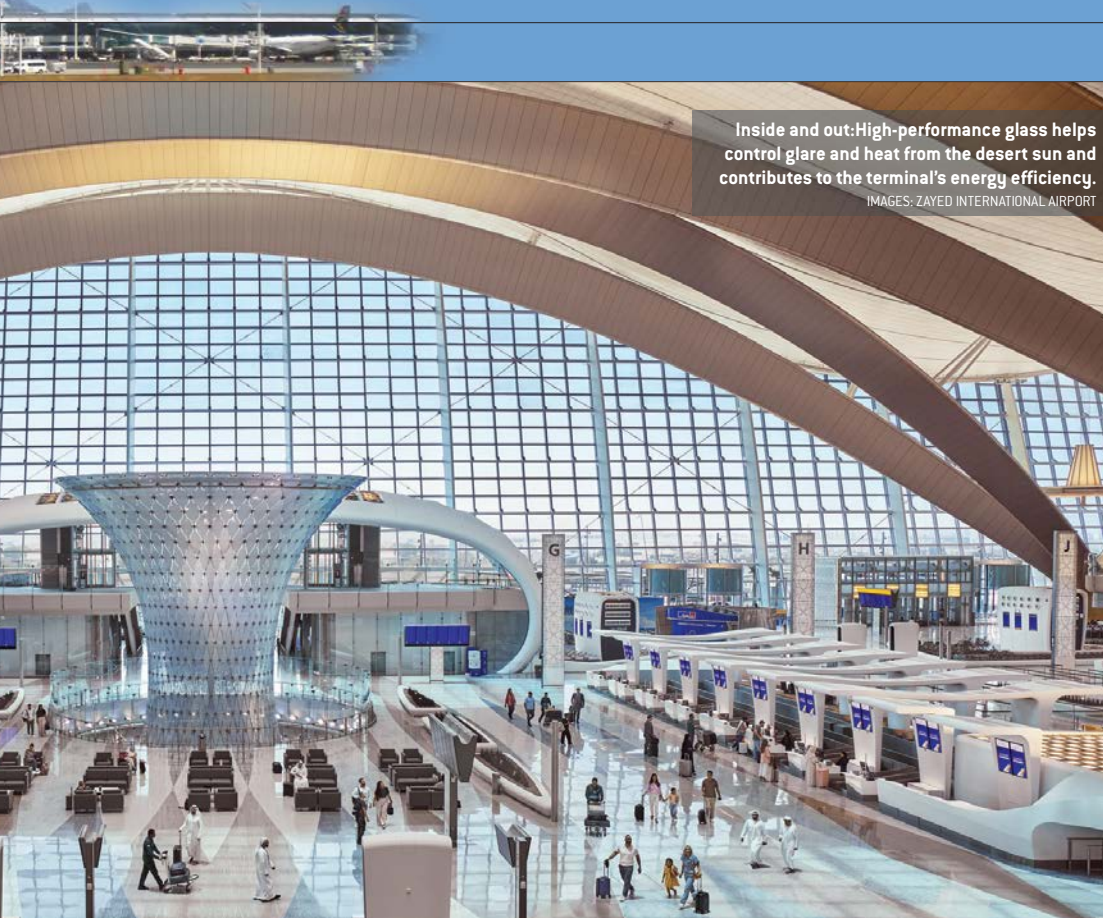
It's not just the design aesthetic that leaves a lasting impression. A streamlined check-in, efficient baggage handling and seamless wayfinding processes mean an effortless travel experience, that exemplifies Emirati hospitality. There are 28km of advanced baggage handling systems processing up to 19,200 bags per hour.

The average wait for luggage is 15 to 20 minutes. There are 14 self-service check-in kiosks with bag drop, 70 immigration counters, 163 elevators, 122 escalators, 58 travellers, and 12 hearing loops. At every corner the airport is poised to deliver on customer satisfaction.

"The emphasis is on creating that all-important seamless experience for



Nathalie Jongma: The terminal is "an iconic landmark in the region."



Inside and out: High-performance glass helps control glare and heat from the desert sun and contributes to the terminal's energy efficiency.

IMAGES: ZAYED INTERNATIONAL AIRPORT

shaped windows in the ceiling helping to draw the light in. Everywhere you look, it's these carefully considered and functional design touches that add to the airport's aesthetic appeal.

It's not just passengers that are benefitting from the new terminal either. Since opening last year, the airport has welcomed an increased roster of international airlines. Capable of handling 79 aircraft at once, the airport is connected to more than 124 passenger destinations. A total of 22.5 million passengers flew through Zayed International in 2023, a 44.7 per cent increase on 2022.

Significantly, 51 per cent of the passengers' fly point-to-point, underlining the airport's role in driving tourism revenue for the region. "We currently average around 400 aircraft movements and up to 75,000 passengers per day," revealed Jongma.

Around 60 per cent of the traffic is served by the national carrier, Etihad, although Jongma noted that low-cost carriers, including Wizz Air Abu Dhabi and Air Arabia Abu Dhabi have grown exponentially.



passengers," explained Jongma, referencing the airport's US pre-clearance facility – the first-of-its-kind in the region. Once fully implemented, the airport will also be the first international airport to introduce biometric technology at nine different touch points. "So in theory you could go from your front door to your destination without having to remove your hands from your pockets," she added.

The airport has harnessed facial recognition technology and analytics to create a travel experience that flows seamlessly from check-in, self-bag drop and e-registration to e-border gates and self-boarding. Processing times are reduced by 70 per cent, allowing more time for passengers to explore the more than 160 retail, leisure and dining facilities.



The wider roll out of biometric cameras in these areas will allow for a more personalised, efficient experience enabling passengers to access airport services without additional identification. The airport has collaborated with various partners, including Idemia, on its biometric solutions, with Osama Al Makhmreh, VP Sales, Middle East and Africa, Idemia Public Security saying Zayed International's Single Token Journey "sets a new standard for passenger facilitation."

Factoring in the need for sustainable

The airline perspective

As an integral partner to operations at Zayed, Etihad is boosting travel to and from Abu Dhabi offering passengers up to two nights complimentary accommodation through its "stopover hotel program".

According to Arik De, chief revenue officer at Etihad, which has lounges spanning three floors at Zayed International, "the new terminal, for which the opening coincided with Etihad's 20th anniversary, goes hand in hand with our strategy for growth. Facilities, such as the US pre-clearance, dedicated business and first-class check-in, lounge areas and biometric solutions are a huge asset for our customers and aligned with our strategy for growth."

Reiterating the close working relationship the airline has with the airport, he added: "To grow you must work closely with your partners. We're very hands on as an airline partner and having a major presence at the airport and good communication is integral to that growth."

growth, Abu Dhabi Airports is keen to share the airport's green credentials. The facility is 'green building certified' under the Pearl Building Rating System. More than 90 per cent of the steel and 82 per cent of the timber used in constructing the new terminal is certified from sustainable sources.

More than 70 per cent of plants used at the terminal's campus landscaping are native and adaptive species that are drought- and saline-resistant. Water-efficient fixtures and fittings have been installed throughout the airport, while 7,500 solar panels power a 3MW plant, saving 5,300 tonnes of CO2 annually. The floor-to-ceiling glass façade helps provide plenty of natural lighting with huge eye-

"Last year we also welcomed five new airlines and this year in Q1, we've welcomed another three: Hainan Airlines, Turkmenistan Airlines and British Airways. Existing carriers are also increasing their presence. FlyNas has announced another daily flight starting in September and IndiGo is increasing its presence by 50 per cent with an additional 21 flights per week."

While London is currently the most popular destination for passengers travelling from Abu Dhabi, with the city pair well served by Etihad and British Airways, other popular routes include Mumbai and Doha. India, alongside Saudi Arabia, are key target markets for growth.

And despite the growth of its close airport neighbour – Dubai Airports recently confirmed that in line with anticipated growth it will relocate all operations from Dubai International to Al Maktoum-Dubai World Central within the next decade – Jongma sees this as fair competition.

"The development of DWC is a catalyser for growth and therein lies an opportunity for Zayed International too. We have a different value proposition, different anchor tenants and airlines. If our airline partners continue growing at the pace they are currently, then we will need to expand our airport much faster than initially planned, but we will continue to keep the passenger experience at the heart of everything we do." ▲

An artistic impression of the Phase Two expansion project of Al Maktoum International Airport DWC.

IMAGES: DUBAI AIRPORTS



Dubai moves with the times

Dubai Airports' plans to relocate operations from DXB to DWC in the next 10 years is driving the development of the "world's busiest and best" air transport hub, reports **Chloë Greenbank**.

Driven by expanding routes and a growing fleet of airlines, the project to transition operations from Dubai International Airport (DXB) to Dubai World Central – Al Maktoum International Airport (DWC) is unparalleled in scale and complexity, according to Dubai Airports CEO, Paul Griffiths.

Speaking to *Arabian Aerospace* and confirming the move will take place by 2034, Griffiths said: "By the time we are prepared to transition to DWC, we will be managing more than 120 million passengers annually and accommodating more than 100 international carriers operating 1,200 to 1,400 flights a day at DXB."



The new hub aims to set a benchmark in the global aviation industry and "reflects the close correlation between the UAE's economic expansion and the growth and development of Dubai's aviation sector," continued Griffiths.

Situated 20 miles south-west of downtown Dubai, plans to develop DWC into a global gateway have long been on the cards. The airport originally opened for cargo operations in 2010, before welcoming its first commercial passenger flight (served by Wizz Air) in 2013. When it takes over from DXB, initial plans are for the airport to handle more than 160 million passengers per year and 12 million tonnes of cargo with five parallel runways and 400 aircraft gates. Ultimately, through a modular approach, the futuristic mega hub will accommodate 260 million passengers.

"Our goal, which we will pursue relentlessly, is not only to be the world's busiest airport, but also the best. With an investment of AED128 bn (\$34.8bn), DWC is poised to become the largest airport in the world, five times larger than Dubai's current main international airport," added Griffiths. It is also at the heart of the 145km² aerotropolis – Dubai South, which will be developed in phases to feature clustered zones, including a mix of residential and commercial areas.

To meet additional passenger capacity, Dubai Airports will leverage innovative design concepts, while implementing advanced systems and technologies that eliminate the need for guests to queue or go through repetitive legacy processes. "At DXB, we've already made substantial investments in biometric technologies, a focus that will extend to DWC's development. Looking ahead, AI will further revolutionise airport operations."

Griffiths also emphasised that Dubai Airports' commitment to sustainability will be "embedded in the design and construction of the new terminal, with a focus on energy efficiency, waste reduction and eco-friendly initiatives."

Additionally, Griffiths revealed his "tremendous excitement" over the potential for the advanced air mobility (AAM) sector in the UAE. "I see AAM as a crucial element for DWC to become an inter-modal hub in the future. The more transport modes you can interface with, the more effective you will become. Pilotless air taxis will be a rapid way to get to the airport and a sustainable one too."



▼ Our goal, which we will pursue relentlessly, is not only to be the world's busiest airport, but also the best. ▲
PAUL GRIFFITHS

The relocation of operations will inevitably present challenges. "No airport move of this magnitude has been attempted before and such ambitious projects inevitably encounter obstacles. We are dedicated to working closely with airline partners and stakeholders to navigate these challenges collaboratively."

A phased approach to relocating airlines to DWC could take up to a year, with the successful relocation of local giant Emirates expected to mark a milestone in the move.

Griffiths also underlined that preventing the splitting of airline operations "especially those of home base carriers remains a top priority."



And while recent airport relocations, such as Berlin Brandenburg or Abu Dhabi's Zayed International offer some insights, none compare to the scale of Dubai's transition, according to Griffiths.

"Nonetheless, our past experiences, such as Emirates' move from terminal one to terminal three in 2008 and temporary traffic shifts for runway refurbishments at DXB, have provided valuable lessons in understanding operational logistics, stakeholder management and infrastructure planning," he said.

And while Griffiths remained adamant it is "too early to speculate on what exactly will happen to DXB once all operations have moved to DWC", he did underline, "we are very clear that the new airport will be Dubai's all-inclusive hub." ▲

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Morocco's Office National des Aéroports (ONDA) continues to roll out its transformation strategy by modernising and upgrading its airports to face the rise in cargo and passenger demand due to booming tourism and manufacturing sectors. The newly-appointed CEO Adel El Fakir will build on his predecessor's legacy, **Anuradha Deenapanray Chappard** reports.

ONDA CONVERTIBLES...

ONDA will accompany the positive evolution of air traffic and the major events that the Kingdom will host, in particular the 2030 World Cup, placing its main airports at the heart of Morocco's future development.

Adel El Fakir who succeeded Habiba Laklalech on June 1, is currently taking stock of the situation and growth perspectives. His added-value is much awaited by the sector as he has been a leading figure in the tourism landscape.

In 2023, ONDA recorded significant progress particularly in air traffic, modernisation of airport infrastructure and optimisation of resource management processes which entailed better services.

The number of passengers exceeded initial forecasts, testifying to the attractiveness of the Moroccan destination. Traffic at Marrakech, Agadir and Tangier increased by 29 per cent, 26 per cent, and 16 per cent respectively. ONDA is expecting 31 million passengers in 2024, 14 per cent more compared with 2023.

In parallel, ONDA is doing its utmost to enable Morocco to welcome visitors during the 2030 World Cup. Extension work will start soon at Marrakech, Agadir and Tangier airports. Architectural surveys are completed.



ONDA is tackling capacity constraints through a holistic and integrated approach.

A new transit area was inaugurated on June 10 at Casablanca Mohammed V Airport to consolidate its position as a hub. The central zone project, including a new security screening area on arrival in 2023, is now completed. A survey, commissioned by the Spanish firm INECO, is currently being carried out to increase the capacity of Casablanca Airport from 16 million to approximately 36 million passengers. Recommendations for structural adjustments are expected by March 2025.

A new terminal will be operational in 2025 at Rabat-Salé Airport, with an additional capacity of four million passengers. This terminal will be the first in



Artist's impression of the planned modernisation at Agadir.

IMAGE: ONDA

Morocco to offer a "touchless" passenger journey.

Tetouan Airport will also have a new terminal with an annual capacity of about one million passengers. A new runway to accommodate wide-body aircraft is in service since last year.

The extension of Fez Airport will be defined according to the airport master plan currently being carried out by the supervisory authority (DGAC).

Furthermore, ONDA has deployed Lean Six Sigma at Casablanca, Fez, Oujda and Nador airports to optimise resource management processes and better manage passenger flows. It is currently being deployed at Marrakech Airport.

Twenty two airports have also adopted the multiplatform airport operations system called "SOAM", allowing stakeholders of the passenger value chain to have real-time information to improve coordination between the different airport services.

ONDA is continuously diversifying airport services to enhance the passenger experience. A new online taxi booking service, "We taxi", is now available at Casablanca Airport after the successful implementation of "Kech.cab" at Marrakech Airport. Casablanca Airport also offers an automated baggage trolley delivery.

Agadir, Casablanca, Fez, Nador, Oujda, Marrakech, Rabat and Tangier airports have

been awarded the ACI "airport customer experience accredited" certification.

Casablanca Airport has been distinguished for the second consecutive year as the best airport in Africa in its category following ACI's ASQ surveys.

For the first time, Marrakech Airport has been awarded best airport in Africa in its category in terms of connectivity and cleanliness. Both airports were also in the Top 10 best African airports in the Skytrax ranking.



ONDA has also launched major projects in the field of air navigation, training and human capital to encourage a corporate culture of merit and excellence.

Cybersecurity has also been reinforced to ensure the availability, integrity, and confidentiality of information, as well as compliance with legal and regulatory provisions. ONDA has also strengthened its eco-responsible CSR approach, especially its support to local communities.

Today, 16 airports managed by ONDA are ICAO certified, double that of previous years.

Adel El Fakir and his team will undoubtedly focus on improving passenger experience, enhancing safety and security, and increasing capacity to support the growth in air traffic and the Kingdom's economic development. ▲

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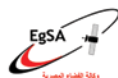
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ROUND-UP

VOLTAERO LINES UP MIDDLE EAST CUSTOMERS FOR CASSIO

The first customers from the Middle East for the new Cassio family of small passenger aircraft will soon be unveiled by start-up manufacturer VoltAero, the French company's founder and CEO Jean Botti, told *Arabian Aerospace* at the Farnborough Airshow in July.

Botti told media that its launch aircraft the Cassio 330, which has five seats, is non-pressurised and features its parallel electric-hybrid powertrain, is halfway through certification.

The plan is for first flight in early 2025, certification to be complete by the end of 2025 and the production of 15-20 330s in 2026 and first deliveries to customers that year.

Botti said VoltAero will also begin manufacturing the next aircraft in the family, the 6-seat Cassio 480, "very quickly" after the introduction of the 330 at its new factory in France. The 480 is more powerful than the 330 and will feature a pressurised cabin and retractable landing gear.

The aim is to ramp up to an output of 150 Cassio family aircraft annually. A 10-12-seater version, the Cassio 600, will augment the family later.

VoltAero has 232 pre-orders to date for various Cassio models. Botti stressed that the Cassio family is aimed at operators who want a fixed-wing aircraft that has environmentally responsible credentials plus operating flexibility and efficiency.

The first applications will be for operators that require an aircraft capable of 400 km or 2-hour stage lengths with passenger, cargo, medevac, and wheelchair missions all envisaged. ▲



Jean Botti: Hopes to deliver 15-20 of his firm's Cassio 330 5-seater aircraft in 2026.

IMAGE: MARK PILLING

FAST START FOR GULFSTREAM G700 CUSTOMER DELIVERIES



The G700 is the fastest in the Gulfstream fleet.

IMAGE: GULFSTREAM

The first two Rolls-Royce Pearl 700-powered G700 aircraft have been delivered to customers less than a month after Gulfstream received FAA type and production certification. It also obtained EASA certification in mid-May.

According to Mark Burns, Gulfstream president, this historical achievement raises the bar for the business

aviation industry and opens the way to increased deliveries.

"During the flight test programme, we took the G700 across the globe, and the response to the aircraft's cabin size, flexibility and performance has been outstanding.

"This EASA certification unlocks G700 deliveries for many more of our

international customers, and we are excited to see our next-generation fleet grow around the world."

□□□□□

The G700's maximum operating speed has increased from Mach 0.925 to Mach 0.935, making it the fastest in the Gulfstream fleet.

It features the most

spacious cabin in business aviation and includes options for a grand suite with expanded lavatory or the industry's largest "ultragalley".

The jet can be configured with up to five living areas and features whisper-quiet noise levels, 20 Gulfstream panoramic oval windows and 100 per cent fresh, never-recirculated air.

The G700's FAA certification confirmed two additional performance improvements, giving customers even more operational flexibility and airport availability: a balanced field length take-off distance of 5,995 ft/1,829 m and a landing distance of 3,150 ft/960 m (international standard atmosphere (ISA) at sea level), both shorter than originally announced.

□□□□□

Qatar Executive is the first G700 commercial operator since June.

It took delivery of its first two business jets in early May. The private charter subsidiary of Qatar Airways Group became the international launch customer for the G700 in October 2019, with an order for 10 of the new ultra-long-range business jets.

The G700s will enhance the company's existing fleet of 15 Gulfstream G650ER aircraft. At a later stage, "Qatar Executive will consider upgrading the G650 to either a G800 or maybe another order of G700" due to growing demand for executive services. ▲

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A growing number of Middle East countries are putting space at the top of their technology investment agendas. **Steve Nichols** reports.

Middle East runs its own space race

The Middle East is seeing more investment in the space sector and will also play a leading role in space tourism. That's the message from Fred Liebler, a principal at FTI Delta, which is part of FTI Consulting, a global, industry-specialised strategy consulting practice.

"Many Middle Eastern countries have recently been investing in their space industries," Liebler said.

The UAE is the most prominent player, especially in the civil segment, with the Emirates Mars Mission, an astronaut aboard the ISS, and now the Emirates Mission to the Asteroid Belt in 2028. But Liebler said other regional programmes show the importance of space to national economies.

Saudi Arabia is looking at space tourism and has been in talks with Spanish company Halo Space. Passengers would take off before dawn in a capsule suspended below a helium-filled balloon. They would be treated to a luxury four-hour trip offering fine dining in the stratosphere and a gentle return to Earth.

It plans to offer the \$164,000 passenger flights from 2026, with Saudi Arabia pencilled in as one of four commercial launch sites. Halo Space is in talks with Saudi regulators as it plans to set up a base in the kingdom to serve wealthy Gulf space tourists.

"I think space tourism is a very exciting field and there is currently no clear leader in the region," Liebler said.

"Saudi Arabia's interest in space goes right back to 1985 when Prince Sultan bin Salman Al Saud became the first Saudi in space when he flew on the US Space Shuttle."

In 2018, the Saudi Space Commission (now the Saudi Space Agency) was established, and in 2023 Ali AlQarni and Rayyanah Barnawi became the first Saudi astronauts to travel to the International Space Station on the Axiom 2 private mission, with Barnawi becoming the first female Arab astronaut.

Saudi Arabia's Public Investment Fund (PIF) recently announced the establishment of the Neo Space Group (NSG), a wholly-owned PIF

company that will become a national champion in the satellite and space sector. Neo aims to enhance Saudi Arabia's space industry by developing local capabilities and boosting its strategic position within the growing global space economy.

Liebler said he wouldn't be surprised if we hear more news soon about Saudi Arabia's aspirations for a mission to the Moon, or even Mars.

"At FTI we are also seeing growing interest from foreign companies who wish to invest in the Saudi space industry," Liebler said. "Some reports say that the region's space sector could triple in the next 10 years."

Other countries in the region are keen to expand their space exploits.

Egypt and Bahrain have recently secured a spot on a Chinese lunar mission. They are to develop and deliver scientific instruments for the Chang'e-7 mission, the Chinese mission aimed at searching for water ice at the Moon's south pole in 2026. Their hyperspectral camera will provide high-quality data for diverse fields,

EMIRATES THE RISING STAR ON ASTEROIDS

The Emirates Mission to the Asteroid Belt (EMA) team has conducted a preliminary design review (PDR) and discussed its latest developments.

The mission will extend over 13 years, divided into six years to develop and design the spacecraft, and seven years to explore the main asteroid belt between Mars and Jupiter. This will include a series of close manoeuvres to collect data for the first time on six asteroids, ending with the seventh asteroid "Justicia".

HE Salem Butti Al Qubaisi, director general of the Emirates Space Agency, said: "The final design of the Emirates mission to explore the asteroid belt represents more than just a technical step, as it reflects our strategic vision and continuous development to support the achievement of its scientific goals and strengthen our position as pioneers in this vital sector."

The programme is targeting a 2028 launch with the landing in 2033. The mission will see the spacecraft travel around 3.6 billion kilometres (2.2 billion miles). It will need to slingshot around Venus and then Earth to gather enough velocity to reach the asteroid belt around 560 million kilometres (350 million miles) away.

Its objectives are to understand the origins and



The Emirates Mission to the Asteroid Belt (EMA) will extend over 13 years.

IMAGE: UNITED ARAB EMIRATES SPACE AGENCY

evolution of water-rich asteroids and estimate the possibility of using asteroids as resources for future space exploration missions.

It will also measure the surface composition, geology and interior density of several asteroids in the main asteroid belt, and measure their temperatures and thermophysical properties to assess their surface evolution and history.

Several national companies will lead the design of the landing vehicle on the Justicia asteroid, including Space 971 and Sadeem Space Solutions.

The UAE mission includes a group of academic

and hardware development partners, which include: Khalifa University, New York University Abu Dhabi, the National Center for Space Science and Technology at the UAE University, and national institutions such as the Institute of Technology Innovation, Yahsat, and local and international partners from the private sector.

In addition, it includes partnerships with local and international agencies, institutions and universities, such as the Italian Space Agency, the American University of Colorado, Arizona State University and Northern Arizona University in the United States. ▲



Watch this space: Halo could soon be bringing space tourism to Saudi Arabia.

IMAGE: HALO SPACE

such as environmental monitoring, natural resource surveys, and climate change studies.

And Oman is building a spaceport. The National Aerospace Services Company's Etlaq space launch complex could launch its first rocket in 2030. Its location on the western edge of the Arabian Sea and quite close to the equator means it is ideally situated for satellite launches. Oman also has plans to build a space research centre for simulation missions and science experiments.

Finally, Qatar also has a space agency – the Qatar Aeronautics and Space Agency (QASA) is a non-profit organisation to support Qatar's overall aeronautical and aerospace development. The country's Es'hailSat 1 and 2 satellites provide direct-to-home television services in the Middle East and North Africa region.

"The sky is not the limit for Gulf countries, but space is," said Liebler. "Getting into space is not cheap and it is not easy, but a lot of this has to do with national pride.

"Putting one of your citizens into space can be a big achievement," he concluded. ▲

UAE SPACE SECTOR KEEN TO BE ON INTERNATIONAL MAP

The UAE's investment in the space sector has nearly doubled to DH40bn (around US\$11bn), growing by around 30 per cent year-on-year since 2015.

The news came as the UAE Space Agency (UAESA) board of directors, chaired by HE Dr. Ahmad Belhou Al Falasi, minister of education and chairman of UAESA, held its first meeting of 2024.

They discussed updates in the national space sector, emphasising strategic projects to enhance its contribution to the economy.

Discussions also included the progress of the Emirates Mission to the Asteroid Belt (EMA) and the Emirates Mars Mission (EMM) Hope probe, as well as initiatives to empower local private sector entities and support Emirati startups.

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Al Falasi said: "We are keen to strengthen the country's presence on the international space map, by continuing to build, develop and empower national capabilities in space science.

"At the same time, we are working to strengthen strategic cooperation frameworks with our partners at the local and international levels in implementing major space missions in line with our strategy aimed at achieving impactful scientific and technological



Dr. Ahmad Belhou Al Falasi: "We are working to strengthen strategic cooperation frameworks with our partners." IMAGE: UAE SPACE AGENCY

achievements that benefit humanity. Investment in the field of space is an investment in the future of the nation and the future of its children, as this vital sector represents an engine that drives the wheel of innovation, and creates new and diverse opportunities for sustainable economic growth."

The UAE Space Agency has also launched the Space Economic Zones programme, which includes establishing six space zones in the country, to support emerging, small and medium-sized companies, and stimulate the national economy in the space sector.

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The programme now has 13 strategic partners, while the number of companies participating has reached more than 180 over the past two years.

The agency also announced the establishment of a National Space Fund worth AED3bn (\$0.82bn) to enhance the investments of entrepreneurs and private sector companies and work on future space activities and projects.

During the past few years, the UAE Space Agency has appointed 70 per cent of National Space Academy graduates in the sector, as part of its strategy to invest in qualifying specialised national groups. ▲

▲ ALL IN A DAY

Wasim Akhtar

Marcelle Nethersole talks to the director of engines for AJW Group.

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AJW provides the commercial, business, and defence aerospace sectors with the most efficient and progressive end-to-end supply chain solutions for the provision and repair of components, warehousing, and logistical service and reduces costs, improves profitability, and supports the brand values, goals, and image of its customers.

We support more than 1,000 airlines across 100 countries.

What engine work does it do in the Middle East?

AJW is a prominent player in the engine services sector, offering a comprehensive range of services tailored to various engine types. With a diverse clientele, we engage in engine leasing, exchanges, and outright purchases, catering to the specific needs of airlines, MROs, lessors, and traders.

One of the company's key strengths in the Middle East is our ability to provide timely and efficient responses to the demands of our customers. With a dedicated team based in AJW Türkiye, we ensure all enquiries and requirements from the Middle East region are addressed promptly and effectively.

What challenges does the company face?

One significant challenge lies in complying with the diverse trace and condition standards enforced by different Middle Eastern authorities. These regulations can often be complex and subject to frequent updates, requiring meticulous attention to detail and adaptability.



IMAGE: AJW

What is next in the pipeline for the company?

Our recent partnership with Lilium, a market leader in electric vertical take-off and landing (eVTOL) technology, marks a significant step towards driving positive change within the aviation sector. As the exclusive parts distributor for Lilium's eVTOL jets, we're not only embracing ground-breaking innovation, but also championing sustainability in aviation.

This strategic alliance exemplifies our belief in collaborative efforts to shape the future of aviation.

The company has recently undergone a comprehensive transformation of its logistics operations to meet evolving demands and enhance efficiency. The company aims to boost its logistics capacity by more than 50 per cent within two years through digital initiatives, including automated warehouse implementation.

What does a typical day look like for you?

Each day brings new opportunities and challenges, ensuring no two days are ever alike.

One day, I might find myself immersed in the intricacies of an Airbus A320ceo project, and the next, I could be diving into the world of A350 spares or orchestrating the acquisition of a cutting-edge Boeing B787-9.

One moment, I might be providing crucial technical insights to support a colleague in closing a deal on an engine part, and the next, I could be at the forefront of a multimillion-dollar engine sales negotiation.

The different regions we operate in and the breadth of products we handle truly keep things exhilarating. With our in-house expertise and capabilities, we're equipped to tackle any challenge head-on, setting the standard for excellence in our field.

It's this constant drive to innovate and excel that fuels my passion for what I do every day.

How is AJW working towards greener more sustainable skies?

Our dedication to sustainability runs deep within the core of our organisation. Embracing this ethos, we joined the United Nations Global Compact (UNGC) in 2023, solidifying our pledge to conduct business responsibly for the greater good. Rooted in collaboration and innovation, our mission revolves around reducing carbon emissions and working within the aviation sector towards a greener future.

At our eco-friendly headquarters, we've taken tangible steps like implementing rainwater harvesting systems and solar panels. Meanwhile, our facilities and operation teams tirelessly drive initiatives to further reduce our CO2 emissions.

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