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War games above the UAE PAGE 30

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Medevacs keep the region in good health PAGE 47



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ISSUE 3, VOLUME 2: AUGUST – OCTOBER 2010

Published by



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Opportunity knocks with Egypt on the MENA region doorstep

Many in the aviation industry become enthused the moment the phrase 'Chinese Market' is mentioned. In a developing nation there are huge opportunities to increase air travel, both in the air transport sector and in business aviation.

In the MENA region, which can often be viewed as a microcosm of a global industry, a very similar opportunity exists - Egypt.

Anybody who has ever visited this great country will know its obvious problems – a rapidly growing population and an over-emphasis on its capital, Cairo, as the centre for all administration in the country. Hours spent on log-jammed roads re-emphasise the need for a clear integrated transport

And here lies the opportunity. Anecdotally, most Egyptians today have never flown. The millions of people living in the Upper Nile have historically been poorly served by air transport.

But things are changing.

Ahmed Shafik, the vibrant Minister of Aviation, has been steadily leading a great upgrading of the country's infrastructure and its key aerospace organisations.

The country has begun what could be described as a partial embracing of open skies and low-cost carriers, and subtle pressure is being applied to operators and carriers in the country to look at expanding domestic networks.

The potential for our industry is great and it is no surprise that Shafik, along with many of the Egyptian industry leaders, is backing the expanding AVEX air show, which takes place in November.

In this issue we meet the people behind the drive for growth in Egypt and see why the country is gradually opening its doors to the aerospace world.

ALAN PEAFORD **EDITOR-IN-CHIEF**

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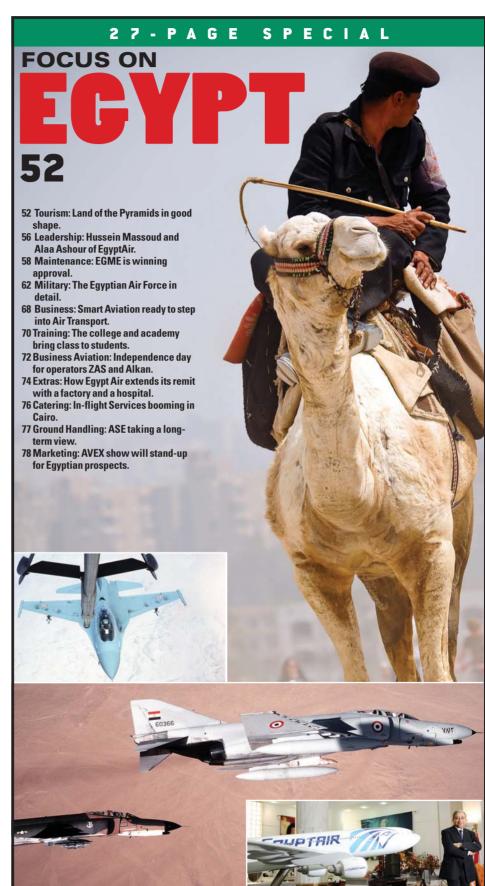
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Cairo conference opens with spat

Sparks flew on the first morning of April's Aviation Outlook MENA conference in Cairo when two leading industry figures took opposing hard lines on the safety record and finances of the region's airlines.

Wataniya Airways chief executive George Cooper took the offensive. "There are some very well run, efficient airlines in this region," he said. "But there are also some that, from a safety and security point of view, have no right to exist."

Turning to the carriers' financial performance during the recession, he said that the true effects of the downturn had been disguised: "I think there's been a big crisis here that has still to play out fully. At some point reality has to kick in, even at some of the massively subsidised airlines in the region."

This was robustly countered by Abdul Waha Teffaha, secretary-general of the Arab Air Carriers Organisation (AACO). "I challenge your assertion that there are airlines in this region that don't meet safety and security standards – all the AACO carriers meet international standards in these areas," he said. "I also reject the claim that airlines here are subsidised – where is your proof?"

Cooper, who launched Kuwait-based premiumonly operation Wataniya at the height of the recession, pointed to overcapacity and price-cutting as symptoms of the malaise. "Capacity that was excess on other routes has been redirected back into the region, with the result that yields have declined," he said. "This can't continue – an equilibrium must be found."

This also drew the ire of the AACO chief. "Over-



Emirates places \$11.5 billion A380 order at Berlin

Emirates Airline placed the largest-ever A380 order when chairman HH Sheikh Ahmed bin Saeed al Maktoum made a flying visit to the Berlin Air Show and signed an \$11.5 billion contract for 32 of the superjumbos.

The purchase was seen as a huge vote of confidence for the programme, given that the Dubai airline has been operating the type for more than two years now.

This new order brings Emirates' total A380 fleet to 90, with ten already delivered.

Sheikh Ahmed was asked why he needed so many of the world's largest passenger jets. "It is not for a collection, they are much too big," he joked.

"This latest order affirms Emirates' strategy to become a

world-leading carrier and to further establish Dubai as a central gateway to worldwide air travel.

"The A380 is our flagship in terms of passenger comfort, innovation, operating and environmental efficiency and revenue generation. Our latest commitment signals Emirates' confidence in the growth to come in a thriving aviation sector," he said.

Airbus president and CEO Tom Enders said: "Emirates has supported the development of the A380 from the earliest days. On behalf of all of us at Airbus, we thank Emirates for its confidence and support. The A380 is, indeed, a remarkable ecoefficient aircraft, a profit generator for airlines and a great flying experience for passengers."

capacity is a consequence of the liberalisation that is going on in this region, as is the resulting price competition," Teffaha maintained. "Price competition will always be there. What's more, I know of carriers like Jazeera and others complaining about the prices offered by Wataniya, saying that they cannot be truly cost-based."

Ash cloud's wider costs

Nearly US\$5billion was lost because of the air travel disruption caused by the Icelandic volcano eruption, according to a study by leading economic forecasting consultancy Oxford Economics. Some \$600m was lost by the Gulf carriers alone.

The report found passengers, airlines and the destinations were not the only losers.

Airbus' Rainer Ohler, said: "The study shows the catalytic impact of air travel – to trade, investment, tourism and productivity – and the need to ensure its sustainable future. A cloud from Eyjafjallajokull has made this clear at least."

Meanwhile, Honeywell is analyzing the effects of ash ingestion in two of its TPE331 turboprop engines used to gather scientific data during recent volcanic eruptions and flights into the subsequent ash cloud

over Europe.

The engines powered a Dornier 228 and accumulated 10 hours of operation in the volcanic ash cloud and an additional 22 hours of operation in the outer zone of the cloud. The engines have been returned to Phoenix for analytical teardown.

New ADAC brand is unwound

Abu Dhabi Airports Company (ADAC) launched the new brand concept – Shop-Dine-Unwind – at the Tax Free World Association (TFWA) event at Singapore. ADAC revised the retail division's approach to create a travelretail concept and brand that could be transferred beyond the physical borders of the emirate.

Huraiz bin Huraiz,
ADAC's chief commercial
officer said: "Shop-DineUnwind highlights the
change in our business
model from owneroperator to landlord. It is
also easily transferable
outside of Abu Dhabi and
will eventually enable us to
highlight the quality of a
travel-retail offer within
ADAC managed airports
internationally."

ADAC currently manages five airports within Abu Dhabi and sees potential, in the long-term, as an airport asset management company.

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Row as Iraqi Air goes bankrupt

Iraq's government has dissolved state-owned Iraqi Airways over a financial dispute dating back to Saddam Hussein's invasion of Kuwait.

Iraqi Transport Minister Amer Abdul-Jabbar said the company was declared bankrupt "because the it doesn't own any aircraft and because of the Kuwaiti government's cases raised against it".

He added: "We hope in the future to replace it by two or three companies to resume its operations."

The move has been met with outrage in Kuwait.

Kuwait's national airline, Kuwait Airways, has long demanded \$1.2 billion in reparations from the airline for alleged theft of 10 airplanes and millions of dollars worth of spare parts during the 1990 invasion. It has sought to freeze the company's assets worldwide.

Christopher Gooding of the law firm of Fasken Martineau, which acts for Kuwait Airways Corporation (KAC), told Arabian Aerospace Radio: "The details of what is proposed by Iraq are vague at present but it appears to be a sorry reflection of the country's attitude to its international commitments that liquidating its own national airline is seen as preferable to addressing those commitments. Threatening to start a new airline merely demonstrates what a cynical tactic this is. Any such move will not lead to the dropping of claims."

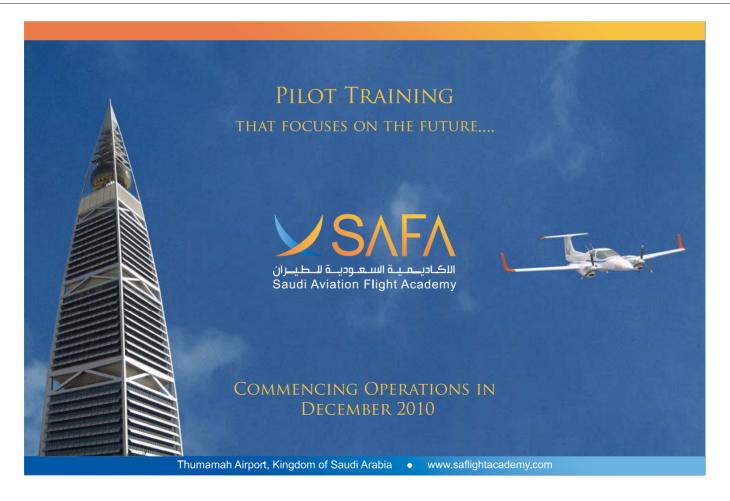


ADA Group brokers Stansted deal

Abu Dhabi's aerospace outreach has been strengthened following an agreement between two leading organisations to work together and market from a shared base at London's Stansted Airport.

The agreement was signed by international luxury executive flight services company Royal Jet and Maximus Air Cargo, the UAE's largest dedicated cargo aircraft operator. It allows Royal Jet to open offices at Maximus' existing facility at Stansted.

The agreement was facilitated by the Abu Dhabi Aviation (ADA) Group, which includes Royal Jet, Maximus and Abu Dhabi Aviation, the largest commercial helicopter and fixed wing aircraft operator in the Middle East.



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No paper to Calogi up the system!

Emirates Group subsidiary Calogi's latest e-freight initiative could revolutionise air freight by removing the need for paper waybills.

After an online live demonstration to a group of IATA senior managers, the Calogi team were able to confirm that their e-Air Waybill (e-AWB) solution fully met the IATA requirements.

The IATA e-AWB removes the requirement for a paper air waybill (AWB), simplifying the airfreight process for the supply chain. There is no longer a need to print, handle or archive the paper AWB

An e-AWB means more accurate information, more confidentiality, more efficiency, as well as the opportunity to reduce costs (no paper handling and archiving). It also means faster air freight shipments. For example, there will no longer be delays due to the paper AWB being misplaced or lost.

The e-AWB online demonstration presented by Patrick Murray, head of Calogi Worldwide Cargo Distribution Network, provided a unique opportunity for the IATA managers to directly assess and evaluate Calogi's e-freight capabilities and see first hand how the portal's state-of-the-art features can support IATA's e-freight initiative.

Murray said: "We have been working with IATA for more than two years to address how we can best support the e-freight initiative. I am delighted that our efforts in this area have been recognised and that, together with IATA, we can fully implement efreight in this region."

He added: "We are implementing in the GCC.



Airbus A330 captures long-range need for Saudi after 30-year wait

Saudi Arabian Airlines — Saudi Arabia's national airline — has taken delivery of its first longrange Airbus aircraft in almost 30 years.

The Airbus A330 was delivered at a ceremony in Toulouse in May attended by Abdulaziz Alhazmi, deputy director general of Saudi Arabian Airlines, and John Leahy, Airbus chief operating officer - customers.

The Rolls-Royce-powered A330-300 is the first to be delivered from an order for eight aircraft signed in July 2008. The delivery takes the number of customers and operators of the world's most popular twin-aisle medium-to-long-haul aircraft to 140.

Alhazmi said: "We are seeing rising passenger demand and with unbeatable economics and passenger comfort, the A330 is the ideal aircraft. Together with our new Airbus A320s, our A330s will allow us to get the maximum efficiency from flying two aircraft families which share common controls and maintenance."

Leahy added: "It is a remarkable achievement that the Airbus A330 has become essential to Saudi Arabian Airlines' fleet modernisation. The aircraft has proven reliability and will meet the most demanding passenger comfort expectations."

Saudi Airlines said the Airbus A330 is the most economic means of flying some 300 passengers on medium-range routes in true long-haul comfort. "The A330 is also one of the world's most fuel efficient aircraft," Alhazmi said.

With Calogi's e-freight enabling green technology, I truly believe that the need for transporting paper documents with the shipment will become a thing of the past."

CANSO signs up Etihad on Silver

Air traffic management global umbrella organisation CANSO has signed up Etihad Airways as a Silver Associate Member.

CANSO director general Graham Lake said: "Since the establishment of our Middle East office almost a year ago, CANSO has been focused on bringing together ANSPs, airlines and the whole aviation value chain to deliver much-needed performance enhancements to airspace in the region.

"The fact that Etihad has chosen to join in our work is a great vote of confidence. We are all looking forward to working with Etihad to help solve some of the biggest challenges facing air transport in the Middle East."

Emirates emergency landing in Kochi

An Emirates aircraft with 350 people on board was forced to make an emergency landing in Kochi after hitting severe turbulence at 35,000 feet 50 miles south of Bangalore airspace.

Twenty passengers and three crew members suffered minor injuries but

were released after treatment in a medical centre at Kochi airport.

The GCAA and the Indian civil aviation accident investigation team are investigating the incident, which happened on April 25.

Jordan and Boeing nearing copter deal

Jordan has signed a Letter of Intent for the purchase of AH-6i light attack / reconnaissance helicopters from Boeing.

In a brief ceremony at the Eighth Annual Special Operations Forum and Exhibition (SOFEX) 2010 at the King Abdullah I Airbase in Amman, Royal Jordanian Air Force Commander Major General Malek Habashneh and Boeing executives signed the letter in anticipation of continued discussions leading to a contractual agreement.

The AH-6i is the international version of the AH-6 light attack / reconnaissance helicopter designed on a combat-proven platform with a heritage of successful service with special operations forces.

"The AH-6i system will deliver outstanding capabilities to Jordan," said Al Winn, Boeing vice president of Apache programs. "Rigorous testing and numerous successful demonstration flights around the world have validated the helicopter's superior capabilities – proving that this design can meet warfighters' needs faster than any other option."

Gulf Air introduces redundancy plan

Gulf Air has introduced a voluntary redundancy/ retirement scheme for its employees.

CEO, Samer Majali said: "A key part of our strategy is to review all elements of the business that have an impact on sustainability and profitability. This included personnel-related costs. Offering this scheme was one of the suggestions put forward by employees and employee representatives to address this issue.

"Our main priority will always be retaining the best and most productive talent, safeguarding the jobs of Gulf Air employees who continue to work hard for our long-term future.

"We are actively employing more Bahrainis. I am proud that 82 per cent of non-flight crew positions in Bahrain are held by Bahrainis, while our overall Bahrainisation level has reached 54 per cent."





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BAE Systems to open up in Jordan

Global defence, security and aerospace giant BAE Systems is to open an office in Jordan to complement the network of offices it operates across the Middle East and Africa.

The UK company said the office will be used as the focal point for business in Jordan and neighbouring countries.

It is expected to be fully operational by the end of the year and will support BAE's ongoing business with the Jordanian Armed Forces and collaborative activities with the King Abdullah Design and Development Bureau (KADDB).

Jeff McCray, regional vice president Africa and Near East, said: "This move underlines our commitment to the Hashemite Kingdom of Jordan and developing business prospects in the region."

First Lebanese Pumas delivered

The Lebanese Army has received the first four of ten Puma helicopters as a donation from the UAE to help support the country's armed forces capability.

The Pumas were flown to Beirut by Emirati and Lebanese pilots, accompanied by technical staff from both countries. Staff Major General Fares Mohammed Al-Mazroui, head of the logistics command of the UAE Armed Forces, said UAE donated the four Pumas upon directives from the president, Sheikh Khalifa bin Zayed Al Nahyan, and vice president and prime minister of UAE and ruler of Dubai, Sheikh Mohammed bin Rashid Al Maktoum.

The remaining aircraft will be delivered later this year, he said, adding the



Libyan long-haul Airbus A330s to get mobile broadband

OnAir will install full SwiftBroadband Mobile OnAir and WiFi Internet OnAir in-flight passenger communications services aboard Libyan Airlines' fleet of new long-range Airbus A330 aircraft. Libyan Airlines is expecting delivery of the first A330 in June 2011.

"We are delighted that Libyan Airlines has made the decision to install connectivity on both the long and short-range fleets," said Benoit Debains, CEO of OnAir. "With OnAir providing both GSM/GPRS as well as WiFi Internet, passengers will have the broadest range of in-flight connectivity options available anywhere in the world."

Capt Mohamed M Ibsem, CEO Libyan Airlines said: "Since signing our initial agreement with OnAir on our Airbus A320 fleet last August, we have been looking forward to expanding the service across our full fleet."

Libyan Airlines' passengers will be able to stay connected in-flight using their own mobile phones or BlackBerry®-type devices to make and receive phone calls, send and receive text messages and emails, and access the Internet.

Libyan Airlines selected OnAir for its single-aisle fleet last year (four Airbus A320 aircraft to be delivered this year; the first in September), and is among the first airlines – the first in Africa – to install OnAir services for its full Airbus fleet.

Puma has many advantages as it can fly over mountains thanks to the four-dimensional autopilot and navigation systems supported by GPS.

The Pumas will be used for search and rescue and evacuation of patients, as well as transportation of troops and military equipment.

Synthetic jet fuel plans accelerating

Qatar Airways is pushing forward plans to be the first airline operating with 100 per cent synthetic jet fuel and believes 2014 is a reasonable timeframe for the development.

Speaking at the ICAO Colloquium on Aviation and Climate Change, Qatar Airways' head of CSR, environment and fuel optimisation Chris Schroeder said the most likely scenario is having a proof-of-concept synthetic fuel within four years split evenly between gas-to-liquid (GTL) and biomass-to-liquid (BTL) blends.

Qatar is working with Airbus and other partners in the "Qatar Advanced Biofuel Platform" to pursue an architecture for biofuel production.

Schroeder said the goal is to find home-grown feedstocks for use in biofuel productions that pose no competition to the food chain. Qatar could possibly look at camelina. He also noted algae is particularly interesting for the MENA region.

Qatar is "happy to share

its experiences" as it works to develop a biofuel framework, said Schroeder. "We want biofuels available at every destination we fly to."

In October 2009 Qatar completed a GTL revenue flight between London and Qatar. Fuel for the flight was supplied by a Shell plant based in Bintulu, Malaysia. Shell and partner Qatar Petroleum are building a GTL plant with a targeted output of one million tonnes per year in 2012.

Libyan Airbus crash mystery

There is no evidence so far that mechanical failure caused a new Afriqiyah Airbus A330 to crash on its approach to Tripoli Airport in May, according to a Libyan air crash investigation team preliminary report.

The aircraft, on route from South Africa, crashed killing 103 people with just one survivor – a nine-year-old Dutch boy.

The Libyan Commission said: "There is no sign indicating a technical failure, according to data recovered from the two black boxes."

The commission also ruled out an explosion or fire on board and said there was no evidence the crash was caused by an act of terrorism.

There was also no evidence of a lack of fuel and nothing to indicate that the pilot had radioed the control tower before the crash to request technical or medical assistance.

New airline for Egypt

Saudi conglomerate Nesma Holding Corporation is backing a new airline to operate from Egypt.

The start-up will launch in July using Airbus A320s.

It is expected to operate charters and focus on flights for pilgrims to Medina from the region and Europe.

At least one aircraft – a former BMI A320 – has been painted in the colours of the carrier, branded Nesma Airlines.

First class Etihad wins trio of awards

Etihad Airways won three awards for its First Class products and services at the Skytrax World Airline Awards in Hamburg, including the award for 'World's Best First Class'.

The awards are based on the latest Skytrax survey of 200 airlines across the world, including a poll of almost 18 million global air travellers from over 100 countries.



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Sikorsky to upgrade Saudi's H-60s

Sikorsky is to upgrade the Royal Saudi Land Forces Aviation Command (RSLFAC) fleet of Black Hawk helicopters from the UH-60A model configuration to the more modern UH-60L.

Based on the success of the H-60 Helicopter Recapitalization and Upgrade Program on US Army Black Hawk aircraft, the programme includes comprehensive fleet upgrades.

These include a T700 to T701D engine upgrade for increased power and reliability plus modification to flight controls, avionics and instrument panel. Additionally, the helicopters will be equipped with a new Aircraft Flight Control Computer (AFCC) as well as new wiring harness, high-speed shaft and seal lead acid battery.

"This conversion programme will modernize the current Saudi fleet and allow for better commonality and integration with its newlyacquired fleet of UH-60L aircraft," said David Adler, president of Sikorsky Aerospace Services. "As we continue to successfully transition the UH-60 helicopter through our global modernizations programmes, this project serves as an important launch point in the region."

\$40m Sniper deal bang on target

Lockheed Martin has signed a \$40 million foreign military sales contract to deliver Sniper Advanced Targeting Pods (ATPs) to the Royal Saudi Air Force (RSAF).

This is the second Sniper ATP purchase in a multiyear sensor modernisation programme to improve precision targeting,



Qatar unveils larger Boeing freighter

Qatar Airways has begun cargo operations using its new Boeing B777 Freighter. The B777F is the latest addition to the fleet, now numbering 83 aircraft, and adds significant capacity to the airline's burgeoning freighter network.

The aircraft has a payload capacity of 102 metric tons, almost double the capability of the airline's Airbus A300-600 freighters.

The freighter is set to operate to several of Qatar Airways Cargo's dedicated freighter network points, including Amsterdam, Lahore, Dubai, Karachi, Chennai, Sialkot, Frankfurt, Amman and Hong Kong.

Qatar Airways CEO Akbar Al Baker said the delivery signalled a dramatic shift in the airline's cargo business. "The capacity of the Boeing freighters is unrivalled and the plane's economics make it an attractive addition to the fleet. It's an opportune time to be introducing more cargo capacity as the State of Qatar is growing at a phenomenal pace, as are other parts of the Gulf region, and we are primed to take advantage.

"With a total of three new triple seven freighters joining the fleet in a little over 12 months, the airline's dedicated cargo capacity will effectively quadruple in size."

Al Baker added that the cargo facilities at New Doha International Airport will further cement the airline's position as a key player in the region. The new airport is scheduled to be operational from the end of 2011.

intelligence, surveillance and reconnaissance capability of RSAF F-15S aircraft.

The RSAF first purchased Sniper pods in March 2009. Operational evaluation concluded in January this year with RSAF declaring it mission ready.

The Sniper pod is heavily used as a non-traditional intelligence, surveillance, and reconnaissance asset for convoy route reconnaissance and battlefield situational awareness.

Deployed on US Air Force and coalition partner F-15, F-16, A-10 and B-1 aircraft, the Sniper ATP is also operational on the CF-18 and Harrier GR7 and GR9 aircraft. Platform expansion continues with the B-52, Tornado, Typhoon, unmanned aerial vehicles and additional aircraft.

Quick-fire academy

Gulf Aviation Academy (GAA) has been awarded EASA Part-147 to provide aircraft engineering-type training and to conduct examinations in conformance with global aviation benchmarks. The academy completed the accreditation process—which typically takes up to a year—in a record four months.

Royal Falcon makes its Marka

Jordan's Royal Falcon Airlines has begun twice weekly direct flights from Marka Airport in the centre of Amman to Abu Dhabi International Airport.

This is Royal Falcon

Airlines' second direct flight into the UAE after its service to Sharjah, which started in March 2010.

The airline is deploying its Boeing 737-400 for the Abu Dhabi route on Tuesdays and Saturdays.

Captain Ziad Hanandah, president and CEO of Royal Falcon, is pictured with Ahmad Al Haddabi, ADAC's senior vice president airports operations, at the inaugural celebration in June.

Dubai consolidation

Thales has formally combined its regional Middle East and UAE headquarters to a single building in the Dubai Airport Freezone.

Operational and key project teams are now co-located in the same office which, the company says, will generate increased synergies to capture and deliver business.

Fuelling a wider network

Kuwait-owned Q8Aviation strengthened its network of European airport jet fuel terminals with the recent addition of Frankfurt-Hahn and Liège.

Afghanistan mountain crash

A Pamir Airways plane with 38 passengers and five crew on board crashed in Afghanistan's inaccessible, mountainous Hindu Kush region near Kabul in May.

Kazakhstan charter deal

Rizon Jet has signed a charter agreement for an initial four-month period to place one of its Challenger 605 aircraft with Prime Aviation in Kazakhstan at Almaty or Astana. Both companies will jointly offer the aircraft for charter within their respective regions.

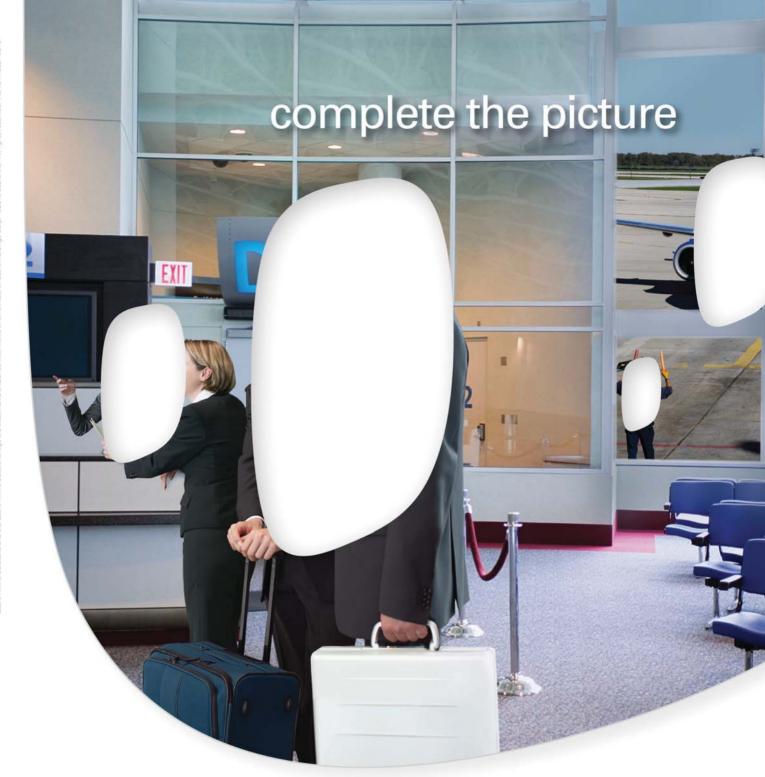
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AIR TRANSPORT IATA AGM



IATA's governing board is pictured at the Berlin AGM.

Cairo on board for IATA

gyptAir will be the focus of air transport industry attention over the next year, with confirmation that the 2011 International Air Transport Association (IATA) annual general meeting will be hosted in Cairo. This will follow the Star Alliance carrier hosting the Arab Air Carriers Organization (AACO) yearly gathering in October.

"All air carriers compete to get such an opportunity," EgyptAir holding company chairman Hussein Massoud told *Arabian Aerospace*, as the 66th IATA Annual General Meeting and World Air Transport Summit drew to a close in Berlin in June.

Massoud said the two events will highlight the Egyptian capital as a place for decision-makers to discuss strategy.

With the air transport industry facing many problems, he said, carrier representatives are drawn to high-level conferences. The popularity of the Berlin event is evidence of this, he added: "This gives an indication that, as long as there is a hot issue, people are interested in such meetings."

Carriers from the region are well represented on the new IATA Board of Governors, announced in Berlin.

On the board for the next two years will be Samer Majali, chief executive of Gulf Air; Hussein Massoud; Temel Kotil, head of Turkish Airlines and Khalid Abdullah Al Molhem, chief executive of Saudi Arabian Airlines.

The four join 26 other leaders elected from 300 airlines around the world.

New chairman is FedEx Express president and CEO David Bronczek, who succeeded Tony

Tyler, CEO of Cathay Pacific Airways. The position was previously held by Majali, from June 2008 to June 2009, when he was CEO of Royal Iordanian.

Majali said: "It is a great honour to represent the airlines in the region and serve on the board of once again. Year 2009 and the first quarter of 2010 have been a challenging period for the aviation industry, reinforcing the need for tighter stakeholder collaboration to drive efficiencies and accelerate recovery. This can only be done through setting new standards across the global airline industry – a process that is actively driven by IATA.

"As a member of the governing board I will be working closely with the IATA representatives to address the challenges faced by the industry, harnessing the collective knowledge and wisdom among other members of the board, so that the global aviation community can benefit from it."

IATA represents, leads and serves the global airline industry and over the past 60 years has helped airline companies develop commercial standards, simplify processes and increase passenger convenience, while reducing costs and improving efficiency. Today IATA's members comprise 230 airlines representing 93 per cent of scheduled international air traffic.

Bisignani attacks government interference



Akbar Al Baker: storm

IATA's director general, Giovanni Bisignani, is to retire at next year's AGM in Cairo. But the fiery Italian, who has done a remarkable job in raising the profile of the airline industry with governments, once again called on them to cease their involvement with national airlines and let them be run without interference.

Looking forward to an industry in 2050, Bisignani predicted there would be only 12 global airline brands.

In the Gulf, where there is an abundance of state-owned carriers, Qatar Airways head Akbar Al Baker, caused a storm when he said he believes the weaker Gulf carriers will simply "disappear". And then, after saying that he did not want to be too

controversial, he added: "And then, there will just be two dominant carriers in the GCC. You can guess which ones."

Etihad Airways CEO James Hogan remained unfazed by Al Baker's statement, saying after the meeting it was not worth commenting upon.

Royal Jordanian chairman and CEO, Hussein Dabbas, also dismissed Al Baker's prediction and said there is need for consolidation in the region.

"There is room for airlines like RJ to merge with another carrier," he said. "I think consolidation will happen but not now and it will be like Air France KLM, British Airways and Iberia, Lufthansa-Swiss. Airlines will maintain their national identity."

Air Arabia is really on the charge thanks to Sharjah

They said it couldn't last -but the region's first and biggest low cost carrier continues to expand.

Alan Dron reports.

hen Air Arabia was formed in 2003, Sharjah was not the most obvious place to start a new airline. Its airport catered largely to smaller, less well-known carriers and it was perhaps best known as a freight facility. Additionally, Dubai's booming airport was only an hour down the road.

To chief executive Adel Ali and his team, however, it was ideal.

"Sharjah has a great catchment area: it's near Dubai and all traffic from the northern emirates has to drive past the airport to go into Dubai," he explained. "It's a beautiful regional airport with a short taxiway — which allows us to trim minutes off every sector — and a long runway. People can get through the airport very quickly. And, when we arrived, it didn't have a based airline."

Importantly, it was decided not to 'fix' the airline's position by naming it after Sharjah. 'Air

Arabia' was designed to appeal to the widest possible audience.

As Arabian Aerospace goes to press, the Middle East's first and largest low-cost carrier (LCC) should be starting flights from its latest base as Air Arabia Egypt.

In a partnership with local tour operator Travco, Air Arabia is beginning flights from Alexandria, with the further aim of starting operations from a Red Sea airport later this year. First routes will be to Kuwait, Amman, Beirut and Khartoum

The new Egyptian operation mirrors that in Morocco, from where it began flying last year. There, it came to an agreement with an existing small carrier, Regional Airlines, which was rebranded as Air Arabia Maroc. The Sharjah-based carrier holds 29 per cent of the new company's shares and manages the Casablanca operation.





"Regional was operating a very small aircraft within Morocco and it wanted to expand that business," explained Ali. "To do that required different aircraft and skills and it realised a combined effort with us would help all parties."

There were simple reasons for linking up with existing companies in Egypt and Morocco, rather than setting up new, stand-alone organisations, said Ali. Both nations demand that any companies within their borders are owned by local citizens, so the majority shareholders in both of Air Arabia's new operations are respectively Moroccan and Egyptian.

With the Moroccan operation based at Casablanca, on the western edge of the Arab world, and the airline's home base of Sharjah on the east, Alexandria neatly fills the gap between the two.

Both the Moroccan and Egyptian operations will look north to Europe and south to Africa for growth. It has been acknowledged for some time, said Ali, that many African nations are underserved in air transport terms and he predicted growth not only between MENA nations and the rest of the continent, but between East Africa and the Indian sub-continent.

Too many airlines

However, he does not foresee expanding into the Indian sub-continent in the way it has expanded in the Middle East any time soon, despite the traffic generated between that region and the Gulf. "We've not really looked at it, simply because there are too many airlines in the sub-continent. We just feel it's too early to expand outside the Arab world."

In a short history notable for steady growth, one of Air Arabia's few setbacks occurred in the sub-continent, when it attempted to set up a joint venture with Nepalese carrier Yeti Airlines to start low-cost services from Kathmandu. The enterprise lasted for just three months in early 2008 before services were suspended, then

Alliance launch Jordan low-cost carrier in Amman

Jordanian travel investment company Tantash and Air Arabia are coming together to create a new low cost carrier to operate from Amman. The two companies signed a joint venture agreement in June to launch the Jordan's new low-cost carrier.

Air Arabia 'Jordan,' will be the first LCC based in the Hashemite Kingdom, and will provide direct service to a range of destinations across the Europe, Middle East and North Africa region from Queen Alia International Airport.

The new carrier's operations will be managed by the Air Arabia Group and will follow the low-cost model from the other hubs Sharjah, Alexandria and Casablanca.

terminated completely later that year. There were three main issues, explained Ali. There was ongoing political instability and associated industrial disputes. Local airports were incapable of handling expansion. And fuel for the Nepalese market had to come through India and was getting more and more expensive by the day. We looked at it and decided it wasn't a good story.

Similarly, he is cautious about expanding operations into Russia. Although he accepts there is "huge potential" there and that his airline's services to Kiev in Ukraine and Almaty in Kazakhstan "do fantastically well for us", he feels that flights to Russia generally are a little too far beyond Air Arabia's self-imposed limit of four hours' flying time to be comfortable.

Like European low-cost giant Ryanair, Ali is a firm believer in using secondary airports. He decided to launch Air Arabia Egypt from Alexandria's new Borg El Arab Airport rather than Cairo, which he describes as "still not an open airport that we can fly to and from. It's still kept for Egyptair".

He believes several countries in the region are considering trying to distribute traffic away from

their main hubs and points to the Egyptian Red Sea airports of Luxor and Sharm-el-Sheikh as examples of good, small regional airports. He is confident that, as traffic grows at the region's secondary airports, they will attract new investment.

Ali is a passionate advocate of an open skies policy in the Arab world. Those countries that have liberalised their markets have seen the benefits. he said.

"For example, in Syria it used to be very difficult to get three or four flights a week into Damascus. But then the authorities opened all three airports – Damascus, Aleppo and Latakia – to international services and removed most of the limitations on frequencies. As a result we've seen fantastic growth."

Profitable every year

Remarkably, Air Arabia has been profitable every year since its inception (despite a downturn early this year due to slipping yields) and operates with load factors of 80 per cent. Its fleet of 25 A320s will rise to more than 60 in the next few years and it expects to increase an initial two Egypt-based Airbus A320s to at least four or six by the end of 2010. Similarly, the Moroccan fleet will grow from three to five this year.

The economic crisis has increased the number of business travellers using his services as companies cut back on travel costs. However, they still probably account for only around 15 per cent of passengers, he said, as many local companies will never move their staff from premium cabins to an LCC. A further 30 per cent of Air Arabia's passengers are leisure travellers, with the remainder split between students and families.

He is optimistic about prospects. "People continue to want to travel. The business environment is getting better, not worse, and there's a huge focus in the Middle East on tourism infrastructure that I think has got a long way to go. For the foreseeable future, I'd say it's a growth story."



Safi safari into a brave new world

As Safi Airways expands its routes, adds new aircraft and rebrands,

Marcelle Nethersole

speaks to CEO Claus Fischer. afi Airways, the international airline of Afghanistan, announced its expansion plans and rebranding at the Arabian Travel Market in May.

The airline, which began operations in November 2007, achieved a growth in ticket sales of 400 per cent during 2009 compared to 2008 and currently operates scheduled flights to four destinations with four aircraft. Its primary hub destinations are Frankfurt, Germany, with five flights per week, and Dubai, UAE, with two flights daily.

In February Safi signed interline agreements with Lufthansa, Emirates, Qatar Airways and the US carrier United Airlines. It also recently reached agreements with Delta Air Lines, Air China and Hainan Airlines, which will further fuel growth.

"Our expansion over the past 18 months has been very encouraging and we are aiming to almost double the number of destinations we serve over the next 12 months," said Claus Fischer, Safi's chief commercial officer.

"We opened Frankfurt almost a year ago and we have increased our services already from three to five flights. We have strong Afghan communities in Germany and the UK and we want to use the Star Alliance hub to serve the North American market. Flying with Safi can save hours of hanging

around in places like Dubai waiting for connections. With us take-off in Kabul is 9am and you arrive at 14.30pm in Frankfurt. At 1700 local time Star Alliance has a big departure wave for evening flights to the US or Europe, so you can be at your destination from Kabul the same day."

Apart from Kabul and Frankfurt, the airline serves Dubai, Kuwait and Doha, and this summer will be adding Delhi and Beijing to its routes.

"Most Afghanis travel to Delhi for medical treatment," explained Fischer. "Beijing is being added as it is a business hub and a transit point for traffic from Korea and Japan, plus for the American west coast traffic, so these new routes will be a great advantage for many people."

Later this summer Safi will be acquiring two Airbus A320s. The aircraft will be liveried in the new corporate branding, which was also unveiled at the Arabian Travel Market.

"We worked hard to achieve the turnaround for Safi Airways during 2009 and we achieved our goal. We will probably get another A340 next year. And our business plan foresees a total of eight to nine operative aircraft in 2014," said Fischer. He added that the airline is currently in the selection process for dry-leasing one A320, with an acquisition of the second unit planned for later in the year.

Safi has a policy to only introduce young aircraft (between 10 and 13 years of age), fully refurbished before going into service.

"We plan a comprehensive overhaul programme for the existing 737s. Once completed, they will continue to operate on charter and ACMI (Aircraft, Crew, Maintenance and Insurance—wet lease) sales and to cover peak periods," said Fischer.

Safi's new logo and corporate identity, designed to give a younger and fresher look, will also be phased into its airport branding, advertising and existing aircraft.

Safi was the first Afghan airline to operate according to EASA and ICAO standards.

"We want to show the world that Afghanistan has a professional and reliable airline," said Fischer.

Safi also announced its preparation for a complete IATA Operational Safety Audit, which will be completed this autumn and is aimed at reassuring potential partner airlines that the company operates to the highest international safety standards.



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Room at the top for Wataniya...

any airlines in the region have an agenda that's not driven by a return to shareholders, according to George Cooper, the man who launched Kuwait-based premium carrier Wataniya Airways 18 months ago.

The straight-talking Scot also doesn't think the situation is going to change much in the near future.

Set up following a government decision in 2005 to liberalise air transport in the Gulf state, Wataniya now flies its half-dozen Airbus A320s to a total of nine destinations in the Middle East, plus the newly added Istanbul, Rome and Vienna. The operation was launched on the back of an initial public offering of shares that attracted no fewer than 100,000 Kuwaiti citizens. That's something Cooper has firmly in mind as he contemplates the competitive landscape.

Commenting on the ongoing privatisation of national carrier Kuwait Airways, he said: "I think it's a very good thing because companies that are privatised and live fully exposed to the demands of shareholders tend to become more efficient and to develop in various ways. That can only be good for air transport in Kuwait and the wider region."

He doesn't expect to see Kuwait Airways' books out in the full light of day any time soon, however. "The process seems to be taking a long time and I don't know when it might be completed," he observed. "But at least the first steps have been taken – a committee has been established and the airline has passed into the ownership of the Kuwait Investment Authority, which will create the entity that will ultimately be privatised." Until then the national carrier will have to live with mounting competition from Wataniya.

With its A320s spaciously outfitted with 122 seats, compared with an industry average in excess of 140, Wataniya certainly looks and feels like an all-premium carrier. But Cooper emphasised that its cost base is more like that of a low-fare operator. "We have outsourced a lot of infrastructure, allowing us to offer a premium product at a normal price," he said.

At a time when, in Cooper's words, the market is "awash with people trying to fill overcapacity and empty seats" Wataniya continues to spread its routenetwork wings. In the Middle East it serves Dubai, Bahrain, Alexandria, Cairo, Sharm el-Sheikh, Beirut, Amman and Damascus, Further afield, Istanbul and

As the recessionary *beadwinds* ease, Wataniya Airways is making steady progress. But Middle East air transport is still hampered by regulatory weight and drag, chief executive George Cooper tells Brendan Gallagher.

Rome were added this May, and Vienna in June.

"We're there to meet the demands of the higher end of the Kuwait national market," said Cooper. "We had a lot of feedback from people asking us when we were going to start serving Europe. With the aircraft we have, we can't go to places like London. But there's plenty of demand in Kuwait for travel to cities like Rome and Vienna, and now we can accommodate it."

Wataniya was one of the first airlines in the world to meet another kind of demand – for on-board mobile phones. Before joining the nascent airline, Cooper served as chief executive of OnAir, the Geneva-based company that supplies a growing range of passenger connectivity services to airlines in the Middle East and elsewhere. He showed his continued faith in the offering by contracting to become OnAir's launch customer and has now had 18 months to observe it in operational service.

"We had one or two early licensing glitches that meant passengers couldn't receive calls inbound from Kuwait," said Cooper. "But now they're settled and all the indications are that our guests love the service. Even if they don't need to use it on a particular flight, they value the fact that it's there. It's reached the point where they miss it badly when they fly with other carriers that don't offer OnAir."

The service allows passengers to use their own mobile phones and BlackBerrys to send and receive text messages, make and receive phone calls, and access the Internet and email.

Having launched into the teeth of the recession, Wataniya continues to make steady progress – a seventh aircraft is due to arrive later this year and further route development is in prospect. Cooper should be happy but he remains troubled by aspects of the regulatory regime in the region.

The current dispute on traffic rights between Kuwait and the UAE means that Wataniya is confined to an out-and-back service to Dubai, with no immediate prospect of being able to offer onward sectors. "The discussions continue and I don't know when they will conclude," he said. "The fact is, there's too much government interest in air transport in this region."



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Four ways to control

The 17th Arabian Travel Market (ATM) took place in Dubai in May. The event attracted a massive 2000 products featuring more than 70 destinations, which cemented the region's importance globally for tourism and airlines. **Marcelle Nethersole** looked at four different areas of the world displaying at the show.



Madan K Lamichhane, Tourism Marketing Officer

Nepal – home to a living goddess

Nepal is famous for its geographic position and biodiversity and the mighty Mount Everest.

"Most tourists come to Nepal for the trekking," said Madan K Lamichhae, tourism marketing officer. "Nepal offers an easy hike in the hills to climbing adventurous mountains. Along with the panoramic mountain views, trekkers will also encounter our wonderful wildlife."

Nepal will certainly offer breathtaking views. The elevation of the country ranges from 60m above sea level to the highest point on earth, Mount Everest at 8.848m.

"Nepal offers lots of energetic activities such as mountaineering and whitewater rafting, and elephant polo is emerging as part of sports tourism," said Lamichhae. "But we also have a rich cultural and religious background."

Religions practiced in Nepal include Hinduism, Buddhism, Islam, Christianity, and Bon. It is also the only country in the world with a living goddess.

"Kumari, the living goddess is called upon to give blessings to Nepal's Hindus and Buddhists, but she also appears for tourists in Patan, an ancient town south of Kathmandu," explains Lamichhae.

Nepal also offers good nightlife in its larger cities with many bars, restaurants and 24-hour casinos in its hotels.

"We have lots of promotional campaigns going on in different countries. Last year Nepal received 550,000 tourists, which includes those coming by land as well as air, with access via India as many people like to trek," said Lamichhae. "By the end of next year we hope to receive one million visitors. This region offers many flights to Nepal with carriers including FlyDubai, Air Arabia and, of course, Nepal Airlines."



Ubongabasi Nseobot PR from Ikoyi Hotel which is one of the official hotels working with NTDC

Nigeria targeting a place on the tourist map

"Being at the Arabian Travel Market is an opportunity to showcase Nigeria as a country that takes tourism very seriously and put ourselves on the tourist map," said Otunba Segun Runsewe, director-general of the Nigeria Tourism Development Corporation (NTDC).

"We're promoting eco tourism, cultural tourism and meetings and incentives. We're a colourful country with colourful people and delicious cuisines. We have beaches ideal for swimming and other water sports, unique wildlife, vast tracts of unspoiled nature ranging from tropical forest to magnificent waterfalls, the Yankari National Park, which is the premier game reserve in Nigeria, and pulsating cities, such as our capital Abuja, and Lagos."

In 2009 Nigeria received 15 million tourists with the US and UK being the two largest markets. The NTDC

hopes that by the end of 2010 it will receive 30 million tourists, a figure Runsewe doesn't perceive as too ambitious.

"We are developing a tourism infrastructure with a focus on transport within Nigeria," said Runsewe. "We will be reactivating the rail system by the end of this year, which will certainly increase tourism. We also work closely with tour operators and offer various packages, from a two-day trip to a month trip. We have also been working with the Indian and Chinese tourism boards to boost figures from these countries."

Nigeria is celebrating 50 years of independence and the NTDC has put in place celebrations. "We have a 'Visit Nigeria at 50' campaign, which will offer yearlong celebrations for both locals and tourists," said Runsewe

your own destiny...



Cyprus – much more than sun and beaches

"This year Cyprus celebrates 50 years of independence," said Hrach Kalsahakian, marketing manager of the Cyprus Tourism Organisation.

The Cyprus Tourism Organisation has attended ATM since the late 1990s and has a regional office in Dubai.

"We have 22 tourist offices outside of Cyprus," said Kalsahakian, "Cyprus is the closest European destination to this part of the world and we feel close to it. Last year Cyprus received 2.3 million tourists, of which 50,000 came from the Middle East, and we are at the show to build on those figures."

Most tourists to Cyprus go for the Mediterranean sunshine and beaches but it does offer more.

"Of course we have a wealth of sandy beaches but we also have beautiful nature; the island is particularly known for its bird-watching," said Kalsahakian. "We have rugged coasts to breathtaking mountain peaks, sunny vineyards and cool pine forests. We have many religious tourists who go to see the Byzantine churches from the middle-ages, which are listed on the Unesco Heritage List, and Islamic sites from the Ottoman period.

"We have old Christian churches. Cyprus was the first country the apostles Paul and Barnabas visited in their journey to spread Christianity and the first country to come under Christian administration."

Emirates flies from Dubai to Larnaka and Pafos every day, and Etihad flies from Abu Dhabi to Larnaka four times a week. Gulf Air flies from Bahrain to Larnaka.

"We are now working with Air Arabia from Sharjah to fly to Larnaka," said Kalsahakian. "There are many travel options available to this region so we hope the tourist figure will rise. On October 1 this year Cyprus is celebrating 50 years of independence. It will be a huge cultural affair lasting a few days, a perfect time to visit Cyprus and celebrate with us."



Majda Behbehani, director of marketing and foreign relations, Ministry of Commerce and Industry.

Kuwait - a pearl in the Gulf

Sitting on the Persian Gulf, Kuwait is an oasis in the desert offering a blend of the old Arab world and ultramodern life, with a rich maritime history.

"We participate in ATM yearly. We want to market ourselves as a destination for tourists, families and also demonstrate a strong emphasis based on business travellers," said, Majda Behbehani, director of marketing and foreign relations, Ministry of Commerce and Industry. "We have an open society offering desert, sea, culture and great entertainment."

Kuwait City's most iconic landmark is the Kuwait Towers, which has three gradient towers, the second of which revolves full circle every half-hour providing panoramic views of the city.

There are also various museums and the modern Scientific Centre houses an aquarium, scientific exploration hall and i-max.

In 2009 Kuwait received around three million visitors, most arriving for business meetings and mainly from the GCC region. Its plan by 2020 is to receive five million visitors from all over the world

"We are building the City of Silk, which will include hotels, spas, parks and business and conference venues," said Behbehani.

"Kuwait has nine islands along the coast, the most noted and beautiful being Failaka, which offers a rich cultural heritage. One of the tourism plans is to build 20 hotels there, a golf course and a marine park. New hotels in Kuwait are also under construction and look to be open in 2011. These include the Four Seasons Hotel Kuwait City and Jumeirah Messilah Beach Hotel.

"Kuwait also has four nature reserves and six reserves set aside for ecological research."

Kuwait's new premium service airline, Wataniya Airways, offers point-to-point connections across the Middle East and is set to launch European destinations, Istanbul, Rome and Vienna later this year. Its fleet is made up of six Airbus A320 aircraft.

"Kuwaitis are warm, hospitable, friendly and helpful, which makes a visit to the country a very enriching and memorable experience," said Rehbehani

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DEFENCE SPECIAL MISSIONS



Royal Moroccan Air Force Alpha Jet has been withdrawn from its training role and is being used to pioneer a new task for the Franco-German trainer – cloud-seeding.

Back in Soviet days, the Russian air forces regularly undertook seeding missions to make clouds dump rain early, thereby ensuring dry weather for ceremonial parades.

Morocco's Al Ghait programme is rather less trivial and represents part of a proactive response to the problems posed by drought.

Drought in Morocco, already a largely arid or semi-arid land, has become more frequent during the last decade. It often hits during the crop-growing season, with the two main periods frequently coinciding with seed germination/seedling emergence or affecting grain setting and growth.

Further climatic change

Studies into climate change and global warming have shown that Morocco is among the countries that are most likely to be threatened by the effects of further climatic change.

It has been calculated that the increase of temperature due to increasing concentrations of greenhouse gases in the atmosphere will be accompanied by a significant reduction in annual average rainfall.

The reduction between 2001-21 has been calculated at four per cent with a 10 per cent during 2021-2050 and 20 per cent for 2071-2100.

This is serious, as Morocco has a diversified economy, but one that is still dominated by agriculture.

Morocco has, therefore, adopted a broad-based drought mitigation strategy, including water conservation measures, new agricultural techniques and new crop varieties.

Aviation has long had a part to play, especially in monitoring and measuring the effects of climate change. In 1982, the Al Ghait programme was launched, with aircraft taking a more active role.

The operation was a joint effort between the Government of Morocco and the United States Agency for International

The Royal
Moroccan Air
Force is using
its ageing fleet
for help green
the desert.

Jon Lake reports.

Development (USAID) and aimed to use weather modification techniques to augment rainfall.

The programme uses silver iodide as a seeding agent to increase the precipitation efficiency of cold clouds in the Central High Atlas Mountains. This causes snowfall, augmenting the snowpack in the mountains which, in turn, increases snow melt run-off in summer – just when it is most needed!

The silver iodide is released from ground-based seeding generators, or from aircraft (or both) when seedable clouds are in the target area.

In order to operate successfully over the mountains, the programme needed an aircraft capable of operating easily and autonomously at heights in excess of 8000m. A single RMAF Alpha-Jet (No.245) was modified for the task, gaining a new Sperry/Honeywell Primus 300SL weather radar in a slightly extended and recontoured nose, and with a modified AN/ALE chaff/flare countermeasures dispenser in the rear fuselage used for launching the cloud seeding silver iodide cartridges. The weather radar is used to help the crew to identify potentially dangerous cumulonimbus clouds.

Further climatic change

The crew identies interesting cumulus clouds, which are then penetrated. Inside each, the pilot drops one or two silver iodide cartridges; these acting as a catalyst for the formation of raindrops.

The Al Ghait aircraft has also been used in a number of other African countries, including Mauritania and Burkina Faso in 1998.

Since 2002 the Moroccan Al Ghait programme has benefited from the involvement of the US company Weather Modification Inc (WMI) of Fargo, North Dakota.

Since 2005, the Alpha Jet has deployed to Dakar, Senegal every year during summer. A number of countries have now benefited from Moroccan experience and expertise in the field of weather modification and in 2007 Morocco won the Zayed ibn Sultan prize in the UAE in recognition of its efforts in this field.

Jon Lake reports on Al Dhafra airbase in the UAE and the exercises that help allied forces with realistic training scenarios.

Six nations catch the UAE Sky Train

his year's Advanced Tactical Leadership Course (ATLC) saw fighter pilots from the UAE, Jordan, Pakistan, France, the UK and the USA undertaking one of the most serious and realistic training opportunities available to today's military aviators.

The latest ATLC exercise attracted international attention, as it hosted historic first meetings between the Lockheed Martin F-22 Raptor and the Dassault Rafale, as well as providing the arena for engagements between the Rafale and other fighters, including the rival Eurofighter Typhoon.

There was a time when realistic exercises for non-US fighter pilots meant a rare guest slot at the USAF's Red Flag at Nellis Air Force Base, Nevada, or a place on NATO's Allied Air Forces Central Europe tactical leadership programme (TLP). Today, opportunities for such training have expanded dramatically, with many more air forces participating, and with new venues and hosts, several of them in the Middle East.

These include Turkey's Anatolian Eagle exercise, Jordan's Falcon Air Meet as well as the UAE's ATLC, arguably the biggest and best such exercise in the region, held at the United Arab Emirates Air Warfare Centre at Al Dhafra Air Base after the Dubai Airshow.

The airbase at Al Dhafra is a joint UAE and USAF facility and is home to most of the United Arab Emirates' fighter squadrons – with F-16E/Fs and Mirage 2000-9s, which provide 'built-in' 'red air' forces. There is also a French enclave at Al Dhafra, known to the Armée de l'Air as Base Aerienne 104, and this hosts a rotational detachment of Dassault Mirage 2000-5s from EC 1/2 Cigognes, normally based at BA102 Dijon Longvic.

The UAE Air Warfare Centre was established in 2000; the first facility of its kind in the Middle East. It was established to allow doctrine, tactics, techniques and procedures to be developed and evaluated for the UAE's own new fighters but its role was soon expanded to improving

interoperability among Gulf Co-operation Council air forces and the air forces of their coalition allies. This was intended to promote the security and stability of participating nations.

The Centre's flagship advanced tactical leadership course was modelled on NATO's TLP. It aims to facilitate integration and interoperability between participating air forces through the development of leadership skills in the participating pilots, who are taught how to employ multinational forces together to achieve mission success.

The course takes pilots who are already qualified to lead a 'four ship' (four aircraft formation), and upgrades them to full 'mission commander' status, giving each student experience of commanding, planning and executing missions in realistic scenarios, with the syllabus moving through progressively more complex missions and more challenging scenarios.

Participation limited

The first AWC course was held in January 2004. Initially, participation was limited to the UAE AFAD, the United States Air Force and the UK Royal Air Force, with the French Armée de l'Air (AdlA) joining for the third course. Qatar and Saudi Arabia joined for the fourth course in April 2005. Today, the AWC serves all GCC countries, and there have been reports that the UAE hopes to include Italy and Germany "in the near future".

Though established and run by the UAE Air Force, the centre operates to the very highest international standards and management is shared between participating nations, with foreign air forces providing key personnel on the staff.

The UAE ATLC offers its participants a host of advantages, by comparison with other existing training exercises, such as NATO's TLP and the USAF's 'Red Flag' exercises.

Captain William Broman of the 'Swamp Foxes', one of this year's participating pilots, judged that: "The value of ATLC is in its uniqueness. ATLC stands alone as an exercise combining, as it does,

elements of Red Flag and TLP. Countries that could not deploy to the United States or Europe are able to deploy to the UAE. This makes it an outstanding opportunity to fly with and/or against dissimilar aircraft, providing invaluable experience for our pilots and maintainers. Experience is everything to the warfighter."

The AWC has access to training airspace that is three times larger in area and volume than that used for Red Flag, much less restricted by civil air traffic requirements and with minimal manoeuvre and electronic warfare restrictions for participating aircraft. It allows the use of combat tactics that could not be properly practiced in more restricted airspace.

Al Dhafra enjoys excellent weather, so that missions hardly ever need to be cancelled. During the first four courses at Al Dhafra, for example, only one mission had to be cancelled due to bad weather, whereas at TLP up to 50 per cent have had to be scrubbed due to weather restrictions.

But Al Dhafra is more than just an airfield with good weather, conveniently located to great training airspace. The base is exceptionally well equipped for its role, boasting all the latest generation range instrumentation infrastructure and debriefing facilities. Participating aircraft carry an ACMI (air combat manoeuvre instrumentation) pod which records aircraft and flight parameters and downlinks them to the ground. This allows precise real-time monitoring of all missions, down to the level of individual aircraft, enhancing flight safety and allowing accurate assessment of simulated missile shots. Participating aircraft are tracked in real-time and can be "kill removed" if the range training officers (acting as exercise referees) judge that they have been "shot down".

As a result, places on the ATLC course are highly prized and are eagerly sought after. Air Vice Marshal Greg Bagwell, Air Officer Commanding the RAF's No.1 Group, told Arabian Aerospace about the importance of ATLC to the



CONTINUED FROM PAGE 30

UK: "The UAE is a key regional ally for the UK and it remains a very high priority for security cooperation. The Royal Air Force was, with the USAF, one of the original participants in the excellent training courses offered by the UAE Air Warfare Centre in 2004 and, since then, we have placed ever-greater value on the opportunities that ATLC affords us.

"RAF participation in ATLC represents far more than a token means of reassuring the UAE of our commitment. The RAF gains great training benefit from the realistic, rigorous and demanding training that ATLC provides, and it is already a key part of enhancing the operational capability and preparedness of the RAF Typhoon force. It gives our pilots a great opportunity to train with their regional allies and, in so doing, to understand and appreciate the very high level of professionalism and operational competence that exists within the UAE Air Force's F-16 and Mirage 2000 squadrons.

Enthusiasm for co-operation

"The Prime Minister himself visited No.11 Squadron as it participated in ATLC in 2008, and this gives a good illustration of the enthusiasm for such co-operation with the UAE Air Force and Air Defence at the very highest level."

This year's ATLC participants consisted of six Royal Jordanian Air Force F-16s from No.1 Squadron, at Al Azraq/As Shaheed Muwaffaq al Salti AB; six Pakistani Chengdu F-7PGs from 31 Wing, at Samungli Quetta; six AdlA Rafales from EC 1/7 'Provence', at St Dizier; six RAF Typhoons from No.3 Squadron, at RAF Coningsby; and six USAF Block 52 F-16CJs from the 157th FS, 169th Fighter Wing, South Carolina ANG, at McEntire JNGB.

A six-aircraft deployment of F-22As from the 1st Fighter Wing's 27th FS ('Fightin' Eagles'), Langley AFB participated in bilateral training opportunities with some of the coalition partners during the same period, but these did not participate in the main exercise.

For the two US units at Al Dhafra, the exercise was known as Operation 'Iron Falcon'.

The UAE Air Force and Air Defence intends that the AWC and the ATLC should continuously evolve, with further upgrades and improvements to equipment and infrastructure, ensuring that it remains a first-class global facility.

There is a determination at the highest level that ATLC will never simply provide training using scenarios that replicate past air campaigns but will, instead, continue to create the most relevant and challenging tactical scenarios for its participants, forcing them to use innovative and imaginative tactics.

This year's participating pilots rated ATLC very highly. Captain William Broman of the 'Swamp Foxes' concluded: "The UAE's political and military commitment to ATLC is impressive. They have great leadership with the proper focus and a real vision for the future of the exercise."



Head to head:

he two stars of the Dubai air show were Lockheed Martin's F-22 and Dassault's Rafale and each sought to outdo the other in the daily flying display.

Behind the scenes, they also squared up to one another in simulated air combat. The 27th Fighter Squadron, part of the 1st Fighter Wing at Langley AFB, Virginia, deployed six Lockheed F-22 Raptors to Al Dhafra during the ATLC exercise. This marked the first deployment of the F-22A Raptor to what the USAF call SouthWest Asia (or the Central Command AOR). The F-22As fought Armée de l'Air Rafales on six occasions, to the evident interest of local UAE Air Force observers, for whom the Rafale seems likely to be their next frontline fighter.

Normally, the results of dissimilar air combat training exercises are not publicized, but following the 2009 ATLC exercises, there were tantalizing glimpses of what had gone on. During an official press conference the commanding officer of the French Rafale detachment at Al Dhafra, Colonel Fabrice Glandclaudron, claimed that in six within-visual-range 'dogfight' engagements with the F-22A, only one resulted in the virtual destruction of a Rafale He said the other four engagements were 'inconclusive', or terminated due to a lack of fuel, or approaching the pre-determined height limit. It was subsequently hinted by French sources that, had

they been allowed to simulate the use of their Mica missiles, the Rafale would have gained victories over the USAF fighters.

The USAF refused to comment directly about the French claims, though the 27th Fighter Squadron's project officer for the F-22 deployment, Major John Rogers, told Arabian Aerospace: "I don't remember the fights quite that way. In any case, we leave claims and counter-claims to the debrief."

Lt Col Lansing Pilch, commander of the 27th, and of the F-22 deployment to Al Dhafra, was categoric in stating his view of the Raptor's performance during the exercise. He confirmed that the six Raptors flew undefeated, against all opponents. Pilch said: "In every test we did, the Raptors just blew the competition out of the water." He did praise the Rafale, however. "It is a good aircraft, combining avionics with manoeuvrability. I was impressed—it's on a par with the USAF's F-15s and F-16s, at least."

The deployment of the Raptor to Al Dhafra was undertaken to test the expeditionary capabilities of the F-22A, and particularly to evaluate how it performed while conducting operations in a harsh desert environment. The six F-22As flew some 86 exercise sorties during the deployment, including 36 DACT (Dissimilar Air Combat Training) sorties. Four sorties were also flown at the Dubai air show in support of the United States Air Force F-22 Raptor Aerial Demonstration



F-22 Raptor v Rafale

Team, whose pilot is a member of the 27th Fighter Squadron.

There was never any intention for the aircraft to fully participate in the main ATLC exercise, though the opportunity was taken to offer bilateral training opportunities to coalition partners who were taking part in the course, allowing the 27th FS to show what their aircraft could do, and to learn more about the capabilities of the USA's allies and partners.

Pilch was keen to stress that the purpose of these engagements had been to provide high-value training to the participants in the 'core' ATLC exercise, rather than to simply demonstrate the dominance of the F-22A in the air-to-air combat arena. "We were not there to beat up on anybody, we were there to get them to see, touch, hear and smell the F-22, showing them what we can do, and learning about what they can do, and thus how best we can operate alongside them in coalition operations," Pilch said.

For these training missions, the F-22As flew only within visual range 1 vs 1 BFM (Basic Fighter Manoeuvring) sorties, and did so carrying under-wing fuel tanks, and with radar reflectors fitted, preventing opponents from seeing how 'stealthy' the F-22 is in operational configuration, or from experiencing the F-22's AN/APG-77 radar and highly advanced AN/ALR-94 passive receiver system.

The Raptor pilots flew against a variety of opponents, with only the RAF turning down the offer of training against the F-22A, to the evident disappointment of Pilch and Rogers.

Pilch singled out the UAE Air Force and Air Defence pilots for their professionalism and thanked them for having been "great hosts". Because some of the UAE Mirage 2000 pilots had 3,000 hours on type, while some of his young F-22 pilots had just 30 hours on the Raptor, he acknowledged that DACT with the UAE AFAD had been an "interesting match-up" and that this had presented his younger pilots with a real "challenge".

Pilch praised the UAE Air Force's Block 60 F-16E/F for its "awesome avionics", and lauded the Mirage 2000-9 for its "excellent manoeuvrability, especially close-in".

The Raptor pilots also highlighted the value of flying against the Pakistani F-7s, which represented an interesting and representative 'asymmetric threat' aircraft, in service in countries like Iran and North Korea.

The Squadron rated its deployment to Al Dhafra a great success. Though the deployment marked the F-22A's first extended test under such harsh desert conditions, with fierce sandstorms and 100° temperatures, and despite operating thousands of miles from its normal supply chain, the aircraft exceeded the USAF's expectations,

demonstrating impeccable availability and a higher-than-expected sortie rate. "The maintenance group didn't know what to expect and so we took a generic support equipment package," Rogers said later. "We pretty well got it just right." In the event, the F-22A operated at a higher tempo and with a smaller logistics footprint than would be required by the F-15 or F-16 – aircraft types that have been deploying to the region since the 1970s.

The 27th Fighter Squadron's CO expressed his satisfaction with the progress that had been made, stressing: "The problems we had with software, avionics, sensor tasking and sensor fusion back in 2003 when I joined the F-22 programme have all been ironed out, and we're transitioning to a great point in the next six months where the aircraft will truly be cost-effective and fully mature." He said he expected a real improvement in sortie generation capability in the near future.

But, quite apart from demonstrating costeffectiveness, availability and maturity, the F-22A also highlighted its unique operational capabilities during the deployment to Al Dhafra. "We demonstrated that Raptor can defend a particular point better than anything else and that we have an unmatched ability to strike hard and deep and with great precision. Finally, we can provide great situational awareness to the rest of the force," Pilch said.



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BUSINESS AVIATION EBACE REVIEW



And the big question is...how's business?

Alan Peaford

reports from
Geneva and the
European
Business
Aviation
Association's
annual
convention.

usiness aviation industry leaders and operators came together in Geneva for the annual EBACE – European Business Aviation – show with record participation in the event by Middle Eastern companies.

Packed halls and a busy static line demonstrated the growing interest in this sector – but the question on everyone's lips was: "How's business and when will we see recovery to pre-recession levels?"

One group of industry leaders were put on the spot at the opening debate to answer the question: "Exiting the economic crisis: where are we now and where are we going?"

There was general agreement that a recovery for business aviation has started but should not be regarded as stable until 2012 and will not take place uniformly throughout the sector

Teal Group chief analyst Richard Aboulafia said there would be "a permanent structured shift in favour of larger aircraft".

Not only has the top end of the market suffered less of a dip than the lower end, said Aboulafia, but the recovery will also come sooner and stronger at the top. Part of this disparity results from the greater use of third-party financial support by the owners of smaller aircraft and, with such

finance more difficult to obtain, it will hinder sector recovery.

Aboulafia said the economic dip has bottomed out and the climb back has begun, but it likely to level out for some time before the recovery stabilises.

TAG Aviation chairman Roger McMullen said many in the industry were aware in 2008 that "we were experiencing a bubble" and said that is why the pinnacle in 2007-08 is not a good benchmark from which further expansion should be judged.

McMullen thought 2006 is a more reliable indicator from where the industry should start. He agreed with Aboulafia about growth returning earlier and stronger to the large-aircraft sector, but delivered a depressing verdict on the prospects for the fractional ownership sector, predicting: "The popularity of fractional ownership is definitely compromised and my guess is that we may never see again the large acquisitions in that sector."

Overall, McMullen saw "modest but volatile growth in 2010, then gradual growth that trails economic growth by about 18 months".

But exhibitors were still buoyant and this report looks at the news from the show affecting the MENA region.



BUSINESS AVIATION EBACE REVIEW



The BAE Systems Avro Business Jet (ABJ) has been tried and tested as spectacular utility aircraft. In service with the Bahrain and UAE royal fleets, the aircraft has anecdotally proved popular with its VVIP passengers on hunting trips to Pakistan and central Asia.

Now a new look for the converted regional jet could take that idea even further.

BAE used EBACE to unveil new design concepts targeted at intrepid explorers with high net worth and a taste for luxury.

Branded the Explorer One and Explorer Four, the concepts are the first two of five that UK consultancy Design Q was contracted to develop. They are intended to make full use of the Avro Business Jet's distinctive features, such as its large rear-opening freight door and high level of interior space.

Each of the two Explorer concepts incorporates an "air deck" viewing platform that can be extended from

New-look business jet explores new ground

that door, in addition to a luxurious interior that incorporates an entertainment system and open-plan galley. Curved sofas encircle a low central Ottoman, on which monitors can be placed.

"These concepts elevate the ABJ to a new level of sophistication," said Stewart Cordner, vice-president of Avro Business Jets at BAE's regional aircraft unit.

The ABJ Explorer One is aimed at high-net-worth individuals seeking to explore remote locations "in a stylish and comfortable way". A fully-equipped office workstation is incorporated in the forward bulkhead, while a large display cabinet is positioned on the opposite side of the aircraft.

White marble stone is used in both the floor and the central table situated aft of the lounge in a crescent-

shaped alcove. A lavatory is situated in the walkway leading to the stunning rear entertainment lounge and air deck.

The Explorer Four concept, meanwhile, is targeted at the luxury charter segment, as an alternative to a yacht. It can provide overnight accommodation for four couples or individuals, in private VIP cabins equipped with a sofa and chair combination that can be converted to a full-size double bed. Each cabin has its own entertainment system with a 17in high-definition flatscreen monitor.

The cabins are also equipped with a full-height wardrobe and direct access to a large dressing room incorporating a toilet and shower, located in the aircraft's mid-section. The glazed bulkheads can be transformed from obscure to transparent to create "a more social space".

Sleeping quarters are provided for the crew both in a cabin in the forward lower hold.

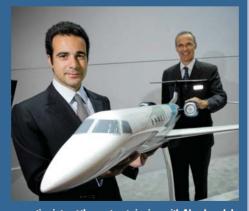
Order boost for Arab Wings

Jordan's Arab Wings signed an order for an Embraer Legacy 650 jet at EBACE on behalf of an undisclosed Jordanian owner. Arab Wings will manage and operate the aircraft.

The jet is one of the first from the Brazilian production line and is scheduled for delivery in the second half of 2010.

It will be based in and operate out of Amman. Arab Wings will also add a Phenom 100 entry-level jet to its fleet this year, according to Ahmad Abughazaleh, CEO of Arab Wings.

"The Legacy 650 will establish a new concept for business travel, offering an extended range of 3,900 nautical miles with the same superior comfort of the Legacy 600, which is a very successful aircraft in the region," said Luís Carlos Affonso, Embraer executive vice president,



executive jets, at the contract signing with Abughazaleh.
Arab Wings is part of a group which owns the Royal
Jordanian Air Academy, Queen Noor Civil Aviation
Technical College, and Gulf Wings, which is based in
the UAE.

Gama pilots in alpha position

Gama Aviation pilots and technicians became the first to train on a new Learjet 40/40XR/45/45XR full-flight simulator recently qualified at CAE Burgess Hill in the

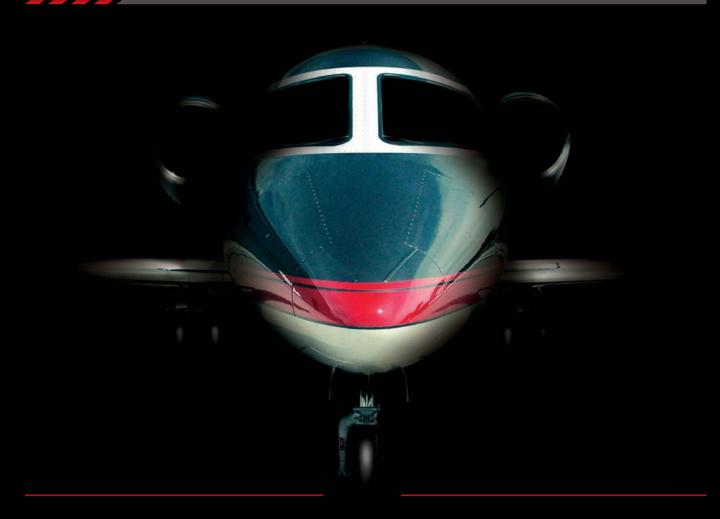
Sharjah-based GAMA signed a contract at EBACE for global support from the training company. "CAE courses, simulators, and instructors are second to none," said Captain Steve Wright, group director of operations and co-founder of Gama Group.

"As a global business aircraft operator, we require a training partner which can deliver the range of programs that support our fleet and in locations convenient and cost-effective for our team."

Gama Group recently received its AOC from the UAE.

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King Air looking to extend its popularity reign

The Beechcraft King Air 350i turboprop attracted plenty of interest as it made its debut at EBACE. Manufacturer HBC has selected the Thrane & Thrane Aviator 200 system to provide broadband connectivity for the King Air family and is offering pre-certification pricing for system installation at its factory-owned facilities. Certification of the system is expected in the fourth quarter of 2010.

"While the King Air already reigns as the most popular business turboprop of all time, we continue looking for opportunities to further improve its capability," said Christi Tannahill, Hawker Beechcraft vice-president, global customer support. "The possibilities are truly endless with on-board broadband connectivity and we expect King Air operators all around the world will enjoy the added productivity that broadband connectivity delivers, while developing new ways to utilise their aircraft.

Corporate operators can refine business proposals en route to meetings, air ambulance operators can convey real-time audio and video status of their patients, while cargo operators can re-route aircraft, update manifest and report aircraft status."

Phoenix rises using Boeing airframe

Dubai-based Project Phoenix, the business aircraft sales organisation that specialises in the renovation and conversion of used airliners to VIP configuration, is to launch a new aircraft called the Phoenix LBJ, which uses the Boeing 737-800 airframe.

The company – managed by former Bombardier Aerospace executives, president Mike Cappuccitti and chairman John Lawson – said in Arabian Aerospace last year that they were looking for other aircraft types to adopt their Project Phoenix conversion plan.

Over the past year the company identified the 737-800 as the ideal candidate to enter the narrow-body airliner conversion market. The new venture's LBJ name stands for large business jet. Lawson said the decision follows a six-month technical evaluation of suitable airliners and a dialogue with potential customers.

Speaking at EBACE, Cappuccitti said the project would be formally launched at MEBA in December and warned that the move should not be seen as an attack on Boeing Business Jets' market. "The people who want to pay \$95million for a new BBJ will continue to do so," he said. "But we see a market for people who want to pay around \$50 million for a BBJ-type aircraft."

Project Phoenix has issued a request for information to several completion facilities in Europe, Australasia and the USA, to undertake the work that will reflect its exacting standards. It unveiled renderings of its proposed cabin design to potential customers at the show.

including a 30-seat VIP version with private office and state room, as well as a higher density corporate version. Customers will be able to choose the number of auxiliary tanks to be installed, depending on their operational range and payload requirements.

"We will be aiming at a 15-month programme from identifying the airframe, taking it through our maintenance process and then through completion," Cappuccitti said.

The group decided on the 737-800 because of the type's popularity and strong likelihood that there would be an increasing number of aircraft coming into the market

"It is a new generation 737 and has all the right attributes for our programme. It requires little in the way of avionics upgrades. It has winglets and we can vary the range and payload capability depending on our customers' specific needs," he said.

"We will be looking at half-life aircraft that can mean something like 12,000 cycles remaining – at worst that's around 24,000h – and virtually new in business aviation terms."

The key market driver is the need for fiscal prudence in future VIP aircraft purchases. "As the market improves we think there will be people who need a BBJ-sized aircraft but would rather pay the price of a [Bombardier] Global Express."



Emerald's president Talal Wahab with MAC president Allyn Caruso on the first CRJ200 delivered at EBACE.

Emerald shining bright with new conversion

The first of three Bombardier CRJ200 jets sold to Beirut operator Emerald Jets by MAC Aircraft Sales was on static display at EBACE, where it was handed over to the Lebanese-registered operator primarily for operations from Saudi Arabia.

The aircraft was converted to an executive jet format by Canadian completions specialist Flying Colours. After the EBACE show it was painted with Emerald Jets' name and logo and was formally delivered to Emerald at its Beirut base.

Emerald Jets has operations in both the Lebanese capital and Riyadh in Saudi Arabia. Formerly known as Easyfly, the four-year-old company has rebranded in line with expansion of its service range to include passenger charter operations as well as VIP flying.

The new CRJ200 ExecLiner joins Emerald Jets' fleet of three Hawker aircraft: one 800XP and two 400XPs. The operator's past customers include "high-level customers" such as "princes, businessmen and banks" as well as Saudi Telecom, said Emerald Jets president Talal Wahab. He expects his new aircraft to be based "90 per cent of the time" in Riyadh.

Portland, Maine-based MAC Aircraft Sales buys and converts CRJ200s. Company president Allyn Caruso characterises the type as a "great charter platform" and "a money-making machine" thanks to its "low operating costs and huge cabin".



BUSINESS AVIATION EBACE REVIEW



High-end cars inspire new helicopter concept Eurocopter unveiled a new EC145 design concept

First Falcon delivered > to Saudi Private Aviation

Saudi Private Aviation (SPA) – the business aviation arm of Saudi Arabian Airlines – took delivery at EBACE of the first of four Falcon 7X business jets from French manufacturer Dassault.

At a special ceremony at the Geneva show, the first of the tri-jet Falcon 7X for Saudi Arabia was handed over. Two more aircraft are scheduled for delivery to SPA later this year and the final aircraft will come in 2011. The order was originally announced at the Dubai Air Show in 2007.

SPA will use the Falcon 7X for VIP charter flights within the Middle East and around the world. With a range of 5,950nm, the aircraft can connect major cities, such as New York to Riyadh, Dubai to Tokyo, or Rio De Janeiro to Jeddah.

"It is a day of commemoration," said Wajdi Abdullah Al-Idrissi, vice president royal & VIP affairs and head of SPA.

"The Falcon 7X was carefully chosen out of many options due to its excellent technical specifications and performance. It is a unique plane that can fly nonstop for more than 11 hours and does not require a long runway, which saves valuable time by being able to land at lower traffic airports."

Al-Idrissi continued: "Though SPA was carved out of Saudi Arabian Airlines a year ago, our long experience spans more than 60 years in VIP aircraft chartering, leasing, management and consultation, and ground handling."

Al-Idrissi said the state-of-the-art Falcon 7X is distinctive and matchless in its class and conforms to the high taste of the company's royal and VIP clients.

"The Falcon 7X has been well received by customers in the Middle East for its advanced technology, its efficiency and its comfort," said John Rosanvallon, president and CEO of Dassault Falcon. "It is capable of meeting the most demanding requirements of passengers, especially on very long non-stop flights."

Dassault has approximately 50 Falcons based in the region and expects this number to increase by almost 50 per cent over the next three years.



Saudi Arabian airlines director general Khalid Al Molhem and Dassault's Jean Rosanvallon

Eurocopter unveiled a new EC145 design concept developed by Mercedes-Benz. The "Mercedes-Benz style" edition of the mid-sized, twin-engined helicopter – which can accommodate eight passengers – was designed at the automotive manufacturer's studio in Como, Italy.

The modular, high-end design was inspired by Mercedes-Benz's R-Class range of cars. It is intended to optimise interior space and to be suited to business, VIP, or leisure travel.

Seat upholstery is available in deluxe materials and a range of colours. For the floor, operators can choose between various types of wood. Wood panels are also used in the ceiling.

All seats are mounted on rails to ease reconfiguration and each of three multifunction boxes is equipped with a cool box, cup holder, table, monitor and DVD player, with extra storage space provided by drawers.

A partition wall with windows separates the cabin from the cockpit. The cabin deploys the same ambient cabin lighting used on Mercedes-Benz E-Class and S-Class vehicles.

The EC145's aft cabin provides a high-capacity luggage compartment with numerous attachment points on the floor and walls for baggage, golf clubs and other outsized articles.

More than 315 EC145s have been sold around the globe. The order book for Mercedes-Benz style EC145s "opens now", said Eurocopter. Deliveries could start in the fourth quarter of 2011.

In a bid to take maximum advantage of its design expertise, Mercedes-Benz is seeking to develop interiors and exteriors for aerospace and maritime vehicles, as well as its own automotive offerings.

Mustangs add new training dimension

Turkish Airlines Flight Training Academy is now operating two Citation Mustang business jets. The company took delivery of the aircraft at the end of May after announcing the deal at EBACE.

Manufacturer Cessna said the new aircraft are based at Istanbul Ataturk Airport and are being used for flight training purposes. The Academy selected the Mustang following its successful experience of operating Cessna 172s as training aircraft.

Mustangs are already being used in Egypt as a training aircraft by Egypt Aviation Academy, where two aircraft operate from October 6th Airfield just outside of Cairo.

"Turkish Airlines' successful growth reflects our commitment to world-class standards in all activities, including flight training," said Menderes Cakici, Turkish Airlines' director of flight training. "The Citation Mustangs will bring a new dimension to the work of our training academy, giving our pilots invaluable jet experience and the best possible learning environment."

Trevor Esling, Cessna vice president, international sales added: "This confirms the Mustang's great flexibility and docile handling characteristics, which make it as suitable for pilot training as for charter operations."





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ECFT signs major training deal

Emirates-CAE Flight Training (ECFT) and CAE signed a three-year contract at EBACE with ExecuJet Aviation Group for pilot and technical training services on more than 30 aircraft types – including models for Bombardier, Cessna, Dassault, Gulfstream, Hawker, King Air, Turbo Commander and Westwind.

The training will be conducted at four sites across CAE's global network of aviation training centres – ECFT in Dubai, and CAE business aviation training centres in the London (Burgess Hill) UK, New York (Morristown, NJ), and Dallas, Texas.

Quintin Cairncross, operations director, ExecuJet Middle East said: "We are very pleased with the flexible service and high-quality instruction our pilots and aircraft maintainers receive from the entire Emirates-CAE Flight Training and CAE team. We look forward to consolidating our partnership as we continue to grow our business."

ECFT also used the show to announce it will further expand its business aircraft training programs for pilots and maintenance technicians with the addition of a CAE 7000 Series Level D full-flight simulator (FFS) in Dubai for the Dassault Falcon 900EX and Falcon 2000EX models. The simulator will be ready for training in the first quarter of 2011. The joint-venture also confirmed the regulatory qualification in April of an FFS for the Bombardier Global Express aircraft.

Softly-softly approach by HBC

Hawker Beechcraft (HBC) was reported at EBACE as quietly preparing to enter the single-engine turboprop market with a new offering. Industry sources confirmed that the aircraft, which is in advanced planning, will bring HBC into the utility aircraft market and will take on the Pilatus PC-12, Cessna Caravan, Daher Socata TBM 850 and Piper Meridian

The aircraft establishes the company's King Air 200 as a baseline for the aircraft's footprint, as Hawker Beechcraft develops its clean-sheet design.

At the show, HBC declined to comment specifically but executive vice-president of sales, marketing and flight operations Shawn Vick said: "I would describe that end of the market as robust. We're going to pay close attention to any and all competitors in the marketplace."

London City go-ahead for Gulfstream

The Gulfstream G150 aircraft arrived at EBACE fresh from a very special demonstration flight.

The smallest of the Gulfstream jets had been at London City airport having received approval from the airport operations and control department for landings and departures. It had flown from Savannah, Georgia via Gander and London Luton.

To fly in and out of London City, an aircraft and flight crew must demonstrate proficiency in the steep-angle, 5.5-degree approach, and must be able to operate from the airport's short runway – 4,327feet (1,320m) for landing and 3,937feet (1,200m) for take-off. The jet must also meet strict environmental standards regarding noise.

The N-registered demonstration aircraft was captained by Gulfstream pilots Brett Rundle and Earl Leonard.

Although the smallest Gulfstream, the G150 is very much a mid-size business jet and has the capability of reaching London from most of the Levant.

Powered by two Honeywell TFE731-40AR engines, the G150 can reach speeds of up to Mach 0.85 and altitudes of 45,000 feet, well above commercial traffic and weather. At a long-range cruise speed of Mach 0.75, the G150 can fly four passengers non-stop up to 2,950 nautical miles – further than any other aircraft in its class. The G150 easily connects cities such as New York to Los Angeles, London to Moscow, or Rio de Janeiro to Santiago.

The G150 also has a comfortable cabin and its unique oval cabin cross-section offers more seated headroom than any of its competitors. With a choice of three cabin configurations, the G150

accommodates six to nine passengers and features ample aisle space and generous legroom and headroom when seated. G150 owners can choose from a variety of fine leathers, upholstery fabrics, wood finishes and floor coverings.

The fully-equipped G150 flight deck features Rockwell Collins Pro Line 21 avionics, which includes Gulfstream's signature Cursor Control Device (CCD). The Safe Flight Automatic Throttle System (ATS) integrated on the G150 provides continuous thrust management during take-off, climb, cruise, descent, approach, landing and go-around flight modes. The optional Gulfstream Enhanced Vision System (EVS II) generates actual, real-time images of the aircraft's surroundings using an infrared camera mounted in the nose of the aircraft.



Wide ambition fulfilled

Swiss firm AMAC Aerospace said it has fulfilled its ambition to become a wide-body completions centre with the confirmation of a wide-body completion project from the Abu Dhabi government.

The Boeing B777-300 ER will be delivered to the completion facility in Basel in November 2010.

This will be closely followed by a Boeing B777-200 LR belonging to a private client in the Middle East. This aircraft will be delivered to Basel in December 2010.

JetEx ahead of schedule

Dubai-headquartered JetEx, which has won a contract to handle all NetJets Europe flights at Le Bourget airport, Paris, said at the show that its European fixed-base operation expansion is now ahead of schedule.

The three-year contract means JetEx will handle almost 25 per cent of the total flight operations at Le Bourget.The company also hinted that a second European base could be announced as early as MEBA.

Speed record celebration

Gulfstream had good reason to celebrate during EBACE when its G650 test aircraft reached its proposed top speed of Mach 0.925.

The test sortie at Savannah became the fastest-ever business jet flight and makes the aircraft the fastest civil aircraft, taking the mantle from Cessna's Citation X.

Gulfstream president Joe Lombardo said he was delighted that the aircraft was living up to its promise. It is already proving a popular prospect with Middle Eastern owners, he added.

BUSINESS AVIATION

Marwan Khalek has built the hugely successful Gama business, which has bases in the UK, the US, Russia and now Sharjah. He attributes his achievement to his upbringing, which permeates the company at every level.

Liz Moscrop reports.

ost people assume the name Gama is a misspelling of the third letter of the Greek alphabet. Actually it is a jumble of the initials of the first names of founder Marwan Khalek and his mother, father and brother.

He said: "My family encouraged and supported me (not financially) when I set the business up, which is reflected in the name."

He is also proud to be setting up in the UAE. He said: "I was born in the Lebanon and take great pride in bringing something back to the region I came from."

Khalek came to aviation more than 25 years ago after graduating as an engineer and working in the furniture trade. He learned to fly during his studies and spotted an opportunity to merge his business and aeronautical skills. Along with partner Stephen Wright, he started ferrying livestock around the UK in 1983, operating a Beech Baron. Steady growth and acquisition has seen the company flourish into a global concern, operating three divisions: aircraft charter, service and maintenance, as well as leasing and management.

Key members of Gama's management team have been in service from between ten to 25 years. Khalek said: "We have to get people who share our belief in and passion for the values of the company. The right attitude is the most important quality."

In return, he feels that he has to repay this commitment by constantly pushing the business forward and helping to develop their skills – a trait he learned from his father. He said: "We have to look after people – progress their careers and support them in difficult situations."

Khalek's philosophy is that sustained steady growth that builds on a sound financial base is the glue that has held Gama together. He said: "This industry can be fickle and is cyclical. We have had testing times. It is hard to strike the right balance between steady and aggressive growth. If we are conservative, then could we have done better? But if we are too aggressive we may not be here to tell the tale."

The Sharjah base is a coup. The airport caters predominantly to airline freight but Khalek said the authorities are recognising the benefit Gama can bring to the apron. The company is building a new maintenance hangar, which it is aiming to have ready by Q3 2011. For the moment it is



OUTREACH

"We have to get people who share our belief in and passion for the values of the company. The right attitude is the most important quality."

Marwan Khalek

leasing a hangar and providing line support services in addition to its charter and management offerings. Although there will be a VIP lounge, according to Khalek, this will be most successful if passengers never see it. He said: "We know first hand what we want as operator. We want to get passengers in and out as quickly as possible. We judge successes on our customers who never see the inside of the lounge. It is only a back-up."

Although Gama has been in business for twoand-a-half decades, it has only recently made headlines. Khalek attributes this to the size of the growth over the last few years. He said: "We have had steady development throughout. When we doubled in size from two to four aircraft that was not newsworthy, but from 30 to 60 aircraft we were perceived as a major player. It was the result of natural progression and now we are opening up geographically."

He sees the recession as presenting many opportunities and points out that Gama has weathered several economic downturns before. There has been no carefully structured master plan for the business, rather prudent analysis at different stages of the company's development and an entrepreneurial approach from a closeknit management team.

There is no doubt that Gama will take its Sharjah base as far as it can. Khalek will also remain deeply involved in his own business, both as controlling shareholder and committed participant. He said: "My father worked 15-20 years in manufacturing. He has people who work with him in the family business even today. Gama doesn't stand on ceremony and we are a reasonably sized corporation. We are on first name terms and are a close team and family. I hope to God it stays that way."



Enz justifying the means

It has been a large capital investment and a giant leap in belief but in the dust of Doha International airport and among the green grass of London's Biggin Hill airport, two new buildings are being given the finishing touches to create history for Middle Eastern business aviation.

The two giant hangars are the landmark MRO facilities and VIP FBO operations for Qatar's RizonJet and they mark the first time an Arab operator has established such a facility in Europe rather than the other way round.

Rizon – owned by Ghanim Al Saad bin Saad through GSSG – has been growing its fleet and working on both the Gulf and European projects at the same time.

And chief executive Patrick Enz said he believes this step into Europe could be the first of many for the ambitious company.

"A lot of European companies set up an operation in the Middle East but we have come to London. We are building a world-class facility here that is targeted at the many Middle Eastern customers that come to Europe using private aviation."

Enz, a former Jet Aviation executive, joined Rizon last year. "It is very likely that we will be looking at establishing other bases in Europe," he said.

Rizon Jet already has a charter operation in Doha with two Challenger 605s and two Hawker 900XPs. The company has the new Learjet 85s on order for delivery in four years time. It has an operation in Bahrain serving the island and Saudi's eastern province and also has an AOC for operations from Sharjah.

But the growth into full-service MRO and a top quality FBO has seen an investment in excess of \$30million by GSSG company.

Biggin is just to the south of London's financial district at Canary Wharf and is a few minutes' helicopter ride to the city's theatre and shopping centre.

"Our customers will access our luxurious VIP terminals in Doha and London and on arrival in London will have support for helicopters or luxury limousine for the journey into central London," Enz said.

Enz added that Rizon Jet is now expanding its operations beyond charter and, as well as the FBO terminal service and the MRO business, it would also be running an aircraft management and aircraft sales business. "These are already operational and source potential purchasers through our network of contacts and prospective buyers," Enz said.

But it is the MRO and FBO that is causing the most

But it is the MRU and FBU that is causing the mos excitement at the moment with both maintenance hangars planning soft openings during July.

Both Doha and London will hold EASA 145 and Qatar CAA approvals and have approvals pending with UAE, Saudi Arabia, Bermuda, Cayman Islands, Aruba and several others.

Each hangar can take up to four Global Expresssize aircraft or nine Hawker 900 jets.

The VIP terminals will also be appealing for Middle Eastern customers. "There will be full VIP concierge service and each will have private lounges so a whole party can be together in privacy," Enz said. "We have separate prayer rooms in each terminal and top quality in-flight catering."

The company has also teamed up with UK's Oryx Jet, which will manage Rizon's Premier 1A aircraft in Europe. This will enable Rizon customers to travel under Oryx's AOC, and Rizon will supply maintenance and technical support to the Oryx fleet.

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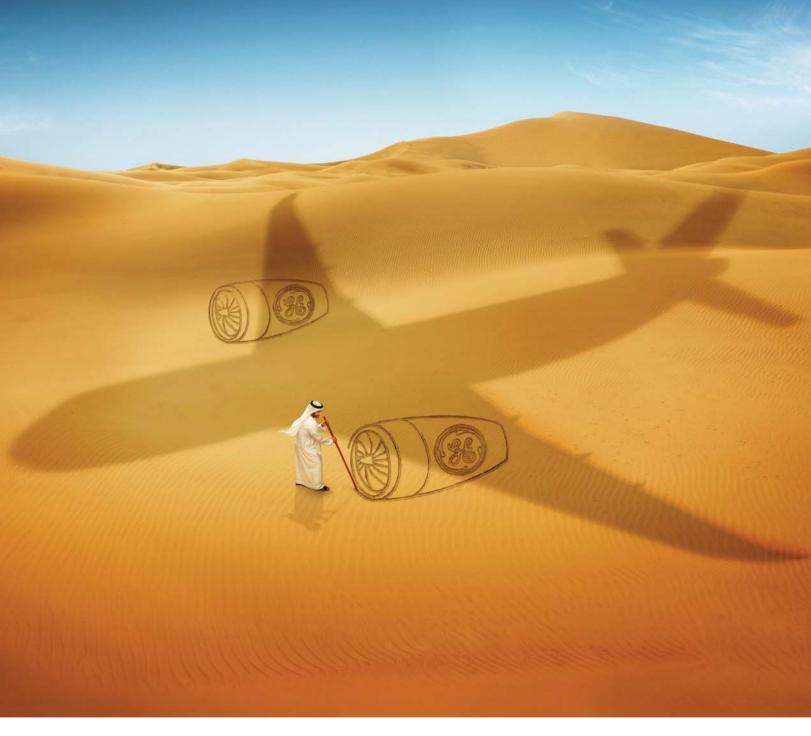
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GENERAL AVIATION MEDEVAC



An increasing number of charter operators in the Middle East are offering air ambulance and medevac services, keeping local citizens in the peak of good health. Liz Moscrop reports.

he Roman poet Virgil wrote that the greatest wealth is health. The world has changed dramatically since he penned the sentiment 2,000 years ago, but the feeling remains the same. People are prepared to pay handsomely for services that offer the best medical care when they fall ill.

Several private jet companies have capitalised on this desire and are providing medical evacuation and air ambulance services to whisk clients to a hospital of their choice at a moment's notice.

Abu Dhabi-based Royal Jet, for example, offers

a Learjet 60, a Gulfstream G300 and a BBJ that can be configured for medevac flights, ranging from one to 20 patients. To date the company has completed more than 1,000 missions – although thankfully it has never had to cater for 20 sick people at once.

Chief operating officer John Morgan said: "Medevac accounts for 15-16 per cent of our missions. It is a recession-proof offering."

The Royal Jet medical team has specific expertise in cardiology, paediatric, neo-natal and intensive care. The fleet carries advanced machines, such as state-of-the-art neo-natal ventilators and defibrillators, as well as modern critical care mobile intensive care unit (ICU) equipment. When a call comes in, Royal Jet sends a specialist doctor to assess the patient to see if he or she is fit to travel. If well enough, the company can convert and despatch an aircraft in four hours. They are thoroughly sterilised before and after each mission.

Dr Casin Soto is the company's chief medical officer. Formerly a chief consultant to the Department of Health in Polokwane, South Africa, and chief flight doctor for Net Care 911, he has notched up more than 300 flight hours with critically ill people on helicopter and fixedwing evacuation missions. He said: "Our main goal is patient care. From a medical point of view we are a back-up service, like an ambulance."



Royal Jet's
Dr Casin
and nurse
Sulafa
attend to a
patient
during
flight.

GENERAL AVIATION

CONTINUED FROM PAGE 47

The body undergoes physiological changes in the air, so people who are unwell are further disadvantaged by less oxygen, pressure and vibration at altitude. Because of this Soto explained: "It is really important to have properly trained staff with full aeromedical qualifications.

Aircraft are kitted out like an average hospital ICU and the team can perform basic emergency procedures if required. However, the ideal setting for that kind of care is on the ground where there is extra back-up should that be needed. The doctor added: "The patient should be stable enough to travel but we are able to perform small procedures like a tube in the neck, nose or chest. We try not to do this generally as there is only one doctor and one paramedic in the aircraft normally. In a hospital there is greater back-up with more medical staff and equipment."

Other operators in the region offering medevac and air ambulance services include Ammanbased RayaJet. The company started charter operations in 2005 with a Bombardier Challenger 601 and also has a Cessna Citation 650 on its books. Although the downturn hit the business aviation sector in Jordan hard, medevac services have proven to be a success, accounting for around 25 per cent of the company's activities, with Iraq and Yemen among the countries it

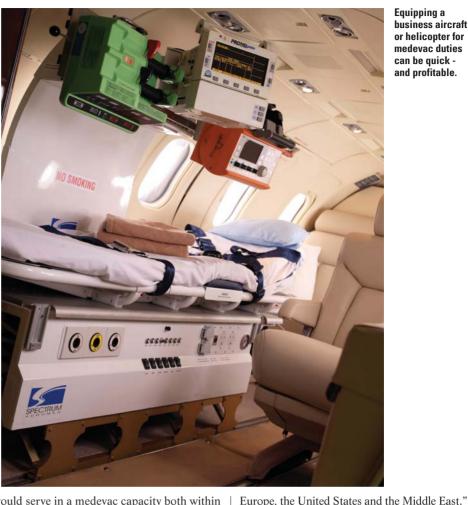
24 hours a day, anywhere in the world

Fellow Jordanian operator Arab Wings also provides medical evacuation services. Like Royal Jet, it says that its medical team can have an appropriate medevac aircraft available with as little as four hours' notice. 24 hours a day, seven days a week, anywhere in the world. Its aircraft can be configured into mini ICUs equipped for critically ill patients.

In Lebanon, MedAirways (formerly Flying Carpet) set up shop in 2001 and was the first company in the country to receive an Air Operator's Certificate. Having started with a single Piper Cherokee, the firm has expanded to become a private national company. It specialises in medevac services and today its fleet consists of one Swearingen SA-227 Metro 19-seat turboprop, two Boeing 737-200s and a Bombardier CRJ-200ER. The airline is headquartered in Rafic Hariri in Beirut and flies several routes, mainly to Iraq.

Further afield, Italy's Lombardi Air Ambulance has bases in North Africa and Eastern Europe. Captain Carlo Gioia spotted a demand for aeromedical transport and launched the company in 2007. It operates a fleet of ICU-configured aircraft and grew more than 300 per cent in 2009. It continues to expand. A spokesman said: "We are implementing new international governmental and institutional collaborations as well as partnerships with leading global insurance groups."

The Saudi Red Crescent Authority (SRCA) took delivery last December of an Airbus A318. Reports in January indicated that the aircraft



Equipping a husiness aircraft or helicopter for medevac duties can be quick and profitable.

would serve in a medevac capacity both within Saudi Arabia and elsewhere in the Middle East.

All of the SRCA's air fleet is designed to have multi-role capabilities and larger aircraft such as the A318 also retain their conventional configurations, allowing the SRCA to offer them on charter arrangements when they are not in use as air ambulances.

Most companies providing medevac services need convertible aircraft. To cater for this Project Phoenix, the Dubai-based aircraft conversion specialist, signed an agreement last year with US outfit Spectrum Aeromed to develop a dedicated air ambulance version of its customised Bombardier CRJ 200 or to offer a quick change fit option.

Spectrum provides a medical interior and full range of medical equipment and will be Project Phoenix's preferred and recommended aeromed provider. In return, Spectrum will refer any interested clients to Project Phoenix.

The two companies will also review future conversion of other larger airliner types, such as the Boeing 737 and Airbus A320 series. Spectrum Aeromed has some 50-plus supplemental type certificates on 250 aircraft types. Project Phoenix chief Mike Cappuccitti said: "We see this relationship very much as a long-term one. We have considerable interest for the Phoenix CRJ in the air ambulance role – from

Meanwhile, Action Aviation and SJ30 manufacturer Emivest Aerospace have announced that the SJ30 light jet is now available in an airambulance configuration. The medevac variant is a quick fit conversion provided by medical interiors specialist Lifeport. According to Action Aviation, the SI30 is particularly well suited for

medevac missions because the cabin pressure is

maintained at sea level even at 41.000-feet.

The interior includes a seamless floor infused with biocide and fungicide. It also includes a lockable drug box and a suction canister. ICU comes from a MedPak, including oxygen, compressed air, vacuum and AC power. A modular MedWall centrally locates switches and outlets for patient care. Action Aviation chairman Hamish Harding said: "The cost per mile of the SI30 as an air ambulance is probably the lowest in the industry due to its low fuel burn and high cruise speeds."

Although such costs are always an important factor, they are unlikely to form a great part of clients' decision-making process when booking an air ambulance. Demand for care in the air will never subside as long as people continue to fall ill. As the old Arabic proverb says: "He who has health has hope; and he who has hope has everything."

GENERAL AVIATION HELICOPTERS



ibya's investment in aerospace has taken another step forward with the unveiling of a new helicopter final assembly facility under the banner of the Libyan Italian Advanced Technology Company (LIATEC).

The LIATEC facility is located at Abou Aisha airport, 60km from Tripoli and, as well as final assembly lines for single and twin-engine helicopters, it will allow the joint venture company to expand on the existing maintenance and training activities currently performed by LIATEC elsewhere in the country.

Describing the new facility as a 'Gateway to Africa', LIATEC plans to use the investment to develop business elsewhere on the continent and to open up new markets for products and services.

The company was first established under an agreement signed in January 2006 and is 50 per cent owned by the Libyan Company for Aviation Industry, with 25 per cent owned by Finmeccanica and AgustaWestland respectively. Its overall aim as an industrial entity is to improve and develop aviation and electronic systems capabilities in the country.

The new facility will also enable LIATEC to expand its support and maintenance capabilities for helicopters, as well as for upgrading training and transport airplanes with the latest generation of avionic systems. The Abou Aisha plant will initially assemble four AW139s a year.

Amedeo Caporaletti, AgustaWestland chairman and member of the board of LIATEC, explained the significance of the investment: "The new plant has been established through the far-sighted strategy of Finmeccanica, AgustaWestland and the Libyan authorities who became aware of how investing in aeronautics would provide a major contribution to the growth of the nation. It will lay the foundation of the Iamahiriya aerospace industry.

"Other advanced technology sectors such as

communications, transportation and homeland monitoring have benefited from this innovative way of technological cooperation already developed and performed through LIATEC since its creation few years ago. LIATEC will, in future, enable Libya to seize further business opportunities in other African countries."

Measuring more than 145,000m2, creation of the new facility was a major undertaking in terms of construction. Over 18,000m3 of excavations were completed during the works and the construction effort took 600,000 man-hours to complete.

LIATEC is also already offering maintenance and training services at its plant in Tajura, Libya. Support services there cover the AW119Ke, AW109 family and AW139 helicopters, but also extend to fixed-wing aircraft with capabilities including maintenance and restoration, overhaul and upgrades, helicopter interior renovation, components and spare parts supply, plus avionics and instrument maintenance.

In the training arena the company provides comprehensive capabilities such as helicopter and fixed-wing initial and advanced pilot and mission training, transition training and maintenance training for platforms and systems.

LIATEC is also promoting industrial co-operation with local industries and universities in the field of research and development. Almost all of its personnel are hired from within Libya and it is committed to employing young engineers and specialists coming from Libyan technical schools and universities.

The facility's opening in Abou Aisha marks the latest major achievement for AgustaWestland in Libya, where the company has recently sold more than 20 helicopters including AW109 Power light twins for border patrol duties, AW119Ke single-engine aircraft for emergency medical service missions and AW139 medium twins for general security.

GENERAL AVIATION



slowed or killed single-engine personal jet debuts. Investment means survival and a chance to confirm pilot enthusiasm for this new category of jet aircraft. Slowly there are signs of things improving.

Diamond Aircraft and Piper have re-started their climb to market entry. Cirrus Aircraft seeks a similar boost as it directs every available dollar into perfecting its next SF50 prototype, and Stratos Aircraft hopes to announce a manufacturing location for its 714 by late July.

The Eclipse 400 prototype still flies over Albuquerque under the latest incarnation. Eclipse says it may one day start E400 production after its Eclipse 500 twin-engine jet is more firmly established.

Epic Air's entire line-up is grounded after bankruptcy last summer. Its single-engined Victory may live again. Potential that nearly led to a 2007 purchase by the owner of Kingfisher Airlines has piqued interest from China's AVIC General Aircraft, which offered \$4.3 million to buy Epic's assets from the court.

Milestone aircraft

Introduction of the FJ-33 engine from Williams International allowed this new sector to emerge between general and business aviation, and Diamond's D-Jet was first to fly on April 18, 2006. President Peter Maurer has no doubt the D-Jet will be certified and delivered first as well. "This will be a milestone aircraft, much the same as a Bell JetRanger was a milestone aircraft and a Cessna Skyhawk was a milestone aircraft."

He's pleased full development is restarting thanks to US\$110 million from investors he can't yet name. "It's a combination of equity investment, internal investment and some government loans that make up the money we need to finish the program," he said.

In London, Ontario, the fourth \$1.9 million five-seat D-Jet could begin flight-testing in September and the fifth in December. Each is

Now it's getting personal as recession fight-back begins

The concept of personal single-engined jets has excited the industry for years. But the global recession hammered plans. **Jeffrey Decker** reports



powered by a Williams FJ33-5A and that upgrade was one cause for delay.

"We didn't want to bring the aircraft to market with the originally selected powerplant, knowing at some point we would need to upgrade it. It was unanimously received by customers as something they desire," Maurer said.

The real trouble came when German engine-maker Thielert crumbled and took its diesel powerplant with it, leaving Diamond with an abundance of undeliverable airframes and a sudden need to create Austro engines. Diamond was again a diesel pioneer, but its new engine cost 52 million Euros.

Success in Diamond's first search for outside funding is fuelling flight tests and tweaking the design, such as the final engine air inlets that curve just over each wing. "It's a sophisticated system that took a lot of resources but it actually worked out really well," said Maurer.

Customers are waiting

More than 300 customers are waiting, and most agreed to pay \$1.38 million in July 2006. The current price, which Maurer expects to hold into next year, is \$1.89 million. He said new delivery date targets revealed this summer will be earlier than Piper's revised first delivery target in summer 2013.

PiperJets sell for \$2.199 million and offer a service ceiling of 11,000m rather than 7,600 and roughly the same 1,300nm range of the D-Jet. Its Williams FJ44-3AP sits firmly between the fuselage and the dorsal fin and is now powered by Brunei investments and ownership under the firm Imprimus.

The order book is holding steady through the recession at 205, said spokesperson Mark Miller.

"The proof-of-concept aircraft has flown more than 350 hours and has almost completed all planned aerodynamic testing," explained Miller. "We recently successfully completed our preliminary design review and are now actively working on detail design for the production aircraft."

Structural testing of the conforming prototype starts next year and flight tests of that model are

planned by the end of 2011. Imprimus approved adding 60 engineers to Piper's team in Vero Beach, Florida.

Orders for the Cirrus SF50 are steady at 428, said jet sales director Gary Black, though 60 new orders were placed since September. "I've had people who needed to cancel and step out, so I've resold their position," Black explained. "New jet position deposits are \$50,000 and non refundable, and this locks in a maximum starting price of \$1.72 Million."

The price of each SF50 went up on January 1. The SF50 remains Cirrus's primary development project with more than 300 flight hours and 400 hours of engine testing. "We are preparing for icing testing now. We have put boots on the wings and tail, and the heated inlet duct on the engine, and we have a TKS sprayer on the windscreen," said Black.

The SF50 "Vision" aims to be the "lowest and slowest" jet available. Like the PiperJet, it will feature Garmin's new G3000 integrated avionics suite. Unlike Piper, Cirrus isn't releasing certification or delivery targets as it scrapes for development funds and assures customers and suppliers alike that it will emerge from tough times.

Last summer founder and former chairman Alan Klapmeier tried and failed to buy the SF50 away from Cirrus, claiming the Duluth, Minnesota manufacturer couldn't afford a proper programme. His departure led co-founder Dale Klapmeier to become chairman and give assurances on the health of the programme and the company.

Cirrus had to fight off allegations of impending bankruptcy with a lawsuit against L-3 Communications, which was dropped on April 1. "L-3 appeared to be creating dissent amongst our supply base," said international sales vice president Ian Bentley. "The restraining order you saw us file was us asking them not to do that," he explained, adding that L-3's initial lawsuit against Cirrus continues, following a scuttled deal to offer SmartDeck avionics.

Cirrus's ownership by Arcapita and the government of Bahrain has always been to promote

aircraft development for one and to be a profitable re-sale for the other, and if Arcapita finds a buyer for Cirrus Aircraft no one will be surprised.

Landing and taking off from grass runways is still a project goal for Cirrus, but not for the Stratos 714.

It's too heavy, said Stratos Aircraft president and CEO Alexander Craig. He's not announcing a target for first flight or which milestones await the young programme, although the company has announced a Williams International FJ44-3AP will power the \$2 million four-seat jet.

The avionics choice is down to two options, Craig said. "I polled every one of the customers," he added, choosing to withhold the number of customers.

Reduced minimum deposit

Stratos is finding investment, he stated, and the refundable deposit programme announced last July has attracted "several" orders. "We just reduced the minimum deposit to place an order from \$50,000 to \$10,000," Craig said. "Development is moving along as fast as we can move it. I am going to shortly authorise construction of serial number one aircraft and I'm hoping to make that announcement at Oshkosh, in July."

At that massive general aviation show he may also announce a manufacturing location. It depends "on the economic incentives that we receive from each particular locale and their associated governments", he explained. "Money talks."

The current base in Bend, Oregon, is on the same runway as the former Epic Air and Columbia Aircraft, which was bought and closed by Cessna. "I hope I get a call from (Cessna president and CEO) Jack Pelton making me an offer I can't refuse."

Aggressive offers to sell these jets are waiting for certification and customers in the Middle East and North Africa will be pursued after US owners.

Piper's Miller said: "We do not currently have an order for a customer based in the Middle East or North Africa."

With a rapidly growing population of 76 million, Egypt is the largest of the Arab nations by quite some way. The country has positioned itself as the gateway to Africa and operates as a bridge between the North African market and the Middle East.

Its economy has being growing rapidly but its population is outstripping its supply of agricultural produce. Freight to the country is increasing dramatically. Only a small percentage of Egyptians have made use of air transport. Moves to improve the infrastructure with an increase of regional airports has been followed by an influx of low cost carriers and regional airlines.

As the infrastructure has improved so tourism has become even more important to the air transport industry as the country capitalises on its historic legacy and its modern facilities.

As wealth grows, so business aviation develops too. Egypt's aerospace industry – long the subject of protectionism – is beginning to open up. In November the aerospace world will see just how much potential exists in the country with the AVEX, Egyptian air show.

Arabian Aerospace went to Egypt to look in depth at what the country has in store. Brendan Gallagher, Jon Lake, Marcelle Nethersole and Alan Peaford report from Cairo. Pictures by Ian Billinghurst.

LAND OF PYRAMIDS SHAPES ITS FUTURE

REPORT MARCELLE NETHERSOLE

gypt doesn't need much introduction. Known as the world's first nation-state, its ancient civilisation is a subject in classrooms around the world. A huge investment in tourism and infrastructure is paving the way for airlines in the region and beyond to look closer at what the country has to offer.

It is home to some of the oldest and most famous monuments in the world, including the breathtaking pyramids, the Sphinx and the Valley of the Kings.

Its vein is the River Nile, which provides support for the Egyptian people where the land is fertile, a contrast to the surrounding Sahara Desert.

To the north of the country lies the Mediterranean and in the east is the Red Sea, both offering stretches of golden beaches.

So it is easy to see why year-round sunshine and archaeological heritage draws millions of tourists annually to this fascinating country. Tourism has become one of the biggest sources of income to the Egyptian economy, although others include Egyptian labour – there are around 6 million Egyptians working in counties like Saudi, Kuwait and the UAE, that send money back to their families.

The Suez Canal has around 20,000 vessels passing through each year, which generates million of dollars, and there are oil and gas exports.

The value of the tourism sector is estimated at \$18.2bn, or 16.3 per cent of GDP. Tourism is also estimated to be growing at five per cent annually and remains the mainstay of the country's economy, employing more 1.5 million people and bringing vital foreign revenues in to the country.

"Our current target is 14m tourists to visit Egypt by 2011," said Zoheir Garranah, Minister of Tourism. "Every million tourists generate around 200,000 new jobs, directly and indirectly. Egypt is a well-packaged tourism product and we will only get stronger as additional infrastructure is added and improved.

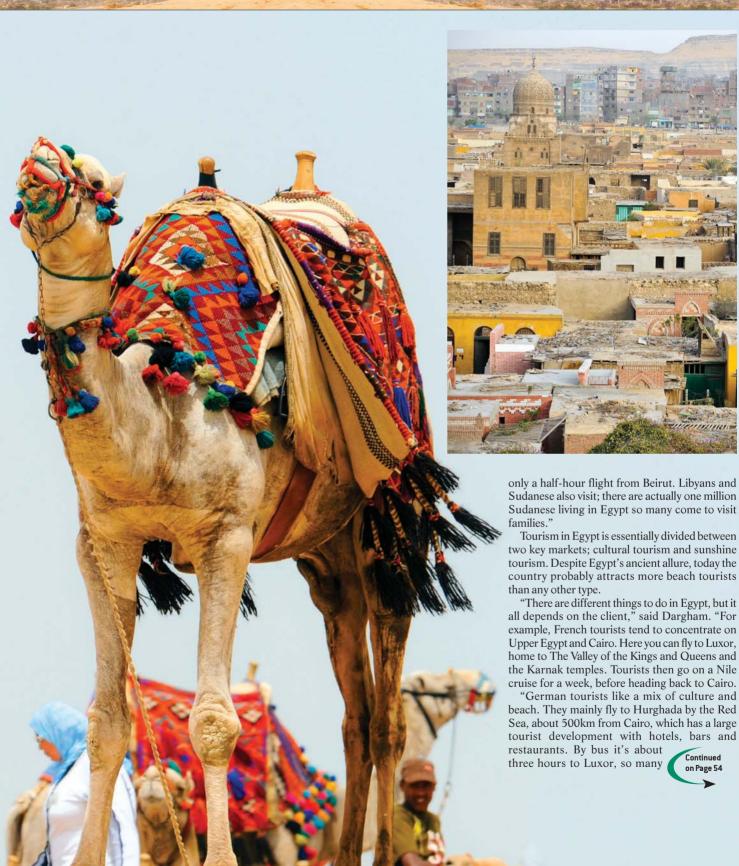
"Today 90 per cent of visitors come through tours. We want people to be able to travel individually too. Egypt has a diverse tourism offering but now, even with specialised products like healthcare, golf, yachting or shopping, there is still room for growth," said Garranah.

The Russian market now accounts for the largest number of arrivals into Egypt. And Poland and the Ukraine are also high on the list. But Europeans, particularly, have always been visitors as well as other GCC tourists.

"The growth in the Russian and British markets has ensured that Europe continues to dominate the tourism sector here with an estimated 70 per cent of arrivals originating from the continent," said Awad Dargham of Alkan Travel.

"Arab nationals account for an additional 17.8 per cent. We have a lot of Saudi tourists in summer as the weather there is too hot, plus they speak the language. We have tourists from Dubai and Kuwait. We also get a lot of Lebanese people who enjoy Sharm El Sheikh, especially, as it is





FOCUS ON FOC

CONTINUED FROM PAGE 53

tourists travel for a few days there before heading back to Hurghada.

British people also like the beach and cultural mix but mainly fly to Sharm El Sheikh, which is the largest and most luxurious seaside resort in the Sinai area. It is situated between the mountains of Gebel el Igma and the beautiful Azure Sea and is a few hours away from Sinai, where the Pharaohs went in search of gold, copper and turquoise and where Moses witnessed the Burning Bush."

"Egypt also offers some of the best diving in the world, particularly by the Red Sea in resorts like Hurghada; El Gouna, Sharm El Sheikh, Marsa Alam and Dahab," said Dargham.

Away from the beaches, Egypt is full of treasures to visit in many of its towns and cities that are sometimes overshadowed.

Dargham explained: "Aswan is Egypt's southernmost city and sits on the banks of the Nile and is decorated with palm-fringed islands. It is home to Nubian people, a distinct ethnic group from this area and Sudan who speak their own language and have their own customs. The town is more African in character than the cities of the north and is fascinating to see.

"Alexandria is a beautiful city founded by Alexander the Great in 331 BC. It was the setting for the relationship between Cleopatra and Mark Antony, and was also the centre of learning in the ancient world," said Dargham. "Today it is known as the Pearl of the Mediterranean and is the second largest city in Egypt. It has stunning buildings, grand squares, European cafés and a cosmopolitan atmosphere."

Egypt's capital is Cairo – a chaotic city with 22 million people packed into it, horrendous traffic and even worse pollution.

"Cairo is a very multinational population," said Dargham. "We have many African people studying here, as well as people fleeing from war-torn countries. We have every Arab nationality living here as well as many Europeans and Americans."

Cairo is a holiday destination in itself, packed with historical sites. It is one of the oldest cities in the world and has a history of thousands of years. Its most famous site is the pyramids. They were built by the Pharaohs to shelter them in the afterlife.

The pyramids of Giza are more than 4000 years old and are one of the ancient seven wonders of the world. Each pyramid is a tomb dedicated to a



different king of Egypt. The three largest pyramids located in the valley consist of the Great Pyramid of Khufu, the Pyramid of Kafhre and the Pyramid of Menkaura. You can go inside the second pyramid, which is quite a hairy experience.

It is here you will also see the impressive great Sphinx – the statue of a reclining lion with a human head that stands on the Giza Plateau.

"To see the all Pharaonic monuments in Cairo you will need at least a week," said Menna Elhamy of Alkan Travel. "But if you don't have time there are various tours you can take in one day or a few days, which is especially good for those coming to Cairo on business and getting a free day. For instance, a day tour starts early morning to the Giza pyramids to avoid the sun and in the afternoon you can visit the Egyptian Museum or the Coptic region."

The Egyptian Museum is a major highlight of Cairo being home to 120,000 relics and

antiquities, including mummies, from just about every ancient Egyptian period.

"The Coptic region in old Cairo is home to the Coptics," explained Elhamy, "Copt refers to the Egyptian Christians who were evangelised by St Mark the Apostle in the first century AD. It encompasses the Babylon Fortress, the Coptic Museum, the Hanging Church, the Greek Church of St George and many other Coptic churches and historical sites. It is a beautiful and important area in Cairo."

Cairo has fabulous local eateries and international restaurants, including some floating restaurants on the Nile. There are bars and nightclubs, where you can enjoy the local beer and even Egyptian wine.

But is Egypt a safe country for tourists?

"Egypt has not been without its share of violence through the years, which at times was directed at tourists. But this is firmly no longer the case," said Dargham.

"Certain precautions remain, including the enforcement of police convoys for coach trips in Upper Egypt and certain rural areas, but that is just to be extra safe. Cairo itself is especially safe."

Egypt is investing in its airports.

Dargham said: "We have many flights, both international and domestic to many airports. Cairo International Airport is now one of the fastest growing airports in North Africa.

"We also have international airports in Aswan for charter airlines for those visiting the River Nile and the Valley of the Kings and Sharm el-Sheikh, Marsa Alam and Hurghada, which all serve the Red Sea area.

"Alexandria offers services to domestic destinations within Egypt and to low cost carriers across the Arab world and Athens in Greece."

The government has a strategy called the National Sustainable Tourism Plan (NSTP), which is aimed at taking the sector through to 2022. The plan is to see tourism in Egypt growing to between 25m and 30m visitors.

"We will always have a lot more to offer than any other country, just because of our historical background. We offer a diverse cultural heritage, with Pharohmonic, Roman, Greek, Islamic, Coptic and Jewish culture, ancient monuments and glorious beaches. Egypt is an all-year-round destination; an asset very few countries can offer," said Garranah.





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You only have to look at the hundreds of ancient monuments that are found throughout Egypt to understand that for several millennia the country has been at a crossroads between Europe, Africa and the Middle East.

In aviation terms too, the country's national carrier has its roots back in ancient times as one of the earliest airlines in the world – it was founded in 1932 as Misr Airwork – and has been a steady performer over the past 80 years.

But today it is embarking on a new growth strategy, supported by its membership of the Star Alliance, that will see it straddle the traffic to those old trading routes and take on the might of the wealthy Gulf carriers.

EgyptAir is more than an airline. The legacy carrier is one of nine subsidiaries under the umbrella of EgyptAir Holdings. The group includes three airlines: EgyptAir, EgyptAir Express and the EgyptAir cargo business. These core businesses are supported by maintenance and engineering, ground services and in-flight services. Behind them are ancillary businesses such as a medical centre, a plastics manufacturing business and even a medical services provider.

"We have a social responsibility and in Egypt the organisation is seen as a vital part of the economy," said Hussein Massoud, chairman and CEO of the holding company. "Aviation is very important for a county like Egypt. It affects the economy of the country. It also reinforces the relationship between the different countries and we have an effect on people's lives."

Massoud building a monument from Alliance

Massoud spent more than 20 years in the Egyptian Airforce which, including time attached to the Egyptian Embassy in Paris, and is one of a small network of aviation professionals that have the ear of Aviation Minister Ahmed Shafik.

There has been external criticism of EgyptAir's protection of its routes through restricted competitive access to Cairo International and for the domination of the industry by the Holdings Company. Massoud is unfazed by the criticism.

"Our social responsibility comes first. That is why we don't outsource in the way some other companies might," Massoud said. "But we have service level agreements between the companies. There are standards they have to achieve. If a subsidiary does not meet the standards then we can go outside. It is not just our standards. As part of the Star Alliance we are not working in isolation or in our own space. Each subsidiary can be benchmarked against other Star Alliance services. We have a gap in some places and we have targets to meet. It works."

Like the chairman of his main carrier, Massoud sees the geographic position of Egypt as the key to its future in the alliance.

"Our position between our traditional markets

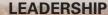
of the Arab countries and Europe and now as a gateway to Africa is good for us and for the Star Alliance. Our maintenance and engineering business already has 70 third-party contracts and that is growing. Working with some partnerships we are ideally positioned as a maintenance hub for the whole region."

For the passenger business, new routes to places such as Lagos, Accra and Abijan means the Alliance has increasing access to the emerging economies of Africa – both East and West – through EgyptAir's Cairo hub.

Massoud, who is on the board of governors for IATA and will be hosting the next annual general meeting of the global airline association, believes inclusion to one of the three major alliances has been essential for the airline and shrugs at the suggestion that Gulf airlines see no need for the alliances in their business models.

"The future is with the alliances. With the challenges we face now, the alliances are the organisations that can survive. For Emirates and Etihad they have over capacity. Money talks, but the main thing is the market itself. That's why they are always attacking our market. I think the future for these airlines could be in doubt - the model is unsustainable," he said.

EgyptAir Holdings returned a profit for E£357 (\$62.8m) last year. "The government gets a return on that and then gives guarantees for new aircraft. The Holding Company owns much of the fleet. It is a system that works."





A MISSION..

t the heart of the EgyptAir Group is the legacy carrier itself, and the day-to-day responsibility for that lies with Captain Alaa Ashour, the chairman and CEO of the airline.

Ashour is a former member of the Egyptian water polo team and still swims competitively – that is when he is not commanding one of the Airline's A330/A340 aircraft or working as an instructor or examiner. It's a bit like having Superman running your airline. But Ashour is modest about his achievements and puts it down to focus.

With less than a year in the job – he took over as chairman/CEO last September after previously heading training, operations and flight planning – he has had the experience of leading the airline through one of the hardest years in aviation financial history.

"It has been very tough," Ashour said. "Until now we are still suffering the effect of the recession. Our network footprint is Middle East and Europe, with a good presence in Far East and Africa plus a daily flight to the States.

"When the economic downturn came in it hit us hard in the Far East with a 25 per cent drop in passengers and a 50 per cent drop in revenues. We were 25 per cent down in Europe and our New York flights continued but were also down. It was really hard."

Things are picking up. The airline's first two 777-300ERs have arrived to work the London and Japan routes. "We are increasing our Narita routes from three a week to six. It will be seven. We will be stepping up to five flights a week to Osaka too."

The airline is working with Seabury APG to plan its network and the flow of traffic. "Traditionally we have relied a lot on in-bound tourism, that is still important to us, but we a see a lot more opportunity for the premium business markets through our Cairo hub and

Ashour aims to make a splash with business

into Africa. Africa is a strategic direction for us. We will be operating from Copenhagen later in the year giving us another European connection and a link with our Star Alliance partner SAS and we will be changing the scheduling to suit connecting traffic beyond Cairo. We are opening new routes into both East and West Africa and will be the most convenient hub."

The current target for connecting traffic through the Cairo hub is 12% – Ashour sees 30 per cent to 40 per cent as a realistic five year aim.

The airline has dropped its first-class cabin and is now focusing on providing a top level premium offer to business class passengers.

"We aim to offer a product that suits business. Good schedules, convenient timings, new aircraft with flatbeds, connectivity and all the attributes that suit business. We are investing in improving the business class to give a competitive product at a competitive price.

"We have gone for the Panasonic FX2, and are talking to them about adding more services for FX2, like internet and packages for SMS and mobiles with live TV. Those negotiations are still going on. We have OnAir connectivity for our A300s. I hope all of this will be in place by the end of the year."

There has been a huge investment in the fleet with four Boeing B777-300s and four B737-800s and one Airbus A330-300 being delivered through 2010 and four more 737s and four A330s coming next year.

The airline is stepping up staffing to meet the needs of the larger fleet and increased schedules

"We are recruiting and training. 52 pilots inside the company and we have a recruitment plan for the end of this year when we will recruit more. Egyptian Air Academy has good pilots coming through and we are recruiting Egyptian cabin crew. in the last five months we have taken on 315 cabin crew and plan to recruit a further 500 this year."

Ashour sees the need to continue growing the fleet, the staff – and the awareness of the EgyptAir brand to meet a potential demographic timebomb of demand that could come from within.

"Egypt has a population of more than 85 million and it is growing. Less than five per cent of Egyptians have flown. There is huge potential there and we have strong products. Working closely with EgyptAir Express (the domestic subsidiary) we can boost our business."

Ashour recognises the challenge from the lowcost carriers but also from others like Gulf Air from Bahrain and Royal Jordanian who are positioning themselves as prime regional carriers.

"Everybody is around biting away at our business. We have come up with a formula to deal with this situation and soon will offer something new that is valued by the customer and will have the attributes of the low fare that suits the needs of the passenger."

'Less than five per cent of Egyptians have flown. There is huge potential there and we have strong products.'

Fadel ready to take on the

A fast-growing parent airline means that EgyptAir Maintenance and Engineering has plenty to do, writes **Brendan Gallagher**.

But the company is relying on a combination of thirdparty business and joint ventures to catapult it into the MRO big league. ompared with the biggest airline-affiliated MRO providers we're still a middleweight," said Abdel-Aziz Fadel, chief executive of EgyptAir Maintenance and Engineering (EGME). "But my objective is to rise in the rankings and I think we have everything we need to achieve that."

Headquartered at Cairo International, the company is a subsidiary of Star Alliance member EgyptAir Holding Company. It holds full EASA and FAA Part 145 approved maintenance organisation status, recently opened an engine overhaul shop that can handle powerplants of up to 100,000lb thrust, and provides line and maintenance, components and AOG support service for the parent airline and dozens of third-party customers.

"Twenty per cent of our revenues come from third parties," revealed Fadel, who has headed the operation since 2005. "We plan to grow that to 40 per cent over the next five years, with the balance coming from EgyptAir . The airline's fleet is currently more

than doubling in size – it was 32 aircraft four years ago, now it's 65 and in a year's time it will be 75."

Operating from three hangars with bays for three wide-bodies and seven narrow-bodies, EGME provides EgyptAir with line maintenance, heavy checks, component repairs and engine overhauls. Capabilities include full C-checks for the Airbus A319, A320, A321, A330 and A340, and the Boeing 737 Classic G and 777.

The company also meets the needs of no fewer than 77 third-party customers – a source of income that Fadel expects to see becoming ever more significant in the future.

"Our existing customers are themselves growing — we know their plans for fleet expansion," he said. "Then there are a lot of new airlines being established in this region: recent additions in Egypt alone include Nile Air and Air Arabia Egypt."

Top targets outside the country include Tripolibased Afriqiyah Airways, Libyan Airways, Royal



heavyweights

Air Maroc, Yemen Airways, NAS Air of Saudi Arabia, and Saudi Arabian Airways.

EGME is investing to extend its ability to serve third parties. It currently has stations, each with 50-60 staff, at the popular holiday destination of Sharm el-Sheikh, and at Luxor and Alexandria. "We plan to build a hangar at Alexandria's newly-expanded Borg El Arab Airport because customers like Air Arabia Egypt, Flydubai and Jazeera Airways have bases there," said Fadel. "We will have a line maintenance facility there from May and the new hangar should be operational before the end of next year. Borg El Arab is taking over from the old Alexandria International and will support services to all over the Gulf – hence our decision to develop a big facility there."

Fadel's sights are also set further afield. "A year ago we had hardly any Russian customers but now we have 18, with several of them treating Sharm el-Sheikh and Hurgada as bases for the aircraft they use for their services to Egypt," he reported. "We started with line maintenance. When they saw what we could do they asked us to provide base maintenance and to repair and manage components for them here in Egypt because customs clearance in Russia can be very difficult."

The EGME boss also wants the Russians' engine business. "They have moved substantially from Russian-designed aircraft to Western types — as much as 80 per cent of the country's air transport is now Western in origin," he observed. "But they don't have enough people and facilities to support them. We're competing for a share of that market."

Joint venture

A joint venture with Rolls-Royce and Lufthansa Technik, the Cairo engine shop opened in 2008. It is approved for work on a range of engines – R-R Trent 700, IAE V2500-A1 and A5, CFM56-3C and -5C, and PW4090 and PW4158 – with the depth of approval, from module replacement to core overhauls, varying from one type to another. Rolls-Royce and Lufthansa Technik supply management services, with a local representative from the German company providing support on the non-RR engines.

EGME's day-to-day engine work is facilitated by real-time engine monitoring via VHF and satellite ACARS for trend monitoring purposes. "We use Airbus's Airman and Boeing's Airplane Health Management software to display and analyse the datalinked information," said Fadel, who has no fewer than three aircraft status screens in his office. "This gives us early warning of discrepancies in-flight and allows us to have qualified staff, tools and materials waiting to fix them as soon as the aircraft lands. If there's

enough time, the problem is fixed during the turnaround and there is no schedule disruption."

Other strings to the EGME include continuous airworthiness management and a wide-ranging AOG support service for EgyptAir third and parties. "Continuous airworthiness management is a recent addition to our total care offering," Fadel explained. "We manage things like service bulletins and airworthiness directives and schedule maintenance for our customers. And we maintain AOG teams here at Cairo International, using the worldwide Star Alliance network to move them to where they are needed, and to facilitate things like visas and customs clearances.'

Fadel is pinning hopes for long-term growth on full risk and profit-sharing joint ventures. "The engine shop was our first JV — now we're in negotiations with other entities," he said.

The talks are understood to relate to base maintenance for wide-body aircraft operated by leading carriers. "A wide-body needs a lot of MRO man-hours and they are expensive in Europe," Fadel observed. "We can provide skilled labour for half the European rate. We are offering potential partners an arrangement under which we receive their aircraft for certain categories of work and send them engines and components for types of work that we don't do. Our chances of securing such deals have been improved by our recent FAA Part 145 approval. Many big carriers want FAA/EASA 'dual release' and now we can offer it."

EGME has been punching above its weight for some years — now the company wants to mix it with the heavy hitters of airline MRO. "We have the ambition, the skilled staff, the facilities, and the full support of our parent airline and the national government," said Fadel. "We're ready to compete with the biggest providers in the business."

"We're ready to compete with the biggest providers in the business."



MAINTENANCE

AVEX: SHAPING THE FUTURE OF AVIATION

gypt - the name is synonymous with ancient history and intrigue. Millenia after its construction, the Great Sphinx continues to draw millions as a tourist attraction, while the ancient ruins of Memphis, Thebes, Karnak and the Valley of the Kings remain a significant focus of archaeological study.

But modern Egypt is far more than just a relic of past civilisations. Cairo is North Africa's largest city - a global centre for business and tourism. Add to this Egypt's new-found goal of becoming the hub of Africa, evident in

Cairo International Airport's recent modernisation and the hosting of the biennial AVEX International Airshow Sharm El Sheikh International Airport, and you will find that it is well on its way to establishing itself as the gateway to the Africa and Middle East region.

"The Egyptian and regional markets are growing... Embraer sees both Africa and the Middle East as having tremendous opportunities." Mathieu Duquesnoy, Vice President, Airline Market - Middle East and Africa, Embraer.



Egyptian President Hosni Mubarak at the Static Display Park

AVEX - the Africa and Middle East Aviation platform

AVEX was conceived with the idea of providing the small and mid-sized aviation industry in Africa and the Middle East a platform for unification and growth. It was first held in 2005 and hosted 60 exhibiting companies. Since then, the air show has rapidly evolved into its current form. Now in its fourth edition, AVEX is expected to be even larger than previous years.

The reason for this growth? With capacity increases taking place across

Africa

US\$2.4 billion

Total value of upcoming airport projects in Sudan, Tunisia, Libya, Morocco and South Africa.

6.2 percent

2009 Y-o-Y passenger traffic growth rate vs. global growth rate of 5.3 percent (Source: Airports Council International)

560 new aircraft

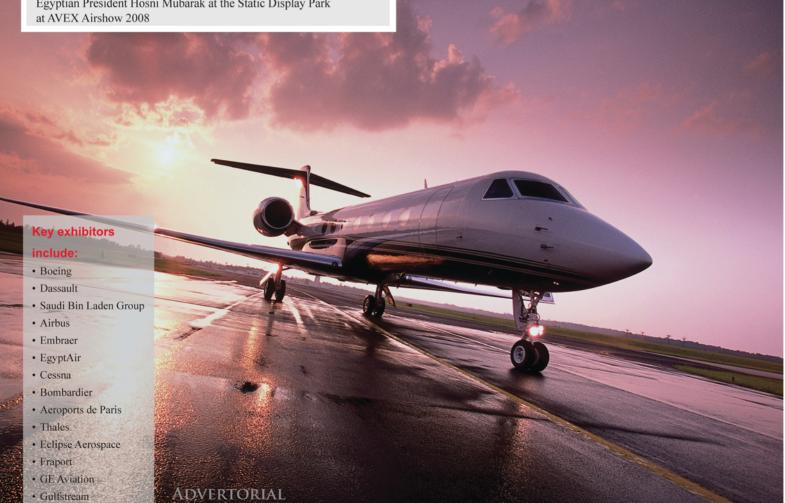
Projected African fleet requirement by 2027 (Source: AFRAA).

5.7 percent

Average traffic growth per annum.

the MENA region, at airports in Cairo, Dubai, Doha and Jeddah, among others, infrastructure investments are a key driver. Combine this with the growth in business aviation in the Middle East and the expansion of low-cost airlines across Africa, and the region becomes a hot bed for growth.

Strategically hosted at Sharm El Sheikh International Airport, AVEX will once again open its doors this November to key decision makers and aviation specialists from airports, airlines, aircraft manufacturers, MROs and CAAs, who are looking to expand in this rapidly growing aviation market.



IN AFRICA AND THE MIDDLE EAST

KEY ATTRACTIONS at AVEX 2010, November 7th - 10th

Expo - November 7th - 10th

The indoor exhibition area hosts up to 100 leading exhibitors and organisations from across the aviation industry. The fourth edition of AVEX brings together exhibitors and aviation professionals from airports, airlines, aircraft manufacturers, MROs and ground handlers, to name a few.

Aircraft Showcase Park - November 7th - 10th

A display area for aircraft, the Aircraft Showcase Park, will feature small to mid-sized aircraft and business chalets for key exhibitors and sponsors.

The Custom Jet Show - November 7th - 8th

The ultimate gathering ground for customised aircraft, the Custom Jet Show brings together some of the region's most advanced, luxurious and aesthetically customised aircraft to Sharm El Sheikh.

The two-day show features an exhibition payilion, which will display small to mid-sized customised aircraft, and the Custom Jet Awards, which will honour outstanding achievements and breakthroughs in the categories of 'Exteriors and Aircraft Livery' and 'Passenger Experience'.



The Middle East

US\$30 billion

Total value of current and upcoming airport projects in Saudi Arabia, Oman, UAE and Bahrain.

10.9 percent

2009 Y-o-Y passenger traffic growth rate vs. global growth rate of 5.3 percent. (Source: Airports Council International)

Dubai Airport's standing among the world's top 50 busiest airports for international passengers.



"The current economic climate provides a great opportunity for new markets to arise. Several countries in Africa and Middle East are emerging with enormous potential. It is a time of synergy between Egypt and the surrounding region to improve the aviation industry, and AVEX is the ideal platform for Hill to meet with key players in the industry and initiate these improvements." Waleed Abdul Fattah, VP - North Africa region, Hill International

Aviation Unity Summit - November 9th

One of the foremost aviation gatherings in the Africa and Middle East region, the Aviation Unity Summit gathers key industry decision makers and aviation thought leaders to discuss the latest challenges faced by the 'united' aviation sector.

Featuring speakers from influential regional associations, aviation authorities, mega airlines, airports, and aircraft manufacturers - the Aviation Unity Summit aims to discuss new aviation business opportunities, smoother channels for entering emerging markets, and strategies for sustainable growth.

AVEX 2008

US\$1 billion: Total value of on-the-spot deals.

80: The total number of exhibiting companies and sponsors to participate.

500: The number of business visitors and VVIPs to visit the show.

1,200: Aviation professionals and key decision makers in attendance.



Egypt

US\$800 million

Value of upcoming airport projects.

72

The total fleet size of Egypt Air by 2014.

Cairo International Airport's passenger capacity once expansions are completed.

Entertainment - November 9th - 10th

The AVEX Entertainment pavilion has been designed to add a dimension of fun and games to business. This year's Entertainment pavilion will feature:

- · Aerobatic performances by world-renowned aerial teams
- · Go-kart racing · Paint ball
- · Bungee catapult

AVEX International Airshow is endorsed by the Egyptian Ministry of Civil Aviation and will take place at Sharm El Sheikh International Airport from November 7th - 10th 2010.

For more information on how to register to participate, please email Michael Platt at michaelp@avexairshow.com or log on to www.avexairshow.com







The experienced Egyptian Air Force is at the heart of the country's aviation activities.

Jon Lake reports.

THE **FORGING** OF THE FORCE

The Egyptian Air Force (EAF) or Al Quwwat Al Jawwiya Il Misriya, is one of the largest air arms in the region and is also one of the longest established.

Formed in 1930 as the Egyptian Army Air Force, it became fully independent in 1937. Initially it had close links with the British Royal Air Force and was primarily equipped with British-supplied aircraft. Spitfires gave way to Meteors and Vampires before the 1952 revolution, after which the new president, General Gamal Abdel Nasser, turned to the Soviet Union.

The Egyptian air force was forged in a succession of hard-fought wars; against Israel in 1948, 1956, 1967 and 1973, against Libya in 1977, and supporting Republican Yemeni

forces against Saudi-backed Royalist forces (1962-70). This gave it considerable combat experience, though most veterans have now retired.

Egypt's close relationship with the USSR was brought to an end by president Anwar El Sadat in 1972. National identity was reinforced and the EAF founded a formation display team - the 'Silver Stars' - equipped with four L-29 jet trainers.

The air force also began to reduce its reliance on Soviet equipment and introduced Mirage fighters into the inventory, initially via a loan arrangement with Libya and subsequently through the Continued purchase of some 54 Mirage 5s with Saudi Arabian funding.

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FOCUS ON FOCUS ON

CONTINUED FROM PAGE 62

Following the signature of the Camp David Accords by president Sadat and Israeli Prime Minister Menachem Begin on September 17, 1978, and the subsequent 1979 Israel-Egypt Peace Treaty, Egypt lost the support of many of its Arab neighbours. Saudi Arabian plans to send 50 F-5s to Egypt were cancelled. Instead, a new relationship was forged with the USA. Thereafter, Egypt would turn to the USA, France, and later China, for its new aircraft and weapons and the air force increasingly began to train with the USAF and its allies.

One of the first fruits of the new relationship came in September 1977, when 35 ex-USAF F-4Es (armed with Sparrow, Sidewinder and Maverick missiles) were supplied to the EAF at a cost of US\$594 million under the Peace Pharaoh programme.

Ten further aircraft were supplied subsequently and the survivors still serve with 76 and 78 Squadrons of the 222 Fighter Regiment.

Behind the scenes, Egyptian cash was augmented by a more secretive arrangement under which large numbers of its Soviet-built fighters (including MiG-17s, MiG-21s, MiG-23s and Su-20s) were sent to the USA for analysis and for use in a secretive adversary training programme. Other Soviet-built fighters were supplied to other US allies for evaluation, and a few to China.

Training together

From 1980, US and Egyptian ground forces began training together in the Operation Bright Star series of exercises. These were progressively expanded in scope, adding air force participation from 1985. Today Bright Star is held every two years and involves tactical air, ground, naval and special operations forces from a number of nations including France, Germany, Greece, Italy, Jordan, Kuwait, the Netherlands, the United Arab Emirates and the United Kingdom, as well as the USA and Egypt.

From 1982, Egypt began receiving the first of 240 F-16 fighters under the initial phase of the seven-stage Peace Vector Programme. The F-16 today forms the backbone of the EAF. With some 200 in service, it is the world's fourth largest F-16 operator.

The EAF's F-16s still serve in the air defence and tactical fighter roles, and have been upgraded to enable them to fire the AGM-84 Harpoon antiship missile.

The 40 Block 32 F-16C/Ds (34 Cs and six Ds) delivered under Peace Vector II were compatible with the AIM-7 Sparrow, giving them a robust air combat capability.

Other deliveries from the USA included five E-2C Hawkeye Airborne Early Warning aircraft, which entered service in 1987 (these were later upgraded with advanced AN/APS-145 radars and augmented by a sixth example). In 1995 the EAF received ten SH-2G Seasprite helicopters for use aboard the Egyptian Navy's two ex-USN



Knox-class and four ex-USN Oliver Hazard Perry class frigates.

Egypt also received 36 AH-64A Apaches (35 survivors were upgraded to AH-64D standards in 2001).

The country ordered 15 Elicopteri Meridionali-built CH-47C Chinooks in 1980 and Boeing began upgrading 12 of these to CH-47D standards from 2002; these subsequently joining four new-build D-models in 1998.

But Egypt was not content to rely solely on the USA for the supply of weapons, and placed significant orders for French equipment, following the success of the Mirage 5.

Kit form

Egypt ordered 30 Alpha Jet MS1 trainers, with Dassault delivering the first four complete aircraft from June 1983. The remaining 26 were supplied in kit form for assembly in Egypt.

Egypt also received 15 examples of a close support version of the Alpha Jet, designated MS2. These incorporated a TMV630 laser rangefinder in a modified nose, together with a digital avionics suite, including a SAGEM ULISS 81 INS, and a Thomson-CSF VE-110 HUD. Dassault delivered the first four complete and the remainder were assembled locally.

The Silver Stars converted to the new Alpha Jet in 1984 and increased from six to nine Alpha Jets in 1985.

The EAF was the first export customer for the Mirage 2000, ordering 20 aircraft in late 1981. Deliveries began in 1986 and the EAF formed a single squadron with 16 single-seat Mirage 2000EMs and four two-seat Mirage 2000BMs, which became operational in 1987. Financial problems put paid to plans for a second squadron, but the survivors continue to serve as multi-role fighters, armed with Matra Super 530D medium range semi-active radar guided air-air missiles and AS30L laser guided air-to-ground missiles.

Egypt also license-built armed and unarmed variants of the French Gazelle helicopter for its armed forces and significant numbers remain in use.

The country turned to Brazil to address its need for a new basic trainer, becoming the first export customer for the Embraer EMB 312 Tucano. It placed an initial order for 40, ten delivered direct from Embraer from 1984, and 30 assembled locally between 1985 and 1988. The Egyptians ordered 14 more in 1989. The Helwan factory also assembled 80 aircraft for Iraq.

Egypt also forged a relationship with China, ordering 150 Chengdu F-7s (the unlicensed





Chinese copy of the MiG-21) to beef up its fighter force. The Egyptians received a mix of F-7Bs and much improved F-7M Airguard fighters, the latter featuring western avionics, including a GEC Type 226 Skyranger radar and a Type 956 HUDAWAC.

In 1999, Egypt agreed to buy 80 K-8E (JL-8) Karakorum advanced trainers to be built in country from Chinese-supplied kits. Compared to the basic K-8, the K-8E for Egypt incorporated 33 modifications to the airframe and avionics. The K-8E prototype made its first flight on June 5 2000 and deliveries were completed in 2005. License production of an additional batch of 40 K-8Es began immediately. The K-8E re-equipped the Silver Stars team in 2004, and the type augments the Alpha Jet in the training role.

In terms of aircraft numbers, the largest recent EAF order was for 68 Grob G-115 primary trainers. Other orders have been for small numbers of aircraft, often to top up in-service aircraft fleets. Three ex Danish C-130H Hercules were acquired in 2004, for example, and in May 2009, Egypt made an official request to buy ten AH-64D Apache Block II attack helicopters, though these still lack Longbow targeting radar.

Upgrades have been undertaken on surviving MiG-21s, which have gained glass cockpits,

helmet-mounted sights, and R-73 missiles, and to the air force's six E-2C Hawkeyes, which are being upgraded to Hawkeye 2000 standards.

Perhaps the most important upgrade programme has seen the air force's older Block 15 and 32 F-16s outfitted with most of the features of the Block 40/42 features, fitted with holographic HUDs and able to carry LANTIRN pods and AGM-88 HARM missiles.

More capable strike

For some years, the Egyptian air force has had a requirement for a more capable strike fighter than the F-16. Egypt requested 12 F-15E Strike Eagles in 2002, but this request was turned down, as was a 2005 request for the supply of 60-100 F-16C/D Block 60/62s.

After this rebuff, in November 2006, Egypt began talks with Mikoyan hoping to buy 40 MiG-29SMT fighters. By 2007, it was negotiating for a larger batch of 60-80 MiG-29SMTs, 20-25 Sukhoi Su-35s and 24-40 Yak-130 advanced trainer/light support aircraft. Subsequently, there were reports of Egyptian negotiations to join the Sino-Pakistani JF-17 programme, with a reported interest in taking 48 of these advanced fighters.

The chance that Egypt might buy Russian or Chinese fighters encouraged the USA to view the

country's request for advanced F-16s more sympathetically and, as a result, the EAF will now receive a batch of 16 F-16C Block 52+ and four F-16D Block 52s, together with JDAM kits for the EAF's stock of Mk84 bombs. The supply of AIM-120 AMRAAM beyond visual range missiles remains problematic, however.

The EAF today is the primary aviation branch of the Egyptian Armed Forces. The air force has an inventory of 806 aircraft, including 586 combat aircraft and 149 armed helicopters. The force has 20,000 personnel, based at 20 main bases, and includes 22 frontline fast jet fighter squadrons. The air force operates 48 R4E-50 Skyeye UAVs, two Camcopter UAVs and 50 324 Scarab unmanned vehicles.

The EAF is backed by a dedicated Air Defence Command with US AN/TPS-93 and AN/TPS-63 radar systems augmenting a dwindling number of Soviet-produced radar systems. Air Defence Command's five territorial divisions incorporate 60 Surface to Air Missile units with the S-125 Kub (SA-3 'Goa') system and an approximately equal number of S-75 Dvina systems. Egypt also uses US I-HAWK and Raytheon Patriot SAMs, some 26 self-propelled Chaparral launcher systems, Crotale SAMs and a range of anti-aircraft artillery gun systems.





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AIR DEFENCE COMMAND

72 TFS

74 TFS

Jiyanklis

75 TFS

79 TFS

546 ECM Brigade 81 Squadron

272 TACTICAL FIGHTER WING

77 TFS 'Fighting Bats'

Air Order of Battle

7 ti ilitalioara		
104 FIGHTER BRIGADE		
22 Squadron	F-7/FT-7	air defence/tactical fighter
45 Squadron	MiG-21MF, MiG-21UM	air defence/tactical fighter
49 Squadron	MiG-21MF, MiG-21UM	air defence/tactical fighter
Fayid		
282 TACTICAL FIGHTER WING		
86 TFS	F-16C block 40, F-16D block 40	multi-role
88 TFS	F-16C block 40, F-16D block 40	multi-role
Mersha Matruh		
102 Tactical Fighter Brigade		
26 Squadron	F-7, FT-7	air defence/tactical fighter
82 Squadron (det.)	Mirage2000BM, Mirage2000EM	air defence/tactical fighter
oz oquanon (ucc.)	Williage 2000 Divi, Williage 2000 Livi	an acronoc, tactical righter
TACTICAL FIGHTER COMMA	ND	
Abu Sueir		
262 TACTICAL FIGHTER WING	F 400 Dissis 40 F 400 Dissis 40	
60 TFS	F-16C Block 40, F-16D Block 40	multi-role
Assouan		
?? FIGHTER BRIGADE		
?? Squadron	MiG-21MF	tactical fighter
Beni Suef		
242 TACTICAL FIGHTER WING		
68 TFS	F-16C/D Block 32	air defence
70 TFS	F-16C/D Block 32	air defence
Birma/Tanta		
236 FGA Brigade		
69 Squadron	Mirage 5SDE, Mirage 5SDD, Mirag	e 5SDR tactical fighter
73 Squadron	Mirage 5SDE, Mirage 5SDD	tactical fighter
Cairo-West	gg	
222 TACTICAL FIGHTER BRIGA	DE	
76 Squadron	F-4E	tactical fighter
78 Squadron	F-4E	tactical fighter
601 AEW Brigade	1-4L	tactical fighter
87 Squadron	E-2C	AEW
	L-20	ALW
Gebel Al Basur		
252 TACTICAL FIGHTER WING		
71 Squadron	Mirage 5SDE, Mirage 5SDR, Mirag	
82 Squadron	Mirage 2000BM, Mirage 2000EM	air defence/tactical fighter
Inshas		
232 TACTICAL FIGHTER WING		
30.TEO	E 404 (D DL 140 / 45)	C La Las L

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F-16C Block 40, F-16D Block 40 (TUAS)

F-16C Block 40, F-16D Block 40 (TUAS)

F-16C Block 40, F-16D Block 40 (TUAS)

F-16A/B Block 42 (ex15)

F-16A/B Block 42 (ex15)

Beech 1900C-1 (ELINT)

fighter ground attack

fighter ground attack

multi-role

multi-role

multi-role

AIR FORCE ACADEMY			
Bilbeis and satellite (Bilbeis 2)			
117 PRIMARY TRAINING BRIGA	ADE		
?? Squadron	Grob 115EG	primary/elementary training	
?? Squadron	Grob 115EG	primary/elementary training	
117 BASIC TRAINING BRIGADI	E		
83 Squadron	EMB312	basic training	
84 Squadron	EMB312	basic training	
85 Squadron	EMB312	basic training	
ADVANCED TRAINING BRIGADE			
88 Squadron	L-39ZO, L-59E	advanced training	
201 Squadron	K-8E	advanced training	
AIR NAVIGATION SCHOOL (OPERATING FROM ALMAZA)			
?? Squadron	DHC-5	navigation training	
El Minya			
Weapon Training Brigade			
?? Squadron	Alpha Jet MS2, Alpha Jet MS1tac	tical weapons/lead in training	
?? Helicopter Training Brigade	,	-	
?? Squadron	SA-342L/L	heliconter training	

?? Squadron	SA-342L/L		helicopter training
COMMAND UNKNOWN			
Alexandriya - Borg el Arab			
545TH TACTICAL HELICOPTE	RWING		
7 Squadron	Sea King Mk47		utility
11 Squadron	SA-342L		liaison
37 Squadron	SH-2G(E)		ASW/ASV
Az Zaqaziq (Abu Hamad)			
550 ATTACK HELICOPTER BR	IGADE		
52 Squadron	AH-64D		attack helicopter
Cairo-East/Almaza			·
516 TRANSPORT BRIGADE			
2 Squadron	DHC-5D		transport
4 Squadron	C-130H	transport (operating from	
16 Squadron		C-130H transport(operating f	
?? Squadron	An-74TK-200A	transport (operating fron	
40 Squadron	SA-342 (VIP)	transport (operating from	VIP transport
533 HELICOPTER TRANSPOR			vii tranoport
?? Squadron	Mi-8		transport
?? Squadron	S-70A-21 Blackl	hawk	transport
?? Squadron		nando 2B, Sea King Mk47	transport
Government squadron		ng 707, Falcon 20E, Falcon 2	
		ulfstream IV/SP) G-400	VIP transport

	Guillott Guillini, Guillott Guilli 17 (G1), G 10	o vii danopore
Hurghada		
53. HELICOPTER BRIGADE		
?? Squadron	Mi-8	transport
?? Squadron	Mi-8	transport
?? Squadron (det) MiG-21/F-7	MiG-21/F-7	air defence
Kom Ashwin		
53. HELICOPTER BRIGADE		
7 Squadron	Mi-6	heavy lift
18 Squadron	CH-47D	heavy lift
?? Squadron	Commando	assault/utility transport
?? Attack Helicopter Squadron	Gazelle	attack helicopter
?? Attack Helicopter Squadron	Gazelle	attack helicopter

Wadi al Jandali (Al Q	atamiyah)	
550 ATTACK HELICOP	TER BRIGADE	
51 Squadron	AH-64D	attack heliconte

Helicopter Training Squadron UH-12E

helicopter training



Smart makes its move with new domestic and regional airline

Charter company responds to government's call on the home front.

mart Aviation, the executive and air-ambulance operator in Cairo, is to launch a new airline to capitalise on the potential growth of domestic and regional routes in Egypt.

The company – which currently operates five Cessna Sovereigns – is considering bids from both ATR for its 72-500 and Bombardier for is Dash 8-400s.

A decision was likely to be made as Arabian Aerospace was going to press, with the successful bidder being expected to deliver two aircraft by the end of the year with operations to begin early in 2011.

The new airline will hold options on three further aircraft. Smart is a joint-stock company, with shares held by the Egyptian Ministry for Civil Aviation, Egypt Air Holding, the Airport company and the Navigation company — all government-linked entities.

Chairman and CEO, General Wael Amin Elmaadawy said the turboprops taking between 60 and 70 passengers, would create a new market for air transport in Egypt.

"We don't need expensive large airports and long runways," Elmaadawy said. "Our plan would be to base the aircraft at Cairo International and then fly to a day-base at somewhere like Sharm el Sheik or Aswan and operate routes from there to key places throughout the country or neighbouring countries such as Aqaba in Jordan or Beirut.

"We will bring places together where a route does not currently exist."

Elmaadawy and his vice chairman, technical affairs, Radwan Sallam were previously with Egypt's Petroleum Air Service (PAS), which operated a fleet of Bombardier Dash 8-300s.

"We have a lot of experience with turboprops and understand the operating costs," Elmaadawy said. "We believe this will allow us to control the costs and our experience with the executive aircraft means we understand the customer service and quality. We want to offer a quality service for a low cost price."

The aircraft will be fitted with an IFE system, which the company will introduce on missions longer than two hours.

The new airline – which will have the Smart brand – will operate from Cairo's main airport, although not from the new executive FBO being built next to Hall 4 – the current VIP terminal.

"We are building a 4,000 sq metre hangar, which will incorporate our business jets and the turboprops," Elmaadawy said. The company is working towards Cessna approvals as a repair centre as well as FAA approval.

Smart sees a growth in employment to match the demand but believes the business jet operation has served as a great grounding in developing staff for the new venture.

The company is also continuing to promote and grow the executive aviation division.

Two of the five Sovereigns can be converted to air ambulances for medevac operations. The aircraft can reach London or Paris non-stop from Cairo and has been used to transfer 15 critically or seriously ill patients from Cairo to an associate hospital in Paris with 100 per cent success.

Smart has been pushing into the Gulf and into Africa. "We have been offering special rates for people taking our 100-hour package, which can be for as little as \$4,000 an hour," Elmaadawy said. "Again controlling our costs allows us to do this."

Elmaadawy wants Smart to be the number one across the whole region. We want to develop trust with our customers; they will use us more and we can then grow the fleet. We are offering great catering from one of Cairo's finest resorts, we have top quality staff and we have great aircraft. I have been very pleased with the Cessna aircraft and the company. It has the range and the comfort."

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Highly competent, safety-minded, customer-focused staff are the bedrock of a successful airline.

Brendan Gallagher visits the EgyptAir Training Centre

School that's filled with an air of history

ith its youthful fleet and advanced attitude to service enhancements such as passenger connectivity, EgyptAir is as modern-minded an airline as you'll find anywhere. But the Egyptian national carrier also has a proud 80-year history as the oldest airline in the Arab domain and one of the oldest in the world, and it goes to some lengths remind its employees of their heritage.

So when novice pilots, engineers and support staff show up for their first day at the EGYPTAIR Training Centre at Cairo International, one of the first things they learn is that the site contains a museum to the airline's history.

Taking pride of place among the exhibits is the simulator on which Egyptian pilots perfected their Boeing 707 skills in the 1970s. The training days of this vintage system are long behind it, but elsewhere in the centre its modern successors are hard at work.

The latest addition to the centre is the S-Building, opened at the beginning of the year and so called for its shape in plan. A cool and elegant circular lobby gives access to nearly a hundred state-of-the-art classrooms and to a simulator facility currently housing four JAR Level D-certificated systems and with room for another four.

The simulators reflect the make-up of the EGYPTAIR fleet – one each for the Boeing 737-800 and 777-200ER, and the Airbus A320 family and A330/A340. But they are also heavily used by



third-party customers, among them Air India, Austrian Airlines, Kenya Airways, Kuwait Airways, PIA, Sudan Airways and Wataniya of Kuwait. Third parties account for 50 per cent of the simulators' working time and EGYPTAIR goes to some lengths to accommodate them: the A320 unit, for example, can simulate both the CFM56 engines that power its own aircraft but also the IAE V2527, the alternative powerplant widely used by other carriers.

A typical session in the Thales-supplied A320 simulator begins with a briefing in an adjoining classroom equipped with a flight management system trainer (FMTS) – a full set of flight-deck instrumentation displayed on active high-resolution touch-sensitive LCD screens.

Set the parameters

"We use the FMST to introduce the trainee to the planned sortie," explained VP and training consultant Hassan Mohamed Abdou. "The pupil and instructor together set the parameters for the day's exercise, upload them and then go fly. This allows us to make the best possible use of expensive time in the full-motion simulator."

The newest simulator in the facility is the 737-800 unit, supplied by FlightSafety Simulation in January last year, and there are more to come. "We plan to add an Embraer 170/190 system to support our EgyptAir Express regional subsidiary," said Abdou. "And we are looking at adding another A320-family unit to meet the constantly growing demand from third parties. We have vacant bays ready and waiting for these systems."

In the meantime, the facility gets two simulators for the price of one with its A330/A340 unit. "We can convert this from one type to the other in just 20 minutes by swapping out modules for the throttles and other functions," said Abdou. "At present we make the switch once every two weeks to support initial and continuation training for our A330 and A340 flight crew."

The training needs of the airline's other employees—cabin crew, engineers and office staff—are met by three floors of well-equipped

classrooms and a hangar full of cabin service and emergency procedures trainers.

"Our centre is one of the largest of its kind in the Middle East and Africa," said Abdou. "Earlier this year we were the first in the region to obtain Joint Airworthiness Authorities certification as a type rating training organisation (TRTO). And we run more than a thousand different courses every year."

As well as pilot ground school, those courses cover standard and emergency procedures in the cabin, engineer and ground equipment training, and tuition in a wide range of commercial, administrative, financial, customer service and security functions.

Teaching takes place in a total of 94 spacious classrooms spread over three floors. Distributed either side of broad, marble-floored corridors, the FAA-standard rooms are variously sized for classes of up to six, 12 and 18 people. "This gives us the flexibility we need to make the most of our available capacity," commented Abdou. Classes running at the time of the Arabian Aerospace visit included one for customer care staff — 15 men and women trainees under the guidance of two female instructors—and one for 777-300 pursers.

Classrooms are equipped with modern teaching aids – whiteboards, PCs for computer-based training, projectors and screens. One room dedicated to flight crew ground school features procedures trainers designed and built by the airline. Each pupil station comprises a PC monitor and slide-out paper graphics depicting the actual layout of controls and instruments on the flight deck. The latter are used to lend a measure of realism as exercises are carried out with the computer screens.

Realism is also a priority in the cabin service hangar. Alongside several full-scale fuselage sections used to train flight attendants in their normal duties and responsibilities, and the cabin service products, stands the cabin emergency evacuation trainer (CEET). This is similar to the cabin service units but with one big difference—inflatable evacuation slides can be deployed on either side, one of them into a swimming pool to



The carrier also takes an exceptional interest in the fitness and turnout of its crews. It is introducing physical training programmes specially tailored to pilots, cabin staff and security operatives, and the cabin service hangar features a "grooming room" to provide flight attendants with tips on looking good and caring for their uniforms.

Ultimately responsible for the performance of the centre is training VP Capt El Motasem Bellah, who expresses himself satisfied with its contribution to the prosperity of the EgyptAir Group. "In the past year we utilised all our simulators at around the international norm of 5,000hr per annum," he said. "We did even better with the A320 unit, which recorded more than 6,000hr. Our overall operation again generated a profit. And we achieved all this despite the recession."

Hassan Mohammed Abdou, (right) with colleague Sherif El Shorbagy

Training experts with a brand new vision

The Cessna Citation Mustang that climbs away rapidly from the October 6 Airport to the north of Cairo looks like any other executive jet on a private aviation mission.

But Bravo Oscar Hotel has a student at the controls and the gleaming business jet is sending out a clear message about training in Egypt – it means business.

The Citation is just one of the aircraft owned by the recently rebranded Egypt Aviation Academy (EAA), which has been tasked by the Egyptian Civil Aviation Authority with overseeing the training needs of the industry other than through line work with the national airline or the armed forces.

And it is no newcomer to the training industry. It can trace its legacy back almost 80 years to 1932, when it started life as the Egypt Air academy and became the first aviation training school in the whole of the Middle East and North Africa. It developed into the Misr Flying College in 1933 and brought thousands of Egyptians through the joys of the Private Pilot Licence (PPL) and on to other flying activities. Indeed, over the years, hundreds of pilots from Africa, Asia and Arab countries have graduated to join their national airlines or work as commercial pilots.

Many instructors at the college have their roots through the Egyptian military and have enjoyed the intense ongoing operations with the air force, and throughout the Middle East there are Egyptian pilots successfully operating with other national airlines.

But the EAA's ambitions are much stronger than just flight training. With support from the aviation minister, Ahmed Shafik, the country's training activities have been refocused to give an holistic approach.

EAA's vision us to develop a world class academy that covers all of the key elements of the civil aviation industry and, alongside the flight school, it has established another three institutes equipped with the latest technology, systems and equipment.

The creation of the EAA has seen an unusual amount of close co-operation between government ministries with the Higher Education Ministry and the Aviation Ministry working together to bring the four key schools together. They are: The Misr Flying Institute; the Air Traffic Control Institute; the Institute of Aviation Engineering and Technology; and the Institute of Computers and Information Technology of Aviation and Aerospace.

According to chairman and CEO Hassan M Hassan, the schools share a common set of values including: "excellence, teamwork, flexibility, researchoriented, innovation and safety".

"Wherever you go throughout the academy you will see this. It goes deep into the culture of the organisation," he said.

For pilots – whether private or sponsored – Misr has a lot to offer. From basic PPLs through to the latest multi-crew pilot licence (MPL) the academy is providing sophisticated equipment through simulators or, of course, the new Cessna Mustangs. The MPL course has won significant acclaim and the college has been accredited by ICAO as a regional training centre for Africa and the Middle East.



he increasing number of top-end tourists visiting Egypt could soon find life easier and more comfortable when visiting the different locations.

ZAS Aviation Services is launching Jet Club with two Embraer Phenom 100 entry-level jets.

The company's ground-handling business currently works with a number of business jet operators from Europe and the Middle East and managing director Omar Zarkani is adamant that the new operation is not in competition with his own customers.

"Many times we are asked by our customers to get a quote for local operations and they have been very expensive. We have also seen customers come into Egypt and have to use a Gulfstream for short local flights. We think there is a niche that will allow us to offer this to our customers so they can move from tourist sites or secondary cities or regions quickly and comfortably.

The excellent short-field performance of the Brazilian-built aircraft means that it will be capable of reaching areas that others will not.

"We are very impressed with the Phenom's figures," Zarkani said. "We have looked at the operating costs and they compete with a King Air. We think our clients will benefit."

ZAS already has experience of aircraft operations as it previously operated freight and passenger aircraft. With its current ground-handling operation it is well positioned to know the main challenges it faces.

The concept of developing an executive flight operations business out of a ground handling company may on the surface appear to be unique. But flight operations is nothing new to ZAS.

"We had previously been exporters of fresh products," said Sami Elias, the company's vice president of commercial operation. "We had

ZAS aims to bridge the gap between business and tourist

One Egyptian company that truly represents the private sector is reinventing itself as it moves from freight handling through to business aviation.

Alan Peaford reports.

good contacts but realised a potential to fly our own products and those of other farms to Europe so we began our own airline. At the same time, we did not have representation within Egypt to make sure all our exports were well handled and departed on time to their different European destinations and so the Zarkani family established itself as handling agents and then offered their services first to other cargo carriers in Egypt and then to passenger carriers.

In 1982, ZAS Aviation Services also established ZAS Airline of Egypt, which was one of the first privately owned airlines in the region, but that slice of the business declined in 1995 in the face of strong competition and the company returned to its core business of ground handling. "Today, ground handling is still our main activity but we also carry out some charter flights and aircraft management," said Elias.

The company had previously looked at buying the Grob SPn but after a crash of the prototype the programme floundered. Then the Phenoms were becoming available.

"We are waiting for the AOC but are hopeful we will have it soon," Zarkani said.

As the tourism market in places like Sharm el Sheik continues to grow, there is more demand on top-end services. "We hear stories of wealthy tourists in Sharm who want to visit a temple and then have to fly commercial to Cairo, change flights, fly down to the nearest airport for the temple then have to do it all over again to get back. We will be offering direct flights, so they can see the temple and be back in time for dinner."

With other economic investments in areas such as Marshah Matrouh on the Libyan border, which is served a couple of times a week by EgyptAir, ZAS sees business as well as leisure opportunities. "We want to bridge the gap," Zarkani said.

Alkan Air an oasis of opportunities...

For millennia the oasis represented precious water and shade, a life-saving waypoint for travellers trekking across the burning, hostile desert. But then came air travel, and the refuge became a playground, far from the madding crowd but just a short hop from big-city home and business.

Whisking the rich and the famous to the oasis resorts of Egypt's Western Desert is something that Cairo-based air taxi operator Alkan Air is very good at. "With our Super King Air 350 we can easily fly to and from oases like Siwa and Dakhla," said general manager Awad Dargham. "These luxury hideaways aren't for anyone looking for a cheap holiday – guests include people like movie star Robert de Niro. By car the journey takes up to 12 hours of hard driving. In the King Air we can take up to 10 people there in an hour's flying time."

Founded in 1996 as Egypt's first air-taxi company, Alkan Air operates a Hawker Beechcraft 850XP alongside the turboprop. "Overall, our activity divides 50/50 between business and high-level tourism, though the proportion varies with the time of year," said Dargham. "At Easter, Christmas and New Year a lot of high-end tourists visit Egypt and rent an aircraft. We also have Egyptian clients who come to us on the big Muslim feasts of Eid al-Adha and Eid el-Fitr to fly with their families to places like Hurghada and Sharm el-Sheikh, or further afield to Lebanon or Greece."

The hot Egyptian summer brings work from well-off people who want quick A-to-B transport to their holiday destinations. "The cooler north coast,



Awad Dargham of Alkan Air.

particularly the newly developed area around El Alamein 200km west of Alexandria, is increasingly popular," said Dargham.

At other times of the year business travel can account for up to 65 per cent of the company's flying time – though even then there's a leisure dimension. "Some business people want a quick trip to see the antiquities of Abu Simbel while they are in Cairo," Dargham explained. "So we take them there, wait for three or four hours while they see the sights, then bring them back to Cairo or on to other destinations like Sharm or Luxor."

Alkan Air's top international destinations, served mainly by the Hawker Beechcraft 850XP with its 455kt top speed and range of 2,600 miles, are Tripoli in Libya, Lebanese capital Beirut and Jeddah in Saudi Arabia.

After a recession-induced dip last year, the company's results are now returning to the healthy levels of 2007-08, according to Dargham. But he's keen to develop other income streams and is looking first to the company's maintenance capabilities.

"We set up a maintenance department here ten years ago to save some of the \$60-70,000 it cost us every time we took an aircraft to Hawker Beechcraft in Switzerland for scheduled work," he recalled. "At the turn of this year we received Egyptian CAA approval to offer maintenance services to third parties and now we're pushing ahead to find clients that we can serve here in our hangar."

The company is a certificated Hawker Beechcraft service centre and can offer a full range of services up to and including C-checks.

The company dipped its toe in the water by providing SMART Aviation, its government-owned competitor at Cairo International, with hangar space and maintenance tooling. Now it's in sight of its first contract for work on third-party aircraft. "We are in negotiations with a couple of Egyptian Government King Air operators," said Dargham. "They currently send the aircraft to Dusseldorf in Germany for engine work at a cost several times what we would charge."

Alkan Air is also aiming to return to a market that it vacated last year. "We used to run a King Air B200 equipped as an ambulance but we returned it to the Egyptian Ministry of Health, which co-owned it with us," said Dargham. "Now we're planning to relaunch the service using a turboprop."





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Hospital at the heart of the EgyptAir operation

REPORT MARCELLE NETHERSOLE

et up in 1986, EgyptAir Hospital was initially established to provide health-care facilities for staff and all civil aviation employees. Today it is a medical hub for patients all over Egypt, and the world.

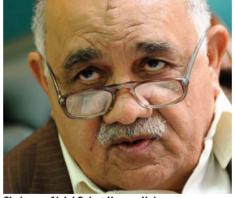
The hospital is the heart of EgyptAir Medical Services Company and at its helm is its chairman, Abdel Salam Hassan Helmy.

"When it was first established there were just 12 beds in the intensive care unit and now there are 47," said Helmy. "The hospital capacity is 202 beds and it has ten private suites. It has state-of the-art facilities for cardiac artery catheterisation, kidney dialysis and endoscopy procedures, as well as units for open-heart-surgery, liver transplants, spinal cord surgery and other specialised operations.

"It has comprehensive medical, surgical and diagnostic facilities including laboratories, radiodiagnosis and nuclear medicine units, nephrology, neonatal units, operating theatres and dental clinics.

"And, to extend our expertise and link to the world, we have recently merged with Georges Pompidou hospital in Paris."

All EgyptAir staff benefit from the hospital with full medicals every three months.



Chairman, Abdel Salam Hassan Helmy.

"We serve pilots, cabin staff, engineers and airport staff to full medicals which includes blood investigations," said Helmy.

The hospital, which treats around 87 patients a day, is specifically known for its expertise in heart and liver operations.

It has performed 201 successful major openheart surgeries and, since 2007, 48 liver transplant surgeries with a 91 per cent success rate.

The hospital, which has 200 doctors, offers 24-hour emergency room services, has seven

pharmacies as well as tailored therapeutic tourism programmes for visitors.

An air ambulance serves the tourist destinations around the country and the hospital's preventative medicine section works in close cooperation with EgyptAir to monitor the hygiene standards of the aircraft and food catering services.

Cairo International Airport is around ten minutes from the hospital. It has its own medical clinics there for emergencies.

Helmy explained: "We have four clinics at the airport. Any emergencies are then transferred by one of our four ambulances to the hospital. This includes any flight emergencies either with staff or passengers. Cabin crew can contact our call centre at the hospital and describe the medical situation. Staff then advise over the phone and we have an ambulance waiting for the flight."

Helmy has been chairman for only a year but has already earned the nickname in the country's media as 'The Bulldozer' due to the amount of work he has already done with great speed. In his first year he has bought medical equipment for 9 million Egyptian Pounds.

"We are currently looking to improve this hospital with a five-year plan," he explained. We continue to improve, from the infrastructure of



Top Left: EgyptAir Hospital

Above: Dr Ahmed Taha Mokhtar, Oro-dental Surgeon.

the building to the development of our medical equipment like X-ray machines, MRI, and CT scans. We also have the most advanced machines to test blood, viruses, bacteria and immunity, upon which we continue to improve.

"We are also upgrading the emergency room and equipping it with two minor operating theatres and five-bed ICU, establishing a minimal invasive therapy unit for treatment of backache without surgical intervention, opening a cardiac critical care centre and emergency cerebral stroke centre.

"Hospital beds and surgical trolleys are currently being renewed and we are expecting to be equipped with 34 new high performing smart bed systems for ICU.

"Also, a specialised outpatient clinic complex has been launched in Cairo Airport to serve workers in the field of civil aviation. We will be opening a new building to include 22 outpatient clinics in various specialties to serve a larger number of patients."

Medical tourism is also being improved along with therapeutic programmes in collaboration with Karnak Travel and duty-free office. The assigning of packages of different prices and levels to attract a different category of patients to medical tourism is also planned.



EGYPTAIR is the only airline to manufacture its own plastics for aircraft interior, as well as manufacturing for other airlines.

Aero Plast, part of EgyptAir's Supplementary Industries, a subsidiary of EgyptAir Holding Company, has its large factory located a few minutes from Cairo International Airport.

"We manufacture all the injection plastic used for catering on aircraft such as the cutlery, the plates and glasses as well as the plastic covering for sugar, creamers and the towel refreshers," said Kamel Mansour, chairman consultant.

"We also manufacture the plastic of the spare parts for the aircraft, particularly the seats, which is JAA certified."

The subsidiary started up in 2004 and rapidly grew in to a 24-hour, seven-day-a-week manufacturing facility

"We have a production section and a machine section and currently have 320 staff working on a shift basis so the machines are constantly running. Imagine the hundreds of passengers a day that all use the cutlery, which is then thrown away, apart from the catering equipment used in Business Class and First Class sections that keeps for longer," said Mansour.

The former General in the Egyptian Air Force has been chairman of the plant for four months and has

already increased the company's facility by buying three more production machines.

"When the factory first started out six years ago there were just four industrial machines and today we have 20. We buy them from all over the world, from Germany to Taiwan, but everything else needed, like the raw materials such as the sugars and creamers, we work with local supply companies."

EgyptAir is the only airline to produce its own plastic materials.

"We also manufacture for Nile Airlines, Yemen Airlines, Libyan Airlines and Nigerian Airlines, as well as VIP jets and we hope to add to that list. We are a very progressive facility here," said Mansour. "We make the designs here and we produce moulds with the CNC machines. Once an order is in we make the logo and start producing the moulds. From design to delivery it takes around two months. Obviously once that mould is set it is ongoing."

Mansour is looking to the future. "We're aiming to get new machines for injection forming as well as increasing the product line in the next year or two," he said. "We are also looking at new machines for the raw materials for the plastics and aiming to increase the product line for the spare parts for the aircraft as well as making the maintenance and repair for all airlines."

Catering for the Egyptian spirit

Joint-venture and new business means EAFIS is on a roll.

Alan Peaford reports.

ehind any great airline lays an army of service providers responsible for ensuring that crew have everything on their hand for passengers whether it is hot food or washroom towels.

Some companies opt to outsource these services while other airlines develop in-house resources to ensure the quality and delivery is exactly to their specifications.

EgyptAir developed its own in-flight services division known as the aircraft services and catering division more than fifty years ago but in line with the EgyptAir group of segmenting the businesses into individual units, the division reformed as a separate company in 2002 and branded itself as EgyptAir In-flight Services (EAIFS)

"This meant we had to look at how we worked and what else we could do," said chairman Mostafa Hassan ElGammal. "We were providing in-flight services for the entire fleet of EgyptAir and began to push as delivering service to other airline companies as well."

ElGammal talks about the "Egyptian spirit". "The Egyptians are hospitable people and welcoming. We made it part of our vision to deliver a competitive service to our customers with that true Egyptian spirit."

ElGammal and his vice chairman, Ahmed Ragheb show the other side of that 'spirit' as well. A determination to succeed.

"There are key drivers for us," said Ragheb. "Safety, quality, suitability and food hygiene are the keys to our competitiveness. We cannot and must not fail on any of these elements in our products and services. It is important for us to be seen as being environmentally responsible in any of the places we are operating."

ElGammal said "Human health is the most



important issue in our industry to implement and it is our policy to exceed all applicable government requirements."

The company has facilities at Cairo, Hurghada and Sharm El Sheikh with the two regional complexes having the capacity for 7,000 meals a day while currently serving between 3,000 and 4,000 a day.

At Cairo, the second busiest airport in Africa after Johannesburg, EAIFS has almost 3,000 employees and serves an average 20,000 meals a day there is even more opportunity for expansion.

ElGammal said EAIFS is looking at new ideas and has established LSG Sky Chefs Catering Egypt as a joint venture with German-owned LSG Sky Chefs. EAIFS holds 70 percent of the shares, while LSG Sky Chefs and Egyptian Aviation Services (EAS) are minority shareholders with 15 percent each. LSG Sky Chefs heads the entire operation with an experienced management team.

"Through this joint venture agreement we aim to contribute to the development of Cairo as a catering and logistics platform for Africa and the Middle East." Ragheb said.

"We have been present in Cairo for more than 30 years and we are very happy to expand our activities with this joint venture agreement," said LSG's Thomas Nagel.

When LSG Sky Chefs established a catering unit in Cairo in 1978, it was its first one outside of Germany. Since 1992, the in-flight services provider has been operating a customer service centre with EAS under a management contract. The combined catering activities of EAIFS, EAS and LSG Sky Chefs will increase the amount of meals produced in the facility from the current 2,000 to 7,200 meals per day. The planning phase for the operational transfer has already started in tandem with the building of a new facility with state-of-the-art technology according to international food safety and hygiene standards.

As well as EgyptAir, EAIFS has a good range of customers including Singapore Airlines, Royal Air Maroc, Etihad, Kenya Airways, SAS, Turkish Airlines and Yemenia.

"We work closely with the airlines to deal with special menu requirements" ElGemmal said.

EAIFS also provides in-flight duty-free items and now also operates a number of food outlets in Cairo's International airport.

"We believe in the service," said Ragheb. "We manage the laundry for the aircraft fabrics and linens, we supply dry ice and we are even providing event catering for the conferences and training sessions that take place on airport or civil aviation property."

In the past two years EAIFS revenues have almost doubled from just over \$36million to \$72million and further expansion is planned with additional locations planned at Borg El-Arab to serve the new Alexandria Airport and a new catering unit at Luxor.



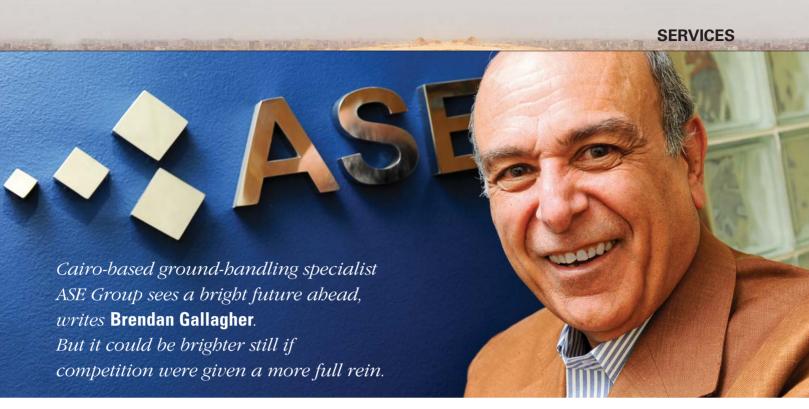
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anging on the wall of Mohamed Hanno's office in the Cairo suburb of Heliopolis is a photograph of a vintage airliner, Handley Page HP.42 Hanno. The big British biplane was part of the fleet that flew the inter-war Imperial route, which passed through Cairo on the way to India, the Far East and Australia.

"It was named after one of my ancestors, Hanno the Navigator of Carthage," joked the executive chairman of ASE Group, the groundhandling services provider that assures the efficient passage of millions of passengers through airports in Egypt, Morocco and the UAE.

With a 200-strong workforce and more than 30 years' experience, the company acts as the welcoming face of several leading European and Middle Eastern carriers as their passengers transit Cairo International, Sharm el-Sheikh, Hurghada, Alexandria and other Egyptian airports.

Biggest client

"Our biggest client is the Air Berlin Group, accounting for about 40 per cent of our revenues," said Hanno. "We started with one flight to Hurghada in 1994, when they had just four aircraft. Now they have well over a hundred and we handle more than 160 flights per week."

Germany provides two more customers – leisure carrier Hamburg International and low-fare operator Germanwings. Completing the customer list are Flydubai, NAS Air of Saudi Arabia, Aegean Airlines and LOT Polish.

"We have represented Flydubai and carried out passenger handling for them since they first entered service," Hanno said. "We were one of their first stations when they were still on paper. Now we handle their daily flight to Alexandria and expect them to open another two destinations this year."

NAS Air is supported on 22 flights a week to

Handlers call for a lighter touch

Alexandria and Assiut on the Nile. ASE provides Athens-based Aegean Airlines with station management, passenger handling, load control and ramp supervision for several flights a week to Cairo and Alexandria, and LOT Polish is supported on 16 flights a week to various destinations across Egypt.

Hanno takes pride in the fact that ASE was the first Egyptian handler to serve a Polish carrier. "We want to grow the business over the next two or three years but we won't do it by trying to take market share from our competitors. I prefer to look for new opportunities in Europe or here in the Middle East," he said.

He believes ASE is in good shape for the challenge, pointing to a resilient performance during the recession, a new company headquarters under construction, and new service offerings in development.

"During the recession we were affected primarily by the collapse of Sterling Airlines – we're still waiting in the creditors' queue," he admitted. "Some of our other airlines suffered to a lesser degree. But we see them more as partners than clients, so some sacrifices were made on our side and some on theirs and we maintained the same level of service. We took a long-term view."

With the downturn now easing in the Middle East ASE is in an expansive frame of mind. The company is due to move into its purpose-built Sky Centre in one of the new settlements close to Cairo International in the middle of next year. And its 24X7 operations centre, currently in temporary accommodation in Helipolis, should move back to the airport soon to take up space vacated by Egyptair in Terminal 1.

New service offerings

The company is putting the finishing touches to two new service offerings – "At this point I can't say any more because our competitors might grab the opportunity" – and is putting even more effort into its role as a leading advocate of standards for the ground-handling community.

Hanno is vice-chair of the IATA Ground Handling Council and is contributing to the newly launched effort to develop the IATA Ground Operations Manual (IGOM). The company helped to draft the standards underpinning the IATA Safety Audit Programme for Ground Operations (ISAGO) http://www.iata.org/ps/certification/isago and has since won certification at four of its stations.

There's one piece of regulation that the ASE boss would like to see the back of, however. "We need freedom in the provision of ramp services," he declared. "At present only two entities — Egyptair and the Egyptian Aviation Services consortium—are permitted by law to work on the ramp. Our clients have to contract with one or the other. This kind of protectionism is no longer useful. Where there's no competition there's no incentive for improved quality and new services."



Air show the gateway to growth

For years Egypt has been a sleeping giant in the aviation world – but that giant is awakening and the world will be beating a path to its door this November.

Alan Peaford

finds out why.

hink Sharm El Sheikh and you will picture the crystal clear waters of the Red Sea, luxury beach resort hotels and hospitality for which the Egyptians have become famous.

But this November the comparative silence of a breeze through the palm trees or the gentle lapping of waves against a sandy beach will be broken by the roars of jet engines as aircraft from around the world descend onto the Sinai's largest airport.

For Egyptian civil aviation minister Ahmed Shafik and the president of the Egyptian Civil Aviation Authority, Capt Sameh El Hefny the dates of November 7th-10th are key to whole rebirth of the industry in Egypt.

The occasion is AVEX, Egypt's own international air show

"Aviation is growing in importance throughout Egypt and it is a key element of what we are doing," El Hefny said. "AVEX is a great opportunity for us to show what we are doing and meet people from all over the world who want to be part of it."

This is the fourth edition of the show and is now being organised by Naseba – the French owned training and business information company that also organises the Doha Aviation Summit from its Middle East base in Dubai.

"There is a real focus on Egypt now," said Nicholas Watson, the Naseba's project manager.

"With a mission of making Egypt the gateway to Africa and the Middle East, the Egyptian government is playing a vital role in the development and expansion of the regional aviation sector," Watson says. "Couple that with the fact that the population of Egypt is the largest in the MENA region by far, and the country is experiencing a rapid growth in demand for aircraft and you can see why there is such interest."

Minister Shafik agrees. Talking to Arabian Aerospace at an event recognising the engineering capabilities of Egyptian MRO by the American FAA, Shafik reinforced the point that Egypt's role as a regional player could be much greater than it has been.

"We have an experienced industry here," he said. "We have shared links with the Middle East and the African countries. We really can be the gateway."

Watson does not see the show competing with the likes of Dubai.

"This is very much a boutique event gathering leading international businesses and buyers related to the small and mid-sized aircraft industry in a unique business-focused aviation expo, where we have exclusive opportunities to showcase aircraft," he said.

Business aviation is at the heart of the show.

"We have all of the major players coming," Watson said. "Gulfstream, Bombardier, Dassault, Cessna as well as Boeing and Airbus. For the airline activities we are looking at regional aircraft and up to the 180 to 200 seats where there is a real demand."

AVEX is a four day event with the first two days

assigned as purely business days, focused on business networking and deal-making opportunities. The final two days are for more casual approaches and will be packed with public attractions and exciting surprises for the thousands that will make their way to Sharm El Sheikh International Airport for spectacular displays and activities around the show. On show will be display teams such as the Egyptian Flying Stars, Jordan's Flying Falcons.

Alongside the show there will be the AVEX Awards 2010 recognising success in the industry and the show will also host the African Aviation Unity Summit which aims to unite African aviation businesses.

Chairman of the Egyptian Holding Company for Airports and Air Navigation Ibrahim Ahmed Manaa, the show will be playing its part in developing the business opportunities. "We have been working with AVEX since its inception and we are pleased to be partnering with the air show for its fourth run. We are confident the air show will outperform its previous successes, taking the aviation industry to a new level. The Africa and Middle East region is certainly proving itself to be a lucrative market in aviation and I believe AVEX will further boost the regions massive expansion," he said.

Watson believes the location of Sharm also makes a difference. "It is a great destination and a great place to do business. We need the industry to take notice of what is happening in this part of the world. There are issues such as shortage of pilots, MRO facilities and of course a lot more route development as the region opens up and there is an increase in spending on infrastructure."

Watson said there is a lot of interest from Asia. "This is an exciting time to be involved in this business. We are expecting around 3,000 trade visitors."











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INTERIORS INNOVATION



Inside information

The aviation industry's launch pad for cabin interiors innovations took place in Hamburg in May. New products and services that make flying more comfortable and more energy efficient were unveiled. This year there was a big focus on seats, galleys and IFE systems as **Marcelle Nethersole**

arious new aircraft seats were launched at the show as well as innovative new concepts, where manufacturers hoped to attract potential customers.

EADS Sogerma was hoping to find a launch customer for its Ultimate Sleeper concept.

Created in conjunction with Lufthansa Technik, this is an innovative Premium First Class bed and seating combination offering "the comfort of a real bed".

"The minimum seat pitch is 81in offering the passenger a real bed environment in a contained cubicle, shielded by an automatic sliding door," explained Jeffrey Forsbrey, cabin interior vicepresident of sales.

The cubicle also has its own mini-bar, built-in wardrobe and 30in television screen.

"We are also looking at lighter weight materials, such as carbon fibre, for the surround rather than the composite materials," said

EADS Sogerma hopes to have this product launched within two years.

Another promising new seat concept was displayed by B/E Aerosopace.

The Staggered Premium Suite concept is an innovative 2-2-2 layout, which allows both privacy and accessibility, but also gives an airline an overall higher density configuration. With a modern architectural design, the first class suite includes an electro-chromatic glass dividing screen, which provides the passenger with discretion at the touch of a button.

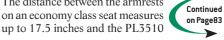
Recaro unveiled two new seats for economy and premium economy classes.

"Sitting for hours on long-haul flights in economy class will soon become a thing of the past," said Kay Follath, regional sales director. Skycouch, coverts three adjacent seats into a lie-flat flexible space. It comes with an ergonomic leg-rest that can be folded up to a 60 or 90 degree angle.

Air New Zealand is the launch customer and will start refitting each of its long-range Boeing 777-300 aircraft with 20 rows of Skycouch seats in December.

Another seat on display was the PL3510 which, Recaro said, is designed to bridge the gap between economy and business class and offer remarkable living space and comfort.

"The PL3510 is a premium class seat. It has a pitch from 36 to 40 inches and offers more width. The distance between the armrests Continued on an economy class seat measures



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CONTINUED FROM PAGE 80

features a wider, 19.5 inch seat surface," said Follath.

B/E Aerospace unveiled its latest economy seat — Pinnacle — which uses advanced proprietary technologies that significantly reduce cost of ownership, simplify maintenance and increase the overall passenger living space. The company said the savings are a result of a 15 per cent weight reduction over the lightest seat on the market, achieved through an increased use of composites, as well as an integrated lightweight comfort suspension system and a new design method that reduces parts by more than 25 per cent.

Pinnacle has already been selected by nine airlines and leasing companies for economy class projects in new-buy Boeing 737, 787 and Airbus A320 aircraft.

Two companies happy to sit together are Lantal Textiles and ZIM Flugsitz, which develop and manufacture passenger seats for commercial aircraft.

They have launched a premium economy seat featuring Lantals pneumatic comfort system, previously used in its first and business class seats.

Angelika Zimmerman CEO of ZIM, said: "Lantal's Pneumatic Comfort System adjusts automatically to the user's seating posture, so passengers feel no pressure points even on long-haul flights."

Lumexis brings fibre optics to the cabin

A new high-bandwidth fibre optics-based IFE system by Lumexis is being installed on all low-cost carrier FlyDubai 44 aircraft.

"There has never been fibre optics broadly in the commercial aviation field – it's always been in telecoms and military aviation – but we're bringing it to the cabin," said Doug Cline, CEO.

The agreement will see FlyDubai equip its eightstrong fleet of Boeing 737s with Lumexis's unique fibre-to-the-screen (FTTS) seat-back platform.

Cline previously headed up Sony Trans Com and developed the Passport audio/video-on-demand system. With his background, he brought a team from Sony Trans Com and Lumexis was born.

"Our single objective is to lower the cost of IFE ownership by half and that means you have to deal with the weight of the system," said Cline.

"We can double the reliability and produce and sell it for less. We believe the Lumexis system is the future of the industry."

Once installed the system weighs 2kg per seat, making the fibre-to-the-screen 50 per cent lighter than traditional IFE solutions.

Fibre optic cables connect each seat-back display directly with a head-end server.

The FTTS boasts a date rate of one gigabit per second, which allows for high capacity functionality. Up to 51 languages are installed in the system.

"For FlyDubai as a low-cost carrier it's all about generating revenue. IFE can be a huge loss for



Flydubai's CEO Ghaith Al Ghaith and Doug Cline Lumexis' CEO.

airlines, but with our system there will be no loss. The next step is to expand within the industry," said Cline.

JAMCO is handling the engineering and certification work and retrofit on the first FlyDubai aircraft will take place in October in Seattle after the low-budget carrier takes delivery of a new 737.



Daniel Percy with Spice.

Partners make a Quantum leap with the world's lightest trolley

The world's lightest certified trolleys were displayed by Canadian manufacturer Norduyn and its partner LSG Sky Chefs.

"Quantum is a new type of aviation trolley made entirely of composites," said Patrick Phillips of Norduyn. "It is significantly lighter, better insulated, sturdier, easier to track and trace and comprises up to 45 per cent fewer parts than legacy aluminum frame trolleys."

The trolley is made of a single body shell with top and wheel base attachments. All screw inserts are molded into the structure. This weight reduction enables measurable fuel savings said Phillips. "A single Boeing 747 fully-loaded with Norduyn ultra-light weight, eco-friendly trolleys for example, would be carrying approximately 850kg less weight, which amounts to about €80,000 a year in fuel savings and 13,600 tons less of Co2 emissions over a year."

Norduyn is a certified designer/manufacturer of aircraft products with a backlog of 16,000 trolleys. It got together with LSG Sky Chefs for good reason. "LSG Sky Chefs own and manage around 66,000 trolleys worldwide, so they know what they are talking about. They make a great partner and, of course, have great market success," said Phillips.

The partnership paid off during the show as the pair were runners-up in the elite Crystal Cabin Awards for Greener Cabin, Health & Safety.

Norduyn also pioneered the baby bassinet on board commercial flights four years ago. It is approved for installation onboard Boeing and Airbus aircraft.

Norduyn's customers include Saudi Arabian Airlines, Royal Brunei and Royal Air Maroc.

"We will also be seeing people from Emirates shortly. The Middle East region is one of great importance in terms of aviation. The airlines there serve their clients well in terms of catering and they are consistently in the top five of airlines, and we would like to be a part of that," said Phillips.

Airbus is also introducing a new galley cart branded Spice (space, innovative catering equipment). It already has three airlines interested and Airbus hopes to announce a manufacturer by September.

"Spice stores Atlas trays and drawers in boxes instead of trolleys," said Daniel Percy marketing manager of aircraft interiors for Airbus. "Weight is saved because Spice boxes are lightweight and don't need wheels or brakes. A twin-aisle aircraft will have eight to ten folding service carts to transport the boxes. They are modular, with four taking the same space as one meal box.

"Modularity is extended to the galley inserts, which allow full plug-and-play functionality, as well as more efficient use of space than today's galleys. We are saving a lot of weight by putting them in plastic boxes, which can weigh 6kg instead of the aluminum trolley which can weigh 21kg."

Installation of Spice allows for three more seats on an A330 and 10 extra on an A380.

Airbus has tested the system with 11 airlines and says this has "shown a generic business case that is very positive".



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It is the biggest event on the 2010 aerospace calendar. The Farnborough Airshow will open its doors to the industry on July 19.

Alan Peaford

looks at what is in store.

t was 90 years ago when the Society of British Aerospace Constructors – as it was known then – decided the world needed to see just what the aircraft industry was doing and, working with the Royal Air Force at Hendon, a show was born.

In July airframe manufacturers, component engineers, service providers, trainers and operators will be making their way to the small Hampshire town of Farnborough, 50 kilometres west of London, for the latest edition of what is now the second largest aerospace industry show in the world (after Paris) and to the airfield that has been home to the event for more than 60 years.

Among those making the trip will be exhibitors from Egypt and Morocco, who will be featuring at the show for the first time, joining others from some 38 countries that are looking to add to their global credentials.

With the global aerospace industry rocked by recession, there were many who questioned whether the show would match its previous successes.

There were no doubts from the organisers. Farnborough International's chief executive Shawn Ormrod said: "We have a fully sold out show. Farnborough has been on the calendar for 60 years on this site and is a bedrock of marketing plans for companies in this industry. While some regional shows have had cutbacks, we have found our customer base has been saying we must be there.

Continued on Page 86

"We never rest on our laurels and recognise

MENA EXHIBITORS AT FARNBOROUGH

More than 20 companies from the MENA region are exhibiting at the Farnborough International Airshow. Here is the who's who at the show and where to find them.

COUNTRY	COMPANY	BOOTH
Bahrain	Bahrain Air	H3/D10
Bahrain	Bahrain Airport Company	H3/D10
Bahrain	Bahrain Airport Services	H3/D10
Bahrain	Bahrain Duty Free Shop	H3/D10
Bahrain	Bahrain International Airshow (BIAS)	H3/D10
Bahrain	Civil Aviation Affairs Kingdom of Bahrai	n H3/D10
Bahrain	Gulf Air	H3/D10
Egypt	EgyptAir	H2/B11
Iran	Kish Free Zone Organization	H1/B9
MENA	Arabian Aerospace	H2/C6
Morocco	AMDI - Moroccan Investment	-
	Developement Agency	H4/B12A
Morocco	GIMAS - Moroccan Aeronautical and	
	Space Industries Group H4/B12A	
Qatar	Qatar Airways Cha	let: C27 - 28
Turkey	myTECHNIC Aircraft MRO Services	H4/C5
Turkey	TÉI - Tusas Engine Industries	H3/C6
Turkey	Turbomak	H3/D2
Turkey	Turkish Aerospace Industries	H3/C4
UAE ´	Abu Dhabi Aircraft Technologies	H4/D9
UAE	Al Jundi Journal/Mod	H2/C30
UAE	Dubai Airshow 2011	H4/A4
UAE	MEBA 2010	H4/A4
UAE	Mubadala Development Company Cha	let: C34 - 35

CONTINUED FROM PAGE 85

we need to mirror what our customers need and so we have been working hard to develop features, both for the trade and public show, to reflect what's happening in the industry."

With increasing exhibitors from the MENA region, Ormrod said the show also reflected the changing geographic emphasis from the industry.

"We expect to see numbers from the Middle East increase and our customers are expecting that too. Egypt and Morocco are here and Morocco has a pavilion for its manufacturing businesses."

There are 22 international pavilions and there will be official delegations from 26 countries. In all, there will be more than 1,000 exhibitors with almost 10 per cent of them attending for the first time.

Farnborough has organised a series of meetthe-buyer one-to-ones to encourage exhibitors to get together with the procurement officials to add value to the marketing efforts.

For the manufacturers there is no better way to show off products than to bring aircraft to the event – and this year there is plenty to see.

Visitors from airlines such as Qatar, Royal Jordanian and Emirates will be delighted at the show debut of the Boeing 787 Dreamliner, which is breaking away from its test programme to cross the Atlantic and take part in the static display.

The Dreamliner will have a part-interior fitted alongside the flight test equipment and will be on display for the first two days of the show.

Another debut will come from the Airbus A400M, the European tactical airlifter. The four-engined turboprop is positioned between the C17 and C130 and, following delays to the programme, the manufacturer is keen to add to international orders.

Turkey has so far ordered 10. The Gulf States and some north African air forces are seen as ideal candidates for the type.

Pakistan will also be in the limelight when it shows the JF-17 fighter for the first time. This is the joint Chinese-Pakistan project that was developed as a low-cost multi-role lightweight fighter to reduce Pakistan's dependence on western firms for advanced fighter technology.

There are questions about whether China has any enthusiasm to continue manufacture after the delivery of the 42 ordered by Pakistan but the first squadron is now flying and an appearance at the show could increase the interest from nations whose requirements are below those touted by the American or European manufacturers.

Those greatly enhanced competitors will also be on display in the shape of the Eurofighter Typhoon and the F-22 Raptor ... and for those with a taste for nostalgia there should be a deafening display by the iconic Vulcan bomber.

There will be indoor and outdoor UAV displays, a whole space programme and a conference.

Arabian Aerospace radio and Arabian Aerospace online will be reporting from the event.





The day my world

A highlight for spectators at the Farnborough Air Show this year will be the Blades, the only globally-accredited airline in the world to fly aerobatic formation offering passengers the opportunity of a lifetime.

Marcella Nethersole went to experience the ride for herself.

his was not a normal day at the office for me. I was heading to Farnborough Airfield to take a flight with The Blades and my first dilemma of the morning was whether or not I should eat breakfast. Was I going to be sick?

I decided it would be fine – after all I was going to be flying with ex Red Arrows pilots, among the best in the world, and figured they would be kinder to their passengers than they are to themselves in their amazing displays.

Once at Farnborough I was kitted out in my flying suit and parachute. After a ten minute 'airline' safety briefing I was given a headset and made my way down to the air strip along with three other passengers to where the four Blade aircraft sat waiting. It was very much a Top Gun moment and I wished my friends could see me.

The Blades fly German-built Extra 300 LP, one of the leading high-performance aerobatic aircraft in the world, and in front of the gleaming propeller I was introduced to my host, Dave Slow, a former Harrier pilot, otherwise known as Blade 2.

Dave made me feel at ease straight away. I was securely strapped into my seat at the front of the two-seater aircraft and, after a short briefing and some words of encouragement, it was time to start engines. Taxiing down, Dave explained over our headsets what to expect.

"We fly elements of the show with passengers as the actual display is too much. We start off



turned upside down...

with gentle manoeuvring and get people used to flying in gentle formation, then we can do some manoeuvring with that and, as the passenger gets more confident, we can separate apart and show what the extra can do if people want to experience that," said Dave.

All four Blades taxied to the runway. Being in Blade 2 meant we were next to the leader, Blade 1, who gives instructions to the other aircraft. With the build-up of engine power my excitement and adrenaline started to kick in as my clammy hands clung to the sidebars by my seat. All four Blades were now ready to take to the skies. And up we went.

The first thing that is obvious is how close the other Blades are to you, an eye-watering experience itself. How an earth do they remain so perfectly apart yet so close?

"With lots and lots of practice," said Dave. "On an average display weekend we can end up doing five flights in a day where three are displays and we will transit between display venues on the other two trips. Each flight is extra practice to make it perfect."

The glass canopy enabled me to have great views of the English landscape below, which looked very green.

It was very gentle but I was waiting with anticipation, as I knew a manoeuvre was coming up.

Dave made sure he communicated with me at

all times reminding me to say if I was uncomfortable or worried at any point.

"We will start off with gentle turns, then increase the amount of bank and go up a bit and down a bit and introduce a vertical element before building up to fly a loop," he explained.

I was all for it, expecting the sensation of a rollercoaster ride. It came. I was stuck to my seat barely able to move as we reached for the skies. Then we dropped and although dramatic it was slightly calming as you feel weightlessness, like you are floating. Then another force took over my body.

"You just experienced three to three-point-five g-force on your body as we pulled up from the bottom of the loop," explained Dave after we had completed a circle in the air. "The g washes off as you go up the hill because the aircraft slows down, so as you get to the vertical the g has gone back to about one and then as you go over the top you're down to zero g and then you get the same in reverse as you come out of the other side, so the g builds as the speed builds and as you pull out of the dive at the bottom you get back up to three to three-point-five g."

After I had composed myself I wanted more – and I got more

The Blades have flown more than 300 displays in front of 18 million people and carried over 1,000 corporate flying event passengers. Now a fully sustainable business since it was set up in

2006, the Blades is looking to scope out to other countries.

"We are constantly getting indication of demand in the Middle East. Every year we are invited to air shows there," said Dave. "We went out to Bahrain in 2006 for three months but we haven't managed to negotiate a right price to go to any more as it's quite expensive to pack up your organisation in the UK for one air show, which makes us quite an expensive product. The way to solve that is take this team as a little franchise and set up a new one out in the Middle East. Our difficulty will be recruitment, as we only recruit ex Red Arrows, who are few and far between."

The sky is not the limit for these guys and they want others to experience it too.

"We want to push people past their perceived limits but nowhere near their real ones and that is a real skill, as everyone has a different limit," explained Dave. "We don't want to make anyone air sick; that is not what the experience is about. It's about an adrenaline rush and fun."

With their own chalet at the Farnborough Air Show the Blades are hoping that their supporters from the Middle East will take up a corporate offer and try a flight for themselves. And I would recommend it.

I came back down to earth with breakfast fully in place and the biggest smile on my face from an unforgettable experience.

Britain looks to strengthen ties with the Middle East

Britain has been a partner to Arab aviation since the industry was in its infancy.

Alan Peaford

meets the head of the UK's aerospace industry to find out how it works today.

inks between the United Kingdom and the Arab world have a long-standing legacy. From the time that the early flying boats were crossing from Europe to Asia and the first Avro Anson was piloted by Sir Freddie Bosworth - the man credited with founding Gulf Air, which started the first air taxi service between Bahrain, Saudi and Oman - the British were investing in the infrastructure and equipment needed to develop and aerospace industry.

Now, with second largest aerospace industry in the world, the UK is looking to strengthen its ties with the region.

In June A|D|S, the UK's AeroSpace, Defence and Security trade organisation, signed an MoU with the Middle East Aerospace Consortium (MEAC) and the Farnborough Aerospace Consortium (FAC) to further expand its international footprint by establishing a business development and representative presence in the Middle East.

The offices will be in Dubai and Jeddah, with the intention to open two more in Bahrain and Qatar in the next 12 months.

A|D|S, FAC and MEAC have agreed to work together to provide opportunities for A | D | S and FAC members to enter or expand their Middle East operations.

Avoid duplication and confusion

Ian Godden, chairman of A|D|S, and Farnborough International, the organisers of the Farnborough Airshow, said the relationship with the Middle East Business Aviation Conference (MEBAC) and the FAC helped avoid duplication and confusion in the regional marketplace and allowed better access for as many as 3,000 small and medium sized businesses that operate in the aviation and defence sectors in the UK.

The UK uses the Farnborough Airshow to reinforce its credentials and A | D | S is a supporter of the Dubai Air Show. Farnborough International worked as a partner with the Bahrain Civil Aviation Authority to help organise the Bahrain International Air Show earlier this year.

The association's objective has been to make sure industry

was aware of the services and technologies available from British companies.

It opened an office in Toulouse ten years ago to support the UK's participation in Airbus projects which, at the prime end, includes making the wings for the A380 and the engines for many of the Airbus

More recently a representative office opened in Bangalore and one in Japan to support activities in those markets. The organisation has plans for Brazil and China, too, but at the moment the Middle East is top of the agenda,

Increasing activities in the defence sector and, more recently, in the manufacturing or lan Godden: Commitment to the market.

industrial development in places like Al Ain or Dubai, has meant increasing opportunities for the great army of unknown businesses to partner or be part of the development.

In the defence sector, for example, the British have more SMEs than the French, German, Italian and Spanish industries combined, and in the civil sector it employs more than 100,000 people with a strong emphasis on high technology work.

A|D|S is working closely with British Governmentbacked bodies such as UK Trade & Investment Defence and Security Organisation (UKTI DSO) and is also encouraging inward investment and partnerships from the region.

Opportunities in the region

"There are lots of opportunities in the region, both in areas such as offset projects and in-service provision," Godden said. "In Abu Dhabi, for example, the investment in creating an aerospace hub in the same way that Singapore did so successfully a few years back, means that there will be demand for the type of businesses that exist in the UK."

A|D|S| was created earlier this year through the merger of the former Society of British Aerospace Companies (SBAC) with the UK's Defence Manufacturers Association and the police and public security suppliers association.

"There is a lot of overlap as we look across security, aerospace and defence," Godden said.

Major developments in UAV technologies are exciting the UK association and the organisation is pioneering the use of the unmanned systems in a manner that will get public approval. These developments cross the whole spectrum from homeland security through to full defence application.

"By positioning ourselves across the region we hope to demonstrate our commitment to the market," said Godden. "We will have permanent staff and will work closely with MEBAC and the Farnborough Aerospace Consortium. It is

an exciting time."

Rees Ward, chief executive of A|D|S, said: "The Middle East is a vital area of future growth for the UK companies that we represent and our members are attractive partners for industrial collaboration for companies based in the area. It is crucial for our members, as well as the UK economy, that we boost our presence in this important region.

"We look forward to further expanding our mutually beneficial co-operation with FAC and MEAC that will, in turn, assist our members, representing the cream of UK manufacturing and services, to boost their access to a vital. growing international market."





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It's still all Systems go as

The close links between the UK's aerospace industry and the Middle East are nowhere more apparent than through BAE Systems.

Jon Lake takes a look at the ties with the defence manufacturer.

AE Systems and its predecessor companies have had a presence in the Middle East market since before the Second World War and the company takes some pride in the fact that its Arab air force customers have flown aircraft like the Spitfire, Vampire, Meteor, Hunter, and Lighting fighters, and trainers like the Chipmunk, and Strikemaster, as well as a host of transport and support aircraft.

The company has also long had an extensive footprint in the region, providing maintenance, engineering, logistics support, training and other services, including significant numbers of contract aircrew.

While Saudi Arabia is BAE's biggest regional customer, the company also has a presence in Bahrain, Egypt, Israel, Jordan, Kuwait, Oman, Qatar and the UAE. Last year, it opened a full office in the Hashemite Kingdom of Jordan, complementing the network of offices the company operates across the Middle East and Africa. The new office is to be used as the focal point for the company's business in Jordan and in neighbouring countries, including collaborative

activities with the King Abdullah Design and Development Bureau (KADDB).

BAE is still associated in the public mind with aeroplanes, though the company is now the largest defence company in Europe and is ranked number two in the world, so its activities are far more diverse and wide-ranging. The three most important of its aircraft products in service in the region are the Hawk, the Tornado and the Typhoon.

BAE's Hawk trainer remains in service in large numbers in Bahrain, Oman, Saudi Arabia, and the UAE. At previous Farnborough Air Shows, the company outlined plans for an ambitious upgrade to earlier Hawk variants. Many saw this as having been aimed in part at Saudi requirements and at the UAE, whose air force seems to have some need to retain its Hawk fleet, even after the newlyselected (but still not ordered, and much-delayed) Aermacchi M-346 Master trainer finally enters service. But BAE sources suggest that the emphasis of Hawk marketing has shifted back to new-build aircraft, both in the Middle East and in countries like Poland, where an upgrade to ex-Finnish Air Force Hawk aircraft was once thought to be a strong contender.

Large numbers of BAE-supplied Panavia Tornado tactical fighters form the backbone of the Royal Saudi Air Force's offensive capability and are undergoing a major upgrade in-country. In November 2009 Saudi Tornados hit the headlines when they participated in air strikes aimed against rebel Shiite Hawthi forces in neighbouring Yemen, following the killing of a Saudi soldier on the border.

The new Eurofighter Typhoon is in service in Saudi Arabia and eight single-seat aircraft and two two-seaters have already been delivered, of a total of 72 aircraft on order. The first 24 of these are being built in the UK, but the remainder are expected to be assembled locally, reflecting BAE Systems' determination to move ever further from the simple straight-forward sale of





BAE continues to grow

platforms to providing through-life capability and support through local joint ventures.

The Typhoon seems likely to gain further customers in the region and an imminent UK/Oman government-to-government deal to supply about 16 aircraft to the Royal Air Force of Oman has already been widely reported.

But even for the company's Military Air Solutions division, BAE's product range extends beyond traditional manned aircraft and the company now proudly boasts to be leading technology development in the Unmanned Autonomous Air Systems (UAS) sector.

Innovative products like the Herti (operationally proven by the UK RAF in Iraq and Afghanistan) and Mantis are already flying, and the company has even more advanced systems under development. And though Peter Anstiss, a BAE board member whose portfolio of responsibilities includes that of business development director for BAE Systems' Military Air Solutions division, admits that: "there is a lot of regulatory work that is needed, not just in the Middle East but around the world", before unmanned systems can reach their fullest potential, he is convinced that they represent: "the future of aerospace".

But the company is about more than selling aircraft, whether manned or unmanned, as Anstiss explained: "BAE Systems has been able to forge long-term relationships with countries across the region through our military aircraft programmes and we are now actively looking to further our strategy of industrial collaboration in the region, focusing on through-life capability, which will facilitate a sharing and transfer of knowledge and skills between countries."

BAE Systems' operations in Saudi Arabia and the wider region have always included support activities, primarily, but not exclusively, centred around combat aircraft. In Saudi Arabia the 'localisation' (Saudization) of these support activities is spearheading a transformation of incountry work into what the company calls a home market — somewhere that goods will be developed, manufactured and serviced locally. Technology and work is being progressively transferred to the Saudi Economic Offset Companies and BAE Systems Saudi Arabia has made a major commitment to the training of local nationals, bringing them into management, technical and other qualified positions.

The proportion and number of local nationals employed by BAE is growing year-on-year, such that Saudi nationals now account for about 2,450 people, or just over half of the total BAE Systems' workforce in Saudi Arabia. This makes BAE Systems one of the largest private sector employers of Saudi nationals.

But local industrial collaboration extends beyond local work on BAE-supplied aircraft in service in the region, and beyond increasing local employment on existing in-country activities. BAE Systems has, for example, been awarded a five-year £150m contract by Eurofighter GmbH to provide an avionic equipment repair support service in the region, which will support the domestic Typhoon fleets in the air forces of Germany, Spain and the UK.

The company's Regional Aircraft Division's Asset Management business has also won an exclusive mandate from an unnamed Middle East operator to remarket a GE CF6-80C2B7F-powered Boeing 767-300ER wide-body airliner. This aircraft is being marketed to a wide range of potential buyers and lessors, including existing Boeing 767 customers, and to operators who have ordered next generation Boeing 787s or Airbus A350XWB but who need interim capacity until these delayed aircraft are delivered, as well as into the freight and VIP conversion markets.

The company is also placing a growing emphasis on non-aerospace activities, including the sale and modification of military and commercial armoured and unarmoured vehicles and systems integration for homeland security and other areas.

BAE today is a global organisation with an incredibly diverse range of activities. No wonder it doesn't like being called British Aerospace.







Rolls-Royce - a classic model for success

For UK engineering giant, Rolls-Royce, the Middle East has come to represent a classic example of the company's core strategies at work - based in the commercial aviation sector on the success of its modern large engines business and associated services agreements, plus a willingness to engage in technology projects with regional partners.

Martin Johnson reviews the success story.

n civil aerospace terms the real breakthrough in the Middle East region can be traced back to the 1970s with the appearance of the RB211 engine on an assortment of Boeing 747 variants flown by Saudi Arabian Airlines. Compared to the benign operating environment in Europe, conditions in the Middle East proved a severe test to equipment in those formative years

but the in-service experience gained by the first three-shaft engines was to

prove invaluable for their Rolls-Royce successors.

The emergence of the Trent series – the reference to "RB211Trent" on all engine registration plates throughout the Trent family underlines their lineage – has been the foundation on which Rolls-Royce has built its current position in the Middle East and North Africa. Orders from customers including Egyptair, Emirates, Etihad, Gulf Air, Middle East Airlines (MEA) and Yemenia are responsible for the Trent's market share of more than 40 per cent on the region's modern wide-bodies.

Thanks to regular technology upgrades resulting in thrust increases and extended time on-wing, the original Trent 700 has emerged as the most powerful option on the A330 and has maximised its

performance advantages – particularly evident on higher weight versions of the aircraft – by being selected by eight out

FARNBOROUGH PREVIEW

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of the nine MENA operators. An 80 per cent market share in the region reflects its dominance.

Significantly, it was the first Trent chosen by Emirates, paving the way for a family affair which included Trent 800s for the airline's Boeing 777s, the Trent 500 on growth versions of the Airbus A340 and, subsequently, the latest Trent XWBs for up to 120 firm and option A350XWBs.

Six Middle East customers have helped ensure the success of the Trent XWB, which remains the sole engine for the new Airbus twin. Orders include the largest piece of firm engine business ever won by Rolls, a \$5.6 billion engine and services deal involving 80 aircraft, agreed with Qatar Airways.

Green technology initiatives are already an established part of Rolls-Royce activities in Qatar. The company is part of the Qatar Science and Technology Park (QSTP) whose mission is to create a hub for technology development, education and research in the region. QSTP chairman Dr Tidu Maini said the centre will be particularly valuable for nurturing young Qatari talent. "Having Rolls-Royce in QSTP will help us deliver great technologies and will form part of our path to support the national vision. We are very keen to develop capacity building programmes and this endeavour will be beneficial for Qatar and beyond."

Fuel usage analysis

Among the QSTP initiatives announced this year is a fuel usage analysis being carried out by Optimised Systems and Solutions Inc (OsyS), a wholly-owned subsidiary of Rolls-Royce, which will create a plan to support Qatar Airways' corporate social responsibility programme to reduce fuel consumption and carbon footprint.

The well-established links with Abu Dhabi's development and investment company, Mubadala, are also a key focus for Rolls-Royce. A new joint venture is offering the On-Wing Care services package through Abu Dhabi Aircraft Technologies (ADAT) and, as Miles Cowdry, president – services at Rolls-Royce explained, the potential is immense. "The Middle East is a rapidly growing market and the United Arab Emirates presents a major hub for airlines and aerospace activities within the region. This joint venture extends our existing presence and close partnership with Mubadala. On-Wing Care, and the provision of a line replacement units leasing pool, form valuable operational support and are part of our global service strategy."

Meanwhile, Rolls announced this year that it was to become a founder member of the King Abdullah University of Science and Technology industrial collaboration programme. The company has a long-standing presence in Saudi Arabia and this association forms part of its strategic plan for broadening its operations and interests in the kingdom.

As a senior partner alongside Pratt & Whitney in the International Aero Engines consortium (IAE), Rolls-Royce has an established and

ROLLS-ROYCE Above: The RTM322 thrives in hostile conditions on the NH-90 multi-role helicopter. Left: Qatar is one of the main customers for IAE's V2500 - good news for Rolls-Royce as a

growing presence in MENA's mid-size market sector. Following on from long-time customers such as Saudia, which uses the V2500 engine on its Boeing MD-90s, IAE's converts have included A320 family operators Qatar and Etihad (both of whom continue to demonstrate strong appetites for growth) along with Royal Jordanian, MEA and Egyptair. A recent addition to the IAE customer list was DAE Capital, the leasing arm of Dubai Aerospace Enterprise, which ordered V2500s for 20 A320s, bringing IAE opportunities for further operational exposure throughout the region.

Strong presence

Rolls-Royce also has a strong presence in the defence sector with more than 1,000 military engines in service in the region. The Royal Saudi Air Force operates the Tornado, Hawk, C-130 and Typhoon, while the Egyptian Air Force has Commando helicopters powered by the Gnome and C-130s with the T56.

In Bahrain, the latest version of the Adour, the Mk951, extends the long and successful presence of that engine in the Middle East, powering the Jaguar and Hawk aircraft of four air forces in the region.

The RTM322, which has proved extremely

durable in hot operations, has become the engine of choice for the NH-90 multi-role helicopter. More than 90 per cent of NH-90 customers, including Oman, have selected this engine. Both the RTM322 and the Adour are products of the Rolls-Royce Turbomeca joint venture.

senior partner in the consortium.

The Light Helicopter Turbine Engine Company (LHTEC) T800 is operating in Oman, where it powers the fleet of Super Lynx 300 helicopters.

Continued high rates of growth predicted in the commercial aviation sector will spearhead opportunities for Rolls-Royce to make further inroads in Middle East markets. With the major carriers still in expansive mood and determined to keep the average age of their aircraft to five years or less, Rolls will hope that the Trent will maintain its popularity in the crucially important high-thrust band.

The company's own market outlook anticipates that the region will require almost 3,600 new aircraft by the mid 2020s, well over 800 of them being twin-aisle jets. Add to that the fact that MENA is currently responsible for 12 per cent of engines on the world's firm order backlog, and the magnitude of the prize assumes a clear perspective.

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Oman in co-operation talks over space projects

A 12-member delegation from Oman visited the Emirates Institution for Advanced Science & Technology (EIAST) in Dubai in May to discuss joint co-operation and future development plans over its space programmes.

The delegation comprised members of the Oman Astronomical Society (OAS), Sultan Qaboos University and the Sultanate's Telecommunications Regulatory Authority.

The visit was aimed at discussing aspects of cooperation between them and learning more about the vital role played by DubaiSat-1, the first remote sensing satellite owned by the UAE.

The team, headed by Dr Saleh Said Al Shidhani, chairman of OAS, visited the ground station connected to DubaiSat-1, the image processing and data analysis lab, and the assembly integration and test room.

Ali Rashid Al Suwaidi, associate research engineer of the ground station, gave a detailed

presentation on the launch process of DubaiSat-1 and how the ground station is connected to the satellite for receiving images.

Ahmed Al Mansoori, director general, EIAST, said: "Today, scientific space research has a key role to play in driving overall socio-economic development. These researches are focused on the employment of advanced technologies to strengthen the march of human civilization and human advancement and have, indeed, become a beacon of hope for solving planet Earth's problems and crises.

"With the successful launch of DubaiSat-1, the UAE has established a site for research and advanced technology in space to provide useful solutions for the overall welfare of the nation.

"The visit of the Omani delegation is important and will be followed by more visits for joint co-operation. EIAST seeks to promote the culture of advanced scientific research and technology innovation, and

establish international collaborative links and joint projects with industry and research organisations."

UAE has plans for three new satellites. A second observation satellite funded by the Dubai government is likely to orbit the Earth in the second half of 2012 and there are plans to develop two more.

A spokesman for EIAST said DubaiSat-2 will be more advanced than the existing DubaiSat-1 – the UAE's first Earth observation satellite launched at a cost of US\$50m in July last year. The images it collects are being used for urban development, scientific research, telecoms, transport, construction and mapping.

DubaiSat-2 will be technologically more advanced than its predecessor and will have better commercial applications. It will produce higher resolution images, which will be commercially available.

EIAST also said there are future plans for DubaiSat-3A and DubaiSat-3B.

Three UAE students for NASA training

Three Emirati engineering students are to undergo training at the National Aeronautics and Space Administration (NASA) Ames Research Center in California.

The training is the result of a partnership between NASA and the UAE-based Arab Youth Venture

According to an agreement signed last year, NASA will give between three and 12 UAE engineering students each year the opportunity to work with US students, scientists, and engineers on NASA missions. The programme's goal is to engage outstanding college students from the UAE in fields of science, technology, engineering and aerospace.

The UAE student involvement will also provide the US young engineers of the future with experience and knowledge about working together with representatives from other countries.

Lisa-Renee LaBonte, chief executive officer of the Arab Youth Venture Foundation, said the partnership with NASA will help to strengthen UAE's goal to mobilise more local skills in promising sectors such as aviation, space, information technology and computers. "Space science has a unique ability to inspire

young people to the pursuit of studies and jobs that lead to innovation and leadership based on thought," she added.

Best service award for Arabsat

The Arab Satellite Communications Organisation – Arabsat – has won a SATCOM Stars Award for best service provider, satellite communications, 2010.

Khaled bin Ahmed Balkhyour, president and CEO of Arabsat said the award "crowns the efforts of Arabsat to expand its geographic coverage to serve customers on the African continent and in all Arabsat coverage areas".

This latest award joins Arabsat's others – "Pioneer in Satellite Telecommunication in the Middle East 2007", "Best Satellite Organisation in MENA 2008" and the "IBC2009 Innovation Award for Content Delivery" and Judges' Prize for most influential project of the year, Multimedia Exchange Network Over Satellite (MENOS)".





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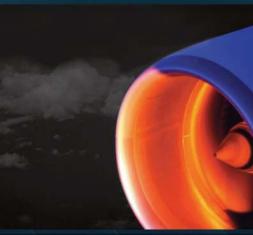
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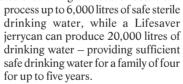


Life-saving water system is adapted for aircrew survival

eveloped in the wake of the 2004 tsunami and hurricane Katrina in 2005, Lifesaver Systems' innovative microfiltration technology is still being used to bring clean, safe water to survivors of natural disasters – most recently in Haiti and Chile.

Frequently, disasters are accompanied by contamination of the local water supply, meaning that safe sterile drinking water can be impossible to get hold of. Airlifting in Lifesaver bottles and jerrycans provides an ongoing and enduring source of clean water, allowing the exploitation of whatever water sources there are on the ground, however badly contaminated they may be.

It has been calculated that a single Lifesaver bottle can



The company has already adapted the same technology to produce the military Lifesaver Hydrocarry UF, a lightweight flexible backpack containing two or three litres of water, and similarly able to produce filtered sterile drinking water quickly and easily from any local source, removing bacteria, viruses, cysts, parasites, fungi and all other microbiological waterborne pathogens effectively, without using chemicals. The Hydrocarry, which weighs 15 ounces empty, can be folded for storage when not in use.

Arabian Aerospace understands that this technology — already in demand by aid agencies and armies — is now also being developed for use by air forces, especially across the Middle East and North Africa. A miniaturized version of the Hydrocarry is under development to meet aircrew survival requirements, for incorporation in the survival packs now fitted to aircraft ejection seats, for example, and in aircrew survival vests and waistcoats.

Downed aircrew may require as much as 10 kilos of water per day in a survival or escape-and-evasion scenario. Lifesaver technology makes it unnecessary to carry the extra weight of a full day's worth of clean water and allows it to be quickly collected from streams, rock pools, muddy puddles or dirty ditches, with no need to stop and boil it, or to use purification tablets or chemicals.

Water is carried 'dirty' and is filtered on demand rather than on collection. This means it can be quickly scavenged in the field, using a scoop-and-go approach. When water is needed, the user just gives the Lifesaver a few pumps and as soon as the teat is opened, clean drinking water begins to flow.



Why the UAE's navigation centre is the strongest link

The Sheikh Zayed Air Navigation Centre of UAE's General Civil Aviation Authority (GCAA) has become the first in the world to implement the Air Traffic Services Message Handling System (AMHS) and link three states in the Middle East.

In 2009, the UAE became the first in the Middle East to electronically link AMHS with Oman. In January 2010, it became the first in Asia and Europe to establish a second electronic link with Jordan and it was the first in the world to establish a

third electronic link with Qatar in April.

Saif Mohammed Al Suwaidi, director general of GCAA said: "Our aim is to make the UAE a global link and a point of reference for other countries in the region in respect of air navigation services, applications and technology. Since the Sheikh Zayed Centre was opened in November 2009, it has gone several steps in terms of communications with world countries."

AMHS is a modern electronic messaging system used to transfer and deliver air traffic flight-related safety and emergency information among the members of the alobal air traffic control community.

All messages carried by AMHS and AFTN are defined by ICAO and are used by air traffic controllers, airports, airlines and flight staff, meteorological offices and emergency services

AMHS supersedes the older AFTN, which has been in operation since 1930, and which has serious limitations on the type of information it can carry.

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AIRPORTS ROUND UP

Dubai World Central officially opens

Dubai Airports officially opened Dubai World Central – Al Maktoum International (DWC) - for cargo operations on June 27, welcoming inaugural flights operated by Rus Aviation, Skyline and Aerospace Consortium.

"Phase One is the first step in a long infrastructure development project that over time will see our new airport transformed into the world's largest global gateway and a multi-modal logistics hub that plays an increasingly integral role in the ongoing economic and social development of Dubai." said Sheikh Ahmed Bin Saeed Al Maktoum, President of Dubai Civil Aviation Authority and Chairman of Dubai Airports.

"It is a proud day for Dubai and an auspicious occasion for the future of global aviation."

Phase One of the airport features one A380 capable runway, 64 remote stands, one cargo terminal with annual capacity for 250,000 tonnes of cargo and soon will include a passenger terminal building designed to accommodate five million passengers per year which will open early next year.

When completed, Dubai World Central-Al Maktoum International will be the largest airport in the world with five runways, four terminal buildings and capacity for 160 million passengers and 12 million tonnes of cargo.

"Although it is a long-term project, the need for a second airport in the near to mid-term is clear," said Paul Griffiths, CEO, Dubai Airports.

"Dubai International currently has capacity for 2.5 million tonnes of cargo while volumes are expected increase 48 per cent to 3 million tonnes by 2015. On the passenger side we expect to see numbers skyrocket from the 41 million that passed through Dubai International in 2009 to 98 million by 2020 and 150 million by 2030," Griffiths said.

He said that the new airport's facilities and connectivity to the Jebel Ali Port and Jebel Ali Free Zone by a bonded road is being acknowledged by early adopting airlines.

"We are delighted with the response from cargo operators who are seizing the opportunity. DWC opened today with 15 cargo airlines signed up and we expect that number to increase steadily over the next few months," he said.

Cargo carriers that have signed up to operate into DWC include Aban Air, ACI, Aerospace Consortium, Aviation Service Management, Coyne Airways, EuroAsian Services, Gatewick, Ramjet, Reem Style, Rial Aviation, Rus Aviation, Sonic Jet, SunGlobal, Skyline and United Aviation Services



Time for new ideas at airports, says Grad

"So much has changed in the last few years that we can't go on working in the same old way," Airport International Group (AIG) chief executive Curtis Grad told April's Aviation Outlook MENA conference in Cairo. "Airport operators need to actively stimulate airline interest in using their facilities, and that means offering some novel ideas."

In 2007 AIG won a 25-year concession to operate Queen Alia International Airport in Amman. Since then, Canadian-born Grad has overseen significant year-on-year growth in passengers passing through the airport of the Jordanian capital. Passenger traffic for the first quarter of this year was close to 1.1 million, a 21 per cent increase on the corresponding period in 2009, while aircraft movements were up 14 per cent at just short of 14,000.

"Queen Alia International is steadily emerging as the airport of choice in the Levant region," said Grad. "Last year was particularly challenging for the industry but these results demonstrate both the resilience of the Jordanian market and the effectiveness of the strategies we are implementing to create a robust and sustainable regional hub."

Over the past two years the airport has announced the addition of new services or additional frequencies from full-service or premium airlines such as Royal Jordanian, Emirates, Etihad and Wataniya, as well as



Above: The opening of Dubai World Central. Left: Curtis Grad: "Ostrich egg layout."

low-cost carriers like Air Arabia, Flydubai, airBaltic and Vueling Airlines. "Much of our recent growth has been created by LCCs serving the Gulf region," said Grad.

A new terminal with a maximum capacity of nine million passengers a year is due to open at Queen Alia International in 2012. "We're aiming for seamless disembarkation and re-embarkation for connecting passengers," said Grad. "Our new 'ostrich egg' layout will allow them to transfer without having to walk for miles – the last thing we want is to alienate passengers by requiring them to move from one terminal to another."

Grad also introduced the idea of "budget" terminals – facilities purpose-built to serve LCCs. "That would raise the possibility of differential pricing by the airport operator," he said. "The LCCs would pay less for a leaner level of service, while the full-service airlines would be charged the standard rate for use of the conventional terminal."

To seize the opportunities offered by self-hubbing, the airport operators needed to sit down with like-minded airlines to analyse passenger flows through the terminal and other issues, Grad concluded. "Our airports are an immovable asset – we can't shift them to where business might be better," he said. "So we have to be very in tune with our customers, and that means rising to the challenge of attracting the LCCs."

Lean management, a global term increasingly talked about in almost every industrial sector, is now the focus of the Middle East aerospace industry. **Alan Martyn** of Simpler Consulting clears up the confusion surrounding the subject, explains how it is suited to the region and looks at best practice.

Lean Air: why it makes sense



ean is considered by some to be the most effective method of ensuring a company is running as efficiently and cost-effectively as possible. However, many people in the commercial and military aerospace and MRO sectors still lack understanding about what it involves and how it should be implemented.

Adding to the challenge for Middle Eastern organisations is an underlying scepticism about whether the lean management approach can survive the cultural differences inherent in the region.

Perhaps the best way to understand the potential benefits is to look back at the history of the methodology and where it originated.

The lean management approach can be traced back to an integrated socio-technical system developed by Toyota between 1948 and 1975. The 'Toyota Production System' (TPS), the term coined for the technique, was designed to organise the manufacturing and logistics parts of the Japanese automobile giant's business.

Although recent events have somewhat soured Toyota's reputation, the effectiveness of the TPS system was quickly recognised and soon spread throughout the automotive industry, with the likes of Ferrari, Porsche and Ford reaping the benefits of increased efficiency and cost-savings. Such success was not going to be ignored by

other manufacturing industries for long and soon various variations on the original TPS were making their way around the globe. As a result, today lean can be found at the heart of every successful manufacturing and service industrial process.

The extent to which the principles have spread across the globe indicates the relative ease with which they can be transferred across regional and cultural borders, lending support to the argument that the benefits can be brought to the Middle Eastern aerospace industry.

Common dilemma

While the lean approach has long been used by Western aerospace and defence manufacturers in the production environment, its integration into Western MRO operations took place only relatively recently. It was not until 1999 that we see the first use of lean techniques in MRO, when the US Air Force attempted to respond to a common dilemma: it didn't have enough heavy lift transport aircraft to meet the demands of its operations.

Whether in a commercial or military fleet, the demand to deliver the right level of capability is a daily challenge. The US Air Force faced two choices: invest in further equipment, or improve its maintenance processes to get more capacity

from its existing fleet. It chose the latter and enlisted lean methods to support a re-evaluation of its maintenance operations.

By examining in detail the processes undertaken when an aircraft was docked for repair and maintenance, and redesigning them to ensure that each stage was as efficient as possible, the lean programme allowed the US Air Force to reduce the duration of the maintenance process by 35 per cent, with the number of days each aircraft was grounded reduced from 339 to 220. This allowed it to boost the capacity of its fleet, without needing to purchase a single additional aircraft.

After this first result, the use of the technique in the military expanded from MRO into frontline operations and command and control processes. This represented a significant development, showing that the process can be applied anywhere in a commercial or military operation.

The potential of lean management to help air forces enhance the efficiency and effectiveness of their existing fleets without the need for additional investment has sparked interest from a number of Middle Eastern air forces and commercial MRO providers.

While some assume that "oil-rich states" are unconcerned about the efficiency of their operations, the reality is always quite different,

LEAN MANAGEMENT



and all are interested in getting more military capability from their fleets.

In this respect, lean techniques are ideally suited to the current situation of many Middle Eastern defence operations. Many have invested heavily in assembling a fleet consisting of the most advanced technology, but don't necessarily yet have the processes in place to ensure that these fleets can be utilised to yield maximum operational capability.

A good first step in implementing a lean programme or improving existing initiatives is to pinpoint one particular area of business need where an initiative will have the greatest first impact. By identifying a financially or operationally significant part of the business that can be improved, lean programmes can quickly prove their worth and secure staff buy-in, without disrupting the company as a whole. It is very important that any improvement targets should be balanced in terms of delivery, quality, cost and personal aspects of an operation. For example a commercial MRO provider might aim to achieve the following four results in this initial project:

- 20 per cent financial savings;
- •30 per cent improvement in delivery turnaround;
 - 25 per cent decrease in warranty defects;
 - Improvements in human development for

example the cultural integration of a multinational workforce, reducing the transient nature of some staff and the accompanying knowledge loss.

Another crucial aspect of a successfully implemented lean programme is ensuring that each element is designed specifically for your organisation. Putting in place generic programmes is simply a waste of time – each company runs processes and methods of working that are unique.

Staff and cultural buy-in is a must too. Understandably, any meaningful change will only happen when the majority of staff sees something better.

Local customs and cultures

One of the most common arguments made against the 'imposition' of outside management approaches is that they fail to take into account the nuances of local customs and culture when attempting to streamline operations. Indeed, the dangers of this are obvious. In the Middle East, religious observance plays a significant role in everyday working life: if changes are made to business practises that cause conflict with employees' beliefs and values, the chances of success will be jeopardised.

The bottom-up approach of lean management

ensures that potential tensions such as these are highlighted at an early stage and never become an issue since the change is "by the people for the people". Local workers would not dream of changing something so culturally important to them, so it never becomes an issue, with lots of opportunities found elsewhere for lean-based improvement by the team.

Once success has been achieved in this first step it allows the concept to be rolled out to the rest of the business and facilitates the transfer of knowledge. This sharing of information is important and means that once the initial consultation period is over, staff at all levels have the knowledge to implement further enhancements. Improvement can continue throughout the entire business and knowledge gaps created by key personnel leaving the organisation can be prevented.

The fundamental benefits lean management can offer – improving productivity by making better use of existing resources – fit well with the goals of many organisations and air forces in the region, who wish to increase the effectiveness of their current equipment. Once initial concerns about the compatibility between lean methods and regional customs have been allayed, the sector stands to gain hugely from a more focused, streamlined approach to its operations.

TRAINING LEADERSHIP

Ayla to promote the role of women at conference

he first Women in Aviation conference in the Middle East is to be launched by Ayla Aviation Academy next

The Jordanian flight training academy, located in Aqaba, hopes the conference will bring women in aviation together.

"The purpose of the conference is to highlight the contribution of women in the field of aviation," said Kinda Sarrage, business development manager.

"Aviation is a young and growing field in the Middle East yet it has engaged women on many levels within the industry.

"We would like to highlight women's contribution to the field of aviation, within the region and abroad, learn from women's past experiences and their "know how" for women just entering the field, and highlight that it is a matter of ability not sexuality that will enable you to succeed in aviation."

The conference will also focus on the advantages and benefits of employing and investing in women, future challenges for the industry and how to overcome them.

"We want women in the region to realise that the aviation industry is not just a man's world, but one in which women can also thrive.

"This conference will be used to attract companies and individuals from the aviation industry, including women, top management of airlines, civil aviation authorities, military representatives, engineers, non-government organisations and educational institutions that promote the advancement of women," said Sarrage.



First Emirati graduate success for Etihad Airways

The importance of Arab nationals taking more involvement in the burgeoning aerospace industry is becoming apparent across the MENA region.

While pilot training has been attracting interest for some time, governments are keen to encourage a wider role for locals across the board.

The UAE's national airline Etihad Airways has responded and the first Emirati trainees from the Vocational Education Development Centre (VEDC) successfully graduated from their work placement programme at Etihad's airport office in Abu Dhabi. Eleven trainees received their certificates at a special ceremony at the company's training academy in the capital.

The group was the first from VEDC to have been invited by Etihad to complete a six-week customer service programme. Upon completion of their training and final graduation from VEDC, the UAE national trainees are offered full-time positions as ground staff agents with Etihad.

James Hogan, Etihad Airways CEO, said: "Each trainee demonstrated remarkable drive and ambition during the programme. As the national airline, it is vital we have UAE nationals on our front lines at airports around the world, welcoming our customers and giving them a first-hand

experience of the culture and hospitality of Abu Dhabi and the UAE."

The trainees began their programme in February at Etihad's academy, where they received two weeks of theoretical training covering Etihad's mission and vision, the history of the airline and business etiquette.

The programme also offered four weeks' at Abu Dhabi International Airport, where they received hands-on customer service training, spending time learning about the various departments including check-in, boarding, transfer desk, and ground service.

Upon receiving his graduation certificate, Mohammed Al Rumaithy from Abu Dhabi, said: "We were all extremely happy to have been selected. We were very proud to sit in our national dress, welcoming and helping passengers arriving in our country. The programme taught us a lot about customer service and many of the group are looking forward to joining Etihad after completing our studies."

The Etihad Airways Emiratisation Program offers a wide range of opportunities for UAE nationals. The airline has an English language training programme, cadet pilot scheme and a technical engineering development programme, as well as the graduate management development programme to UAE nationals.



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FINANCE LEASING



ames Geldenhuys, head of aircraft finance at Johannesburg-based Nedbank Capital, sees a growing range of opportunities in secondary finance. "We found that there were deals where aircraft are coming out of the first round of finance and the big guys – major lessors etc – are not interested in equipment 10-12 years old."

Nedbank capital recently completed sale-and-leaseback (SLB) arrangements on two Boeing 777-200s with Emirates and Veling (based in Mauritius – see veling.aero). Both Nedbank Capital and Veling also have offices in London and are well established in aviation now.

"It was great as it ended up being an all-African financing deal for Emirates," said Geldenhuys, who added that Nedbank Capital's typical deal (or 'ticket') size is \$25-30 million and involves narrow-bodies or regional aircraft rather than widebodies. It currently has 21 aircraft in its portfolio (as of the end of May) along with rotables and some spare engines.

So what changes has Nedbank Capital seen in the aircraft market over the past 18 months?

Geldenhuys said lots of banks have dropped out of the

Record profits increase for Emirates Group

South African finance could offer a solution.

Emirates Group has posted a record profit increase of 248 per cent, describing the results as outstanding in a year fraught with worldwide market instability and economic uncertainty.

Sheikh Ahmed bin Saeed Al Maktoum, chairman and chief executive of the Group said: "It has been an exceptional year of continued profitability against a backdrop of the worst global recession in generations. The first half of the financial year, however, was extremely challenging as the world continued to grapple with the economic crisis. Our pioneering spirit and ability to adapt in adverse conditions helped us to push through this harsh economic climate with an extremely strong performance in the latter part of the year."

The Group's net profits increased 248 per cent to AED 4.2 billion (US\$ 1.1 billion) for the financial year ended March 31 2010. Group revenue

remained stable at AED 45.4 billion (US\$ 12.4 billion) reflecting lower passenger and cargo yields offset by increased traffic. The Group profit margin improved to 9.1 per cent from 2.6 per cent a year earlier.

Emirates Airline revenues remained stable at AED 43.5 billion (\$US 11.8 billion), an increase of 0.4 per cent from the previous year. Airline profits of AED 3.5 billion (US\$ 964 million) marked an increase of 416 per cent over 2008-09's profits of AED 686 million (US\$ 187 million). Emirates SkyCargo carried 1.6 million tonnes of cargo, an improvement of 12.2 per cent over the year's previous 1.4 million tonnes. Cargo revenue at AED 6.3 billion (US\$ 1.7 billion) is 8.1 per cent lower than last year as the result of declining yields. Cargo revenue, including mail and courier, contributed 17.2 percent of the airline's total transport revenue.

market, having "taken a step back" after the credit crunch. "There's a lot of inventory out there now and this is reflected in the margins. Pricing is much more scientific than it was a couple of years ago – but it helps us that the bigger players are concentrating on their big clients.

Geldenhuys: "Ours is more a rifle than a shotgun

approach."

"We look at what comes along in the secondary market, rather than jumping at RFPs (airline requests for proposals) — as they are mostly for new equipment. We don't want to come up against country credit ratings. Ours is more a rifle than a shotgun approach. And, from a raising dollars viewpoint, a three-to-seven year term is the sweetspot."

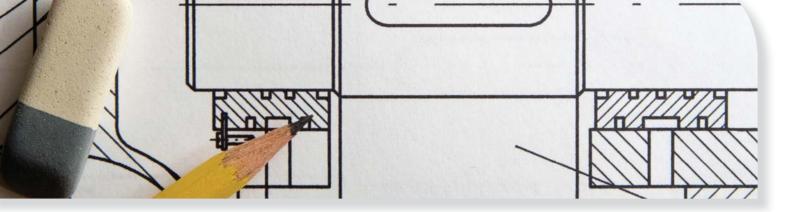
Geldenhuys defends South Africa as a source of finance and related services, saying: "South African banks were much better prepared for the economic downturn than most international banks due to higher capital adequacy ratios and also being more conservative than some of the bigger banks."

He also said Nedbank Capital deals with "first class respected firms relevant to the jurisdiction" and has "a strong in-house legal team". So it is well placed, it seems, to take advantage of increased market activity, although Geldenhuys is cautious still: "I think banks will remain conservative and that the capital markets will come back first, before the banks reconsider their stance. It's the old story of the play between balance sheet and asset value."

Nedbank Capital's aircraft finance team is particularly looking to be involved with experienced lessors. Geldenhuys said: "Lessors are good at identifying profitable, and therefore better, transactions in the second-hand market — while the market on new equipment is very competitive with a lot of the big banks focusing only on that segment.

With some experience of the Middle East market under its belt, Nedbank Capital believes it is well placed to serve that market and to grow its portfolio. It is an international market and it has not found any barriers to entering the fray in the Middle East, although it has not seen clients expecting Sharia-compliant financing.

"We have not done Sharia deals before and currently don't have the expertise. We have not experienced a demand for this type of finance, perhaps due to the market segment that we do business in," concluded Geldenhuys.



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EVENTS



Bulls eye in Abu Dhabi

bu Dhabi's claim to be increasingly an aviation-city took another turn as the 2010 season of the Red Bull Air Races kicked off to a flying start in the UAE capital at the end of April.

This was the second of a three-year relationship between the Abu Dhabi Tourism Authority (ADTA) and Red Bull to position Abu Dhabi as the flagship host city of the championship's season opening round.

This arrangement works in tandem with the

WORDS AND PICTURES: PAUL MERRITT

Formula 1 racing calendar and, together with other planned major events, is set to enhance and maximize Abu Dhabi's position as a key destination for cultural, sporting and tourism activities, as well as being a city of great opportunity and vision.

"With the capital's stunning seafront and skyline serving as its backdrop, the Red Bull Air Race brings Abu Dhabi city to the forefront like no other event we hold," an ADTA spokesman

This year the event provided the estimated 300,000 spectators with plenty of drama unfolding over the two-day extravaganza as pilots had to cope with a new race circuit and unstable weather conditions.

Qualifying day resulted in Austrian Hannes Arch, of Team Abu Dhabi, (last year's winner) again dominating by coming first with Nigel Lamb (UK) second, Paul Bonhomme (UK) third and Matt Hall (AU) fourth.

However, the weather conditions on race day brought the added challenge of 40 deg C heat and gusting winds with blowing sand.

This proved challenging for the pilots with many being penalised for various race infringements.

One of the major upsets was Arch being disqualified for dangerous flying while favourites Goulian (US) and Hall (AU) were forced to retire due to technical problems.

Race winner was Bonhomme with Lamb second and Peter Besenyei (HU) third.

All three, who happen to be veteran Red Bull pilots, put their podium places down to tactics and skill to combat against the adverse weather.



Facing the media after the race



Next BIAS date announced after launch event success

Farnborough International (FIL) has confirmed it is to once again partner with Bahrain's Civil Aviation Affairs (CAA) to organise the next Bahrain International Airshow (BIAS).

Dates for the show have been announced as January 19-21 2012.

Since the conclusion of the launch event, FIL and CAA have held extensive discussions around BIAS 2010, including the review of feedback received from participants. Following the confirmation of dates for the second event is a series of planning meetings between FIL and CAA to decide on which developments and initiatives will be introduced in order to add further value for participants and visitors.

Speaking ahead of EBACE 2010 in Geneva, FIL chief executive, Shaun Ormrod said: "It is with great excitement that we confirm our intention to collaborate once again with CAA on the Bahrain International Airshow 2012 and announce the dates of the show.

The launch earlier this year was a resounding success for all concerned – organisers, participants and contractors alike. Without doubt, there will be developments for 2012's event; exactly what these will comprise at this stage is still under discussion. However, it is very likely that there will be greater opportunity for demonstrating aircraft in extended flying displays, a more structured civil and military delegations programme and further opportunities for engagement with Royal Bahraini delegations and ministers."

Captain Abdulrahman Al Gaoud, undersecretary for Bahrain's CAA, echoed this saying: "CAA was highly delighted with the outcome of the inaugural BIAS in January and I have received the highest praise for the organising committee and the event from His Highness Sheikh Abdulla bin Hamad Al Khalifa. It is our wish that the airshow should grow in stature with more iconic international companies to be invited and to improve the facilities and offerings of the show even further."

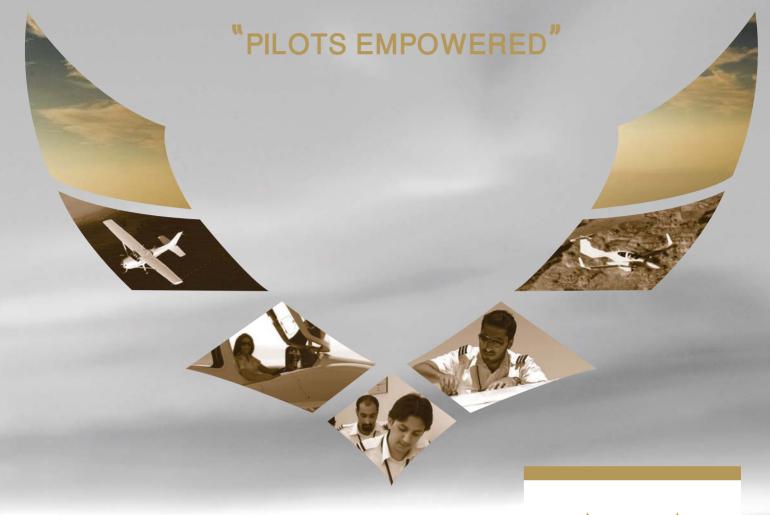
MEBA facing 'unprecedented demand'

F&E Aerospace said it is facing an unprecedented demand for space at this year's Middle East Business Aviation show (MEBA 2010) and is now taking bookings on a first-come, first-served basis. The show takes place from December 7 to 9 at Dubai's Airport Expo.

The last MEBA show in November 2008 attracted some 250 exhibitors from 30 countries and more than 5,500 visitors; this year's running of the event is on course to achieve up to 350 exhibitors and some 7.000 visitors.

Alison Weller, managing director of F&E
Aerospace said: "The number of bookings and
reservations we received at EBACE is indicative of
the enormous level of interest shown by business
aviation companies worldwide in this region."

More than 70 business aircraft will be displayed on the outdoor static aircraft park, which will also feature more company pavilions than in previous shows, along with the hospitality chalets.







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Let's work together, say Contractair

n 1997 Frances Cooremans saw a niche in the market to supply flight deck and cabin crew staff to supplement an airline's operations department on an interim basis and set up Contractair.

Today the UK-based company is one of the world's leading established flight crew leasing companies. Besides specialising in contract and permanent flight deck and cabin crew placements, it also offers training solutions, flight operations support, aircraft repossession and ferry and positioning flight services, where its Contractair Onecall product focuses on providing a comprehensive package, incorporating all aspects of the process required in moving an aircraft.

"We work together with airline companies worldwide, both for commercial and VIP operators," said Cooremans. "We are one of the few agencies to hold labour licenses in Germany, Switzerland and Belgium. We recruit during times of pilot shortages, for example, or when an airline is changing fleets, or when its own pilots are in training and it needs temporary crew. To date we have 30,000 pilots on our books.

"Our training instructors and examiners

have more than 2000 hours' experience on a wide range of aircraft types including; A320, A330, A340, B737, B474, B777 and Embraer E-Jet series, and other types upon request. We also do license renewal checks and work with some Type Rating Training Organisations," said Cooremans.

As well as Europe, the ISO 9001:2008 accredited company does a lot of work in the Far East and it was one of the first agencies to place pilots in China.

The Middle East and North Africa are also prominent regions, Cooremans said: "We do a lot of work with Egyptian carriers, which is one of the reasons why we're at the Cairo conference. We also have a substantial amount of VIP work in North Africa and the Middle East."

Contractair is now part of the large Resource Group, although Contractair still retains its own identity.

"Contractair is a company that does things properly. We don't take short cuts. We undertake thorough checks of our crew and keep abreast of current legislations at all times, ensuring trouble free transitions for both our clients and crews." said Cooremans.



Frances Cooremans: "30,000 pilots on our books."

Gulf Air names new deputy CEO

Gulf Air has appointed Maher Salman Al Musallam to the position of deputy chief executive.

Al Musallam is a Bahraini who brings a wealth of experience gained from a career spanning 35 years in the Royal Bahraini Air Force.

Chief executive, Samer Majali said: "The airline is continuing its rapid implementation of the new strategy and we certainly welcome someone of Mr Musallam's calibre to the team."

MAJOR REGIONAL AIRPORTS LAND NEW TOP MEN

Two major airports in the region have appointed new chief executives.

James E Bennett (right) is the new boss at Abu Dhabi while Gordon Dewar steps up at the new Bahrain Airport Company.

Bennett had been president and CEO of the Metropolitan Washington Airports Authority (MWAA) since 2003, where he led a multidisciplinary organisation consisting of more than 1,400 employees operating Ronald Reagan Washington National, Washington Dulles International Airport and the Dulles

Bennett was, among other things, responsible for the execution of the \$7.1billion reconstruction and expansion of Dulles Airport; in addition to the \$1billion that it has previously invested in Ronald Reagan Washington National. Bennett also becomes chairman of the American Association of Airport Executives in May.

H.E. Khalifa Al Mazrouei, chairman of

ADAC, said: "Jim joins ADAC at an important phase in its short history and I am confident that, under his leadership, it will continue to develop into a world class airport company.

"We have a clear vision for the future of ADAC and for the airport businesses within the group and I believe Jim is ideally qualified to help us realize that vision over the coming years."

Dewar joined Bahrain Airport in July from Edinburgh Airport in the UK, where he was credited with helping the Scottish capital's airport grow dramatically.

Kamal Ahmed, chairman of Bahrain Airport Company, said: "We are confident that Mr Dewar has all the right credentials and the relevant experience, especially in managing airport operations and expansions.

"I trust he will develop on the work that has been done and pursue the strategic plans we have set to realise our vision of a global aviation hub."



DAE names new sales head

StandardAero, a Dubai Aerospace Enterprise (DAE) company, has named Marc Wittingen director of international sales for the company's airlines and fleets business sector.

Wittingen will be responsible for leadership of the sales force, customer relationship management, and capturing new opportunities in Europe, Africa, Middle East, Russia, Asia and the Pacific Rim.

Al Raisi steps up at Oman Air

Oman Air has appointed

Abdul Aziz Al Raisi as chief officer, management affairs. Al Raisi has worked with the airline for more than 26 years, starting as an engineering trainee. In his new position,

SAFI AIRWAYS ANNOUNCES NEW TOP FOUR

Safi Airways has announced four executive management appointments as part of its strategic expansion plan for the region.

They include John
Roijen as chief financial
officer (CFO), Christoph
Blaha as director
maintenance, Tom De
Geytere as chief
development officer (CDO)
and Christoph Götzmann as
vice president of cargo and
general manager for
Europe.

Safi Airways chief commercial officer Claus Fischer, said: "These industry specialists bring with them a wealth of experience and knowledge and we are bound to benefit from their expertise."



he will continue being involved in all technical projects involving all new aircraft being acquired by Oman Air.

Chief executive Peter Hill said: "We believe he will add a new perspective to our vision and are positive he will continue assisting Oman Air effectively in its expansion plans."

Saif Al Suwaidi chairman of ACAC

Saif Mohammad Al Suwaidi, director general of the UAE's General Civil Aviation Authority (GCAA), has been elected chairman of the Executive Council of the Arab Civil Aviation Commission (ACAC).

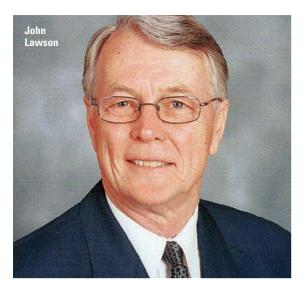
IT strategy top job for Al Badi

Etihad Airways has appointed Khawla Salem Al Badi as head of business strategy development in its information technology (IT) department. Al Badi, a UAE national, will be responsible for aligning the airline's IT strategic work programme with its business strategy in areas relating to pricing, crew planning, flight operations, in-flight catering and business intelligence.

Lawson to chair Project Phoenix

Former Bombardier business aircraft chief John Lawson has been named chairman of Project Phoenix – the Dubaiheadquartered conversions





business. Lawson has served as a business consultant to the company since it was founded in early 2007 and will now take a more formal role. "We are delighted that John

has accepted our offer to join as board chairman and has, in fact, taken an equity position in the company," said Project Phoenix president Mike Cappuccitti.

ETIHAD APPOINTS UAE NATIONAL TO KEY ROLE

Bassam Abdullatif Al Mosa has been appointed Etihad's vice president of corporate investments and subsidiaries.

Al Mosa, a UAE national, will be responsible for managing investment projects for Etihad Airways, including: maintaining financial control; reporting; and managing Etihad subsidiaries from a board perspective. In addition, he will continue to seek new strategic investments opportunities for the airline.

James Hogan, Etihad Airways CEO, said: "As the national airline of the United Arab Emirates, Etihad is dedicated to attracting top Emirati talent for our key senior roles across our expanding network."

Al Mosa also holds key positions in a number of Etihad's subsidiaries including being chairman of the board of the Airline Services Centre and a board director of both Amadeus Gulf and Aldar Etihad Investments Property.

Before joining Etihad, Al Mosa held roles as the head of banking at Abu Dhabi Free Zone and company corporate treasurer at Dophin Energy Limited. A graduate of Portland State University, USA, he holds a Bachelor of Finance and a Master Degree of Public Administration.



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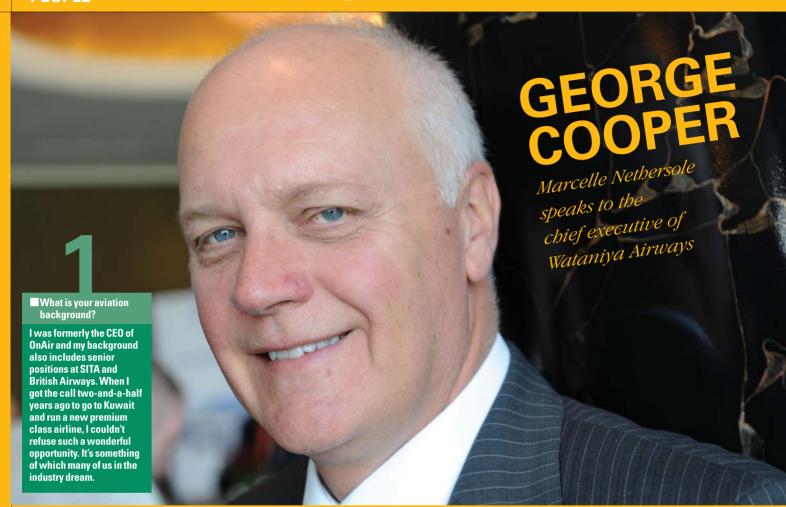
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PEOPLE



■ Is being CEO of a new premium class airline a challenging task?

Starting afresh with a new airline is extremely challenging but very exciting. We launched in 2009 which, commercially, was a very difficult year for the aviation industry so we knew we had to do something special and make an impact. It made it a challenge but an exciting one.

3

■ What has been the response by customers since Wataniya's launch?

It has been excellent.
Commercially there is still a lot of work to be done but we're very pleased with the guest service feedback we get.

We get approval ratings that in my 35 years in the industry I have never seen. We are receiving 92 per cent excellent/very good for the overall service, 95 per cent excellent/very good for our staff.

This is the bedrock for the future of this premium service company and, if you don't have that, you don't have much of a future.

What does a typical day for you involve?

I like to go to Sheikh Zayed terminal early in the morning to see the first wave of flights off. I then may have a meeting with our operations people over there to discuss what has been happening and what is expected in the coming days. I have been known to make spot-inspections of the toilets in the first class lounge, to the delight of the cleaners!

Then I head back to HQ and meet with external people, perhaps from the travel trade, and have internal meetings. Every day I touch base with my chairman as we work closely together. At the end of the day I go home to my long-suffering wife.

■ What key plans has Wataniya for 2010?

Major news is with the arrival of our sixth aircraft and opening up new routes to Alexandria, Istanbul, Rome and Vienna.

Opening up to European destinations represents quite a big strategic move for us because up to now we have been a regional player in the Gulf and Middle East, so stepping into Europe for the first time is another sign of our success.

6

■ Do you enjoy living in Kuwait and how do you spend your time?

I do enjoy living there. The only downside is the heat in the summer. But Kuwait is a relatively easy place to live. My wife and I live in a nice neighbourhood with both ex-pats and Kuwaiti people and we are friends with many so there are plenty of social activities going on. One thing I always try to fit in every week is a game of golf.



Stepping into Europe for the first time is another sign of our success.



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