ISUE 2, VOLUME 5: MAY 2013 – JULY 2013 ARABIAN ARABIAN

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN THE MIDDLE EAST, NORTH AFRICA AND TURKEY

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### A true safety culture is everyone's responsibility

arlier this quarter I had the honour to chair a conference organised under the auspices of the Dubai Civil Aviation Authority (DCA).

The subject was aviation safety culture - not just safety, but safety culture.

Civil aviation authorities from Africa, Europe and across the Middle East attended, as did airlines and even manufacturers.

Safety is that important.

And while many of these conferences focus on safety itself - the regulations, the practices, the case studies - this looked at it differently.

What IS the culture of the organisation?

How do the people in that organisation work particularly when they are under stress?

And is safety really the organisation's number one priority, or is it really relegated once cost is involved?

What impressed me the most was openness and commitment to change by both the private and public sector organisations; an openness that reflects, perhaps, the way that the region is embracing IOSA, recognising human factors - and doing something about it.

Safety by pilots - whether commercial, military or private - is essential. But so, too, are the practices of the air navigation providers, the ground crew and everybody else that makes our great industry successful. The key to all of this is communication and the processes of awareness, understanding and commitment.

Communication internally is vital - there is no excuse for airlines, operators, airports and regulators not to share information with their colleagues, nor for senior managers to do anything other than walk the talk and demonstrate the behaviour expected of the frontline employees.

And, externally, we need to be doing more to be reminding passengers and the public that they are making use of the safest means of transport available.



Qatar Civil Aviation Authority's stoic approach to the postponement of the opening of its flagship new airport on safety grounds is to be applauded. It wouldn't have been many years ago that a state would have pushed on as a matter of national pride. Qatar did the right thing and demonstrated to nationals, the region and the world that safety is the first priority. Safe landings.

> Alan Peaford, editor-in-chief Arabian Aerospace

#### COVER: Iragi Airways director general Captain Saad Al-Khafaji. **Picture: Billypix.**

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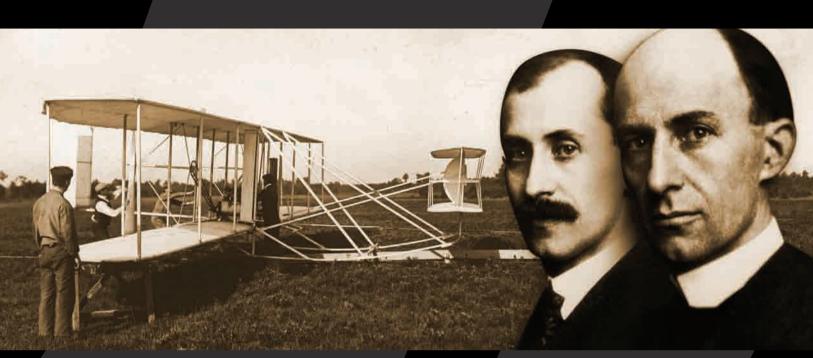
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### **Jet Aviation opens** FBO at Al Maktoum

Jet Aviation Dubai has officially opened its new FBO facility at Dubai World Central's Al Maktoum International Airport.

The company was granted permission to permanently operate an FBO at the airport following its appointment as the dedicated ground handling service provider for the Middle East Business Aviation (MEBA) exhibition in December 2012. It will continue to provide maintenance and FBO operations at Dubai International Airport.

The new FBO provides 24/7 handling services, such as immigration and customs support, crew transportation, hotel reservations and catering coordination. Aircraft services include taxiing, luggage handling, lavatory drainage and an aircraft refuelling service, for which all Jet Aviation FBO and MRO customers in EMEA receive preferential rates.

Amenities at the facility include two new customer lounges.

### **GAA** training deal with Bahrain

Gulf Aviation Academy (GAA) has signed a comprehensive training



### Super duo's Sydney display celebrates partnership

Two Airbus A380s flew in formation over Sydney's worldfamous Harbour Bridge to celebrate the launch of a tie-up between Emirates and Qantas - and then got on with business as usual. The aircraft from the new partnership were then together at Dubai.

The formation flight was believed to be the first time anywhere in the world where two separate airlines have flown together in formation.

agreement to deliver aviation training services for Bahrain Airport Company (BAC) and its personnel.

Under the agreement, GAA will be providing a wide range of specialised and accredited training services including IATA airport operations. dangerous goods, first aid, safety management system, and fire and safety.

In addition there will be other soft skills and leadership courses and workshops delivered at

GAA's training facilities at **Bahrain International** Airport, such as customer service, management development and aviation higher education degrees.

### **CAE** training boost from Dassault

CAE's training centre in Dubai joins its sister facilities in Bordeaux. France; Little Rock, Dallas and Morristown, USA; and Burgess Hill, UK; in celebrating the award of a Falcon training policy

The pilots had been training in simulators for months in preparation for the spectacular flyover, which was done at 450 metres (1.500 feet).

Permission for the unprecedented manoeuvre had to be sought from safety regulators in both Australia and the UAE. Australia's competition regulator formally approved the Qantas-Emirates tie-up in March, allowing them to combine operations for an initial period of five years.

manual (FTPM) certificate, which validates that CAE is delivering superior quality training services for Falcon pilots and maintenance personnel.

The FTPM is the highest level attainable by a Dassault authorised training provider (DATP).

### Mubadala's university challenge

Mubadala Aerospace has signed a \$1.5million agreement with UAE University to train the next

A 3,760 metre runway, capable of handling

The present airport is set for more expansion

generation of Emirati technicians to work at Strata's aircraft composite production facility.

The initiative, with key modules delivered by professional trainers from Lockheed Martin, builds on the success of existing programmes, which have already seen nearly 100 Emirati staff join Strata over the past two years.

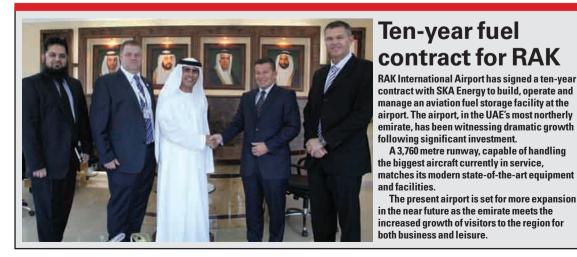
This programme will introduce an additional 90 to 100 Emirati employees to Strata by early 2015.

### **Turkish Airlines** orders extra A330s

Turkish Airlines has signed a firm order for two additional A330-300 passenger aircraft and three options as part of the carrier's continued growth plans.

The additional order takes its total firm order for the type to 38.

The new aircraft will be deployed on medium and long-haul routes from the Turkish Airlines hub in Istanbul.





### Etihad net profit jumps 200%

Etihad Airways reported a net profit of \$42 million in 2012 – up 200% on 2011 – in a year that saw strong improvements in revenues, passenger numbers and cost control.

Revenue increased 17% to \$4.8 billion (\$4.1 billion), on passenger numbers up 23% to 10.3 million (8.4 million). These numbers were boosted significantly by Etihad's equity partnerships and codeshares, which delivered more than \$600 million in total revenue.

### Sharklet 'double' for Air Arabia

Sharjah-based low-cost carrier Air Arabia has become the first airline in the Middle East to take delivery of a sharkletequipped Airbus A320. It has since taken delivery of a second.

Air Arabia has now received 16 of the 44 A320 aircraft it ordered from Airbus in 2007. Once completed in 2016, the order will more than double the size of Air Arabia's existing fleet. The low-cost pioneer expects four more aircraft to be delivered in 2013.

### Tawazun defence tie up with Saab

Abu Dhabi Tawazun is to partner with Swedish



### Shell Aviation voted as emerging market's best

Shell Aviation has been named the best aviation fuel provider for the Middle East and surrounding region at the Emerging Markets Aviation Awards.

The award was presented at a ceremony during the annual Airport Suppliers Conference, which took place at the Al Bustan Rotana Hotel in Dubai.

The award recognises excellence in the aviation and airport industry for emerging market airports in the Middle East, Africa, the Indian sub-continent, Russia, the CIS and the Baltic States.

Shell Aviation provides fuel for around 7,000 aircraft each day, refuelling a plane every 12 seconds. It has branded operations at airports in the UAE and Oman, and serves customers through third-party distributors across the Middle East region.

defence and security company Saab to create the Middle East's first facility for the development, manufacture, assembly and integration of radar systems.

The joint venture, named Abu Dhabi Advanced Radar Systems (ADARS), will be the newest member under the Tawazun group, and will be owned 51% by Tawazun and 49% by Saab.

The next generation radars have multiple applications for land, naval and other ground systems. ADARS will be the region's first company to have an onsite anechoic chamber to develop and test microwave products.

The ADARS facility will be based out of Tawazun Industrial Park, which is Tawazun's emerging knowledge hub for defence and strategic manufacturing in Al Ajban, just outside of Abu Dhabi city.

### New VIP catering facility AI Bateen

Abu Dhabi Airports Company (ADAC), the operator of Al Bateen Executive Airport, and Gategroup of Switzerland, have officially opened the Executive Gourmet catering facility at Al Bateen Executive Airport in Abu Dhabi.

The fully operational bespoke business aviation caterer will provide hospitality and catering services to meet the tailored requirements of elite passengers and private jets.

Executive Gourmet will provide its VIP catering concept from its 770sqm facility at the airport. Highly trained chefs will staff the on-site kitchen around the clock.

### Air Algerie eyes Dreamliners

The Algerian government has given the go-ahead for Air Algerie to move ahead with its plans to buy new aircraft as part of a bid to improve the North African carrier's competitiveness. The airline – which is state-owned – has been starved of investment for several years but has won over the government to invest as the country attempts to regenerate its tourism business and its international relationships.

The airline has primarily been a Boeing customer with 23 Boeing 737s and three B767s. It has three Airbus A330s and a dozen ATR-72s, which it uses for shuttle flights to the country's main oil and gas fields.

Analysts suggest that Air Algerie has already been in talks with the American manufacturer for eight B787-8 Dreamliners and, despite the current issues with the aircraft, is ready to sign a deal.

### SparrowHawk set for ME trainers

The latest generation CMA-9000 flight management system SparrowHawk, from Esterline CMC Electronics, which includes head-up display (HUD), has been selected by the Qatar and Saudi air forces for their new PC-21 turboprop training aircraft.

### RAK Airport reports positive growth

RAK International Airport has recorded growth of almost 25% in passenger numbers and 60% in financial performance in its 2012 figures. The airport said that its operations performance had reached a 98% achievement rate and aircraft movements, dutyfree sales and cargo tonnage had also shown positive growth.

### **UAE** joins panel

The UAE, represented by the GCAA, was elected as one of 30 state ICAO facilitation panel members at the recent meeting in Montréal, Canada.





Abu Dhabi Airports Company (ADAC) has signed a seven-year contract with Global Aerospace Logistics (GAL) to provide civil air navigation services at ADAC's five airports.

The contract, which starts on May 1, is worth in excess of AED538 million (\$146 million), and includes Abu Dhabi International Airport, Al Bateen Executive Airport, Al Ain International Airport, Sir Bani Yas Island Airport and Delma Island Airport, which collectively handle approximately 200,000 air traffic movements a year.

The contract is initially for five years with a possible extension of two years.



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### Ajman airport plans pressing on

The UAE GCAA is working on ways to help Ajman achieve its ambition of opening its own airport amid industry concerns that a go-ahead would add more problems for the nation's crowded airspace.

The tiny northern emirate was believed to have shelved 2008 plans for Ajman International Airport but local newspaper sources have reported that the emirate's ruling family is pressing ahead with plans to develop the \$3.5 billion project on 600 hectares of land close to the Al Manama district.

### Turkey plans world's largest airport

Turkey has set a deadline for bids to build, what it describes as the largest airport in the world, in Istanbul.

Transport minister Binali Yildirim said that the deadline for bids to build the six-runway airport is May 3 2013. It will be designed to handle 150 million passengers per year and could cost more than \$9.3 billion.

The airport will be Istanbul's third and will surpass Dubai World Central, which is currently the largest airport in the world with its five runways and 120 million-passenger capacity.

### Gulf Air in top 10 for flight punctuality

Bahrain national carrier Gulf Air was ranked among the top 10 global airlines for on-time performance of its flights in January 2013.

The airline is also among the finalists for the 2012 FlightStats On-time Performance Service Awards for the Middle East region, which recognise operational excellence in air



### Sanad ties with ADNL to finance new global spares platform

offerings.

Sanad Aero Solutions, the Mubadala Aerospace engines and components financing and leasing company, is expanding its relationship with Abu Dhabi National Leasing (ADNL) to develop a global spares platform.

Sanad has been working with ADNL, the wholly-owned lease financing arm of the National Bank of Abu Dhabi, since late 2011 with an initial focus on spare engines.

The latest global spares platform expands the scope further to aircraft components. The value of closed transactions to date are in excess of \$300 million and will further strengthen the synergies between Sanad's

asset management expertise and ADNL's

travel for all commercial carriers globally and regionally.

FlightStats ranked Gulf Air eighth for punctuality in January with a rate of 85.21%.

The only other Middle East airline in the list is Saudi Arabian Airlines in ninth position.

### Super Tucano gets Afghanistan role

The Afghan Air Force is to receive 20 Embraer A-29 Super Tucano light attack aircraft following a new deal between the USAF, supplier Sierra Nevada, and OEM Embraer.

The \$425million contract has been battled over by the US-Brazil partnership and The award is seen as offering a boost to Embraer's new defence and security arm, which will now be developing a major presence through the deal with Sierra Nevada Corporation.

American OEM Beechcraft.

The two companies will supply 20 Embraer A-29 Super Tucano light attack aircraft, one basic aviation training device, one flight training device, six mission planning stations, and six mission debrief systems for the first delivery order. The companies will also have to provide long lead spare parts, flight certification to USAF military type certification standards, and data rights. **Etihad Cargo posts** 

### record tonnage

commercial banking and lease finance

Mubadala Aerospace's global MRO

businesses, ADAT and SR Technics.

The integrated spares financing activities

The commercial airline industry holds an

rotable components today supporting existing

require an additional \$20 billion in new spares

fleets. Sanad estimates that the industry will

to support new aircraft deliveries forecast

The global spares platform is designed to

to serve this need with a range of products.

ensure that Sanad and ADNL are well positioned

over the next 20 years.

are being conducted in collaboration with

estimated \$35 billion in spare engines and

Etihad Cargo has posted record monthly uplift figures for January of 32,613 tonnes, a 27% increase on January 2012 (25,600 tonnes).

In its annual results, Etihad Cargo reported annual tonnage growth of 19% for 2012 on the back of a capacity increase of 14% in available tonnage kilometres.

### Etihad partnership with Kenya Airways

Etihad Airways is to expand significantly its reach across Africa after signing a strategic commercial partnership agreement with Kenya Airways. Etihad will place its EY code on Kenya Airways flights from Nairobi to 27 destinations across Africa.

As part of the reciprocal codeshare agreement, Kenya Airways will place its KQ code on Etihad Airways' daily service from Nairobi to Abu Dhabi and, subject to government approval, onwards to up to 32 key destinations across Etihad's global network.

Kenya Airways will also launch a new thrice-weekly service between Nairobi and Abu Dhabi from midsummer 2013.

The agreement paves the way for greater collaboration between the airlines on the joint procurement of services for ground handling, line and heavy maintenance, training, and cargo operations.

### Deal to reduce heli downtime

Honevwell Aerospace has signed a deal with Transworld Aviation (TWA) in Dubai to distribute its line of health and usage monitoring systems (HUMS) across the Middle East markets. The partnership agreement with TWA is designed to ensure that Honeywell's defence and commercial helicopter operators in the Middle East will benefit from decreased maintenance costs. increased availability and quicker turnaround on orders, technical support and parts delivery.

### A terminal triumph

CEM Systems has announced that its AC2000 security management system has been successfully installed at the new Concourse 3, Terminal 3 in Dubai International Airport. CEM's business partner in the UAE, Tyco Fire & Security UAE LLC, delivered the system.



### Etihad makes big switch to Sabre

Etihad Airways has made its 'big switch' to new, stateof-the-art, passenger sales, website and check-in systems – the most significant milestone in its \$1 billion, 10-year deal, with Sabre Airline Solutions.

The passenger service system (PSS) transformation project is the most challenging IT and business-critical initiative that the Abu Dhabi-based airline has implemented in its history. It has involved intensive training for 6,700 Etihad Airways and thirdparty staff.

The switch integrates Etihad Airways' current PSS into one platform that utilises cutting-edge software across its reservations, inventory, ecommerce, distribution and departure control activities.

### Dubai International passenger record

Dubai International has begun 2013 by welcoming, for the first time, more than 5.5 million passengers in a single month.

Passenger traffic rose 14.6% to 5,559,760 in January 2013, up from 4,852,139 in the same month in 2012. Aircraft movements totalled 31,332 in January 2013, climbing 5.6% from the 29,680 movements recorded a year earlier.

Most markets were boosted in January by holiday traffic, as well as visitors to the Dubai Shopping Festival.

### Challenger 850 joins Turkish market

Istanbul-based Europe Jet is now offering a companyowned Bombardier CRJ200LR / Challenger 850 with 15 VIP seats which, it claims, is the largest business jet to be operated in the Turkish charter market.

### DWC opens doors in October

Dubai Airports has announced that Dubai World Central – Dubai's second airport – will open its doors to passengers on October 27, when launch carriers Nasair and Wizz Air will commence operations.

### Africa and ME see traffic growth

IATA's latest figures on premium travel (business and first class) have seen growth, particularly in African and the Middle East markets.

Emerging markets, particularly those linked to the Far East, were the source of the growth in international premium travel.

IATA said that positive momentum in key Asian economies – including China and South Korea – as well as growth in trade and industrial production, has helped boost demand for air travel for that region.



Ian Dawkins: "Connectivity has to be consistent all over the world."

### OnAir enjoys triple success with MENA

Geneva-based OnAir announced three major deals with MENAbased airlines for inflight connectivity at the Aircraft Interiors Expo in Hamburg in April.

The airlines are Qatar, Saudia and Libyan in contracts for both inflight GSM (mobile and smartphone) connectivity and WiFi internet access.

Qatar Airways has extended its use of Inmarsat SwiftBroadband connectivity to its upcoming A350 and A380 fleets. These are to be line-fitted with both Mobile OnAir and Internet OnAir connectivity.

"We have been operating Mobile OnAir for more than three years on some of our aircraft and it's clear that our passengers want, and are coming to expect, inflight connectivity," said Akbar Al Baker, Qatar Airways CEO.

Saudia is also expanding its inflight connectivity programme across the fleet as well as using crew applications to extend the use of the connectivity pipeline to the ground.

Saudia's new A330s, which will be delivered throughout this year and next, will be equipped with Mobile OnAir and Internet OnAir. The airline's existing and planned fleet of 20 B777-300ERs will also have OnAir's GSM and Wi-Fi services fitted, enabled by the Thales TopConnect solution.

The final contract was Libyan Airlines, which will take delivery of its first Airbus A330 in May, equipped with OnAir connectivity.

"There are two truths about inflight connectivity", said lan Dawkins, OnAir CEO. "The first is that any airline wanting to attract and keep customers must provide connectivity. The second is the connectivity has to be consistent all over the world. Finally, passengers want to use their phones, tablets and laptops in the same way they do on the ground, so they must have access to both a mobile phone network and Wi-Fi."

### Saudi GACA breaks fuel monopoly

Saudi Arabia's GACA has announced a plan to provide jet fuel at discounted rates for domestic flight operators and will end the state monopoly on fuel provision and handling at the kingdom's major airports.

### Libyan in Lufthansa Systems deal

Libyan Airlines has selected a comprehensive package of its aeronautical solutions from Germany's Lufthansa Systems. The two companies signed a five-year contract for the Lido/Flight flight planning solution, as well as the Lido/RouteManual and Lido/eRouteManual navigation charts.

### Pakistan boost for Rizon Jet

Rizon Jet has received approved maintenance organisation (AMO) designation from the Pakistan Civil Aviation Authority for its Doha facility. With this authorisation, various business aircraft registered under the Civil Aviation Authority of Pakistan can undergo maintenance, repairs and inspections at Rizon Jet's maintenance facility in Qatar.

### **Jet Aviation boost**

Jet Aviation Dubai was recently authorised to provide maintenance, alterations and repair services to the new ultra-long-range, ultra-large-cabin Gulfstream G650.



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The resolution of a 23-year-old dispute between Iraq and Kuwait has opened the door for both countries to concentrate on reviving their ailing flag carriers. But, while Kuwait's parliament is bogged down with political apathy towards its loss-making airline, Iraq is seizing the day with ambitious aircraft orders and diplomatic overtures across the Arab world and beyond. Martin Rivers talks to the Iraqi Airways director general.

# A SMILE ONTHE NEW FACE OF IRAO

raqi Airways director general Captain Saad Al-Khafaji struck a sanguine note as he outlined the role his carrier will play in bringing Iraq back to the international fold, speaking shortly after flights to London resumed in March.

Though he made no attempt to downplay the difficulties Iraq has faced – both under Saddam Hussein and in the aftermath of the 2003 US-led invasion – he was overwhelmingly optimistic about the benefits that a well-funded, well-connected flag-carrier can bring to its home nation.

"This is the new Iraq. We have a new political situation – democracy is ruling Iraq now," he said. "We want to do our best to communicate with other countries, not with guns, but with brains. And we cannot communicate with other countries unless we meet, so Iraqi Airways is building bridges between the world and Iraq."

Reliable statistics are hard to come by, but none of the groups monitoring casualties in Iraq places the figure below 100,000 deaths over the past decade. At the height of the bloodletting, in 2006 and 2007, some 3,000 lives were being lost each month. That number has since plummeted to around 350. While suicide bombings, kidnappings and assassinations still ward off business travellers and tourists, the statistical reality is that Iraq is emerging from its darkest days.

"Three years ago the situation was very difficult," Al-Khafaji recalled. "Every day that passes is now better than the day before. In the next year, I promise you, this propaganda about explosives will go away."

The country's profound political and military troubles lay at the heart of the Iraqi Airways decline in modern times. Sanctions and the no-fly zone effectively grounded the airline in the 1990s. Its fleet was spirited away by the regime and it was not until 2004 – one year after the overthrow of Saddam – that scheduled flights resumed with a single Boeing 737-200.

Al-Khafaji was among the pilots operating those fledgling services. He climbed the ranks in the difficult years that followed, eventually succeeding Captain Kifah Hassan Jabar as director general in 2011.

The first major sign of progress for Iraqi Airways came in 2008, when Iraq's government signed a \$5.5 billion deal with Boeing for 40 aircraft, comprising 10 787-8 Dreamliners and 30 737-800s. That was followed by an attempt to resume London services in 2010 – ending a two-decade hiatus – but the inaugural flight descended into farce when Kuwait Airways had the aircraft impounded and Jabar detained by British police.

The intervention capped years of asset seizures by Kuwait Airways around the world, also including a raid on the Iraqi Airways offices in Jordan and the disruption of its Bombardier jet deliveries in Canada.

Kuwait's flag-carrier held its Iraqi counterpart responsible for \$1.2 billion in damages stemming from Saddam's theft of 10 aircraft during the 1990 Gulf War. It had convinced Britain's High Court that employees of Iraqi Airways withheld information and obstructed the return of the Kuwaiti aircraft.

The two sides finally settled their differences late last year, with Iraq paying a reduced sum of \$500 million in compensation. The funds have now cleared, Al-Khafaji confirmed, and the matter has been laid to rest.

"As bad as Saddam treated his people, he treated his neighbours the same," the director general said. "Saddam was very



'Iraqi Airways is building bridges between the world and Iraq.' CAPTAIN SAAD AL-KHAFAJI IRAQ

### CONTINUED FROM PAGE 18

keen to create problems. He wanted to be an historic figure, and now he is!"

Although Iraq has compensated its neighbour for the debt, Al-Khafaji admitted: "Deep in my heart, I don't believe we had to pay it." But he put aside such reservations, explaining: "We are a rich country. Our budget was \$110 billion last year, and it will increase this year, so money is not a big issue. The most important thing is [foreign] relations, and a new image for Iraq. Kuwait is our neighbour – that is our destiny, we cannot change it – and all neighbours have their ups and downs."

He went on to draw comparisons with conflicts in Europe during the 20th century, saying: "There were so many problems between European countries but everything has been solved. Now it's back to normal, and they are united as one community. Arab countries are the same."

#### **Route network**

With the Kuwaiti issue now settled – and with plans for a joint airline venture between the neighbours scrapped – Iraqi Airways is diving head-first into rolling out its route network. The flag-carrier resumed flying to Kuwait City on February 27 and to London Gatwick Airport on March 5. Its outbound London services include a stop-over in Malmo, Sweden for additional security checks, while the return flights are nonstop.

Kuwait City and London were selected as the first post-resolution route launches, Al-Khafaji said, in order to "prove to everybody that we have settled our issues". As Arabian Aerospace was going to press it was also expected that flights to Frankfurt would also have resumed.

Beyond that, the airline has its sights set on Copenhagen and Amsterdam first, followed by Paris and either Madrid or Rome. "Or maybe both," Al-Khafaji enthused, adding that Iraqi Airways expects to fly to "all the major capitals in Europe – but one at a time".

Notwithstanding its wider plans, London has a special significance to the airline. About a quarterof-a-million Iraqis live in the UK, which creates strong demand for the visiting friends and relatives (VFR) market. Frequencies on the Baghdad-London route will rise from twice-weekly to four times weekly in June, while the London-bound service from Sulaymaniyah in northern Iraq will also double to twice weekly. "In the past there were three flights a day to London," Al-Khafaji noted. "Iraqis love London."

Looking beyond the VFR market, there is an appetite in both countries for closer business ties. UK-based conglomerates like BP and G4S already have a strong presence in Iraq, Al-Khafaji noted, adding: "We want British companies to come and invest in Iraq, to help build Iraq with other countries. We are great believers in the technology that the British have. They are good hard workers, and they are intelligent."

Further afield, Iraqi Airways is committed to restoring its former links with the Far East. The airline expects to launch flights to Kuala Lumpur 
 We are a rich country. Our budget was \$110 billion

### 'We are a rich country. Our budget was \$110 billion last year, and it will increase this year, so money is not a big issue.' Captain Saad Al-Khafaji

in Malaysia, replacing a joint venture that had, until recently, been operated with AirAsia. Its future route network will also likely include the Chinese cities of Beijing, Shanghai and Guangzhou, as well as the Thai capital Bangkok.

Nor will it be long before Iraqi tailfins appear over American skies – an unthinkable prospect just a decade ago. The US embassy in Baghdad has been instrumental in "helping to speed up the process" of launching flights to New York and Washington, Al-Khafaji noted.

#### **Growth trajectory**

With such an ambitious growth trajectory, it is clear that the 21-strong Iraqi Airways fleet must expand. Prior to its London launch, the airline served just 12 destinations across the Middle East, North Africa, central Asia and India. A wholesale move into Europe and Asia will require significantly more wide-body jets. Mindful that its Dreamliners will not arrive for several years, Iraqi Airways has wasted little time in procuring individual units from both Boeing and Airbus.

Three A320s, two A321s, one A330 and one 777-200LR have entered the fleet since the deal was reached with Kuwait Airways. These "selective" deliveries underscore the airline's desire to make up for lost ground as quickly as possible, and talks are on-going with both manufacturers.

On the wide-body front, Iraqi Airways is negotiating near-term deliveries of another two 777-200LRs, which will be deployed on long-haul routes, including the upcoming US services. The flag-carrier also expects to exercise its five Dreamliner options, Al-Khafaji confirmed, though he declined to give delivery dates, saying only that Boeing "promised that they will give us the Dreamliners in a short time... not a very short time".

Part of the airline's 737-800 order will be upgraded to -900s. And even though the Sky Interior jets will start arriving in July – "we ordered the best money can buy... touch-screens everywhere" – Al-Khafaji indicated that further narrow-body orders with Airbus are on the cards.

Confirming that the third A320 arrived in Baghdad on March 7, the director general said: "It is not the last one. I can promise you it's not the last one." He would not be drawn on the size of possible future commitments but conceded that talks are under way about a "good number".

Hinting at a possible large-scale order, he added that European financiers have expressed an interest in funding an Airbus order. "There are some European investors looking to do some business," he said. "There are hidden conversations."

Asked about the order for 10 Bombardier CRJ900s, which Kuwait Airways disrupted after six deliveries, Al-Khafaji said the outstanding four units could be converted. "My opinion is I want to

change them to CSeries," he said, adding that Iraqi Airways would return four of its CRJ900s in



IRAQ



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#### **CONTINUED FROM PAGE 20**

exchange for the newer type. "The CSeries is a reasonable aircraft for the region. This is under discussion. We have an agreement, but it is not settled."

One of the reasons for expanding so rapidly is that Iraqi Airways wants to show the rest of world it can stand on its own two feet. To that end, Al-Khafaji rebuffed a proposal to codeshare with Etihad, and he is reluctant to strike fifth-freedom deals with US carriers.

"If I do codesharing or joint ventures with other companies, we will be the underdog," he explained. "We don't like that. We will go [into partnerships] when we can be head-to-head, shoulder-to-shoulder." Asked whether he would consider sharing traffic with an American airline, he said: "I could do it right away with a US carrier if I wanted. But I want to fly our aircraft with our flag. Whatever it takes, I'll wait."

Amid all the talk of expansion, the director general inevitably turned his attention to Baghdad's prospects as a regional hub. He remained down-to-earth, distinguishing between near-term opportunities and long-term aspirations.

"Before, we were number one in the region. Now we are number last," he said with a wry smile. "We will do it slowly. If we deserve to have a position, we'll have our position."

#### **Three Gulf hubs**

Noting that the United Arab Emirates is investing \$135 billion in its aviation industry, Al-Khafaji said Baghdad cannot challenge the big three Gulf hubs at present. But he insisted the groundwork is being laid for a viable intercontinental hub, with Iraqi authorities committed to reducing fuel prices, maintaining impenetrable security, and signing ground handling contracts with globally recognised firms.

"I've said it before, and I'm saying it now. Careful of the new tsunami," the director general beamed. "The tsunami is coming. Of course I am trying to make Baghdad International Airport the hub for international carriers. We'll make it very safe, very easy to handle, and low-cost. So most companies will land in Baghdad to go to the East and to the West. It will be the hub."

Al-Khafaji has spent almost his entire professional life in aviation, having graduated from Oxford Aviation Academy in 1977. For a brief period, however, following the loss of his father to Saddam's regime, he turned his hand to the fabric industry. "My father was a well-known industrial man, so I followed in his footsteps," he recalled. "It was a good job. I made some profit from it, and I learned how to deal with the business market."

Describing this interlude as a "good academy" for his business sensibilities, Al-Khafaji espouses a holistic approach to making Iraqi Airways profitable. "When you do something you believe in, even though you don't think about profit, profit will come," he concluded. "You have to serve your business right. Do the best you can do. Later on, you will find yourself getting profit."



### Security the key to Baghdad International Airport's future

As the national carrier, it is no surprise that Iraqi Airways operates the lion's share of passenger services at Baghdad International Airport.

In March 2013, the airline was responsible for 55% of flights and 40% of capacity, as measured in available seat kilometres.

But growing optimism about Baghdad's prospects as a business hub has seen a raft of airlines launch services to the gateway in recent years. Though Austrian remains the only western carrier to serve Iraq's capital, it has already attracted most of the region's mainstream airlines. Emirates, Etihad, Qatar Airways, Gulf Air, EgyptAir, Royal Jordanian, Turkish Airlines, FlyDubai and Air Arabia all operate scheduled flights to Baghdad.

Éfforts to court more international carriers will hinge on the Iraqi Civil Aviation Authority's (ICAA) ability to convince foreign governments that security at Baghdad Airport is watertight. The anxiety that many countries still have about opening up direct air services to Baghdad is illustrated by the UK's Department for Transport (DfT), which has insisted that the new Iraqi Airways London service includes a stop-over in Malmo, Sweden for extra security checks.

But, since January 2 2010, UK-based G4S has been contracted to deliver security services at the gateway.

A senior G4S official explained: "Our aim here is to try and make Baghdad Airport look like any other airport elsewhere in the world. The G4S uniforms you'll see in the terminal are exactly the same ones you'll see in the UK, and that's all part of the normality."

G4S's operations at the airport are broadly split into two categories. The ground security division comprises staff manning the perimeter checkpoints and the quick reaction force. They have blue shirts and carry visible weapons. The aviation security employees within the terminal, meanwhile, have white shirts and are unarmed. "It's a much more international look," the official said.

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Around 85% of the G4S staff securing Baghdad Airport are Iraqis and the aim is to continue growing this number. In 2011, the company sent two Iraqi managers to the UK to attend the DfT's Level 3 aviation security managers' course. Then, in February, another 11 ICAA employees, including three women, were trained on the Level 1 course. "In both cases, the students performed extremely well," the official said. "They're very, very clever people."

He continued: "Previously there hasn't been infrastructure [in Baghdad] for training specifically in aviation security. So part of G4S's role here has been to coach and mentor the ICAA to international standards. Our aim is to get more Iraqis into management positions. In time, when our client is happy, all the guys with blue eyes will be out of the country and it'll be just like any other airport in the world, run by locals for locals."

The guidance proffered by G4S includes advice on the interpretation of ICAO Annex 17, which is the benchmark for protection against acts of unlawful interference. Its progress will become clearer this autumn, when ICAO conducts an audit of Baghdad Airport to assess compliance with internationally recognised standards.

Several western governments have already visited the airport to conduct their own inspections, the official confirmed, including representatives from the relevant authorities in America, France and Britain.

Asked what safety shortcomings have necessitated the Iraqi Airways stop-over in Malmo, the DfT said: "The Department continues to work closely with the Iraqi authorities regarding flight operations between our two countries. However, it is a matter for individual governments to determine whether direct flights from another state should be allowed."

The G4S official declined to comment on the DfT stance, but he asserted: "Because of the resources that go into making sure as little as possible – if anything – goes wrong, I feel just as safe flying in here as I do flying into London. This feels like a safer airport than it did when the Coalition was here."

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Alan Dron tells the remarkable story of one of the world's longest-running legal battles – a tale so strange that it could be made into a blockbuster film.

#### THE WRIT STUBE STU

## Lawyer's 22-year battle finally earns justice for Kuwait

When Iraqi Airways' flight to London touched down at Gatwick Airport on March 5 it marked a new start for the carrier.

For the first time in more than two decades it was able to undertake flights to the UK or Europe without the threat of its aircraft being seized as part of one of the world's longest-running legal battles.

Since 1991 Kuwait Airways had been battling to win \$1.2 billion compensation, plus costs, for its fleet of aircraft that had been seized as Iraqi forces of the Saddam Hussein regime invaded the Gulf emirate. That battle had led to English lawyer Christopher Gooding and his legal team at Anglo-Canadian law firm Fasken Martineau being prepared to confiscate any Iraqi Airways assets they could find around the world in order to put pressure on Baghdad to settle Kuwait's claim.

In January this year, a financial instrument worth \$500 million – a compromise amount – was deposited by Iraqi representatives in Gooding's safe. Once paid over to the Kuwaiti authorities, the long-running saga was finally over.

Getting to that point, however, involved a legal case that involved running a 'virtual airline', creating a worldwide intelligence network, overseeing a secret mission into hostile Iraqi territory to find incriminating documents bricked up behind an apartment wall, and deciphering a diary written in code. Little wonder that talks are under way to make a film of the affair. hen Christopher Gooding took a telephone call from war risk underwriters on the night of August 2 1990, little did he realise it would change his life for the following 22 years. Iraqi armed forces had invaded Kuwait and seized the emirate's airport, together with 15 commercial and Royal Flight aircraft belonging to Kuwait Airways (KAC), Gooding was informed. A total loss claim could be expected and he was instructed to handle it.

Within days of the invasion the commercial aircraft – two Boeing 767-200s, three Airbus A300-600s and five Airbus A310-200s, together with hundreds of millions of dollars of spares – had been flown out of Kuwait to Baghdad. Six were subsequently sent by Iraq to Iran for 'safe keeping' (from where they had to be retrieved after payment of a \$20 million fee). The other four were destroyed by Allied military aircraft at Mosul, northern Iraq, during the 1991 Gulf War.

KAC engaged Gooding and his team to seek compensation for the loss of the aircraft, spares and further losses arising from its inability to operate flights for months afterwards.

The latter part of that claim meant calculating the 'consequential losses' – money that KAC would have earned if its fleet was still operating. Gooding set up a 'shadow airline'.

"We ran the 'airline' on the assumption that the fleet hadn't been stolen," said Gooding. "It was fascinating; we got right down to calculating the cost of meals and crewing, as well as more obvious things like the value of slots and landing



#### **CONTINUED FROM PAGE 25**

rights."

English jurisdiction in the case was established by serving Iraqi Airways Corporation's (IAC) offices in London with writs. The case began in the London courts in January 1991. Gooding points out that the case had to be fought and proved under English, Kuwaiti and Iraqi law.

IAC's lawyers argued that their client had 'sovereign immunity' – the Kuwaiti aircraft had been seized during a war between sovereign nations. IAC officials did not deny that its personnel had flown the Kuwaiti aircraft to Iraq, but insisted they had been doing so under orders from Saddam Hussein's regime – and disobeying those orders would have been suicide.

In fact, said Gooding, in many of the numerous court hearings in London and elsewhere over the following years, the Iraqi stance had closely echoed that of Nazis who were tried for war crimes at Nuremburg in 1946: "They argued that they were acting under orders."

For several years, the London courts accepted this sovereign immunity argument until the House of Lords ruled – in a finding that re-wrote the law of State Immunity – in KAC' s favour, although finding that IAC was not responsible for any losses until after September 17 1990.

#### **Denied liability**

IAC then denied liability on the basis that, by that time, the aircraft were located where they were eventually destroyed by Allied forces or had been flown to Iran. In other words, IAC argued that it had done nothing that had led to their loss.

Gooding's team, and KAC, were blocked. IAC insisted that many of its records had been destroyed during the Gulf War. Gooding's team believed this was untrue, but had no way of proving it. In the English courts, judge after judge upheld Iraq's stance.

It was only in 1999 that the first chink of light appeared. As part of its necessary disclosures in yet another London court hearing on the affair, IAC's lawyers revealed they possessed a diary written by its former engineering manager, Nuaman Al Nama. There was just one problem: it was written in an individual form of shorthand that was so obscure it was virtually a code.

"That's when we started putting together what was really an intelligence network, going around the world to interview the Iraqi diaspora to find out what the hell the hieroglyphs in the diary meant," said Gooding. "It took us nearly twoand-a-half years to break the code."

A driving force behind this effort was a KAC senior engineer Hamad Al Baijan, who used a combination of old KAC colleagues and Iraqis who had fled overseas to help decipher the diary's entries.

The contents were legal dynamite. They contradicted IAC officials' sworn testimony that the Kuwaiti aircraft had not simply been parked at Baghdad after seizure, with IAC staff doing no more than basic maintenance to keep them



Oil wells burn at the aftermath for the Gulf War - Kuwait's aircraft were also war victims.

airworthy. It showed they had, in fact, been repainted in IAC colours and airline managers had ordered them to be pressed into service as soon as possible.

The next major development came in 2003. Immediately after the conclusion of the Second Gulf War, after Coalition forces had invaded and occupied Iraq, Hamad Al Baijan was again instrumental in uncovering new evidence – evidence that would blow the case wide open.

#### Wanted to flee

A former senior IAC official, Mohammed Ghazi Aziz, wanted to flee Iraq and approached KAC for help. There was, he said, a secret cache of documents hidden in Baghdad that would cast light on the seizure of the aircraft. Acting on this information, in circumstances resembling a Hollywood thriller, Al Baijan and Aziz raced through the Iraqi desert in three trucks, with a dozen armed escorts.

In Baghdad, Aziz directed them to an apartment. There, bricked up in a secret compartment behind a wall, was a collection of documents that demolished the Iraqi case.

Why had these documents not simply been destroyed, rather than hidden away, with the risk that they might someday be found?

"Saddam Hussein ran the country on a pure Stalinist basis," explained Gooding. "Under a Stalinist or Nazi regime, the entire objective of the bureaucracy was to spread the blame, so nobody could say one person was responsible for anything. As a result, the preservation of documents was intended to protect those who had never taken the decision."

Remarkably, many of the recovered documents proved the documents previously relied on by IAC to be forgeries, carefully crafted 10 years previously to support IAC's case. "It was a very deep conspiracy, a conspiracy based on legal advice on what would work [in court]. This wasn't a perjury of facts, it was a perjury to match the legal case that was being put forward to win on those perjured facts," said Gooding.

Al Baijan and his team – who by this time knew that Iraqi insurgents were aware of their presence and hunting them – drove the documents out of Iraq to Jordan and on to London. On a later trip he also discovered, in a date grove in Fallujah, container loads of spare parts said by IAC to have been destroyed or returned.

The English courts decided that Iraqi witnesses had committed perjury. The previous court rulings were set aside, allowing the case to be reopened. An English judge described IAC's acts as the worst perjury ever perpetrated on the English courts.

With all the previous judgements in IAC's favour now overturned, the case could be tried again, on the true facts.

That resulted in damages of \$1.2 billion being

### **KUWAIT**



awarded against IAC, plus \$87 million in costs against the Iraqi government, because the state had paid for the Iraqi defence case.

However, Iraq showed no sign of paying up. Gooding's team had to find a way of applying more financial pressure. But how?

Their chance came in 2008 when IAC sought to buy 10 Bombardier CRJ-900ERs, plus 10 options, in a \$400 million deal. Gooding obtained a Canadian court judgement that allowed him to seize either the undelivered aircraft or money deposited by Iraq with the Canadian airframer.

Eventually, "We ended up releasing the aircraft [to IAC] against security... by virtue of IAC having put up letters of credit".

Further pressure was applied in 2010 when Iraqi Airways attempted to re-launch Baghdad-London services with a Boeing 737 leased from Swedish airline Tor Air.

Gooding could not impound another company's aircraft. He could, however, seize all the assets that IAC had lodged in London in order to make the flight possible: "We froze their fuel account, money passengers had paid for their tickets and all the funds IAC had lodged in London in order to be able to fly there."

He could also have the Iraqi national carrier's director-general detained and his passport seized when he left the aircraft after it touched down at London's Gatwick Airport.

Kifah Hassan Jabar spent several days being questioned as to the whereabouts and extent of his company's assets before he was released and allowed to leave the UK.

"It was a tense time," recalled Gooding, "but I think that was the wake-up call [to the Iraqis] that this case was not going to go away."

But Gooding and his clients were coming under pressure themselves. As the case slowly unfolded over the years, both Gooding and the Kuwaitis came under considerable external pressure – Gooding declines to say from where – to drop the case.

### Leave the past behind

He was told that the Kuwaitis were being unreasonable, that with the events of 1990 now receding into memory, it was time to allow Iraq to leave the past behind – and the Kuwaitis should do the same. Allowing IAC to resume operations without the threat of legal action hanging over it would be an important stage in Iraq resuming its place as a normal member of the international community, ran the argument.

The Kuwaitis, however, were adamant. What people in the West forget, said Gooding, was that the events of 1990-91, when Kuwait was occupied and pillaged by the occupying Iraqi army, have never faded in Kuwaitis' memories. Many families lost members or relatives, either killed or who disappeared during the Iraqi occupation. Gooding, who has spent much of the past three decades working in the Middle East, is full of praise for his Kuwaiti clients for refusing to buckle and staying the course. He singled out consecutive director-generals of the airline and the Board, Al Baijan, KAC's legal advisor Abdus Sattar Setareh and his assistant (later fellow-partner at his legal firm) Sukhi Kaler as driving forces behind the case.

The case has been the defining feature of Gooding's professional life. Over the years the tempo of work has risen and fallen, from 30% at its lowest points to "120%" at its peaks. Little wonder that, when the case finally ended in January this year, "I slept for three days."

Speaking in February, he added: "I used to say that every time Iraqi Airways land, they'll find me at the end of the runway with a writ. They're just about to start flights again to London and Kuwait. For the first time in 22 years, I don't give a damn."

27

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### BAHRAIN

The airline landscape in Babrain has undergone seismic shocks this year with the closure of one airline and large-scale redundancies and cutbacks at the national carrier. Alan Dron asks what future lies ahead for commercial aviation in the country?

# BAHRAIN LEFT UP IN THE AIR

hen it came, Bahrain Air's death was marked not with a whimper, but a roar of fury. Following a February 12 Extraordinary General Meeting, at which the carrier's shareholders decided to file for voluntary liquidation, a blistering statement on the airline's website placed the blame for the collapse of the small carrier squarely on the shoulders of the island kingdom's government.

It charged the authorities with failing to pay compensation following their decision to order Bahrain Air to suspend services to several nations where Shia clerics or governments had voiced support for their co-religionists' demonstrations against Bahrain's Sunni ruling family.

It also accused the government of requiring it "to make immediate payments on past government debts or face closure" at the same time as having its scheduled operations, both destinations and frequencies, reduced considerably by the Civil Aviation Affairs in the Ministry of Transportation.

"This effectively strangles the airline by



Shaikh Ali bin Khalifa Al Khalifa: "...no inclination to provide a meaningful solution."

simultaneously requesting payments and reducing its ability to generate the necessary revenues both to make these payments and to sustain long-term profitability," said the statement.

Bahrain Air added that Transportation Minister Shaikh Ali bin Khalifa Al Khalifa "has shown no inclination to provide a meaningful solution" to the airline's problems and pointedly noted that the minister was "an active board member of Gulf Air".

The following day, an equally terse response was posted on the Ministry of Transportation Civil Aviation Affairs website.

Citing an unnamed 'official source', it claimed that Bahrain Air had failed to honour agreements to pay off its debts in instalments, that it had failed to transfer funds due to the government from passengers' fares and that, by running up debts that had exceeded twice its capital, it had contravened Bahraini commercial

The official added that Bahrain

law.

Continued on Page 31



### A Must for Thrust

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#### CONTINUED FROM PAGE 29

Air had been allowed to operate any route on which Gulf Air did not have a presence - although that, by extension, suggested that the smaller airline had been barred from competing with the national carrier.

Interviewed by Robeel Haq on his blog TheAviationWriter.com, Bahrain Air CEO Richard Nuttall accepted that "in a region where many airlines were subsidised, it was always going to be difficult to be truly profitable. There is not enough point-to-point traffic, and regional connecting traffic yields are too low to sustain an airline.

"However, as a new airline, with a low-cost seat configuration. Bahrain Air was always going to be much more efficient than Gulf Air on many Indian subcontinent routes and to seasonal leisure markets."

He added that the closure of Bahrain Air would bring "minimal benefits" to Gulf Air.

"They will benefit marginally on a few routes but they either do not fly to most of our strongest routes, or they are planning to pull out or reduce frequencies. And for any connecting traffic they are still competing with a host of other carriers."

However, Nuttall wished the national carrier well. Restructuring would take patience and money. "But at least there now seems to be a resolve to take difficult decisions that were taboo in the past."

Those difficult decisions include a slimming of Gulf Air's workforce, route network and aircraft fleet.

### Major restructuring

Following the announcement in December 2012 of a major restructuring of the airline, it reported in February that it was on track to achieve what any company would regard as remarkable cost savings of 24% by the end of 2013.

Its headcount, which last year had reached 3800, was due to be reduced by more than 30%. with 15% achieved by January through a combination of non-renewal of contracts, voluntary retirement, natural attrition and outstation restructuring.

The airline said in February: "Further rightsizing will be implemented across all levels of the organisation." Significantly, it said that this would be done on the basis of performance-based reviews and individual job assessments against business-critical requirements.

It added that, despite an operating environment that remained difficult, the restructuring measures were already yielding results and that it was on track to complete all major workforcerelated changes within the second quarter of this year.

The airline says its priority is to preserve the maximum number of skilled, qualified Bahraini nationals in their posts. No Bahraini pilots will be affected by the restructuring.

It added that in January the airline's Bahrainisation levels at headquarters reached a

'At least there now seems to be a resolve to take difficult decisions that were taboo in the past.' **Richard Nuttall** 

record high of 85%, delivering on Gulf Air's commitment to be a key Bahraini employer.

have been made redundant. This is a highly sensitive point. "Gulf Air is a cornerstone of the economy and so many families rely on it to survive," said a senior source on the island, who has watched events for some years.

Air's demise was "disbelief that it was allowed to happen. It was seen as fairly avoidable. The government could have stepped in to save the airline."

destinations - Aden, Colombo, Copenhagen, Dhaka, Erbil, Kabul, Kathmandu and Rome - and is focusing increasingly on a role as a regional player, concentrating on routes in the MENA area.

Bangkok, Frankfurt, London and Paris, The emphasis is now on point-to-point regional traffic that can bring higher yields, as opposed to less lucrative transit traffic through Bahrain.

### **Network reductions**

Fleet changes reflecting these network reductions were well under way by spring, with a final fleet of 26 aircraft compared to 38 in mid-2012. Although it is concentrating on regional services, two leased Embraer E-190s, which had been brought in specifically for shorter sectors, have been phased out to simplify the fleet's structure.

And substantial orders placed in 2008 with Airbus and Boeing have been significantly reduced.

Reflecting the cutback in long-haul services, an order for 20 Airbus A330 twin-aisle aircraft has been replaced with one for eight Airbus A320ceos and 'up to 16' A320neos. Similarly, an order with Boeing for 24 787s has been reduced to '12 to 16' of the type.

The A320ceo equipment will be delivered by the end of this year, while the A320neo variants will appear later this decade for fleet renewal and expansion. The 787s are also due to appear in Gulf Air colours towards the end of the decade, to replace current wide-bodied equipment.

It remains to be seen if the radical measures to overhaul the national carrier bring the desired effect. There seems to be a new realism - if reluctant in some quarters, where an intercontinental airline was seen as a symbol of national virility - that Gulf Air, the pioneer of air services in the Arabian Gulf, can no longer compete with the giant Etihad, Emirates and Qatar Airways.

Its relatively dense regional network and good on-time statistics may bring it more business passengers who value frequency and punctuality. A cliché, perhaps, but this could be the start of a new chapter for the Golden Falcon airline.

Robeel Haq's full interview with Richard Nuttall can be found at: http://www.TheAviationWriter.com/2013/03/ex clusive-interview-bahrain-air-ceo.html

However, it is understood that some Bahrainis

He added that reaction on the island to Bahrain

Meanwhile, Gulf Air has dropped eight

Long-haul sectors have been cut back to



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### **ENVIRONMENT**

Alan Dron looks at the early sales success of the Airbus A320neo and compares it to the rival Boeing 737MAX.

### WHY IT MAKES SENSE THAT THE NEW AIRBUS IS THE FASTEST-SELLING COMMERCIAL AIRLINER IN HISTORY

n an age when a 1% improvement in an airliner's fuel burn is a cause for some excitement – and one to be trumpeted by the airframer and/or engine manufacturer – a 15% increment has airline chief financial officers licking their lips in anticipation.

That explains the sales success to date of the Airbus A320neo (new engine option), officially announced in December 2010. A year after its official launch it had become the fastest-selling commercial airliner in history.

The first metal for the new variant – an engine pylon component – was cut at Airbus's Saint-Eloi facility in Toulouse in July 2012 and the type is due to begin revenue-earning flights in late 2015.

Fuel now forms such a major portion of an airline's costs that such a substantial improvement in performance makes a massive difference to an airline's balance sheet. As of mid-January 2013, airlines had signed up for a remarkable 1,734 firm orders with the European manufacturer.

The benefits of being first to market can be seen in a comparison with Boeing's forthcoming competitor in the category, the 737MAX. Although announced just seven months after the neo family was unveiled, by mid-January the Chicago-headquartered giant had logged 1,064 firm orders – still a massive achievement, but some distance behind its European rival.

The two airframers were neck-and-neck in other commitment categories early this year with Airbus just leading Boeing 149-147 in aircraft covered by memoranda of understanding (MoU) and by 720-700 on options.

According to Airbus's figures, the neo family had achieved a 62% market share,



### CONTINUED FROM PAGE 33

compared to 38% for its transatlantic competitor.

In the Middle East, the lead was considerably higher, with Airbus having chalked up more than 70 neo-family sales to airlines (this figure excludes lessors and Turkey) with Boeing yet to achieve any orders for the MAX in the region at the time of writing.

Arab carriers to have ordered the neo include Gulf Air, Middle East Airlines and Qatar

Airways. In addition, Kuwaiti lessor ALAFCO has placed a major order and Tunisia's Syphax has signed an MoU for the type.

One of the most intriguing neo sales came in December, when Turkey's second-largest airline, low-cost carrier Pegasus, announced a firm order for 75 of the type (58 A320neo and 17 A321neo) plus 25 options. What made this significant – apart from being the largest single airliner purchase in the nation's history – was that Pegasus is a major 737 operator.

The Istanbul-based carrier has 42 of the US airliners in service – all but two of them modern 737-800s, many of which have only recently been delivered. Prising away the Istanbul-based carrier from its current airliner supplier was something of a coup. Given the rate at which the Pegasus route network throughout Turkey, Central Asia and the Middle East is expanding, the prospect of having more fuel-efficient aircraft in the fleet sooner rather than later may have worked in Airbus's favour, as the 737 MAX is not anticipated to enter airline service until late 2017.

### Maximum benefit

The European contender in this new category has relatively modest changes to the successful A320 family design: 'Minimum change for maximum benefit', as Airbus puts it.

The powerplants, naturally, are the major difference and the only other significant visible change is the addition of slim, swept-back wingtip aerodynamic aids, dubbed 'sharklets' by Airbus.

These, in fact, are already starting to appear as a customer-specified option on the A320ceo (current engine option) family, where Airbus says they will provide up to 4% improvement in fuel consumption over longer routes. The aerodynamic modification also results in up to 2% lower engine maintenance costs due to the lower thrust required when sharklets are installed.

On current A320s, the sharklets also add more than 100nm (185km) to the aircraft's range, increase payload by more than 500kg and improve take-off performance.

The devices first took to the air in November 2011 on Airbus's in-house development A320. An A321 with sharklets joined the certification flight test campaign 11 months later and the new aerodynamic feature is now being incorporated on the A320ceo.

Adding the sharklets to either the current or neo ranges requires some modification to the aircraft's outer wing boxes, while the application of new

### Airbus A320neo v Boeing 737MAX

Launched	Airbus A320neo December 2010	Boeing737MAX July 2011
Firm orders (mid-Jan 2013)	1734	1064
MoU	149	147
Options	720	700
Market share (firm orders)	<b>62</b> %	38%

engines on the neo range, with their slightly different mass, also requires changes to the centre wing box.

Airbus is careful to point out that the 'up to 4%' improvement in fuel burn provided by the sharklets does not signify that the new engines provide the remaining 11% of the 15% overall improvement. "You can't just make a simple subtraction," an Airbus spokesman said. There are subtleties in the overall dynamic package that contribute to the headline figure.

That 15% reduction corresponds to an annual CO reduction of 3,600 tonnes per aircraft – useful as a contribution towards reducing greenhouse gas emissions. The neo version will also be able to carry an extra two tonnes payload.

The major factor in the neo's performance, of course, is the new-generation engines that will power it. Customers have the choice of CFM International's LEAP and Pratt & Whitney's PW1100G PurePower. The latter powerplant is the lead engine for the neo.

In September 2011, Pratt & Whitney (P&W), Japanese Aero Engines Corporation (JAEC) and MTU Aero Engines announced they would collaborate to provide the PurePower PW1100G-JM engine for the A320neo. (The 'JM' suffix refers to MTU and JAEC's participation.)

MTU has responsibility for the low-pressure turbine and participates jointly with P&W in the high-pressure compressor. JAEC handles the fan, low-pressure compressor and combustor/diffuser, while P&W is responsible for the remainder of the engine and systems integration.

The PurePower family of geared turbofan engines uses an advanced gear system allowing the engine's fan to operate at a different speed than the low-pressure compressor and turbine. The combination of this, plus a new advanced core, delivers fuel efficiency and environmental benefits. P&W completed assembly of the first

### Middle East A320neo family purchasers

#### ALAFCO: 85 A320neo GULF AIR: 10\* A320neo

(\*GF says it has placed commitments for 'up to 16', but Airbus only logs 10 on its orders website) MEA: 5 A320neo, 5 A321neo (plus 8 options) PEGASUS: 58 A320neo, 17 A321neo + 25 options OATAR AIRWAYS: 6 A319neo, 30 A320neo, 14 A321neo + 30options

#### PW1100G-JM test engine for the A320neo last October and eight will be used for the test programme. The powerplant is rated at 33,000lbs thrust and more than 1,100 examples have been sold so far.

The second engine to find a home on the neo is the CFM LEAP-1A, assembly of which is due to start this spring, with testing planned to commence in the autumn. Its first appearance under the wing of a neo

should take place around Q3 2015, with service entry in Q2 2016. Like the PW110G-JM, the LEAP-1A will produce around 33,000lbs of thrust.

As well as its 15% improvement in fuel consumption over today's CFM-56, CFM says the LEAP-1A will have a 50% reduction in oxides of nitrogen emissions, and up to a 75% reduction in the engine's noise footprint. Among technologies helping to achieve these virtues is the use of composites in the production of fewer, lighter fan blades and other engine components, which in total save around 1,000lbs (450kg) in the overall weight of the aircraft.

Moving inside the aircraft, Airbus announced earlier this year that it will offer airlines new options for configuring the floor space offered by the largest aircraft in the range, the A321neo.

These increase the number of seats in the aircraft while maintaining the same comfort standard.

The new cabin options take advantage of recent innovations in cabin monuments and seat design.

### Additional overwing

One new option consists of an additional over-wing exit door, which raises the current maximum exit limit so operators can make more use of the available cabin floor space. When the new overwing exit is combined with the Space-Flex aft cabin configuration, the A321neo can accommodate up to 236 seats, 16 more than today's maximum seating. This gives a 5% reduction in seat-mile costs.

With Space-Flex, an A320 family aircraft's fullwidth rear galley is replaced with a smaller unit, along with two lavatories that previously were located left and right of the central aisle, making more efficient use of the jetliner's rear volume. This allows operators to install up to three additional seats, or increase the legroom between seating rows.

Space-Flex also provides a full persons with reduced mobility (PRM) lavatory for the first time in a single-aisle aircraft. The 'PRM-friendly' lavatory is created by converting two single Space-Flex lavatories into one PRM enclosure.

In conjunction with the additional over-wing exit door, a second new cabin option will see the forward exit de-activated. This creates an undivided forward cabin allowing additional seats and greater flexibility in multi-class seat arrangements. Airbus believes this option will be of particular interest for longer-range markets, where high comfort standards are needed in the premium-class cabin.

Both new cabin options will enter service in the second half of 2017.

### ENVIRONMENT

In January 2013, Syphax Airlines of Tunisia signed an MoU for 3 A320neo

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### **AIR TRANSPORT**

### **Egypt's revolution in**

What do you do when your airline's strategy is suddenly thrown off course by events over which you have no control? This was the problem EgyptAir faced just over two years ago when the Egyptian revolution began on January 25 2011. Victoria Moores reports.

hat day in late January marked the start of an outbreak of demonstrations, riots and strikes that ultimately lasted months, even though the revolution officially lasted just two weeks and three days.

The government and Egyptian president Hosni Mubarak were overthrown, the armed forces assumed power, the constitution was suspended and the parliament and former ruling party were both dissolved.

Two years on, EgyptAir is still feeling the aftershocks of this political upheaval.

"The years 2008-10 were the best for EgyptAir, so the company was prepared for four more years of growth. The plan was to add a number of aircraft to our fleet, build our network and add more routes," said EgyptAir deputy VP planning Ehab Ghazy, speaking at the Embraer Airline Business Seminar in Maputo, Mozambique.

"All that was put on hold but we know this crisis will end. The market is growing and we need to be ready for that."

#### Think of the future

Dubai-based Paul Clark from consultancy firm Through the Looking Glass agrees it is essential to think of the future when a crisis throws you into a totally unpredictable short-term situation. "I always say to airlines in times of crisis 'don't panic'. The key thing is you have to still think long term and not allow yourself to over-shape your fleet to the changed situation, because the market will come back. Just think of what happened with SARS. Fleet planning is a long-term issue and a crisis almost never affects the long-term situation. I think EgyptAir did a lot of things right."

EgyptAir's first challenge was dealing with a mass exodus of people leaving the country, followed by a dramatic drop in traffic. "There was a huge boom as foreigners went back to their own countries," explained Ghazy. "We needed to add capacity to get everyone back home. But, after seven or eight days, we saw a drop in traffic and





Ehab Ghazy: "There was a feast of demand and then a huge drop after."

Top: Revolution led to a dramatic drop in travel demand. PICTURE PRESS ASSOCIATION immediately cut our capacity. There was a feast of demand and then a huge drop after."

The airline immediately mustered its crisis centre, which was active 24 hours a day, seven days a week, supporting operations. "Our decisions were taken by the hour, not by the day," said Ghazy.

Sleep became a scarce commodity and Ghazy applauds the airline's staff for doing a "very good job" of handling a "very hard situation" between January 25 and February 11, when Mubarak stepped down. Things then flipped again as Egyptians flocked home to celebrate what had happened.

#### **Traffic plummeted**

However, in February 2011 most people avoided Egypt and traffic plummeted to 30% of prerevolution levels. "There was an enormous drop in traffic immediately after the revolution. This caused us to take a huge number of aircraft out of service. We parked aircraft to keep capacity in balance. If you face this kind of situation, you have to be ready to park and lease out aircraft to mitigate sudden changes in demand."

When a crisis hits, fleet and network flexibility are key, agreed Clark. "Airlines which have quite diverse networks and markets generally find it easier to redeploy and move around capacity. However, EgyptAir tends to be far more exposed to regional market volatility."

Ghazy said the Umrah pilgrimage in March and April 2011 helped boost traffic to 70% of former levels. This again increased to 80% in June, when the schools broke up for the summer holidays. Likewise, in October and November the

### STRATEGY

### crisis management



Hajj pilgrimage helped shore up passenger figures. "Those seasons supported EgyptAir in the year after the revolution, putting us in a better position than we expected," said Ghazy.

EgyptAir's traffic has now begun to return to pre-revolution levels and Ghazy hopes, once all the institutions are back in place, things will settle down and growth will return. A key element of this will be the country's parliamentary elections in April 2013.

### Fleet flexibility

"The other thing is fleet flexibility," explained Clark, returning to his second point. "In a crisis you want to try to get as much flexibility as you can. You need to renegotiate your order book, talk to lessors and make friends with your partner airlines as soon as possible."

Fortunately the revolution hit just as EgyptAir was coming to the end of its five-year fleet planning cycle, so it only needed to renegotiate the delivery of one Airbus A330-300 in 2011. A further 11 of the airline's 81 aircraft were due to be sold and replaced. These aircraft, comprising three A340-200s, four Boeing 777-200s, and five Boeing 737-500, were parked up.

"We delayed some aircraft, pushed forward phase-outs and postponed our fleet expansion by two years. Now we are working on whether to extend this, or to begin a return to the original plan. We are in a review phase, which we expect to finish in spring 2013," said Ghazy.

Fleet structure, in terms of the 'lease or buy' decision, also plays a critical role. "The flexibility to offload capacity quickly [through leases rather than ownership] may be more expensive, but in a volatile situation it can make a real difference," advised Clark.

Historically EgyptAir has primarily focused on owned aircraft, although it was beginning to shift its focus just as the revolution began.

"We are a government-owned airline. The government always looks at the asset and wants to own the aircraft. For a while, our Continued management team has been

proposing that we should take



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### **AIR TRANSPORT**

### STRATEGY

#### **CONTINUED FROM PAGE 37**

aircraft on an operating lease. Now the operating lease concept has been accepted and this should give us a more flexible fleet ownership strategy. EgyptAir is not government-run, it is government-owned, and they need to accept that we are changing the way we do things."

Clark fully supports Ghazy's theory that government owners tend to favour outright aircraft purchases over leasing arrangements, whereas airlines under private ownership are more likely to structure their fleet for optimum flexibility.

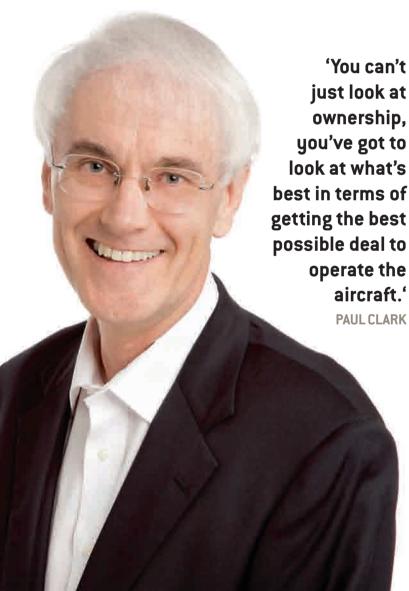
"I think he is spot on there; it is a very interesting point. Governments like to feel as if they control everything, that they own everything and it's theirs. It all stems from the old issues of sovereignty and national interest. However, today I think people have a different point of view. I think the industry has grown up and people understand that fleet financing is something that has to be seen through a different lens.

"You can't just look at ownership, you've got to look at what's best in terms of getting the best possible deal to operate the aircraft. If you can see evolution [in the owned-leased balance] in environments such as Latin America and China, why wouldn't Africa take that on board?"

#### **Correct proportions**

Every airline is different, so it is extremely difficult to give guidance on the correct proportions of owned to leased aircraft. However Clark recommends roughly a third owned, a third on operating lease and a third on finance lease. "This is a good starting point, but there is no magic answer to that question," he cautioned.

The shift towards operating leases will be reflected in EgyptAir's new 10-year fleet plan,



which will include both conservative and optimistic scenarios for the future. "We shall use this as a way of expanding our fleet in the coming years, especially given the huge demands on manufacturers and the lack of slot availability," said Ghazy.

Laying the foundations for the long-term is already an obvious priority for EgyptAir, demonstrated by it doubling its fleet-planning horizon from five to 10 years. "EgyptAir does not have many aircraft on order, so they should push ahead with their fleet renewal plan," advised Clark. "They must not forget the long term, even though they are still finding a way of navigating choppy water at the moment."

Reflecting on the lessons EgyptAir learned from the revolution, Ghazy advises other airlines that they need to be prepared for the worst and, most importantly, be prepared to act immediately. "You need to have Plan B on the shelf and ask yourself 'what are we going to do if we are faced with any crisis'?

"If you don't have this, you will have to sit down and think. Taking this time could be very costly. You need to respond quickly and you need to have strong relations with your suppliers because you will rely on them if you hit problems. Finally, you need to have a very good team running the show. If you don't manage the situation effectively, your company could go bankrupt."

#### Ready for growth

Effective crisis management involves running through possible scenarios and preparing for the various outcomes. "For fleet planning, this depends on two things: when you expect things to settle down and making sure you are ready for growth after that happens," he said.

Ghazy also stressed the importance of strong capacity management to ensure yields do not drop, causing huge losses.

Having a crisis team ready and poised for action was also a huge advantage for EgyptAir, although Ghazy confesses that revolution is not something the team would normally expect to handle. However with 20:20 hindsight, he believes the team did a good job of managing the crisis.

Asked what he would have done differently, he replied: "Nobody expected the transition to take so long. If we had known that, some of the decisions we took on a short-term basis would have been changed to long-term decisions, such as switching aircraft which were put out into the market on short-term ACMI leases to one- or twoyear dry leases."

In closing, Ghazy again stressed the importance of relations with the aircraft manufacturers. "Whenever there is a crisis, you need to sit down with the manufacturers and operating lessors to explain the situation. They will be ready to support you. They don't just sell you the aircraft and then go away. We have seen from Airbus, Boeing and Embraer that they are all ready to support us."



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### **EXPANSION**

### DEFENCE

Embraer is making inroads in the Middle East executive jet market and its range of regional E-Jets is operational with five airlines in the MENA region. But will it, asks Alan Dron, become as well known for military products in the coming decade?



he Brazilian manufacturer has an office in Abu Dhabi to promote its civil products; but in future years its salesmen are likely to be channelling their efforts into its military systems as well as its commercial ones.

At present, its military footprint in the region is slight. The Egyptian Air Force operates 52 EMB-312 Tucano turboprop advanced trainers. Kuwait flies a further 12, although these are 'halfbrothers' to the standard Tucano, being licencebuilt by Shorts of the UK. They differ substantially from Brazil-originating Tucanos, notably in their use of Garrett TPE331-12B engines rather than

# Can Embraer be a military force in the Middle East?

the more usual Pratt & Whitney Canada PT6A and in a strengthened airframe and under-wing hardpoints for weapons training sorties.

The Brazilian company currently has two main products it hopes will interest air forces in the region – the EMB-314 Super Tucano turboprop advanced trainer and the forthcoming KC-390 tactical transport jet.

Press reports have suggested that Libya is in negotiations for Super Tucanos and that the Pentagon is prepared to offer Lebanon 10 turboprop advanced trainers, although it is still determining whether these would be Super

Tucanos or Beech AT-6 Texan IIs. Embraer declines to comment on possible future orders in the region.

In autumn 2010, Embraer was reportedly discussing an order for the Super Tucano with the United Arab Emirates, but no commitment has materialised.

Embraer's military presence in the region is small, but the company's defence business is expanding rapidly. Although it has readward military Continued

produced military equipment since its

on Page 42

### DEFENCE

Embraer's sales attention will increasingly switch to

### **EXPANSION**



#### **CONTINUED FROM PAGE 41**

earliest days (the Bandeirante light utility aircraft that launched the company on to the international market was designed for the Brazilian Air Force), it only set up its defence and security division as a separate business unit on January 1 2011.

As a measure of how its military operations are booming, in 2006 defence sales accounted for just 6% of Embraer's total revenues. Last year, it had risen to 17.1% and further increases are forecast for coming years. The defence business last year had revenues of \$1.05 billion.

"Defence markets worldwide are shrinking, so growing in that climate is a great accomplishment," said Luis Carlos Aguiar, the Embraer defence & security president in a March briefing at Gavião Peixoto, the division's main defence site situated some 40 minutes' flying time inland from São Paulo.

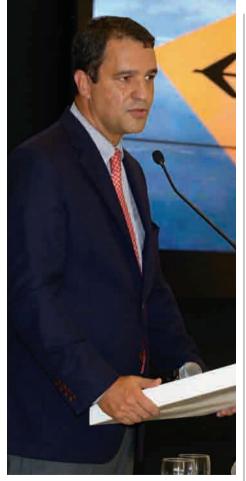
Gavião Peixoto is the manufacturing site for the Super Tucano and for major modernisation programmes on Brazil's F-5E, AMX and A-4 Skyhawk fleets.

"We believe over the next eight years we will have double-digit growth," he added, predicting a 25% rise in revenues in 2013, following a 24% rise last year.

"We're trying to tempt customers away from the US and Europe," he admitted. To do that required not only attractive prices and quality products but also a geopolitical relationship with potential clients.

One geopolitical advantage may lie in the fact that some MENA nations may be more comfortable buying military equipment from a non-aligned nation like Brazil rather than one of the major powers.

Intriguingly, Aguiar and several other



Luis Carlos Aguiar: "Defence markets worldwide are shrinking, so growing in that climate is a great accomplishment."

company executives believed they had a real chance of selling not only aircraft but also the components of integrated border protection and surveillance systems to other nations. These would be built on Brazil's experience with its SISFRON system, which meshes aircraft with ground and air-based vehicles and sensors and which is ultimately aimed at protecting Brazil's vast 16,000-plus kilometre border. A contract for SISFRON's initial phase, covering some 650km along the Paraguayan and Bolivian borders in the remote southwest of Brazil, was signed last November.

For the moment, however, it is the Super Tucano that forms the main thrust of Embraer's export drive. It believes that in the turboprop advanced trainer and light attack aircraft it has a product particularly suited to smaller air arms that are unlikely to face high-intensity warfare operations.

Just as the problem of pirates off the Somali coast has seen the somewhat ludicrous sight of billion-dollar guided missile destroyers hunting for small groups of men in skiffs armed with no more than some AK-47s and RPGs, when much simpler vessels would be just as effective, so highly-sophisticated combat aircraft are not always required for many of the roles that smaller MENA air forces need to undertake.

Advanced training, border patrols and counterinsurgency (COIN) sorties feature high on the priority list of many nations, rather than high-tech air-to-air or air-to-ground missions.

Just having a visible, regular presence in an area can be a deterrent to many lower-grade threats.

The Super Tucano is ideal for this role, says Embraer. Importantly, it can operate from unimproved







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### DEFENCE

#### **CONTINUED FROM PAGE 42**

airstrips and its turboprop powerplant gives a much lower hourly operating cost than jet types.

Embraer believes that the Super Tucano's choice by the US Air Force as the winner of its rerun light air support (LAS) competition, which is intended to deliver 20 aircraft to bolster the fledgling Afghan Air Force following the withdrawal of US and international forces, will improve prospects for the type. Indeed, although the initial order is for 20, the LAS competition could eventually lead to up to 60 of the winning type being purchased for distribution to overseas nations.

Embraer (together with its US partner, Sierra Nevada Corporation) initially won the LAS contract in early 2012, but US competitor Hawker Beechcraft, which had offered its AT-6 Texan II, lodged a legal objection to the Brazilian team's victory. The US Government Accountability Office found flaws in the US Air Force's handling of the competition and the contest was re-run.

When the new competition again found in favour of the Brazilian entry in February 2013, its US competitor – now rebranded as Beechcraft after emerging from Chapter 11 proceedings and desperate to win the \$427 million contract to improve its financial prospects – once again reached for its lawyers to object to the award, voicing concerns at unspecified "significant errors" in the selection procedure.

The US Air Force overrode Beechcraft's objection, citing a US law that allowed it to do so when it is 'in the best interests of the US' or if there are 'unusual or compelling circumstances'.

#### Final outcome of the row

At the time of writing, the final outcome of the row was unknown. Despite the uncertainty, however, Aguiar said during his briefing that the mere fact that the US Air Force had twice chosen the Super Tucano could only help the aircraft's international prospects. "It opens the doors to future sales," he commented. Embraer believes that there is a worldwide market of almost 350 aircraft in the Super Tucano's market category.

Aguiar was sanguine over Beechcraft's repeated legal challenges to Embraer's victories in the LAS contest: "I don't want to say too much, but this is part of the game."

Further enhancements to the Super Tucano are in the pipeline. For example, Embraer is studying a small podded radar that could be fitted to the aircraft to enhance its surveillance capabilities.

If the Super Tucano is taking up the efforts of the Embraer sales team today, attention will increasingly switch to the company's KC-390 military transport aircraft. As its designation indicates, the KC-390 will, unusually for what is primarily intended to be a transport aircraft, have an inbuilt air-to-air refuelling capability. Embraer believes that, conservatively, there is a market for 700 aircraft in this category up to 2025.

Although it was not initially designed as a competitor to the Lockheed Martin C-130 Hercules, its main target market will be those air

'Given Embraer's enviable track record of successfully penetrating new markets with efficient and appealing new designs, this product should not be underestimated. Embraer has a history of producing aircraft the market wants.'

### THE TEAL GROUP

forces operating venerable examples of the US aircraft (and the equally ancient Antonov An-12). Although the C-130's design is seemingly ageless, many examples of the Hercules in service around the globe are now extremely elderly.

In the MENA region, air arms from Tunisia to Turkey operate the type. Until now, for many countries contemplating new transport aircraft, the best replacement for an old C-130 has been deemed to be a new C-130. But could that situation change once the KC-390 becomes available in the second half of the decade?

The Brazilian challenger will have a slightly larger payload (23 tonnes compared to the C-130's 19-21 tonnes) and, with a cruising speed of 465kts (850 km/h) will be 100kts faster than even the latest C-130J. With maximum payload, it will have a range of 1200nm (2220km), compared to the C-130J's 1600nm (2960km), although the C-130J achieves that range with a lower (15.5 tonne) payload. Like the C-130, the KC-390 will be able to operate from unprepared runways and is calculated to be able to make 10 passes over such ground before it renders it unusable.

According to the KC-390 programme vicepresident Paulo Gastão Silva, the aircraft is on schedule for first flight in late 2014, with initial operating capability a year later and full operating capability by mid-2016.

The Brazilian tactical transport contains a mix of mature and advanced systems. The powerplants will be the well-established IAE V2500 turbofan and the avionics will be the Rockwell Collins Pro Line Fusion range used on the Boeing 787.

More novel will be features such as sidesticks and dual HUDs for the pilots, HOTAS controls for chaff and flare dispensers plus several warning systems and a directional infrared countermeasures (DIRCM) pod to foil approaching heat-seeking missiles.

Operating the self-protection suite, together with air-to-air refuelling and control of the EO/IR pod, will be undertaken by a third crew member sitting behind the co-pilot.

Standing in the cockpit of the KC-390 simulator at Embraer's Eugênio de Melo plant one is struck by the visibility afforded the pilots –

especially through the particularly deep side windows. In fact, so large were these, said one Embraer official, that the simulator's image projectors had difficulty generating the necessary field of view.

In mid-March Embraer and the Brazilian Air Force undertook a critical design review of the KC-390. Its successful completion would mean the release of manufacturing drawings and the beginning of component production for the first prototype aircraft. "This is the year when CATIA files start to become a real aircraft," said Silva.

Currently, there are few competitors in this category. The only new design aimed at the KC-390's market segment is the Russo-Indian Medium Transport Aircraft, whose go-ahead was announced in October 2012. "If they succeed, they could compete with us," admitted Silva. "However, their aircraft is slipping all the time in development and will come to market much later than us."

He believed that, importantly, Embraer was recognised worldwide as an established OEM due to its history of commercial and military designs, whereas the Russo-Indian consortium of Irkut and HAL did not have that advantage.

### Marketing know-how

Boeing has been working on a marketing study on behalf of Embraer for the KC-390. The Brazilian company was reluctant to talk about this during March's briefing session, but Boeing's marketing know-how would certainly be of use in selling the aircraft in the Middle East.

However, will it prove to be simply 'too much aircraft' for some nations? Few are likely to require the built-in tanker capability it offers, while its fly-by-wire and advanced self-defence systems may stretch the maintenance capabilities of some nations.

Richard Aboulafia, vice-president, analysis, at US aviation consultancy Teal Group, thinks the KC-390 may appeal to only a few nations in the region. "This plane is basically in a C-130 price class, or close to it." Conceivably, Egypt could handle it, he believes. "The big wild card is [US] foreign aid. There are still plenty of C-130s and other smaller planes to give away."

The risk that many nations may consider the best replacement for an old C-130 to be a newer C-130 is one that Embraer will have to overcome in the region. Several nations, such as Saudi Arabia, Iraq and Tunisia, are in the process of negotiating for, or already receiving, newgeneration C-130Js, which probably rules out the Brazilian aircraft from finding a home there.

However, as the Teal Group said in an assessment of the KC-390 in October 2012, "Given Embraer's enviable track record of successfully penetrating new markets with efficient and appealing new designs, this product should not be underestimated.

"Embraer has a history of producing aircraft the market wants."

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### DEFENCE

## Flying the flag for survival...

The UAE Air Force deployed six of its Dassault Mirage 2000-9 fighter aircraft, supported by a pair of Boeing C-17As, to Nellis AFB to participate in Exercise Red Flag 13-2 and a subsequent Green Flag exercise at the same Nevada air base. Jon Lake reports. his was the first time that the UAE's Mirage 2000s have participated in a Red Flag exercise, although the air force did deploy F-16E/F Desert Falcons to Nellis for Red Flag 09-5 in 2009 and for Red Flag 11-2 in January 2011.

For Red Flag 13-2, the UAE dispatched three single-seat Mirage 2000EADs and a trio of twoseat Mirage 2000DADs, with some 170 pilots, engineers, ground crew and other support personnel from 71 Squadron and 76 Squadron at Al Dhafra, and from 86 Squadron at Al Safran (Madinat Zayed air base).

These units form part of the fighter wing controlled by the Western Air Command in Abu Dhabi. Red Flag is the world's premier large force employment (LFE) and integration exercise, and is increasingly becoming the USAF's preferred method of helping its allies to learn how to achieve better interoperability with US and other coalition partner air forces.

The exercise uses the more than 12,000 square miles of airspace and 4,867 square miles (2.9 million acres) of dedicated ranges that make up the Nevada Test and Training Range

to expose frontline aircrew to realistic training. Red Flag simulates the first ten missions that a pilot might otherwise fly in



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Desert Mirage -The UAE air force flew its Mirage fighters in this year's Red Flag exercise.

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### DEFENCE

### CONTINUED FROM PAGE 47

combat, because Vietnam War statistics indicated that if a pilot survived ten combat missions their chances of survival increased dramatically.

The Nevada complex has a comprehensive array of targets, including road convoys, tanks, surfaceto-air missile (SAM) sites and even entire airfields. Live ordnance can be dropped on some of these targets.

The range also has a wide variety of threat emulators including US, European and Russian air defence and SAM radars and missiles.

SAM launches are simulated using so-called 'smokey SAMs'. Two squadrons of dedicated 'aggressors' fly specially painted F-15s and F-16s to simulate a range of Russian, Chinese and other threat aircraft types.

During Red Flag 13-2, the UAE Air Force Mirages operated alongside Swedish Air Force Saab JAS39C Gripens; F-16s from the Netherlands and Singapore; US Navy F/A-18E Super Hornets; USAF F-15Es and F-16s, B-1 and B-52 bombers as well as KC-135 tankers and E-3 Sentry AWACS aircraft; US Navy EA-18G Growlers; US Marine Corps EA-6B Prowlers; and USAF HC-130 Hercules and HH-60 Pave Hawk combat search and rescue aircraft.

There are usually about four full-scale Red Flag exercises per year at Nellis, with four more Red Flag Alaska exercises at Eielson and Elmendorf AFBs. These are augmented by some ten Green Flag exercises. Green Flag is a smaller, more focused, close air support exercise. Green Flag West is held at Nellis, while Green Flag East takes place at Barksdale AFB, Louisiana.

Following the completion of Red Flag 13-2, during which the UAE Mirages reportedly operated predominantly in the strike package escort role, the aircraft then took part in Green Flag, frequently flying in a three-tank fit, and with Damocles laser designation pods on the starboard 'shoulder' pylon.





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### **Mock-up mystery of Iran's F-313 fighter programme**

The existence of Iran's Qaher (conqueror or vanquisher) F-313 fighter programme was announced on February 1 2013. Jon Lake reveals what's known so far. mock-up of the new fighter was presented to a highlevel delegation, led by president Mahmoud Ahmadinejad, during Iran's Islamic Revolution anniversary celebrations.

The president was accompanied by Brigadier General Ahmad Vahidi, the Defence Minister; Brigadier General Hassan Shah-Safi, the Commander of the Islamic Republic of Iran Air Force (IRIAF); and by Army Commander Major General Ataollah Salehi.

The exact status of the Qaher F-313 project is unknown and public statements about the aircraft have been, at best, contradictory. The president was quoted as saying that the aircraft had been test-flown for "thousands of hours" by pilots who were "very satisfied with its performance", while other senior figures acknowledged that the type had yet to fly in full-scale, manned form.

### Flying prototype

Initial reports that the aircraft seen by the president was a flying prototype were soon shown to be mistaken, and it was subsequently admitted to be a mock-up – explaining some of the apparently inconsistent features of the aircraft – whose cockpit and ejection seat were too small to accommodate the air force test pilot tasked with explaining the new jet's features to his VIP audience, and who, therefore, had to perch, somewhat comically, on the tiny seat like an adult riding a child's bicycle.

Other features that seemed to suggest that the aircraft was no more than a mock-up included its very low-quality, unlatchable cockpit canopy, and its cockpit. The latter appeared to have been hastily put together using general aviation avionics systems and instruments, with a TS Sorcerer autopilot, a Garmin SL-30 transceiver, Garmin

The president was quoted as saying that the aircraft had been test-flown for "thousands of hours".



GTX transponder, and an AvMap GPS. The airspeed indicator also redlined at below 300 knots.

Hassan Parvaneh, the project manager and head of the design team, confirmed that the aircraft was a mock-up, intended only to convey an impression of the full-sized aircraft and revealed that two sub-scale models had been flown, one powered by a conventional piston engine, driving a propeller, and the other powered by a small micro jet engine.

And whatever the limitations of the mock-up, there can be little doubt that the Qaher F-313 demonstrates the ambition of Iran's aerospace sector to move towards fully indigenous creation and manufacture of 'clean sheet of paper' aircraft designs.

Iran's aircraft industry has successfully sustained and supported the continuing operation of the advanced combat aircraft delivered before the fall of the Shah and the imposition of an ensuing regime of tightly applied sanctions, sometimes integrating new weapons and new avionics systems.

This has meant, for example, keeping F-14 Tomcats in operational service for 34 years after the withdrawal of support from their manufacturer, as well as the integration of new weapons and Chinese avionics and radar systems in ageing F-4D Phantoms. This represents an achievement that should not be under-estimated.

#### Local manufacture

During the late 1990s, Iran produced a succession of light jet trainer prototypes – named as the Dorna, Tondar and Tazarve. In the new millennium, Iran turned its attention to local manufacture – starting with the Azarakhsh (Lightning), which was presented as Iran's first domestically-manufactured combat jet but which was actually a locally remanufactured F-5E, with a 17cm extension of the nose, accommodating a new radar based on a Russian design but reportedly incorporating Iranian parts and technology. A handful of aircraft were manufactured (or remanufactured) from 2007.

The Azarakhsh was followed by the similar Saeqeh (Thunderbolt), which was another F-5 derivative, this time with twin tailfins. An initial squadron of Saeqeh fighterbombers was unveiled at an air show in September 2010. Iran also produced the Shahed 285, a single-seat light attack helicopter based on the Bell JetRanger.

At the Qaher F-313's inauguration, President Ahmadinejad told his audience: "Once we imported cars and assembled them here. Now, we are at a point where we can design, build and get planes in the air."

And, clearly, the F-313 is planned to be an advanced aircraft, with a very low radar cross-section and with stateof-the-art weapons and systems.

Some have speculated that the aircraft may have been conceived as a lightweight close air support aircraft in the mould of Rutan's ARES, or the long-dormant SABA from BAE Systems and, as such, the type has been optimised to be able to take off and land on short runways and for easy maintenance.

### TANKERS

Elsewhere in the

Middle East. the first of

three A330 MRTTs built

for the UAE Air Force

was officially delivered

on February 6 during a

Spain - later than the Q2

ceremony at Getafe.

2012 date that had



A situation in which one operator clearly views original equipment as satisfactory, while another does not is, at the very least, unusual. Jon Lake reports on progress for the Airbus A330 multi-role tanker transport. hile the British RAF has so far declined to clear its Airbus A330 MRTT aircraft (known locally as the Voyager) for service, the Royal Saudi Air Force (RSAF) has now done so.

Intriguingly, the RSAF version of the aircraft uses the same Cobham 905E under-wing refuelling pod or hose drum unit (HDU) that has apparently so exercised the UK RAF and QinetiQ, and which has led to the UK specifying a new and different 'basket'.

The RSAF clearly reached a different conclusion following trials between the Saudi MRTT and Tornado and Typhoon receivers, and was happy to proceed with clearing the equipment for service.

Thus, while Airbus Military points out that A330 MRTTs have now been delivered to all four current customers – Australia, Saudi Arabia, the UAE and the UK, this is a misleading 'fact', as it is also the case that the UK RAF has so far cleared the aircraft only for transport operations.

#### **Formally inducted**

Nevertheless, the Royal Saudi Air Force formally inducted the Airbus Military A330 MRTT into service in a ceremony on February 25. The Deputy Minister of Defence, Prince Khaled bin Sultan, dedicated the first aircraft to be delivered (2403) at Riyadh Airbase, though it will actually operate from Al Kharj with the 24th Squadron.

Since then the rest of the initial Saudi batch of three tankers have been contractually delivered, and at least two are in service in the kingdom.

It is understood that contacts between the A330MRTT and both Typhoon and Tornado began even before the ceremonial induction. Deliveries of a second batch of three A330 MRTTs to the RSAF will reportedly begin at the end of 2014.

The Saudi MRTTs will be used to refuel RSAF fighters including the F-15, Typhoon and Tornado, with the existing KE-3 and KC-130 tankers remaining in service to refuel the E-3 Sentries and to augment the new tankers.

### Mixed message over Airbus multi-role tanker

originally been planned. The delay may have been due to the need to test and requalify a secondary boom hoist developed for the UAE's aerial refuelling boom system (ARBS). This system permits the boom to be retracted, even in the event of a primary boom retraction system failure. The redesign was prompted after one of the UAE MRTTs actually lost its boom during a test flight, due to a conflict between the back-up boom hoist and the primary boom retraction mechanism.

### **Qualification tests**

The UAE delivery follows an extensive series of flight tests in Abu Dhabi in March 2012, which saw the type being qualified to refuel UAE Mirage 2000-9s and F-16E/F Block 60 fighters. The qualification tests included simultaneously refuelling two Mirages using the under-wing hose-anddrogue pods.

The first aircraft has since been joined by the second and both UAE tankers are now operating from Al Ain. The remaining UAE aircraft is at an advanced stage of conversion and will be delivered by mid-2013.

At much the same time as the Saudi ceremony, the Royal Australian Air Force (RAAF) MRTT also achieved initial operational capability (IOC), demonstrating air-to-air refuelling during the Avalon show.

The RAAF is initially only using the under-wing HDUs, with one aircraft being retained in Getafe undergoing remedial work to resolve certain issues with the ARBS, which is expected to enter RAAF service later this year.

Airbus Military has been selected as India's preferred vendor, with the IAF keen to obtain six A330MRTTs, while Brazil, France and Singapore have also expressed interest in acquiring the type.

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### Saudi Eagle soars for the first time

Though it went officially unremarked at the time, the Boeing F-15SA – a new fly-by-wire version of the Strike Eagle being developed to meet Royal Saudi Air Force requirements passed two major milestones in February. Jon Lake reports.

he new F-15SA ran out for its first taxi tests on February 15 and then completed a successful 45minute first flight at Boeing's St Louis facilities on February 20. It was in the hands of Boeing pilot Joe Felock, chased by the F-15E1 Silent Eagle demonstrator.

The first F-15SA aircraft was painted in Saudi camouflage but wore the US 'star-and-bar' national insignia and the USAF serial 12-1002.

The US Air Force's Air Material Command subsequently issued a statement acknowledging that the first flight of the new advanced fighter aircraft for the Royal Saudi Air Force (RSAF) had gone as planned, meeting all of the test objectives required to support the aircraft's on-schedule development.

The F-15SA forms the centrepiece of the RSAF F-15 fleet modernisation programme, with 152 aircraft planned to enter service, comprising 84 new-build aircraft, with the RSAF's 68 surviving in-service F-15S fighters due to be upgraded to the same standard.

A dozen of the aircraft will remain in the USA, equipping a training component.

#### Weapons bays

The F-15SA incorporates some of the features planned for the proposed Silent Eagle, but lacks that aircraft's conformal weapons bays and stealth enhancements, including radarabsorbent material (RAM) treatment and canted tailfins.

It does, however, incorporate a Raytheon AN/APG-63(V)3 active electronically scanned array radar (replacing the baseline Strike Eagle's mechanically scanned Raytheon AN/APG-70 radar), which has already been fitted to the Republic of Singapore Air Force's F-15SGs.

Saudi Arabia is the launch customer for a new digital flight control system (DFCS), which improves manoeuvrability and reliability and which reduces aircraft weight. The new Saudi aircraft are also the first to incorporate the new digital electronic warfare system (DEWS) from BAE Systems, which is based on technology developed for the company's AN/ALR-94 (used by the Lockheed F-22) and AN/ASQ-239 Barracuda (used by the Joint Strike Fighter). The F-15SA incorporates new forward and aft cockpits, which have advanced displays providing enhanced situational awareness for the crew, though it isn't yet clear whether these will be the new large-area, touchscreen displays that were offered for the Silent Eagle configuration.

The F-15SA crew will wear joint helmet-mounted cueing systems, and will use an AN/AAS-42 infra-red search and track system.

With an estimated value of \$29.4 billion, the F-15SA sale to Saudi Arabia has been described as the largest US defence export deal to date, according to the USAF, and there are further contracts underpinning the deal.

#### **Firm fixed price**

These include \$253 million to Lockheed to provide groundbased F-15SA pilot and maintenance training systems, \$18.3 million to Raytheon for integration and weapon verification support, and a \$95 million firm-fixed-price and cost-no-fee contract to the Al Raha Group for third-party logistics services to support the repair and return of F-15 assets to the Royal Saudi Air Force.

Lieutenant General C D Moore II, commander of the Air Force Life Cycle Management Center at Wright-Patterson AFB, Ohio (which oversees F-15SA programme management) called the successful first flight of the F-15SA "a tremendous milestone" and "a testament to the relationship between the USAF, Boeing and our RSAF partners".

It is understood that Riyadh is urging the USAF and Boeing to accelerate the F-15SA programme, which is currently scheduled to see deliveries beginning in 2015 and continuing until 2019.

Colonel Robert Stambaugh, the Air Force security assistance program manager for the F-15SA at Robins Air Force Base, described how the programme team (led by Colonel Rob Strasser at Wright-Patterson AFB) had overcome obstacles in developing an F-15SA prototype for the testing stage, and added: "Completing this major milestone in less than one year after programme3 implementation was truly remarkable."



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The Gulf Club

A select group of exhibitors will be at EBACE this year presenting the best of what the Middle East has to offer the business aviation industry. Liz Moscrop looks at the players.



few years ago the annual European Business Aviation Conference and Exhibition (EBACE) saw, at most, one or two Middle East companies take an exhibit at what has now become the largest event for the private aviation industry in the EMEA region. This year's event is bigger than ever and takes place on May 21-23 in Geneva, Switzerland.

Although there are fewer exhibitors than last year, there is still a strong showing of companies from the Gulf.

Every exhibitor from the Gulf has good reason to be grateful to the Middle East Business Aviation Association (MEBAA), which has taken a stand along with its partner F&E Aerospace, (which organises shows in the Gulf, including Aircraft Interiors Middle East, the Dubai Airshow and the Middle East Business Aviation Show).

MEBAA, itself, campaigns tirelessly for a better operating environment for local business aviation services providers. Its persistence is paying off. Last December the association announced it had appointed two new board members – Wajdi Alidrissi, managing director of Saudi Private Aviation and Richard Gaona, CEO of Comlux Management. Comlux is a global operator that has VIP charter services with a large presence in Bahrain, and operations throughout the MENA region, aircraft management, sales and acquisitions and cabin design and outfitting management services.

Alidrissi's appointment illustrates the growth of the Saudi Arabian market that is dovetailing with the kingdom's development in construction.

According to MEBAA's data, indications are for a steady 5% year-over-year growth for the Middle



Pete Bunce: "The Middle East and North Africa region is of growing importance for business aviation and we want to ensure it develops to its full potential."

East and North Africa; Alidrissi believes Saudi Arabia is actually growing at a rate of 10%.

Alidrissi wishes to work with regulators to improve the situation for operators in the region. He said: "Regulations imposed upon business aviation that were designed for commercial operators are not effective. Despite sharing the same airspace, the two have such different ways of working that regulation is becoming counterproductive to operational efficiency for business aviation operators and, in the worst cases, it's bringing safety standards into question."

Also last December MEBAA teamed with the US General Aviation Manufacturers Association (GAMA) in an initiative to work together to promote and develop business aviation in the Middle East and North Africa region.

GAMA CEO Pete Bunce said: "The Middle East and North Africa region is of growing importance for business aviation and we want to ensure it develops to its full potential. It is important we combine our efforts to ensure business aviation is treated fairly, with proportional rules implemented across the region."

The objective of this joint effort is to transform the regulatory environment by encouraging civil aviation authorities in the region to adopt a common set of principles to facilitate business aviation operations.

MEBAA's chairman, Ali Al Naqbi, added: "The single biggest obstacle to the full development of business aviation in our region is the lack of an appropriate regulatory framework tailored to the particular needs of business aviation.

Through this partnership we aim to change that."

### EBACE PREVIEW

#### **CONTINUED FROM PAGE 57**

Many of the region's key players, who provide infrastructure and related support, have taken booths at EBACE. Flight planning and ground handling are huge local requirements, reflected in the amount of service providers who will be there.

Dubai-headquartered Jetex Flight Support, for example, always has a huge presence at the show. The aviation services provider has just opened a new flight-planning lounge at the UK's Oxford Airport. The company branded a room for crews in an exclusive arrangement with the UK airport.

Jetex is the airport's preferred flight planning partner with only Jetex materials and information featuring in the Oxfordjet FBO. Jetex-supplied computers will link directly to its flight planning systems, while also hosting generic flight planning software packages for crews to be able to do swift, stand-alone assessments of route options when on the ground at Oxford.

Fellow flight planning firm Hadid International Services is also a show stalwart, and arrives this year with an ISO 9001 certificate.

#### New fuel supplier

MoonJet Flight Support will also be there once again, promoting its global flight services. In March the company secured new fuel supplier arrangements in Nigeria, leading to better pricing and more efficient service for customer flights there. Nigeria is a key market for MoonJet in Africa.

Turkey's Bilen Air Services has also taken a booth. The company has a strategic partnership with ExecuJet and offers FBO and handling services, as well as hangarage and crew lounges.

Another well-known name on the Middle East handling scene is Dubai-based Palm Aviation. The company has an agreement with Jordan Aircraft Maintenance Limited (JorAMCo), whereby Palm offers flight support, ground handling and refuelling services to JorAMCo's customers on demand during their maintenance visits to JorAMCo's facilities at Queen Alia International Airport in Amman, Jordan.

Jet Aviation has a stand. The General Dynamicsowned firm has a maintenance and FBO operation in Dubai, as well as two other bases in Riyadh and Jeddah. It has just opened a new base at Al Maktoum International in Dubai.

British company Gama Aviation also has a booth. The firm obtained a UAE GCAA CAR 145 maintenance approval in the first half of 2011 and has bases in Sharjah and a newly opened Abu Dhabi facility.

Britain's Gama Group has also just opened a second FBO in Abu Dhabi, augmenting its base in Sharjah. CEO Marwan Khalek said: "We are going great guns. Our Sharjah FBO continues to show growth month-on-month and our service delivery is well received by clients. We will soon be able to offer hangarage for larger aircraft."

Qatar Holdings has two of its companies in Geneva – Harrods Aviation and Qatar Airways private jet division Qatar Executive, which received EASA certification approval to provide maintenance and repair services for Bombardier



Patrick Margetson Rushmore: "There are peak times in Europe and the Middle East when people are travelling. For example, there are peaks in the Gulf region just before and just after Ramadan. In Europe, the slower times coincide with peak times in the Gulf and vice versa."

Challenger 604, Challenger 605 and the manufacturer's entire global family of business jets in December 2012.

Qatar Executive can now offer scheduled maintenance, repair and warranty services for European-registered Challenger and Global aircraft at its Doha hub.

Founded in 2009, Qatar Executive today operates a wholly-owned all-Bombardier fleet, comprising three Challenger 605s, two Global 5000s and one Global 6000, which is set to grow.

Other charter companies at the show include Morocco's Dalia Air, Gözen Air Services from Turkey, and Egypt's Zas Aviation.

The Gulf region is of great interest to several Western European companies, which see the potential for great synergies between the two regions. London Executive Aviation (LEA), for example, one of Europe's largest business jet charter operators, is working on a deal with a local AOC holder to share its two Embraer Legacy 600 aircraft based in the UK. During off-season times, LEA would like to base the two aircraft in Dubai rather than the UK, and make them available for hire to locals.

CEO Patrick Margetson Rushmore explained: "There are peak times in Europe and the Middle East when people are travelling. For example, there are peaks in the Gulf region just before and just after Ramadan. In Europe, the slower times coincide with peak times in the Gulf and vice versa."

#### Local operator

LEA is looking for a local operator to share aircraft, crew, maintenance and insurance (ACMI) lease costs. That might then give them access to larger aircraft types, such as Boeing Business Jets and Airbus Corporate Jets.

Margetson Rushmore added that the talks were progressing but that a deal would take time due to the complexity of the arrangement.

Even though there are fewer regional exhibitors at EBACE this year, the feeling in the Gulf is that the Middle East is still a force to be reckoned with. MEBAA expects registered business aircraft in the Gulf to increase from 500 to 1,375 by 2020. Al Naqbi recently said that the regional industry would be worth \$1 billion by 2018.

Rob Wilson, president of business and general aviation at Honeywell Aerospace, also predicts that the region will continue to grow. Despite not having local manufacturing, he said that the Gulf accounts for 5% of aircraft demand.

His sentiment was shared by Homaid Al Shemmari, executive director, Mubadala Aerospace, who said that business aviation would dovetail with the expansion of the UAE economy, drawing a specific comparison with Abu Dhabi's 2030 strategy that includes the growth of the emirate's dedicated business airport and investment by Mubadala across the business aviation industry.

With such bullish prospects, visitors to this year's EBACE could do worse than visit some of the regional stands at the show.

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MEBAA founding chairman Ali Ahmed Al Naqbi looks at issues arising from the International Business Aviation Council planning and operations committee meeting that directly affect the MENA region.

### The big issues

ajor issues as varied as carbon emissions, the 'grey market' and emergency response plans (ERPs), were debated when IBAC met in Montreal – with implications for the MENA region.

A working group is to be developed to establish an international business aviation position regarding the application of market-based measures (MBMs) to international aviation, as part of ICAO's overall approach to address carbon emissions in the sector.

ICAO recently established a high-level group on climate change to provide political guidance on difficult issues relating to the application of MBMs to international aviation. At the moment, the industry provides support for the concept of MBMs as one element of a suite of measures to mitigate carbon emissions.

#### Joint statement

The position was stated in November 2009 when IBAC and the General Aviation Manufacturers Association (GAMA) issued a joint statement saying: "The successful achievement of carbon neutral growth by 2020 will be challenging, since there will not be a significant and immediate impact delivered by improvements in technology, infrastructure and operations, and alternative fuels. During the interim period, business aviation operators are committed to offsetting their emissions through market-based economic measures."

Now the working group has taken an active part at the recent ICAO committee on aviation environmental protection (CAEP) meeting and there has been progress.

An ICAO announcement said moves forward had been achieved in delivering agreement on the

certification procedures supporting a new CO2 standard for aircraft.

ICAO added: "The new CO2 certification procedures represent another step towards a practical and comprehensive CO2 standard for aircraft. It is a promising development and illustrates the value ICAO is placing on the business aviation voice."

The second day of the event highlighted a particular concern for MEBAA members, which we raised regarding emergency response plans (ERPs).

These plans are put in place as part of a safety management system that, in the event of an aircraft accident, incident or other occurrence of a serious nature, will be able to provide the correct procedures to follow, responsibilities, instructions and guidance for personnel in the absence of a safety officer.

According to IS-BAO standards and recommended practices, 'An operator shall have a plan detailing the procedures to be followed in the event of an accident, incident or other emergency. Compliance with this is mandatory'.

Our region suffers from an extreme lack of operators possessing a recognised ERP. However, this isn't a problem unique to the Middle East. In 2009, the European Business Aviation Association (EBAA) conducted a survey of its market and found that about one-third of all operators do not possess an ERP and most have not provided ERP training.

The EBAA has set about changing this by introducing its ERP Guidance Manual to assist European operators.

We made it clear that this matter is of great concern to MEBAA members as currently there is not an IBAC-endorsed training or guidance manual available to Middle Eastern operators.

To address this issue, it was agreed that

MEBAA would partner with Kenyon, an international emergency services company, to draft a guidance manual for MENA operators. The manual will also be complimented by workshops in conjunction with Kenyon to further enhance MEBAA's offering to its members. Discussions are currently on-going between MEBAA and Kenyon to finalise the logistics of the first workshop, scheduled to take place towards the middle of 2013. A whole day was dedicated to discussing illegal chartering or the 'grey market'- a problem faced by all members of IBAC and, especially, here in the Middle East.

**ISSUES** 

### Illegal charters

The committee opened discussions with the acknowledgement that the issue of illegal charters is widely acknowledged to be a problem. It is further complicated by the lack of an agreed definition, full accuracy, credible data; and the resources to the regulatory authorities to enforce existing or non-existing rules.

IBAC's current definition of illegal chartering describes it as: "The operation of an aircraft for remuneration without the operator having authority to conduct a commercial flight in accordance with provisions of a current AOC issued by a relevant authority."

Whether an aircraft is operated under, and in accordance with, an AOC is a key factor in defining an illegal charter. However, it is not the only factor, which is where the grey area lies.

It was agreed by the meeting that a clearer, simpler and more concise definition, further supported with examples in order to inform and educate the public, members of the industry and regulators, would be drafted and, once approved, adopted by all member associations.

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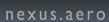




cepa







### COMLUX



*Comlux Aviation has a strategic and growing base in Bahrain.* 

Liz Moscrop uncovers the company's plans for the Gulf. omlux Aviation is one of the fastest growing private aviation groups in the world. With bases in Bahrain, Indianapolis and Switzerland, the company caused a stir at the recent Middle East Business Aviation (MEBA) event when it brought the largest business jet ever displayed – a Boeing 767 – to the show.

CEO Richard Gaona said: "Most of these aircraft are privately owned, so it is very unusual to see a 767 available for charter."



Comlux has its main Middle East base in Bahrain, which is home to the 767, an Airbus ACJ320 and an ACJ319.

The Bahrain base is a strategically good move. Kamal bin Ahmed Mohamed, the country's minister of transportation and acting CEO of the Economic Development Board, recently revealed that Bahrain is set to announce further expansion of its international airport and increase the opportunities for business aviation.

He said: "We welcome foreign investment. We are 25 minutes away from the eastern province of Saudi Arabia across the causeway and there will be a causeway connecting Bahrain with Qatar. There is a good talented pool of well-educated, bilingual people. The kingdom's economy has long been the most free and diversified in the region."

Speaking at the recent Middle East Business Aviation Conference, Bahrain's deputy undersecretary for civil aviation, Ahmed Nemat Ali, told delegates that his country was working hard on civil aviation laws to assist with the development of the industry in the region–indeed Bahrain is positioning itself as a centre of excellence in the region.

Gaona is coming to the end of his first five years at Comlux and is looking to expand the company



#### **CONTINUED FROM PAGE 63**

further, with Bahrain a key part of his strategy. Last year the company opened a new operations centre and aircraft base at Manama, Bahrain for its Fly Comlux arm. This joins the commercial sales entity at the base. The firm has seen so much demand that it now bases three wide-body jets there.

The operation is a joint venture between the Comlux Aviation Group and local partner Saudi Private Aviation (SPA), which is, in turn, a partner of Saudi Arabia Airlines. Comlux makes its fleet available to SPA's clients, while SPA offers its Falcon 7X and Hawker 400XP aircraft to the Swiss firm, giving Comlux customers a large fleet from which to choose.

The idea is to grow the staff on site to around 65 people, including admin, sales and flight crew personnel. The aircraft on site are largely flying to Europe, with the 767 proving particularly popular.

Gaona said Comlux also makes several trips from the Kingdom of Saudi Arabia – a fairly easy trip with short positioning flights to either Jeddah or Riyadh before flying on to Europe.

The Bahrain expansion is just part of the growth of services on offer since Gaona took the reins. His background is well known. He spearheaded the development of Airbus Corporate Jets and wanted



Comlux can manage a number of completions including the Bombardier Global XRS.

to increase the range of services on offer to customers at Airbus. He left ACJ after selling the first (and only) VIP Airbus A380 to Saudi Prince Alwaleed bin Talal bin Abdulaziz Al-Saud. He said: "I had gone as far as I could go with Airbus and wanted to offer customers something more."

Thanks to that background, Comlux now helps customers buy and sell aircraft, complete or refit their jets, and operate them under management. The group also provides aviation services worldwide that include aircraft management, VIP charter, aircraft sales and acquisitions, aircraft cabin designs and completions, aircraft engineering services, aircraft maintenance, and avionics design.

Back in September, Comlux America opened a third 129,000sqft hangar at its completions, engineering and maintenance facility in Indianapolis. This adds space for additional large airliners. The facility also features customer offices, a clinic and a prayer room.

The company can take on Airbus, Boeing and Bombardier types and its completions capabilities on site include cabinetry and workshops for sheet metal, avionics, upholstery and finishing. There is also an interior-design department in



### COMLUX



Indianapolis, as well as departments for engineering, certification, technical publications, and document control procurement and programme management.

Comlux also has four other aircraft operations businesses, which include air operator certificates in Switzerland, Malta, Kazakhstan and Aruba.

Around a quarter of its fleet is fully privately managed aircraft, and not available for charter. It has several aircraft on order, including an Embraer Legacy 650, two Bombardier Global 6000s and two Global 7000s.

The company is also the launch customer for

inflight

the Sukhoi Business Jet (SBJ), the VIP variant of the Sukhoi Superjet 100, for which it holds two firm orders and two options. Before it enters service, Comlux America will design and outfit the VIP cabin.

The Indianapolis facility has also been appointed as the first approved SBJ completion centre. First delivery is scheduled for the fourth quarter of 2015.

Indeed, Comlux America is constantly busy. Towards the end of last year Boeing awarded the US-based completion centre the maintenance and cabin upgrade contract for two of its BBJs. The maintenance programme includes VIP interior removal and re-fitment with structural modifications, interior refurbishment, and also a complete in-flight entertainment and cabin management system upgrade. The first aircraft was scheduled to arrive at the Comlux America facility as Arabian Aerospace was going to press and the second one will arrive in the summer.

Gaona said: "We have a very good relationship with both Airbus and Boeing." Comlux America is one of the few completion centres in the world to have all shops integrated under the same roof, improving efficiency and productivity of the teams and quality of work.

So what is next on the horizon for the dynamic company?

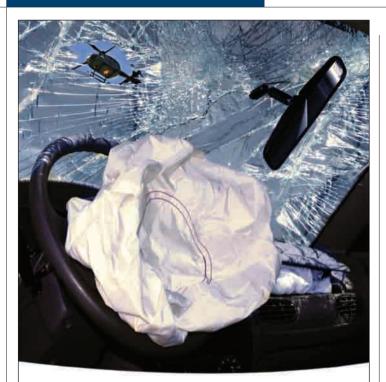
Gaona said that his first five-year plan had been to expand the services on offer so that Comlux would become a one-stop-shop for customers wishing to buy, outfit, maintain and fly aircraft. He has done exactly that. He has high hopes for the Middle East, and the firm's other bases, but his main goal for the next five years, he added, was to "continue to develop the excellent young management team around me. I would like to be able to retire one day knowing that the company is in excellent hands. I have a hard working and talented group of people with me."

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### Dassault's birds still golden

The Dassault Falcon business jets are recognised across MENA as the aircraft that deliver performance and quality. This month the Falcon brand will be 50 years old. **Alan Peaford** finds out just why the French aircraft manufacturer has enjoyed such long-lasting success.

t was four short words by the legendary aviator Charles Lindbergh that is said to have begun a chapter in business aviation that is celebrated this month. The four words were sent in a telegram to the chairman of Pan Am, Juan Trippe, 50 years ago and simply said: "I've found your bird."

Lindbergh was acting as a technical advisor to the American aviation group and had been tasked by Trippe to guide them into the private jet market. A visit to Bordeaux to see the manufacturers of the Mirage fighter aircraft introduced them to the Mystere 20, an eight-to-twelve-seat business jet.

The Dassault family, led by founder and Mystere creator Marcel Dassault, knew that – just like today – conquering the US market was vital for the success

### DASSAULT

of the project and his son, today's company figurehead Serge Dassault, set about encouraging the Americans to take a look.

"The Mystere 20 has the potential to occupy a key position in the US private aircraft market," he said.

The Pan Am order for 40 aircraft and an expectation of a further 160 was the boost the Dassault business jet needed.

But there were two problems. One was the P&W engine, which Pan Am thought was underpowered, and the second was the name. The Mystere, it seems, was simply too French for the US market.

For Serge Dassault there was total agreement, both about the name and the engine. "Since American corporations weren't gaining any time advantage from their business jets they sold them and began to fly commercially, waiting for a moment when a business jet would be built that would grant them the time savings they were looking for as well as being a comfortable and safe way to travel," he said.

Dassault had already been investigating an engine change and, by the time Lindbergh made his historic visit, the General Electric CF700 offering a 25% range improvement was ready to go.

The name issue involved a trip to Manhattan to meet a branding company. High on the shortlist was the name Citation - later to go to Cessna - but the French team rejected that. The next option, Falcon, ticked all the right boxes.



At the NBAA meeting in 1963 a mock-up of the Dassault



From the Mystere (inset) to the latest 7X, Falcon has enjoyed a successful 50 years. Middle: Marcel Dassault's original Bordeaux facility and above, the new "Lindbergh" building for assembly.

### DASSAULT

Falcon 20 made its debut – and the rest, as they say, is history.

But while Dassault celebrates the golden jubilee this year and looks back with pride at the growth of the reputation and the fleet, there is nothing old fashioned about the business.

The centre of the Falcon world is Merignac, close to the Gironde River and the wine capital of the world in Bordeaux. Here, alongside the Bordeaux International Airport, is the main assembly and manufacturing plant for the Falcon fleet.

A modern steel and glass building dominates the landscape. The Dassault name and logo – symbolising the lucky four-leaf clover that Marcel Dassault would carry in his wallet – can be seen clearly whether you arrive by land or air.

The new building even carries the name of Charles Lindbergh as testimony to the man's part in the Dassault story.

Inside is a spotless, well-lit production facility where the different models are assembled.

Just a few kilometres away is the Martignas plant, where the distinctive wings are built using the latest in robotic technology to deliver precision and consistency.

The Dassault wings feature a unique advantage in that the whole section can be removed simply from the piano junction at the root. It is made from one single piece of aluminium and once the titanium screws are removed the wing can be replaced.

"We need to do this about once a year when an aircraft has had a small collision or something," said Jacques Roussarie, director Falcon Industrial Support.. "It means the owner can be flying again quickly and not spending months with the aircraft undergoing expensive repairs."

#### First manufacturer

Dassault was also the first manufacturer to use composite on a primary part of a civil aircraft when it developed a composite aileron for the Falcon 20. It went one stage further in the 1970s and developed an entire composite wing for a Falcon 10. The wing was certificated and flew as a test aircraft for the next 40 years and was retired just a few years ago having clocked up more than 20,000 flight hours.

The complete wings are tested at Martignas and then taken by road to Merignac, where they are stored alongside other vital parts that are produced across France: Argenteuil, near Paris, where the nose cones are produced; Seclin, near Lille, for large metal parts for the fuselage; Biarritz, where the radomes and landing gear are made; and Argonay, in the French Alps, where the sophisticated flight control systems are developed.

In the giant assembly hangar the green aircraft work their way around towards a large hangar door and, after test and acceptance flights from the same runway that all Dassault aircraft have made their first flights from since the days of the Ouraga, the Falcons are flown across the Atlantic to Little Rock, Arkansas for the completion and outfitting of the luxury cabins. They are then either taken by



Take it EASy - the Dassault sophisticated avionics suite now on all Falcon models.

customers from Little Rock or returned to Merignac for delivery.

Today, the demand is so great that completions are also being carried out in Bordeaux.

While the US remains a major market, the Middle East is continuing to see growth. The company sees demand for business jets recovering throughout the Middle East, spurred on by large regional operators and the increased globalisation of commerce.

The company's plans call for Dassault to deliver six Falcons to Middle East customers over the next 18 months, growing its fleet by 10%. More than 60 Falcon business jets already operate in the region.

"The Middle East business jet market and its infrastructure are continuing to mature," said John Rosanvallon, president and CEO of Dassault Falcon. "This is due, in part, to increased globalisation but also to the development of larger operators and world class facilities such as the Al Maktoum International Airport."

The manufacturer has been expanding its Middle East sales and support network in order to serve the dynamic market. In addition to its main Dubai office, the network includes authorised service centres in Dubai and Jeddah, a spares distribution centre in Dubai and a technical office in Jeddah.

"Falcons are well-suited to the demands of our Middle East customers, offering long range and large, roomy cabins, which are ideal for work or rest," said Renaud Cloatre, Dassault Falcon's sales director for the Middle East. "Moreover, Falcons burn 20-40% less fuel and offer up to 50% lower operating costs than some aircraft in their class." The Falcon 7X is Dassault's best selling aircraft and accounts for about 40% of all

Dassault Falcon's Middle East business jet sales. Two of the largest 7X operators in the world are based in the Middle East. Saudia Private Aviation (SPA), the business aviation arm of Saudi Arabian Airlines, flies four of the advanced tri-jets, making it the largest 7X operator in the region. Dubai-based Empire Aviation Group manages three Falcon 7Xs on behalf of owners.

Key to the success of the Falcon has been the links with the military aircraft produced by Dassault.

"Technology developed for the fighters, such as the Rafale, become transferrable to the Falcons," said Jean Claude Bosc, the research, design and engineering manager for the in-service Falcon programmes.

The 7X is a case in point. It was the first business jet to be equipped with a fully digital flight control system, which greatly enhances flight safety and overall comfort. Its 5,950nm range allows the 7X to serve more than 90% of the city pairs demanded by the typical business aviation traveller. The aircraft can connect New York to Riyadh, Jeddah to Recife or Dubai to Darwin.

The 7X also offers unparalleled flexibility of operation. It can fly multiple short hops and then proceed on to the final destination without being refuelled. And it is capable of landing on short airfields and the most challenging airports. For instance, it is the only business jet in its category able to operate from short runways like La Mole St Tropez in France, or to meet the demanding requirements of London City Airport, with its steep approach and noise restrictions.

#### Inboard slats and winglets

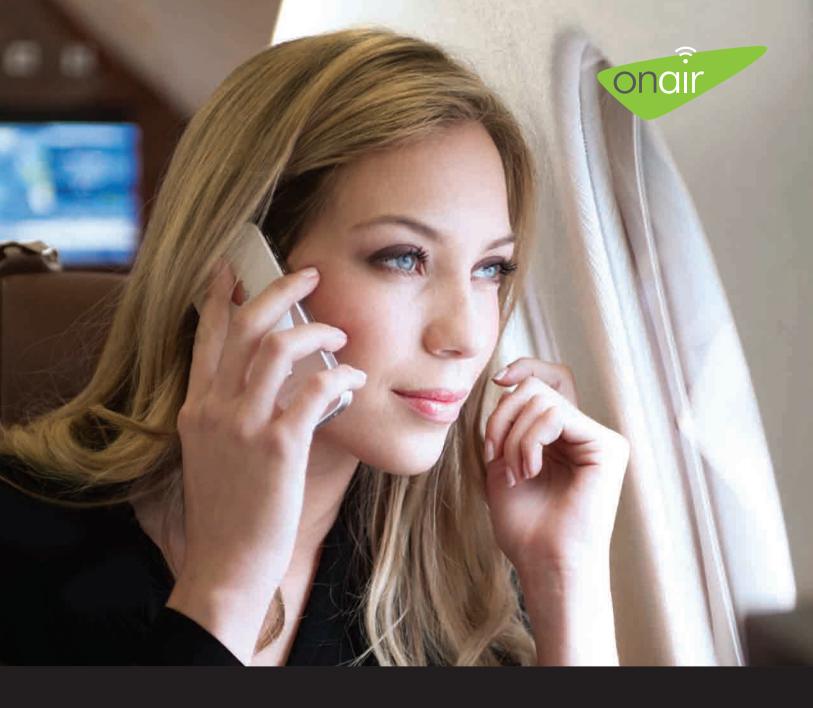
The entry-level 3,350nm Falcon 2000S was certified in March. It is fitted with inboard slats and winglets that allow it to land at airfields that normally can only be served by much smaller midsize jets. Flight test performance is better than figures announced when the aircraft was unveiled in May 2011. The Falcon 2000S can fly from Dubai to Paris or Riyadh to London City Airport.

The 4,000nm Falcon 2000LXS, which was EASA certified at the same time as its smaller sister, is equipped with the same inboard slats and winglets as the 2000S.

It has the same short field performance as the 2000S and the climb and cruise capabilities of the 2000LX. It can fly from Dubai to London City or Hong Kong.

At the Abu Dhabi Air Expo in March, Dassault brought a 2000 to celebrate the type's 20th anniversary. Cloatre said: "The Abu Dhabi Expo is the ideal forum to show off the aircraft and let people see its capabilities."

Like the wines of Bordeaux region – and there is even a Chateau Dassault fine wine – the Dassault aircraft have a reputation of fine vintage. Since the first Falcon jets amazed America, models like the Falcon 50, the 900 and the current fleet tend to impress wherever they go.



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### **INTERIORS**



### **HIGH AND DRY**

Providing equipment for very large corporate aircraft in the Arabian market has given CTT Systems a stepping stone into the commercial-airline world for its Boeing 777 and other cabin-drying and humidification installations, reports **lan Goold.** 

> Right: European manufacturer Airbus has selected a CTT Systems zonal dryer as optional equipment for the A350, which is expected to make its first flight this year.

fter equipping several corporate Boeing 777s, including a number based in the Middle East and Gulf regions, Swedish manufacturer CTT Systems is about to launch a direct marketing campaign aimed at installing its cabin-environment equipment on long-range 777 commercial-airline fleets.

If successful, the move will confirm the company's earlier experience that equipping corporate Boeing 747-8s and 757s led to airline adoption of related CTT Systems cabin-drying and humidification products.

The supplier has also been selected by Boeing to provide the standard fit on the 787 and by Airbus as an optional provider for the A380 and upcoming A350.

In the Arab region, Gulf low-cost carrier (LCC) Flydubai has chosen CTT Systems as the production fit for more than 30 Boeing 737-800s, while in Europe British LCC EasyJet has begun equipment trials on its Airbus A320 fleet.

Boeing's selection of CTT equipment for the 787 has been a good thing for the Swedish supplier, which

expects to begin marketing to commercial 777 long-range operators this month, according to sales and marketing vice-president Peter Landquist.

The company plans a long-term marketing effort to place its Cair system in long-haul firstclass cabins, with equipment probably comprising a humidification unit and one or two 'zonal' dryers. Landquist reports "positive" discussions with Dubai carrier Emirates Airline, which would be the "perfect" launch customer.

CTT Systems equipment has already been installed in about five corporate 777s at

completion centres that include Lufthansa Technik (LHT) in Hamburg (Germany) and AMAC Aerospace in Basel (Switzerland), with more applications understood to be currently under way.

Landquist says the systems fitted to the corporate 777s are essentially similar, with customers selecting the numbers of units fitted. Corporate Middle

East operators include the Abu Dhabi Amiri

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## **BUSINESS AVIATION**

## CONTINUED FROM PAGE 70

Flight, which has two, while Jeddah-based Mideast Jet operates a US-registered example; Aviation Link (also in Jeddah) manages a plainliveried, Cayman-registered machine on behalf of a private owner. Elsewhere, corporate 777s are flown by the governments of Gabon and Turkmenistan, according to website triple7world.info.

Landquist would like to have CTT equipment offered on current 777-200 and -300 models, on which installations also could be retrofitted in flight crew rest areas as an upgrade during aircraft refit work. Unsurprisingly, he expresses a "big interest" in having equipment on Boeing's planned 777-8 and -9 upgrade models.

The Swedish company prefers to deal directly with airframe manufacturers, with the equipment offered as standard or optional fit (integrated with other cabin systems), rather than to develop retrofit systems. It has been working hard to show the potential for its humidification and drying equipment to be offered as an option for any aircraft type.

"We have been broadening our marketing and are more confident we can fit it more or less anywhere. The big issue for manufacturers has been that they cannot provide 20-25% relative humidity (for passenger comfort) without creating condensation. This has not been a problem for Lufthansa, which has CTT equipment in its A380 first-class cabins," said Landquist. The original CTT Systems installation was aboard an SAS Boeing 767-300, but now the supplier is looking at "anything in production".

Landquist provides a tempting analysis of system benefits, claiming that installation reduces the weight of water generated by cabin condensation by up to 500kg on a 787 flight. Since this would also help to lower the threat of airframe corrosion and the replacement rate of cabin-

## Flydubai aims to match EasyJet savings

With its selection of CTT Systems equipment for its 737-800 fleet, Gulf-based Flydubai will be hoping to emulate the savings expected by European counterpart EasyJet.

The British low-cost carrier believes that zonal-drying equipment could significantly reduce aircraft weight and consequent fuel consumption and has begun a 12-month trial with four single-aisle Airbus A320s.

EasyJet suggests that the equipment – weighing less than 30kg and installed in the crown area – will "reduce weight-increasing moisture by up to 250kg on each flight, the equivalent of 12 hold-bags plus the additional benefit of improving air quality for the passenger".

Zonal-drying systems comprise a fan, heater and a moisture-absorbing, silica-impregnated fibreglass rotor. Flight-operations manager Captain Chris Foster concluded: "There is the potential to save 4,500,000kg of fuel per year using this technology."

CTT Systems sales and marketing vicepresident, Peter Landquist, said LCCs typically use high-density seating configurations that generate particularly high levels of condensation between warm cabin liners and cold aircraft skins.

"Airlines take time to realise just how much water is created in the aircraft and CTT was really impressed by the airline's quick understanding," he added.

If the equipment is adopted for the whole fleet, the supplier's challenge will be to provide 30 or 40 systems a year alongside production for Boeing and other customers.

Although Airbus does not yet offer the CTT Systems equipment as an option on the A320, Landquist claims that EasyJet will probably ask for it following the trial. "There's a good chance if EasyJet pushes for it, but you can never know if it is a possibility – it would be good."



insulation blankets, CTT Systems suggests that customers equipping a ten-aircraft fleet could see a return on investment in as little as two years.

Having gained experience through modification of numerous Boeing Business Jets along with a few private wide-body aircraft, LHT last year installed CTT Systems equipment on a corporate Boeing 777 and expects to complete at least two more on wide-body aircraft.

The 777 installation involved a cabinhumidification system that LHT says typically presents no problems in terms of labour time or tooling requirements. Retrofitting the equipment on current aircraft requires about 100 man-hours of labour, according to Landquist. "The big job is the wiring installation, but mechanically it is very easy."

Such work arises in two ways, according to LHT: "Often the customer mandates us to install the system and we mandate CTT to produce the equipment, but we also have the case where CTT has sold the product directly and we have done the integration, installation and certification work."

## Increased market interest

Since CTT equipment was specified as basic fitment for the 787 and optional on the A350 and A380, has LHT seen increased market interest in passenger- and crew-area drying and/or humidifying systems? "Yes," confirmed the company. "We have seen an increasing interest over the past years by VIP and commercial customers. This is also due to the increased reliability of the systems. CTT is playing a central role in this development."

LHT's work has been principally with private and corporate aircraft, but as CTT Systems offers the equipment for retrofit on airline fleets, the maintenance company expects to be a player. "We have been focusing on the VIP market so far – but we would have the capabilities and expertise within our commercial cabinmodification business to offer these services for airline fleets."

CTT Systems has also seen interest from commercial operators following a corporate Boeing 757 installation by Comlux America, which also has equipped ACJ320s similarly. With interest from a "large European operator" – possibly Icelandair – Landquist says that two humidifiers and a dryer could serve the forward part of the aircraft. With its equipment installed on six out of seven corporate Boeing 747-8s, according to Landquist, CTT Systems is hoping to develop a fit for commercial 747-8I first-class cabins, while also reporting "big interest" from Airbus operators.

After more than 12 months' experience on the 787 (before January's global grounding), Landquist says 787 operators are satisfied, although he concedes there had been some initial reliability problems that have been fixed. Some 787 customers are considering retrofit introduction elsewhere in their fleets, according to Landquist.

CTT Systems equipment planned for commercial 777 long-range operators' firstclass cabins will probably comprise a humidification unit (seen here) and one or two 'zonal' cabin dryers.

## **GENERAL AVIATION**

REGULATION



# UAE authorities signal massive boost for GA

General aviation enthusiasts have been given a tremendous boost by the UAE's General Civil Aviation Authority (GCAA), which has approved plans to develop regulations for light sport aircraft (LSA) activities in the United Arab Emirates. Alan Peaford reports.

Ithough there will be a 12-month consultation period, known as a 'notice of proposed amendment' to the new rules, they should open the way for LSA aircraft meeting specific requirements to be authorised to operate in approved flying club environments.

Globally, the GCAA joins only a few authorities providing regulation for the LSA sector.

Per geographical size, UAE airspace is one of the busiest in the world.

GCAA's director general, Saif Mohammed Al Suwaidi, said the regulator is conscious of the security, commercial and general aviation interests but added that future release of airspace to enable cross-country routing for general aviation is planned.

Formerly unregulated, the GCAA vision is, he said, to increase safety, security and standardisation for the growing aviation community.

Yousif Hassan Al Hammadi, general manager of Al Bateen and chairman of the UAE branch of the international Aircraft Owner and Pilots' Association (AOPA), celebrated the decision. "This will lead to greater opportunities for general aviation in the UAE and hopefully others in the region will follow," he said.

The timing of the announcement couldn't have been better. It came as some 80 representatives from the International Council of AOPA, including leaders from the USA, the United Kingdom, Germany and France, were at a special meeting at the Gulf Centre for Aviation Studies at Al Bateen to discuss a variety of topics, including air space regulations, aerial noncommercial operations, certification and maintenance issues, as well as pilot licensing.

This focus on the GA industry could also support a UAE bid to host the 2015 World Air Games – an international air sports event organised by the Fédération Aéronautique Internationale (International Aeronautical Federation - FAI), which is aviation's answer to the Olympic Games and includes events such as parachuting and aerobatics.

"This is all part of us wanting to develop a passion for aviation among young people in the UAE," Al Hammadi said. "We want to open the skies for general aviation but it is hard. The airspace in the region is very congested. The growth of civil aircraft movements has been amazing. But there is a recognition that there is also growing needs for other flying activities.

"We hosted the world parachuting championships in December and we are seeing ballooning and paragliding developing. We need this show to help educate people about general aviation."

Al Hammadi said he hoped there would also be an increase in the numbers of light sports aircraft coming into the country."

Ultimately, he said, he hoped there would be opportunities for private pilot licence (PPL) training. "There is commercial training at Al Ain and with activities there – Strata building aerostructures and airline growth – there is a real need to attract our younger generation to see how attractive aviation is as a career."

The new regulations meant that the authorities were taking a special interest in the LSAs on show at the recent Abu Dhabi Air Expo (see story page 120). One exhibitor, Czech Sport Aircraft, spent the last day of the show demonstrating its PS-28 Cruiser to senior GCAA officials.

Captain Khalid Humaid Al Ali, director of the GCAA's licensing department, said: "Having just issued the new regulations for LSA, it is very encouraging to see the interest of Czech Sport Aircraft to introduce its PS-28 Cruiser into the UAE. This new regulation is aimed at providing greater opportunities and choice to the private pilots within our region and this aircraft is clearly one of the market leaders in the LSA category.

"We were very pleased with the demonstration of the aircraft and we could certainly see the PS-28 Cruiser in a training and recreational role here in the United Arab Emirates."

## SPACE

## Testing complete > as DubaiSat-2 waits in line

Delegates at the Global Space and Satellite Forum, being held in Abu Dhabi on May 7/8, will be able to hear an update on DubaiSat-2, the UAE's second advanced imaging satellite, which is now set to launch some time in the third quarter of this year.

Salem Almarri, director of marketing and international affairs at the Emirates Institution for Advanced Science and Technology (EIAST), said it is now effectively queuing for the launch.

"All the testing is complete and the satellite is waiting in South Korea for a slot," he said.

"The satellite, which weighs less than 300kg, builds upon the work completed by DubaiSat-1 to provide electro-optical image data of the UAE and other areas that can be commercialised."

The project is the result of five years' work by a team of 22 Emirati engineers from EIAST, operating in cooperation with the South Korean company Satrec Initiative.

DubaiSat-2 will be launched into orbit on board a Dnepr rocket by the Moscow-based International Space Company Kosmotras (ISCK). It will share the launch with 18 other satellites and has an expected working lifetime of at least five years.

The satellite is two metres high, 1.5 metres wide and will orbit 600km above the Earth's surface, compared with DubaiSat-1's 690km. Power will be supplied by four solar panels, generating more than 450W.

## 

The orbit has also been changed from the ascending (south to north) orbit used by DubaiSat-1 to a descending orbit (north to south), which will allow both satellites to work well together and give better coverage over the UAE area.

The technical improvements to the new satellite include an increase in data download speed from 30Mbps from DubaiSat-1 to 160Mbps on DubaiSat-2. The area data acquired by the satellite will also increase from 12,000sqm per day to 17,000sqm.

Another innovation is the use of an electrical propulsion system with Xenon gas fuel. The system will be used for the satellite's orbit correction and maintenance. Carrying 2Kg of Xenon fuel, the unit draws around 300W when in operation and generates a tiny force of around seven milli-Newtons.

Despite the small force, plasma thrusters are finding their way on to many spacecraft nowadays due to their high efficiency and low fuel usage.

"Our investment in the UAE team of engineers is the most important achievement of EIAST through our flagship satellite, DubaiSat-1, launched in 2009," said Ahmed Al Mansoori, director general, EIAST.

"These young engineers and specialists are now more confident and determined to succeed as they work towards the launch of DubaiSat-2, and this is the real achievement of our space programme.

"While the first satellite was for knowledge transfer, this second satellite is looked at as more of a commercial venture. We will see the range of clients increase to more international municipalities and universities, as well as United Nations projects for natural disasters."

The UAE team, along with its South Korean partners, has designed the satellite to enhance the quality of the images for applications like environmental projects, urban planning, infrastructure, telecommunications and electricity.



## Alphasat passes major thermal testing ahead

Thermal vacuum testing of the new Alphasat I-XL satellite has been continuing for the past three months to simulate the harsh conditions in space.

To replicate the severe cold faced when the satellite passes from direct sunlight into the Earth's shadow, the shroud of the testing chamber was pumped full of liquid nitrogen to lower the temperature to -173C.

temperature to -173C. At other times the temperature was raised to hundreds of degrees Celsius, all in a near vacuum representing just 100 millionths of the atmospheric pressure found on the ground.

Alphasat is a high-power telecom satellite built by Astrium, through a public-private partnership between the European Space Agency (ESA) and UK satellite operator Inmarsat. Weighing more than 6,600kg, it is based on the new European Alphabus telecommunications platform developed by Astrium and Thales Alenia Space under joint contract from ESA and the French space agency, CNES. Alphasat I-XL carries a new generation of advanced

Alphasat I-XL carries a new generation of advanced mobile communications payloads, as well as four technological demonstration payloads for ESA. These include a space-to-ground laser communications system and a new type of star tracker.

Alphabus is a larger telecom payload designed for direct-to-home TV broadcasting, digital audio broadcasting, broadband access and mobile services.

broadcasting, broadband access and mobile services. Inmarsat currently offers its broadband global area network (BGAN) family of services for the

## **ROUND-UP**



## < Iran aims for manned flight after monkey goes into space

The Islamic Republic of Iran recently celebrated sending a monkey into space but there was international confusion as TV pictures clearly showed two different monkeys, casting doubts on whether the flight happened – or ended successfully.

However, Iranian officials said this was because of a mix-up with State TV, which used library images of a widely reported but previously unsuccessful flight in 2011. The images were the same as those issued after that mission, they said.

According to Iran, the Pishgam (pioneer) spacecraft launched in February reached a height of 120km.

Mohammed Ebrahimi, head of the Institute for Astronautical Systems at the Iranian Space Agency, said sending an astronaut into space was one of the agency's important projects.

He believed that the first astronauts could be sent into suborbital space and safely returned as early as some time between 2016 and 2018.

## 

He conceded, however, that to achieve this the Institute would need to develop a number of technology strands. "A strategic action plan should also be developed," he added.

Ebrahimi said that in the first phase of the project two Iranian astronauts would be sent up into suborbital space for 15 to 30 minutes. "After this phase, launching astronauts to orbital space would be possible," he added, although he conceded that much work needed be done to prepare the ground.

Ebrahimi named a number of technology strands that needed to be developed including propellants, power production, robotic constructs, information technology and communications, bio-recognition, exploration and operations, simulation, and entry to space.

However, he defended Iran's right to have entered the space race. Referring to comments by Victoria Nuland, spokesperson for the US State Department, that the Pishgam probe launch had been against UN resolutions, Ebrahimi said: "The UN resolution in question refers to sending heavy payloads into space, which could have military implications. The Pishgam probe was not built for military objectives and its mission has no military value. Generally speaking you cannot block Iranian scientific progress by UN resolutions."

## of summer launch >

aeronautical, land and maritime markets via its three Inmarsat-4 satellites.

The Alphasat mission will extend Inmarsat's current L-band BGAN services, providing an additional 7MHz of spectrum over Europe, the Middle East, Africa and parts of Asia, from its 25-degree East geostationary orbital position.

It will also allow Inmarsat to progress its goal of having aviation safety services certified on its 432kbps SwiftBroadband service for aircraft, providing satellite-based aircraft communications addressing and reporting system (ACARS) datalink, prioritised IP data and voice channels.

Alphasat's launch is planned for this summer aboard an Ariane 5 from Europe's Spaceport in French Guiana.





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Email us at: info@bravorentacardubai.com When Ram Menen, senior divisional vice president of Emirates SkyCargo, announced that he is to retire in June, it came as shock to the cargo industry.
Tom Pleasant looks at his legacy.

# A FREIGHT HEAVYWEIGHT



am Menen forged Emirates SkyCargo into one of the world's most dynamic cargo operators and he has been a vocal advocate for airfreight in general.

That he did all this by making friends, not enemies, was demonstrated when, at IATA's recent World Cargo Symposium, Menen was given a standing ovation after his leaving speech.

IATA's head of cargo, Des Vertannes, knew Menen when they both worked at British Airways in the 1980s and told a telling anecdote of his style. His task at the time was to generate traffic between Kuwait and London Heathrow, either en route via Dubai or Delhi.

"There was nothing from Kuwait in those days but he had a target and he had to do it with zero space," said Vertannes. "We wondered how he was beating his targets, not by double digits but by triple digits, when Dubai and Delhi could not."

Typical of the ingenious Menen, the answer was that he was using passenger luggage bins above empty seats and had given gifts to the ground handlers to unload whichever bins he had commandeered for his cargo.

At the conference, Menen said: "It's been a great journey. I had the best team, great partners, great customers and friends."

Emirates SkyCargo only carried 10,000 tonnes in its first year (1985). Today, Menen leaves it with 10 freighters (one 747-400F, two 747-400ERFs and seven





## MANAGEMENT

## CARGO

#### CONTINUED FROM PAGE 77

777Fs) that operate to 43 destinations. In the 2010/11 financial year, SkyCargo carried 1.8 million tonnes of cargo, an improvement of 11.8% over the previous year's 1.7 million tonnes. Cargo revenue, at AED 8.8 billion (US\$ 2.4 billion), including mail and courier, contributed 17.4% of the airline's total revenue.

Menen clearly feels he is leaving Emirates in a strong position, not only because of this path of relentless growth and expansion he has set it on, but also because of the increasing significance of the Middle East to the entire aviation sector.

"The centre of gravity has shifted," he said. "The whole region, and in particular Dubai, has become a world hub for cargo and passengers because of our geo-centricity. That's very powerful. We have about 5.8 billion people within an eight-hour flying time.

### Fastest-growing countries

"Two-thirds of them are in East Asia and two thirds of those are in India and China. Those two countries are the fastest-growing countries and also the factories of the world, supplying global consumers, and their markets will continue to grow. With Africa being the fastest-growing continent and as trade between Africa and those markets increases, it makes sense to go through the Middle East."

As other Arab countries come out of the Arab Spring, he added, they would rebuild and strengthen the Middle East further. That will also strengthen other airlines in the region, but he said this does not worry him at all.

"Yes, the other Middle Eastern carriers are growing, but there's plenty for everyone. As more people come through the Middle East the pull power of cargo through the region also becomes bigger." Regardless of how well Emirates and the Middle East is doing, the global cargo industry is suffering and that makes for a volatile environment for anyone. One area that is a headache for almost all airline CEOs is freighter utilisation.

Five years ago Airbus and Boeing were happily taking orders for as many of the all-cargo aircraft they could build. Today, as one anonymous airline head claimed: "If anyone who is operating a freighter tells you they're running it at a profit, they're lying."

### **Major routes**

Strong words and there is certainly some truth to them, but the reality is a little more forgiving. Airlines such as Emirates, operating major routes, can still use a wide-body freighter and make money. It is just that they have to be far more careful and choose which freighters to use with skill.

"It is tough to make freighters work these days," agreed Menen. "Our advantage is that we've gone for 777Fs, which are a lot more economical to operate. Of course, if we had a choice we might delay some deliveries, but they were ordered years back and trying to forecast our future requirements with confidence is a challenge in this economic climate."

That is especially true with the current high price of oil, which can make freighters uneconomical to operate for all but a few specific situations.

"Freighters are a really important part of what we do," said Menen, "but I worry that some of the current freighter capacity will disappear if oil prices continue to remain high.

"The 747-200, the DC-10 and the like have already become history and we will continue to see



casualties. If this continues for another two or three years then the remaining freighters will definitely become niche aircraft."

He suggests pure freighter operators, such as Cargolux, will continue to struggle until oil drops down to \$50-70 a barrel and interest rates rise. In the meantime, he ensures Emirates SkyCargo's regional distribution remains mainly passenger belly and that the airline trades off its extensive passenger network, claiming: "We can carry something from Osaka to Newcastle faster than anyone else."

Expanding that network to growth areas, such as Africa, will also be part of his legacy. While many airlines have swaggered to the continent confident they can show local carriers how modern aviation works, many have also skulked back with their tails between their legs, claiming Africa is still too much of a volatile market. Menen is not one of them.

"We have about 22 destinations in Africa, spread all over and with long-term coverage; we don't go in there and then get out. The continent holds more than 55% of the world's minerals and while South Africa was always the main market, Kenya is becoming the garden of the world with all the perishables coming out of there, and west and central Africa are catching up. They are really leap-frogging technology and their growth will be a lot more sustainable. No, Africa will definitely not be a flash in the pan. It will continue to be a growth area."

#### Challenges for cargo

However, he is not blind to the difficulties the continent has for the industry.

"Yes, it presents challenges for cargo. A lot of cargo traffic there is ocean, because it is cheaper, and a lot of consumer goods only get sent illegally as extra baggage.

"We are also seeing the authorities in countries like Ethiopia making their markets more protected and restrictive and, when you start seeing that, the growth of that country will always suffer. It won't disappear though; I think some of it will simply shift to other areas."

As unsteady as Africa and as tough as the global market both are, Menen still believes the future is good for cargo.

"Time has become a major part of the air cargo equation. Product lifecycles are getting shorter, as is the shelf life of products, and those will be positive for cargo.

"While places like the US are looking at near-shoring, I doubt very much that the average man on the street will pay an extra \$2 for something because it was made in the US. Even if that shift does grow, manufacturers will still want components made in less-expensive places then shipped to and assembled in the countries of consumption.

"What will the future exactly be for cargo? I don't know. I just reiterate what I've always said over the last 10 years – the old rules don't apply and the new rules aren't yet written."



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**Tom Pleasant** reports from the seventh World Cargo Symposium in Doha, Qatar.

# Digital breakthrough to make life tonnes better

here else should the International Air Transport Association (IATA) have held this year's World Cargo Symposium (WCS) other than in the Middle East?

The region's airlines are set to drive the air cargo industry's regrowth this year thanks to route and capacity expansion into the rapidly growing economies of Africa and Asia.

However, there was still talk at the WCS of the US and Europe's contribution to the global economy and the industry. The US still accounts for 18% of global airfreight tonnage, 21% by revenue, and even beleaguered Europe, despite its continuing economic weakness, is showing signs of a stronger second half to the year.

Speaking at the event, Gert-Jan Jansen, executive director of analyst company, Seabury Group, warned that modal shift has already cost the air cargo industry 10% of its volume, or 2.6 million tonnes, and that is likely to continue. On transpacific routes especially, ocean transportation was showing much faster growth than air.

Robbie Anderson, president of United Cargo, highlighted shipping lines that are now using "moving warehouses" for foodstuffs that continue growing in transit from Latin to North America and seaports which were improving transfer speed and efficiencies from ship to rail.

In addition, truck manufacturers are

introducing new designs that increase their capacity by 35% without increasing the total size of the vehicle, and train companies are investing in double-container stacking.

"We've really got to focus on what we can do to stay competitive," Anderson said, adding that the challenge was to slash transit time to avoid further losses.

Leading the competition are the integrators, such as FedEx and UPS. "Transit is not a six or seven-day process for them," Anderson said.

#### **Encouraging achievement**

Where other events have been weighed down by talk, instead of seeing action, this year's WCS had one encouraging achievement with the approval of a multilateral, digital air waybill (e-AWB).

With each cargo consignment still needing paper copies of up to 20 different certificates and documents, IATA is driving the adoption of its efreight initiative that will funnel these into an electronic format.

The approval of the multilateral e-AWB will allow airlines to accept them from all participating freight forwarders, which can in turn tender e-AWB shipments at airports around the world. The agreement is due to go live before June this year.

"This is the most important new cargo standard developed in the last two decades," said Des Vertannes, IATA's head of cargo. "It gives us critical momentum to achieving the e-freight vision."

Other commitments were to support cargo services liberalisation and a risk-based approach to a secure supply chain.

"This will be bolstered by electronic data sent well in advance of flights and underpinned by improvements in technology," said Steve Gunning, chairman of the IATA cargo committee and managing director, IAG Cargo.

"We must remember that we are securing a global network that transports some 50 million tonnes of cargo annually. Harmonisation and mutual recognition of standards by governments is a critical element in ensuring both effectiveness and efficiency."

It wasn't all doom and gloom, standards and regulations. Host of the event, Qatar Airways, unveiled its expansion plans for the airline's freight division – Qatar Airways Cargo. The carrier's CEO, Akbar Al Baker, vowed at the event to make the airline one of the top five global air cargo operators within the next five years.

Having already invested heavily into the newly built cargo complex at Hamad International Airport (formerly New Doha International Airport), the airline also plans to expand cargo capacity by 40% with seven new freighters joining its fleet this year, heralding what Al Baker calls "a new era for Qatar Airways Cargo".



## **IATA**





From left: Akbar Al Baker, Des Vertannes, and Oliver Evans.

The carrier recently received the delivery of its first Airbus A330 freighter, will take two more in the coming weeks and three more by the end of the year. The airline also expects its fifth Boeing 777 freighter to arrive during the summer.

"We have already invested nearly \$2.5 billion and that will increase over the years," he said.

That is a situation the other speakers clearly envied.

"No North American carrier operates freighters now. We will continue to buy twin-aisle planes," United Cargo's Anderson said.

### **Mixed fortunes**

Despite the industry's mixed fortunes, it is still clearly loved.

"We are the industry that links the factories on one side of the world and shops on the other. We have wonderful stories to tell," said Oliver Evans, chief cargo officer for Swiss International Air Lines.

Evans said the nature of the business results in an "endless source of challenge" to the industry, which means it requires a tough, alert, versatile workforce that can deal with anything from Icelandic eruptions and Japanese tsunamis to political upheavals, economic crises and environmental concerns. "We are impacted by every damn thing that happens all over the world. That's why I'm so passionate about it," he said.



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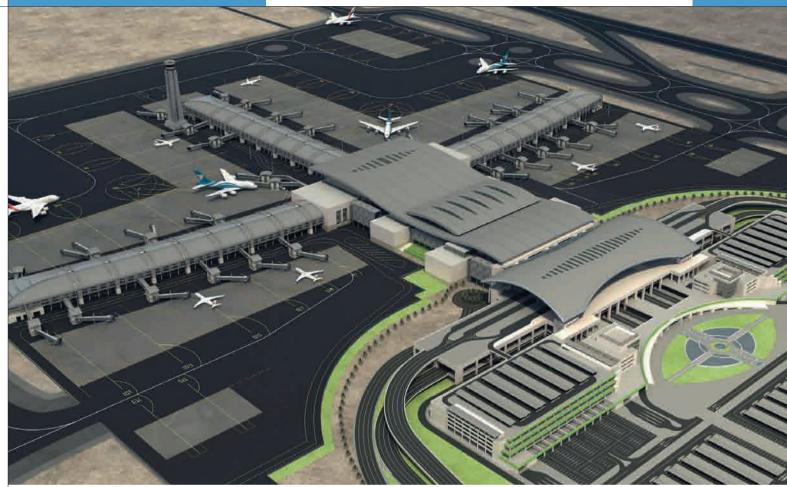
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## **AIRPORTS**

## **EXPANSION**



# Oman's master plan

Record passenger numbers at Oman's key airports are fuelling demand for the expansion of the country's airport system and, as **Keith Mwanalushi** discovers, progress is firmly under way. **B** y any indication, these are interesting times for Oman's principal gateway at Muscat International Airport. According to the Oman Airports Management Company, for the first time in the airport's history passenger numbers exceeded 7.5 million in 2012, compared to just fewer than 6.5 million in 2011 – an increase of 16%.

The record passenger numbers are being driven by several factors, including fleet and route expansion by the existing airlines serving Muscat.

Home-based carrier Oman Air is further expanding its fleet. In February this year the carrier took delivery of a further two Boeing 737-800s, bringing its total fleet strength to 30, which also include Airbus A330s and Embraer E175s. Six 787-8s are also on order.

The existing airport, which was designed back in 1973, has now reached its maximum capacity. A new airport, currently under construction, aims to meet the nation's passenger growth numbers.

International consulting group COWI A/S, in a joint venture with Larsen Architects and Civil Engineers, developed the master plans for the new airport in 2005 and prepared preliminary design, tender design (detailed design for all civil works), and preparation of tender documents, tender evaluation and construction management and supervision for both airports until the end of last year.

It is said to be the biggest project ever in the Sultanate, with an investment of more than two billion Omani Riyals (\$5.2 billion).

"The first stage of the development will give Muscat International Airport a capacity of 12 million passengers per year and the master plan allows for further development up to an ultimate capacity of 48 million.

For Salalah Airport (Oman's second city) the first stage will cater for one million passengers and the master plan has further steps to 10

million,<sup>5</sup> said Ejner Christensen, project engineering director at COWI - Larsen IV.

Christensen said the projects were (in addition to a number of

Continued

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## **AIRPORTS**

#### **CONTINUED FROM PAGE 83**

smaller preparatory works) split into ten different construction contracts that were awarded between 2009 and 2011. "These contracts cover all areas from traditional civil and building works to supply and installation of all equipment and IT-systems required for stateof-the-art airports."

However, he highlighted a number of events that led the process to take longer than originally anticipated.

"In June 2007, when the tender design was moving at full speed, cyclone Gonu hit Oman with a 200-year rainfall record, resulting in substantial damages and flooding," he explained. "As a consequence, it was decided by the client not to allow basements in major public facilities and the airport master plan had to be changed to bring the baggage handling system up to ground level and remove a tunnel linking the terminal with remote piers."

Furthermore, he said, the procurement strategy was changed in 2007 from detailed design to design-build for all buildings in order to save time. "However, the result has been the opposite, meaning the tender periods and construction periods have turned out to be longer so that the net result is a delay of around two years."

## Driven by stakeholders

Late changes during the construction period driven by stakeholders (a major one was when Oman pulled out of Gulf Air and the Muscat Airport had to be adjusted to accommodate more carriers and Oman Air as the dominant airline), also resulted in delays due to substantial expansion of the apron areas, taxiways and supporting airport systems.

These changes alone increased the civil works contract by approximately 15%, according to Christensen.

Some of the new facilities and features of the new airport at Muscat include a passenger terminal building with 28 contact gates and an additional 30 remote stands.

The terminal's net floor area of 340,000sqm should allow adequate movement for the projected 12 million annual passengers. In addition, two A380-capable runways, a 97 metre high ATC tower and more than 7,000 parking spaces are part of the design.

According to COWI, the airport has not only an attractive architectural design but it has also a dynamic and functional structure, which has been designed to accommodate future expansion.

Expansion stages have been phased out to accommodate 24 million passengers annually, followed by 36 million, and at the fourth and final stage, the capacity could reach 48 million passengers a year.

Several other contractors are currently on site. JBT Aero Tech won a major gate equipment order from the Oman Ministry of Transport and Communications. The project exceeds a value of U\$20 million and includes the supply of 40 passenger-boarding bridges for the new terminal



at Muscat International and eight boarding bridges for the new terminal at Salalah Airport.

Both designs include additional future opportunities for expansion when required by growth and demand. JBT AeroTech received notification of the project in the third quarter of last year and anticipates installation of the gate equipment to be completed in the second quarter of 2014.

Passenger traffic has also reached a record high at Salalah Airport; 629,305 in 2012 compared to 513,278 in 2011 - up 23%.

Air Arabia initiated its first direct flights to Salalah in June 2012, making it the third airline to operate all-year services into the airport after Oman Air and Air India Express.

"The new airport in Salalah will have all modern facilities to allow for international traffic on airside, including a 4km runway able to handle the Airbus A380," said Christensen. "In the passenger terminal all systems will be able to handle international passengers in a streamlined process in security, immigration, emigration, customs and so on.

#### Ignites the development

Growth in air travel ignites the development of the tourism industry within any city, as well as assisting in fostering strong commercial, industrial and economic activity. Hotel capacity is being expanded substantially in the Salalah area and this is expected to facilitate a boom in the tourism sector that already receives charter flights from Europe, especially during the winter period.

Christensen added: "During the summer the Salalah area is a popular destination for guests from the Gulf region that want to escape from the high temperatures in their home countries. The airport will, with its modern flexible design,

be able to serve as an international tourist gateway as well as a domestic airport for many years to come."

The new terminal at Salalah envisages an expansion of capacity to one million passengers annually by 2014. The airport has been designed to allow for further expansions to reach two and six million passengers annually when the demand is required.

According to the Oman Airports Management Company, other notable contracts at the site have been awarded to Galfar Engineering for the construction of the new terminal building, new runway and other related works.

Baggage handling systems are being developed by Vanderlande Industries, air traffic management systems by Indra and navigational aids from Thales.

## Key feature

Airport cities are now a key feature of developments around the world - particularly at the grand new airport projects around the Middle East - so how much emphasis was made on developing Muscat and Salalah into airport cities?

Christensen explained that Muscat Airport had limited area available for an airport city development because it is surrounded by residential and commercial areas on three sides and the sea on the fourth. "It will be necessary to strike a fine balance between reserving land for the direct and indirect airport-related activities and giving land to more commercial development.

"In Salalah an area is reserved for future airport development that potentially could be used for an airport city or for sea-air cargo activities. Salalah is the dominant container port in the region with frequent links to Asia, Europe and the USA, and the proximity of the airport to this world class port creates some interesting possibilities," he concluded.

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G4S, one of the world's leading secure outsourcing groups, has announced that its aviation division has grown by more than 8% in the last year and, as **Steve Knight** found out, the Middle East is playing a significant part in that success.

## G4S aviation enjoying Middle East boost

4S has been providing services to the aviation industry for more than 20 years but, in 2009, took a strategic decision to develop a more focused approach to the sector.

Since then there has been considerable investment in sectorspecific resources and the business has expanded to cover more than 120 airports in 45 countries.

The G4S aviation division now employs more than 15,000 people worldwide and has seen its partnerships with airlines increase to 80 contracts. Last year, total turnover rose to £298 million.

The growth, disclosed in the company's preliminary results announcement for 2012, is largely attributed to the development of the new strategy.

The company's core services always included screening, access control and aviation security work, but it has now also expanded into cargo screening, documentation services and facilities management, as well as adjacent market activity such as canine services, journey management and global country insights.

David Stockton, global aviation director, G4S, who joined the organisation at the start of 2012, said: "We are extremely pleased with the continued progress our business has made over the last year.

"Our success is formed around people, process, passion and



technology. These guiding principles are at the heart of everything we do.

"During the past 12 months we have focused on delivering an innovative service that combines the very best of technology with the most skilled staff in the industry and our successes have been testament to this."

Stockton picked out the Middle East as particularly noteworthy.

"The growth in the Middle East region has been excellent, with Dubai, Abu Dhabi, Qatar and others all driving global growth and capacity with major infrastructure projects in the airports, airlines, facilities and service," he said.

"For example, our work in Dubai with our 'May I help you?" (MIHY) customer service programme has helped support the airport's growth."

## Staff assisting passengers

The \$8.1 million Dubai Airports MIHY customer service contract, awarded in 2011, saw G4S staff assisting passengers with a variety of requirements that come with international air travel, such as flight, hotel, general information and assistance.

Over the course of the contract, more than 500 G4S staff were deployed after first taking a specially-designed five-day training programme encompassing all aspects of Dubai Airports including safety, security and customer service standards.

Ahmed Al Shamali, the airport's head of operations planning, said at the time: "Acquiring a service partner that understands the demand of an ever-growing international airport and comprehensively meets the high standard of aviation security was a key element to mutually establishing this new partnership with G4S.

"The MIHY service initiative is developed to assist customers through their Dubai Airport experience. MIHY is not just a service attendant who assists passengers; it's our definition of customer service. G4S has just joined this philosophy and we are excited to see them with us being the face of Dubai Airport."

It's not just Dubai where G4S has enjoyed Middle East success, however. "With operations in Saudi, Kuwait, Oman, Iraq and Jordan, we continue to invest in bringing innovation, consistency and training to our current and future operations," said Stockton.

"Across the region as a whole, we continue to work alongside our customers to develop solutions that can enhance the journey experience and contribute to a safe, secure and customer service-driven airport operation."

David Stockton, G4S director, global aviation solutions, speaking at Intersec in Dubai earlier this year.



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*The 13th Airport Show will take place at the Dubai International Convention & Exhibition Centre (DICEC) from May 6-8.* Marcelle Nethersole previews the event.

# Safety and security at the top of the agenda



Above: Daniyal Qureshi: "Airports in the Middle East must ensure they are constantly aware of the latest threats."

Below: George Hannouche: "The future of our air transport system depends on the confident and qualified leaders who run our airports." he 13th Airport Show will bring in world-leading companies to showcase the latest safety and security solutions and products.

Co-located with the Global Airport Leaders' Forum, an industry meeting to generate solutions for airport leaders from around the world, the event will also introduce the Airport passenger experience zone, which will offer thousands of visitors a taste of the technologies that will dominate the airports of tomorrow.

With Middle East airports expected to be handling nearly 400 million passengers per year by 2020, show organisers say security is high on the agenda and constant development and upgrades to systems are needed to deliver a better traveller experience.

Event director Daniyal Qureshi said: "Considering the expected growth of the regional aviation industry and the security challenges posed by the significant increase in passengers, airports in the Middle East must ensure they are constantly aware of the latest threats and ways to eliminate these.

"Benchmarking against the most advanced global airport security programmes is essential and the Airport Show and Global Airport Leaders' Forum will give regional airport authorities an opportunity to achieve this."

Mohammed Ahli, director general, Dubai Civil Aviation Authority (DCAA), added: "Safety of passengers, and freight and infrastructure security, is a constantly evolving requirement. The authorities face the challenges of adopting



effective safety measures while limiting the inconvenience to the passengers. An airport is always judged by its security and service standards. It's crucial to adopt innovative technology, improve security and streamline efficiencies to offer a seamless passenger travel experience."

Aviation experts have also stressed the need for launching airport leadership development programmes and capacity building initiatives to meet the rapidly changing requirements of the commercially run airports, which will be up for discussion at the event.

Khalifa Al Zaffin, executive chairman, Dubai Aviation City Corporation, said: "There remains a shortage in professional manpower because of the pace of development that we are witnessing, and we are filling these positions with foreign expertise. Nonetheless, I believe the region has a sufficient number of aviation professionals to fill top-level positions, although I am not sure how long we will be able to sustain this given the rapid growth and development of the aviation sector.

## Urgent need

"There is an urgent need to strengthen the human resource development initiatives in the aviation sector and we need to take advantage of both local and foreign expertise to cope with the industry's rapid growth. Moreover, we need to build more local institutions that provide specialised aviation training."

He added: "Intelligent leadership is a crucial factor that will enable us to achieve our long-term goals and vision. We need to maintain a pool of leaders who fully understand and are competent in managing the smart technologies that we have implemented to effectively and efficiently run our airports.

"We, therefore, need to nurture leaders who are capable of maintaining our competitive advantages with regards to operating a genuinely smart airport."

A session in one forum called 'investing in capacity building to develop airport leaders', will discuss how airport management can grow and develop at the same speed as the infrastructure, through effective human capital strategy, leadership development initiatives and succession planning, and investment in university development programmes.

Arab world aviation expert George Hannouche, whose company, Bayanat Airports, is an exhibitor at the show, said: "The region is seeing game-changing developments in the airports sector while the GCC airlines work their way to take on the world competition; one crucial issue is human asset management and leadership succession.

"A good leadership is of prime importance in the success of a profitable and efficiently run airport. The future of our air transport system depends on the confident and qualified leaders who run our airports."

## **AIRPORTS**

n the sporting arena, World Cups in cricket and football define the pinnacle of global standards and achievement using a tangible and a measurable yardstick. World class airports are, however, a whole new ball game.

Who defines 'world class' airports? Who sets the standards? What are the acceptable benchmarks? Should there be any such benchmarks that can be applied universally across the board – in both the developed world and emerging markets?

Just because 'world class' airports has a great symbolic power, is it a reason enough to indiscriminately use it wherever and whenever?

Billions of dollars have been spent globally on the development of airports over the past 20 years or so and the result is often, with some exceptions, a potpourri of designs, styles and shapes resulting in monsters of steel, plate glass and concrete.

It is estimated that another 900 billion dollars are likely to be spent worldwide in the next two decades on the design, development and construction of new airport infrastructure and reconstruction and refurbishment of the existing ones; the majority of them in the Middle East, Africa, the Indian sub-continent, CIS and the Asia-Pacific region.

### **Expectations and aspirations**

There is no denying that there are certain airports that conform to the expectations and aspirations of the travelling population and can be truly termed as 'world class' insofar as compliance to safety and security norms, operational standards, passenger facilitation, level of service, overall ambience, environmental compatibility, return on investment and delivering value to investors is concerned.

However, the numbers are few and far between. I would rather term them as 'intelligent airports' or 'smart airports' instead of 'world class airports'.

The need of the day is not the grandiose statement of architectural styles vying with one another for awards but safe, functional, flexible, spacious, convenient, comfortable, aesthetically pleasant, efficient and, above all, 'environment and passenger friendly' facilities that reduce the traveller's overall irritation factor.

An intelligent level of information, a minimum of imposed controls, a smooth and unobstructed continuous flow, adequate consumer-related concessionaires, fully manned check-in, customs and immigration desks, adaptability to ever-changing requirements, effective global solutions on noise, focus on reduction on carbon emissions and an unobtrusive, yet effective, security system, are the hallmarks of a 'smart' airport. Travel horrors highlighted by the plight of



In a controversial personal opinion, outspoken industry analyst Inderjit Singh asks whether the connotation 'world class airport' is merely an obsession, a myth or an enduring mirage?

# World class airports: are they a hit or a myth?

Tom Hanks in the Hollywood movie The Terminal are an everyday reality for passengers at many airports. In the film, Hanks plays a visitor to New York City from Eastern Europe whose homeland erupts in a fiery coup while he is in the air en route to America. Stranded at JFK International Airport with a passport from 'nowhere', he is unauthorised to enter the US and must spend days and nights in the terminal's international transit lounge until the war at home is over.

### Treating passengers with disdain

While the character, and his experience, is fictional, the reality is that airport designers and operators are guilty of treating passengers with disdain, and even contempt, at times. Is it a case of real life imitating 'reel' life or vice versa?

An airport is a multi-faceted facility with different connotations. For airlines, it is the smooth running conveyor. For an airport operator, it is a business venture. For a financial analyst, it is a blue-chip investment, while for those living in the vicinity, it is the bane of their existence.

For real estate developers, it can be a financial pump; for the surrounding communities, it's an economic engine rather than just an air transfer station. For the region, it is a centre of economic development, while for the nation it acts as a gateway to growth. And, finally, for passengers it is a dream and, hopefully, not a nightmare.

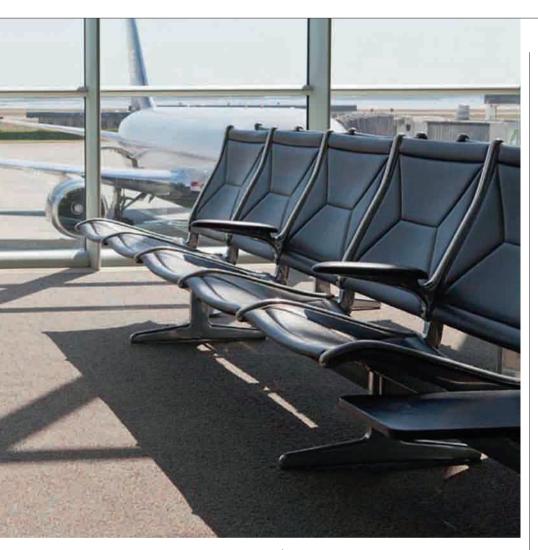
An airport, basically, is an interface facility where people can switch over from one mode of transport to another – ground to air and vice versa.

Labels of 'world class airports' in recent times have become very fashionable in the aviation/airport parlance – more so in the emerging economies of the developing nations where, it seems, large sums have been committed indiscriminately to achieve this perceived status.

There is a danger that this phenomenon can be a cover-up for shortcomings because of inadequate due diligence, assessment of risks, planning, and implementation of cost-effective and prudent solutions.

In the wake of frequent demands by private airport operators for user development fees (UDF) and airport development fees (ADF) from passengers and airlines alike at several recently-commissioned international airports developed on the public private partnership (PPP) model, the respective governments (on analysis of the realities through appropriate cost and performance audits) have

## **ANALYSIS**



realised that a contributing factor has been an extravagant approach towards the developmental cost. Consequently, this approach raises the total cost of any task by adding what should be avoidable hefty charges that cause a great deal of resentment among customers.

Incidentally, the airports under reference, all handling more than 10 million passengers annually – a universally accepted yardstick for selfsustaining and profitable airports – were earlier profit-making cash-rich airports and, in addition to sustaining themselves, were contributing towards the development of other cash-strapped airports through cross-subsidising. Some of them have made it to the IATA 'wall of shame' list for increasing airport charges.

Reportedly, IATA claims to have convinced several countries to withdraw taxes on the air transport industry – including countries where tourism is the mainstay of their economy – by abolishing or rationalising the air passenger tax and tax on ATF, to avoid adverse affect on their tourist inflow.

Airports today are an integral link in the total global transport supply chain and form part of a complex economic and social system. Like highways and other forms of transport, they constitute important elements of the infrastructure of a nation.

Realisation has long since dawned that the air

transport industry is a catalyst for attaining broader economic development. Airport operators have recognised their role in the air transport chain. So, from mere providers of airline infrastructure, or air transfer stations, airports are re-inventing and re-positioning themselves as logistic hubs, setting a new paradigm for the integrated global transportation system of the future.

They are now centres for economic development and, increasingly, 'gateways to growth' for their airline customers, their communities and the regions in which they are located.

It is not a mere coincidence that the developed countries and many developing nations are beginning to have a smart air transportation network in place. No airport, however efficient and self-sustainable, can function in isolation. Individual airports form a link in the larger global chain of the air-transportation network. One weak link and the chain snaps.

So what is a world class or, more correctly, a smart airport?

## The passenger is our livelihood

The first significant parameter we must consider is that the consumer, the air passenger, is the raison d'être – the sole reason – for the existence of all of us who work in the air transport industry. The passenger is our livelihood, our income, our profit, our future and, as such, is not an inconvenience.

An air traveller, often referred to as 'pax' (a horrible word) in airline and airport jargon, is not a unit to be regarded as being of a basic standard, usually diminutive in size, somewhat lacking in both intelligence and general ability to find his way about. He is not to be treated with indifference, or have his special desires ignored, or at best treated with reluctance.

If this seems to be too harsh a judgment, I suggest that all those of us who are either airline or airport employees, benefitting perhaps from that very special treatment, should put ourselves in the position of a mere 'pax' at a foreign airport late at night, tired, bewildered and even perhaps ill, to get just some flavour of what millions of air travellers have to put up with. You will then find that my judgment is not so harsh after all.

It is my strong conviction that the passenger is the 'first foremost frontier'. As soon as everybody, both high and low in the world of air





## AIRPORTS

#### **CONTINUED FROM PAGE 91**

transport, recognises this fact, the sooner the system will improve.

Airports today are engines for a nation's economic growth reflecting the economic trends, solutions and challenges facing the aviation industry.

The globalisation of trade and services needs large-scale, long-distance transport infrastructure, such as motorways, high-speed rail links, shipping terminals and airports. These are the logistic support through which the goods of big business flow.

### Liberalisation of services

With the globalisation of production and the liberalisation of services, developing countries and nations in transition need, more than ever, to increase their capabilities by offering reliable and cost-effective 'connectivity' through combined intermodal road, rail, sea and air transport systems.

Aviation is a unique and an important industry. We connect the world – linking cultures, bringing people to business and products to markets – crisscrossing skies through a multitude of global airlines and airports. This makes us a catalyst for growth and development supporting 57 million jobs and \$2.2 trillion of economic activity. By value, more than 35% of the goods traded internationally are transported by air.



Ironically, the airports viewed by passengers as outstanding are not necessarily seen the same by the airlines. Only a handful of world airports meet the passenger satisfaction and operational performance criteria of both the passengers and airlines equally well.

This is, however, not surprising, as passengers and airlines use very different criteria to measure airport performance. Passengers are looking for efficient, comfortable, attractive airports, which make the transition through them enjoyable.

Airlines judge airports on the profitability – turnaround time, yield and payload etc. They also rate airports that make the effort to establish positive, pro-active relationships with the airlines.

It may, thus, be best to ensure a judicious mix of compliance to the regulatory norms, operational expectations of airlines and aspirations of the travelling passengers as the qualifying yardstick before labelling airports 'world class'.

■ Inderjit Singh is a former airport director (chief executive) of New Delhi's Indira Gandhi International Airport (IGIA), he has served with the ICAO as an airport consultant and he was, until recently, head of aviation at the India/South Asia office of URS Corporation USA.





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## JORDAN

## **Royal opening for Queen Alia's new terminal**

International airlines operating into Amman are switching to the new terminal at Queen Alia International Airport following its formal royal opening in March. Alan Peaford reports.

is Majesty King Abdulla II, opening the new 103,000sqm terminal with Queen Rania Al Abdullah, described it as one of the most important air transport gateways in the

region, supporting the kingdom's economic, tourism and trade growth.

The new terminal boosts QAIA capacity from 3.5 million to 9 million passengers per year. Annual capacity at the airport will subsequently grow to 12 million in the final stages of its development.

The Airport International Group (AIG) consortium, comprising several international, regional and local investors, carried out the project. It has been described as a prime example of successful public private partnerships with a 25-year build-operate-transfer (BOT) concession and



an estimated \$750 million investment. Jordan's government retains the ownership of the airport and receives around 54.47% of gross revenues for the 25-year term of the agreement.

The new terminal, designed by British architect Norman Foster, will initially operate with eight new gates. Phase two will add another four gates, while a total of 25 gates will be in use upon completion.

Minister of transport Alaa Batayneh said the new terminal – offering around 20,000 direct and indirect job opportunities – is one of the many accomplishments that are being implemented under Jordan's ambitious development plans.

Foster and Partners described the project as having a highly efficient passive design, which has been inspired by local traditions, and is based on a flexible modular solution that allows for future expansion – the new building secures the city's position as the main hub for the Levant region and allows the airport to grow by 6% per annum for the next 25 years.

The terminal is glazed on all sides to allow views of the aircraft on the apron and to aid orientation. Horizontal louvres shade the facades from direct sunlight – to eliminate glare.

Mouzhan Majidi, chief executive of Foster and Partners said: "Queen Alia International Airport has been an extraordinary project – it has transformed Amman into a niche hub, while offering critical growth for the wider economy through regional links. The new terminal building is energy efficient, will accommodate phased expansion and provides a dynamic symbol for Jordan."







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# GIANT'S STEP

The growth of Italy's industrial giant, Finmeccanica, has been fuelled by a relentless pursuit of international expansion in recent years. Nowhere is that global mind-set more apparent than in the Middle East and North Africa where, as Paul Derby reports, the Group continues to strengthen its presence.



taly's relative geographic proximity to the Middle East and North Africa (MENA) is one of the reasons for the strong cultural and historical ties that bind the country to its near neighbours.

Trade with partners in the region has taken on added strategic importance to the Italian economy, which despite suffering heavily in the wake of the global credit crunch and the Eurozone crisis is forging ever stronger links with customers in MENA.

Finmeccanica can trace its own presence in the Middle East back more than four decades. In the UAE, for example, the Group began to supply gas and steam turbines for several facilities, including the Layyah power station in Sharjah, in the early 1970s. This was followed by further success in the early 1980s with the supply of OTO Melara naval guns.

Today the company has a corporate headquarters in Abu Dhabi to co-ordinate its presence in the UAE and the wider Continued region – a signal of the importance that Finmeccanica on Page 96 places on its relationships in this part of the world.



Italian jobs: The Alenia M-346. Insets: The AW-139 and the Selex Hammerhead.

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## FOCUS ON

## CONTINUED FROM PAGE 94

Since those formative years, Finmeccanica's industrial and commercial presence in MENA has accelerated and today is underpinned by expertise in the sectors of helicopters, transportation, energy, security and space, all of which have led to significant contracts and projects for its companies in the region.

Explaining its approach to doing business in MENA, the company says that the primary focus for its products and solutions is to support infrastructure modernisation plans in fields such as transport, energy, security and protection.

It describes a three-pronged approach: "Firstly, establish a Group presence in the country, which can be used to develop institutional relationships that will allow the Group to be recognised as a potential commercial, industrial and technological partner of choice; secondly, identify and establish manufacturing/technological partnerships with local contacts; and, finally, take advantage of developments in government-togovernment relationships and, thus, benefit from the support of the national government."

To be successful this strategy also involves the need for technology transfer and the creation of partnerships or other collaborations with local entities.



Alenia Aermacchi and Selex ES are partners on the Eurofighter programme.

There are numerous examples: AgustaWestland is creating the AgustaWestland Aviation Services joint venture with Abu Dhabi Aviation, while Selex ES has been present in the UAE for many years through the Abu Dhabi Systems Integration joint venture. Such partnerships are likely to remain a driver of growth regionally.

Elsewhere, both Alenia Aermacchi and Selex ES are partners on the Eurofighter programme, which achieved another milestone at the end of 2012 when Oman became the seventh customer for the aircraft, with an order for 12 Typhoons.

So, while Finmeccanica continues to take a global approach by investing in the development of its business in the rapidly-growing BRIC countries of Brazil, Russia, India and China; rather closer to home, the Middle East and North Africa region promises to be an engine of growth for the next decade and beyond.



## Middle East a vital market for AgustaWestland

While defence budgets in Europe and the United States continue to be squeezed, AgustaWestland's performance in the helicopter sector has proved remarkably resilient, as it seeks out markets where demand for helicopters remains buoyant.

The Middle East is a prime example of this approach, with the company building on a strong heritage in the region and, in particular, the continued requirement for helicopters in the offshore oil and gas market.

More than 130 AgustaWestland helicopters are currently in service in the region, including the AW109 Power and Grand/GrandNew light twins, the AW139 medium twin, the Super Lynx 300 and the NH90, with customers in nations such as the UAE, Oman, Qatar and Saudi Arabia.

The company's success in the region has, in part, been driven by the AW139, with approximately 25% of the entire AW139 orders worldwide going to customers in the Middle East. Examples include Qatar-based Gulf Helicopters, which has a total of 18 offshore-configured AW139s on order, with most of them already in service, while the Qatar Armed Forces has purchased a total of 21 units.

Other key customers for the AW139 include the Dubai Air Wing, the UAE Air Force and offshore operator Saudi Aramco.

AgustaWestland has also launched its 'family' of new-generation helicopters, including the AW139 alongside the AW169 and AW189, which it says will offer numerous benefits to Middle East operators. These three types all share a similar design philosophy, some common components, the same capabilities and certification/safety standards, as well as a similar approach to maintenance and training. Gulf Helicopters is the largest customer for the AW189, with 15 units on order for offshore missions, while the UAE's Falcon Aviation Services, which already operates Grand and GrandNew, has also signed a preliminary sales contract for two AW169 helicopters, marking the entrance of the type into the UAE market.

AgustaWestland has also strengthened its industrial presence in the Middle East significantly in recent years. In late 2011 Abu Dhabi Aviation (ADA) and AgustaWestland created AgustaWestland Aviation Services to carry out a range of activities, including the sale of helicopter spare parts and accessories, helicopter/component repair and overhaul, customisation, modification and upgrading.

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The company is also broadening its regional training offering. Mubadala Aerospace, through its subsidiary Horizon Flight Academy, is launching a joint venture with Abu Dhabi Aviation to develop a dedicated commercial and defence advanced flight training facility in the UAE. AgustaWestland plans to establish the joint venture as one of its authorised training centres to support customers in the region.

AgustaWestland CEO Daniele Romiti said: "With a long-standing and well-established presence with the sale of both commercial and military helicopters of various models, and the local supply of support services and partnerships with major local players, AgustaWestland continues to be strong in the United Arab Emirates and in the Middle East. We are in a very good position to exploit further important business opportunities in the future."



# Selex ES targets export growth in MENA

Growth in export sales is one of the key targets for Selex ES and, thanks to a strong existing footprint in the Middle East, the region offers significant potential to expand the company's activities.

When Selex ES was launched in January this year, it brought together the previously distinct activities of Selex Galileo, Selex Elsag and Selex Sistemi Integrati into a unified business with the benefit of greater 'critical mass' in defence and security electronics.

To accelerate the growth of the business, Selex ES has created three divisions to focus on specific market sectors: air and space systems, land and naval systems, and security and smart systems.

One of the first opportunities to present this new face to the market came during the IDEX event in Abu Dhabi in February. With a slowdown in the company's traditional European markets, the Middle East is a region that could boost the drive for new export business.

Speaking at IDEX, Selex ES CEO Fabrizio Giulianini said: "Selex ES is unmatched when it comes to the depth and breadth of defence electronics expertise we can offer.

"Whether our customers need enhanced security or an innovative civil solution, Selex ES has the experience and skills to make it happen."

The company is hoping to tap into the UAE's increased focus on homeland security through its ability to develop complex integrated systems for homeland protection, combining the expertise of Finmeccanica's companies and existing assets.

Potential applications include control and protection of national borders, roads, airports, railway stations and critical infrastructure. Other promising future opportunities for Selex ES in the UAE include the national G4 network for armed forces and the future soldier programme.

During IDEX, Selex ES and Piaggio Aero also presented the P.1HH Hammerhead unmanned aerial system, which is due to complete its first flight later this year. The Hammerhead system is being developed for intelligence, surveillance and reconnaissance (ISR) missions and is derived from the Piaggio Aero P.180 Avanti II platform. Selex ES is developing the mission management system, the vehicle management and control system, air data terminal and the ground control segment of the UAS.

## 

Selex ES's presence in the UAE to date has seen the company providing integrated naval systems for combat management, naval radars and fire control systems, missile electronics and military radios.

It is also a joint venture partner in Abu Dhabi Systems Integration alongside Abu Dhabi Ship Building, which focuses on systems engineering, integration and complete technical support.

The JV is being developed to compete both in the UAE and the wider Middle East and is responsible for the Ghannatha patrol boat and Baynunah class corvette naval programmes for the UAE Navy. Selex ES has recently delivered the first combat management system for the Baynunah programme.

Beyond the UAE, Selex ES has already developed a strong presence in Saudi Arabia through its involvement in the Eurofighter Typhoon programme and has established a limited liability company, Selex ES Saudi Arabia, to further develop its commercial and industrial presence in the kingdom.

## Alenia Aermacchi aiming high

In 2012 Alenia Aeronautica and Alenia Aermacchi merged their activities into a single entity. The combined organisation boasts revenues of  $\notin$ 2.7 billion, a total workforce of around 12,000 people and a healthy order backlog valued at  $\notin$ 8.6 billion.

Following the merger, it also operates in an extremely diverse range of sectors from multi-role fighters, with its position on the Eurofighter programme, through to military transports with the C-27J and a significant interest in the military trainer market with the M-346.

Add into the mix development of unmanned aerial systems (UAS), a 50% stake in the regional turboprop maker ATR and 51% ownership of the SuperJet International joint venture with Sukhoi, and it is clear that the company has a powerful base from which to work.

In MENA, Alenia Aermacchi has a growing presence, which dates back to the supply to numerous North African and Middle East customers of the MB-326, MB-339 jet trainers and SF.260 basic trainers as well as the G.222 transport aircraft over the past 40 years.

#### 

More recently, the company has joined forces with Mubadala-owned Strata in the UAE to build composite aeronautical structures. In 2012 Strata delivered the first assembled tail unit for the ATR regional turboprop made at its AI Ain plant.

One of the most high-profile successes for Alenia Aermacchi in the region was the decision by the UAE to acquire the MB-339 jet trainer as the basis of its Al Fursan aerobatic display team, which was formed in 2010 and made its first public display during the 2011 Dubai Air Show.

The company said: "This is a perfect showcase for the capability of our aircraft and of the Italian integrated training systems as the pilots were trained in Italy, using Italian aircraft, Italian training systems, tools and doctrines.

"The UAE has been a customer of the MB-339 since the 1980s and the choice of this aircraft for AI Fursan is a sign of the good relations we have in the region also at government to government level."

Meanwhile, Alenia Aermacchi is hoping that 2013 will see the re-opening of negotiations with the UAE Air Force over a proposed deal to buy a large batch of M-346 advanced jet trainers. The aircraft was selected in 2009 in preference to the Korea Aerospace Industries T-50 but the contract has yet to be signed. The company says it continues to have "very positive relations" with the air force.

The success of the C-27J military transport, which has been selected by 11 countries, means that Alenia Aermacchi is also actively pursuing opportunities for the type in the Middle East and North Africa. In particular, the company is developing the MC-27J multi-mission variant of the Spartan, which it believes could have a strong appeal in the MENA market.

## MADE IN ITALY, THE INSIDE STORY

Kelly Green speaks

to aircraft interiors firm Delta Interior Design about why its trademark Italian style is sure to impress the Middle East's business aviation community. estled in the heart of Brianza, Italy, the historic industrial district north of Milan, is Delta Interior Design. Founded in 2000, the company offers interior design, interior refurbishing, modification and upgrades, and new parts manufacturing for all models of aircraft, including helicopters. It also supports its customers for external livery design and offers amenities such as specialty cleaning products, antibacterial products, china, linens, and more, all from highquality Italian companies.

And now, the Italian company is focusing on bringing its 'Made in Italy' aesthetic to the Middle East.

Matteo Bulletti, general director, explained: "We are starting now to investigate the Middle East market based on our previous experience in Europe and the Far East.

"We are very confident that our knowhow and experience, together with the 'Made in Italy' signature, can be successful in the very demanding market of the Middle East. We are now negotiating two projects, one refurbishment and one reconfiguration for customers in the region," he said.

Protecting his client's identities, Bulletti would only disclose that Delta Interior has worked with a large maintenance centre in the region, as well with aircraft owners, both charter companies and privates.

Delta Interior Design started operating in 2001 as an accomplished cabin interior refurbishment specialist of fixed and rotary-wing VIP aircraft with full technical capability.

Operations grew rapidly and Part 145 (C6) certification was obtained in 2003. After moving into a new, larger facility in 2006, EASA design organisation approval (DOA) capability was achieved in 2007, and EASA production organisation approval (POA) followed in 2009. ISO 9100 certification is in progress.

According to the company, Delta Interior Design is able to exploit a unique blend of styling and craftsmanship expertise, fabrication know-how and hi-tech engineering. "An agile network of individuals, who master the arts of design, construction, equipment integration and interior restoration, is the secret of the quick response capability of Delta Interior Design to any kind of requirements that may arise," the company added. With extensive experience in servicing hundreds of aircraft in a wide range of models, Delta Interior Design boasts that it can "respond to even the most challenging aesthetic tastes and functional needs with creativity at the highest standards".

The outcome is absolutely personal, and rigorously styled as 'Made in Italy' by the predominantly Italian design team.

Being so close to one of the world's fashion capitals, Delta Interior Design works in collaboration with the Design Institute of Milan, which provides the source of its junior designers.

"These young professionals have bright, clean minds that can successfully find original solutions for our customers," said Bulletti. "Thanks to our experience, we are able to fulfil the most stringent customer requirements providing solutions that sometimes go beyond customer expectations in terms of design, weight and maintainability, with eyes open to cost and time readability," he added.

## Customer-selected

Although the company has its own in-house designers, it is also happy to work with customer-selected designers or architects.

"Work can be carried out in our facilities or onsite, depending on work scope and customer requirements," Bulletti explained. "We have already provided various services and work outside Europe."

Whether customers are seeking a suitable interior to highlight and exploit the characteristics and performance of brand-new or existing aircraft/helicopters, Delta Interior Design's view is that there is no limit to imagination. "Just let it fly. We'll make dreams become real," the company promises.

One of Delta Interior Design's most unusual customer requests came in 2007. "We designed and realised a ceiling of a helicopter full of stars," said Bulletti.

So far the company has been active within the aviation industry in Europe and in Asia, but it is now looking at extending its horizon towards newer markets and attended the recent AIME/MRO Middle East event in Dubai in January.

"We are looking forward to working with Middle East customers and getting some challenging requests to fulfil," said Bulletti.

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## ABU DHABI



# **AMMROC'S ROLE GROWS**

Abu Dhabi's home-grown maintenance specialist AMMROC has secured a major share of the domestic military market and is looking for regional expansion opportunities. **Chuck Grieve** reports.

hen the Advanced Military Maintenance, Repair and Overhaul Centre (AMMROC) was set up, it was for the express purpose of supporting the UAE armed forces with world-class technical services.

There is little doubt that the joint venture between Mubadala Aerospace, Lockheed Martin and Sikorsky Aerospace Services has succeeded in that mission.

Barely three years after its launch, AMMROC is expanding its domestic operation to become the primary provider of MRO services to the UAE Air Force, and is confidently looking further afield for new markets.

AMMROC used IDEX 2013 to announce new contracts that solidify its position with the UAE armed forces and general headquarters (GHQ), as well as pushing the boundaries of its abilities in MRO.

The announcements covered expansion of its services to additional platforms, a deal to upgrade the avionics in the UAE's Lockheed C-130 Hercules fleet, and another to carry out major inspections on the UAE Navy's AS565 MB Panther helicopters.

AMMROC is the fastest expanding of the seven defence firms under the umbrella of Mubadala, the Abu Dhabi investment and development company. It grew by 75% in 2012. About 90% of its work is for the UAE military.

However, the company is eying the regional market for expansion. Its ambition is to cut its dependence on the home market by half in the next few years, so that

Continued on Page 102



Fahad AI Shamesi: "We have the right partners, we have the right capabilities and we have the right tools to go out and get other business from the region."

## **ABU DHABI**

## MRO

### **CONTINUED FROM PAGE 101**

by 2015 it is earning 45% of its revenue from other Middle East customers.

Chief executive Fahad Al Shamesi, outlining the company's vision in an earlier interview, said marketing its growing capabilities and expertise elsewhere in the region has always been part of AMMROC's long-term plans. "There are so many platforms that need to be supported," he said. "We have the right partners, we have the right capabilities and we have the right tools to go out and get other business from the region."

Acknowledging AMMROC's growing capabilities in providing dedicated MRO services for attack and transport helicopters, trainer and fighter jets and transport aircraft, the scope of the company's original two-year contract has been expanded with a new agreement covering MRO support for additional platforms for the UAE Air Force. The new contract is valued at AED663 million (US\$180 million).

Under a new AED157 million (US\$43 million) contract, AMMROC will carry out full modifications on the avionics of six UAE military Lockheed C-130 Hercules aircraft. The modifications involve changing the aircraft's avionics from analog to digital and will extend the service life of the aircraft by 20 years. The work is scheduled to start this year.

And, in its first work for the UAE Navy, AMMROC was awarded a AED143 million (US\$40 million) contract to perform major inspections of 13 multi-role AS565 MB Panther helicopters. During IDEX, the company said the work on four of the aircraft was nearing completion.

## HUMS makes the right sound for helicopters

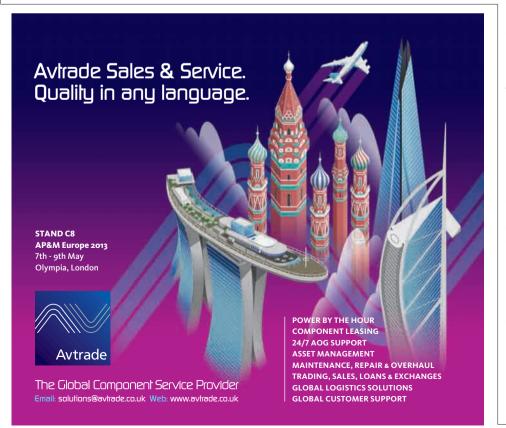
Performance worries over military and commercial helicopter operations in the harsh conditions of the Middle East deserts could be eased with a new distributorship deal in the region.

Honeywell Aerospace has signed the deal – the first of its kind in the Middle East – with Transworld Aviation (TWA) in Dubai to distribute its line of health and usage monitoring systems (HUMS) across the Middle East markets.

HUMS is a condition-based maintenance (CBM) system that monitors the health and usage of an aircraft's drivetrain to addresses any maintenance and safety problems. The system increases availability for flight planners, enhances logistics for maintenance and inventory managers, and enables strategic planners to decide on fleet availability and cost containment measures.

HUMS continuously checks aircraft health and usage by monitoring vibrations at numerous points to pinpoint mechanical faults. Monitoring up to 36 different elements, it identifies signs of stress and fatigue before they become serious issues. The system stores data on any faults, allowing operators to make informed maintenance decisions. This is particularly valuable for helicopters operating within the Middle East where the stress on drivetrains can be exacerbated due to the region's hot, sandy and dusty conditions.

The HUMS have been used on thousands of commercial rotorcraft including a wide variety of platforms from AgustaWestland, Sikorsky, Bell Helicopter, Eurocopter and MD Helicopters. Honeywell claims its HUMS products have helped U.S. Army AH-64 Apache helicopters reduce mission aborts by 30 %, maintenance test flights by 20% and scheduled maintenance by 5 to 10%.



To cope with its rapid growth and provide the space to achieve its ambitions, AMMROC is developing a state-of-the-art maintenance base at the Nibras Al Ain Aerospace Park at Al Ain International Airport. This centre of excellence is designed to "offer innovative maintenance solutions, performance-based reliability, all-life cycle management, and affordability from one centralised location".

Construction of the US\$800 million base is expected to start in October. It will cover one square kilometre, of which one-quarter will be taken up with hangars, a headquarters building, back office facilities and testing areas. It is expected to be completed by the end of 2015 and will employ about 3,500 people when fully operational.

When AMMROC transfers its operations to the new base from Abu Dhabi airport, maintenance engineers associated with on-going support contracts, who are currently on site at UAE armed forces bases, will remain there.

## Engineeringprofessionals

AMMROC has taken steps to develop its own engineering professionals from among promising UAE students. In November 2012, it signed an agreement with Abu Dhabi Vocational Education and Training Institute (ADVETI) to sponsor training programmes for UAE nationals. The initiative will help prepare students from secondary technical schools and vocational education development centres for jobs in the growing aerospace and engineering sectors.

AMMROC will sponsor about 100 students a year, mainly on two-year aviation maintenance courses. On completion, they will enrol in the Al Ain International Aviation Academy (AAIAA) for a further year for their diploma, or a further two years to earn a higher diploma, with continued sponsorship, internships and on-thejob training. AMMROC will then provide all graduates with full-time employment and continue their learning in technical subjects, soft skills, English and corporate social responsibility, with secondments and special assignments as appropriate.

Al Shamesi said the ADVETI partnership "will greatly assist us in our drive to develop UAE nationals equipped with the professional skills needed to meet our rapidly growing requirements".

AMMROC's first work for the UAE armed forces was carried out under an AED1.15 billion (US\$313 million) maintenance service contract, signed in 2011, which covered maintenance services for fixed and rotary wing aircraft for the GHQ.

At that time, it was announced that the GHQ anticipated changing the relationship into a performance-based logistics (PBL) arrangement with AMMROC to facilitate improvements in efficiency in providing military MRO services in the UAE.

That contract, said Al Shamesi, demonstrated the "outstanding progress" that the company had made in a very short time and the "level of trust" in AMMROC by its most important customer.



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## AMES on target for forward thrust

Aerostructures Middle East Services (AMES) took the opportunity to announce some new enbancements to its service offerings while exhibiting at this year's MRO Middle East. Kelly Green reports.

Alexandre Mule and

with AMES success.

FrançoisVitti: delighted

ust three years since it first opened its doors in March 2010, Dubai-based Aerostructures Middle East Services (AMES) is expanding its jet engine nacelle repair capabilities from its technical base in the UAE. The announcement was made as the company exhibited at the MRO Middle East event at Dubai World Trade Centre in January.

The expansion means that AMES is now able to accommodate the region's very large nacelles and thrust reversers for Engine Alliance GP7200s that power Airbus A380s, and General Electric's GE90 engines used on Boeing 777s.

The EASA Part 145 certified company also offers nacelle and thrust reverser services for Rolls-Royce Trent 700 and 500 engines, which equip Airbus A330s and A340s, as well as for the A340 and A320 family's CFM International CFM56 powerplants.

Speaking at MRO Middle East, Alexandre Mule, deputy general manager of AMES, said: "Here in this region we are able to offer the maintenance for all these very large engine nacelles, which is a very key market for this area, where the long-haul routes are very important."

A statement from the company added: "As a next step, the company is preparing to implement service capabilities for CFM56 nacelles on Boeing 737s, along with a broadening of its on-wing support for various engine nacelle types."

## Success stories

Set up as a 50/50 joint venture between Safran's Aircelle and Air France Industries KLM Engineering & Maintenance, AMES has become one of the region's success stories since it opened its 2,200sqm facility in Jebel Ali Free Zone, Dubai three years ago.

"We forecast double-digit expansion of our business in the coming years as AMES builds its services and responds to Middle East airline growth," said general manager François Vitti.

Mule credits the expertise of AMES's two parent companies for the company's success. They offer their joint capabilities to Middle East customers, providing services for a full range of



nacelle types: Rolls-Royce, General Electric, CFM International and Pratt & Whitney engines.

"AMES combines the expertise of one OEM and a leader in the MRO industry with AFI," explained Mule.

AMES was created to support the Middle East's jetliner fleets of Airbus A320s, A330s, A340s and A380s; Boeing 747s, 767s and 777s, along with McDonnell Douglas MD-11s and Embraer 170/175s. When the company opened in 2010 there were more than 390 of these aircraft in the active inventories of the region's airlines, with some 200 additional jetliners on order.

"Our services are tailored to meet all of the market's expectations, with solutions that range from repair and overhaul to logistics, spares and on-site support at customer locations," Vitti explained.

The primary focus for AMES is the repair of fan thrust reversers, with the additional capability to handle other nacelle components such as air inlets, cowl doors and nozzles. Its central location in the UAE between Dubai and Abu Dhabi enables the company to serve a region that covers Bahrain, Egypt, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia and Yemen, as well as neighbouring countries.

### Proximity to the customer

"For us close proximity to the customer is very important," said Mule.

"We chose to come to this region because it is a growing market for the maintenance industry," added Vitti.

"Because of the cost of transportation we have to be located here in the UAE, in the Middle East, near Emirates, Etihad, Qatar, Gulf Air," he continued. "If you look at the nacelle for the B777 or the A380, these are very big engines. Transporting these big nacelles to Europe or the United States would be very costly and you will spend time on the transportation. So it makes sense to come here, in close proximity to the customer, to reduce the cost of maintenance, to reduce the cost of transportation and to reduce the turnaround time."

Vitti added: "The brand of AMES broadly speaking after two years is known by major airlines – Emirates, Etihad, Qatar, Saudia, Kuwait Airways and Gulf Air.

"The brand of AMES is not new – we are a 'frequent flyer' in the market. In the beginning we had to go to the customer, now they are coming to us."

AMES also announced at the show that it has successfully developed on-wing support activities, which involves the deployment of teams into the field, in addition to its in-shop repair and overhaul at Dubai.

"Through the on-wing support, we are sending people to help our customers in their facilities – to carry out inspections and to do maintenance directly on the aircraft on site," explained Mule.

"This is what the customers are looking for," added Vitti. "We appreciate this contact with the customer."

After the success of its first three years of operations, what does the future hold for AMES? "Our strategy is to continue to develop these activities because, rather than providing maintenance, we are providing service," said Vitti. "Maintenance is part of the global service that we offer to our customers."

## MRO

# Why MROs will get a

Cloud computing for the aircraft industry may sound like a terrible pun but, in reality, many companies are latching on to the benefits it can bring. Ramco, which is a specialist in the field, is keen to promote this new approach, as **Steve Nichols** found out.

outed to be the next generation of computing applications, cloud computing aims to create a smarter work environment. Businesses have become spoilt for choice when it comes to choosing the solution that will best suit them. But, with hundreds of MRO software providers in the market today, it can be a difficult choice to find the right one.

Perhaps 'going to the cloud' is the way forward. But, what exactly is cloud computing and how can it benefit an aviation business?

Cloud computing in simple terms is a virtual workplace where a single installation of the MRO software can be used by multiple customers and be accessed through the internet. You just use the software you need, as a service, which is installed in an entirely different location to where you are based.

With multiple internal and external connections, and thousands of queries being handled every second, a robust computing system is required to meet the challenges in managing the infrastructure.

## Solution provider

But with cloud computing, all these are taken care of by the solution provider, freeing businesses to focus on their core competencies. And Ramco is convinced that the MRO industry can benefit greatly from the cloud approach.

"With more than three million parts on an aircraft, tracking and managing each stage of maintenance work would become unmanageable without a comprehensive MRO computerised solution," said Sam Jacob, vice president – aviation product development at Ramco Systems.

"Applications for the aviation industry are expected to simplify the complexities of managing the MRO business but traditional IT systems installed on company premises make the deployment and management of IT systems complex."

Jacob said that a cloud-based MRO solution provides the real possibility of expanding the availability of sophisticated IT systems to smaller organisations – operators with fleet sizes of less than 10 aircraft and small MRO centres can benefit from the operational efficiencies offered by specialised integrated solutions.

Ramco has more than 1,000 customers in 35 countries, including Emirates, Air India and Eurocopter, and has pioneered the use of cloud-based computing in the aviation industry. So why



Ramco CEO Virender Aggarwal says a gradual introduction to the cloud pays dividends.

has the MRO space, which has largely relied on paper-based processes before, suddenly become interested?

"The competitive nature of the airline industry has also forced the cost of doing business to rockbottom levels," he added. "With maintenance expenses being the second largest cost contributor after fuel expenses, organisations are aggressively re-positioning their maintenance functions. As well as addressing regulatory compliance and aircraft reliability, it is also about improving business efficiencies and delivering competitive advantage."

### **Operational efficiencies**

Jacob said smaller operators and maintenance centres need to build the same operational efficiencies, best practice adoption and decisionmaking enablers as their big brothers if they are to retain their edge and stay relevant in the market place.

So how does cloud computing help with this?

Simple – it allows companies to pick and choose what their business needs from available MRO software packages. MRO applications in the cloud are designed for 'on-demand' usage and companies can decide what modules they want to start with and adopt other functionalities later as they wish. For example, MRO companies can start with just materials management and maintenance programs along with planning and execution, and later expand to other functionality such as engineering, finance and human capital management solutions (HCM).

Ramco said an operator with a multiple fleet could introduce one model of cloud-based MRO software and move on to other models progressively as needs develop. Since the MRO software is offered on subscription basis, it only pays for the fleet that's currently operational, making IT expenses completely aligned to the business.

But is cloud computing a proverbial silver bullet for MRO operators?

## **Operational benefits**

"A switch-over to a cloud-based application in itself is unlikely to deliver the operational benefits that operators and MRO organisations seek," said Jacob.

"The cloud-delivered software solution still needs to address fundamental challenges that organisations face in deploying enterprise applications. In order for enterprise systems to be effective, they need to get their personnel on board."

Ramco adds that application simplicity and relevancy are the two most important parameters for successful system adoption in the field and on the shop floor.

"Applications also need to leverage the high level of penetration of mobile devices among users. Their availability on tablets and smart phones allows the application to be taken to the place of work. This means that a high level of simplicity, plus intuitive touch-screen models, can significantly increase the level of system adoption and appeal to all users, such as pilots, field mechanics and field warehouse personnel," said Jacob.

But does this mean a one-size-fits-all approach to functionality?

"No," said Jacob. "The secret is to tailor and extend the functionality of the cloud-based MRO software to which the organisation is subscribing. Ramco believes it is probably the only cloud software vendor that provides extension development kits (EDKs) that help customers extend the capabilities of the standard cloud product to meet their unique needs.

"With a cloud application, aviation MRO

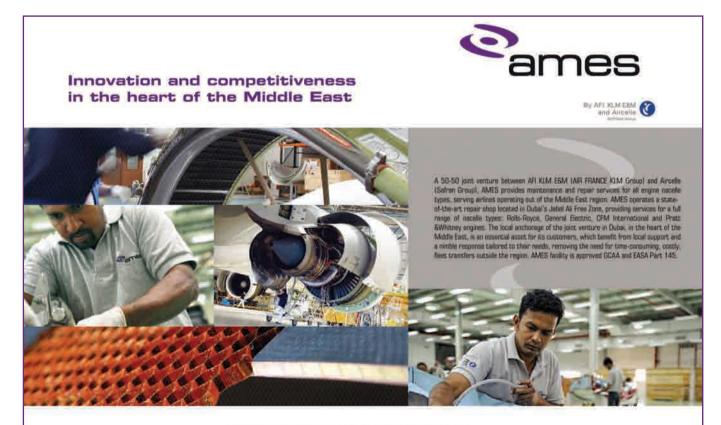
# lift from the cloud

companies get the freedom to use only those features, functionalities and capabilities that are currently relevant for their business," Jacob said. "For example, an organisation working in the field of continuing airworthiness management, and focusing on engineering and maintenance planning services, may eventually grow into a fullfledged MRO. At that point, it could start subscribing to the end-to-end contract management, execution and billing functionality of a cloud-based system."

Ramco said that, over the years, organisations have become so dependent on IT that it is not uncommon to see systems becoming a constraint in adapting to change and scaling up for growth. But, being cloud-based, relieves the company of the lead-time to add IT capacity and upgrades – with the cloud, they can scale up capacity and usage 'on-demand' with no waiting time.

Priority also goes into making sure that the data transmitted is secure, through the use of encryption and secure data sockets, to prevent any form of data interception.





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**MRO** 



Narrowing supply stocks and the near-absence of aircraft for disassembly have sparked a worldwide shortage in aftermarket parts for the Boeing 777. Alan Peaford reports.

> n a confounding turn of events, B777 operators are resorting to part-exchange options and expensive aircraft-on-ground (AOG) orders as a result of untimely shortages in the stockpiles for major part suppliers.

With the list of clients for Boeing's long-range twinjet spanning six continents, responses to the current scarcity take on a decidedly global focus.

"Although reasons for the current dearth in aftermarket spares for the 777 remain unclear, we have received multiple enquiries about locating standard parts for the aircraft," said Zilvinas Sadauskas, CEO of Locatory.com, the aircraft parts supply subsidiary of Avia Solutions.

He added: "It has come to our attention that more than a handful of clients have struggled to find the desired spares for the B777 on both our trading platform and those of competing parts locator services.

"The pressing factor here is that since such companies provide what is effectively an amalgamated trading platform, it serves to highlight the shortages within key suppliers across the industry. It would be a bizarre case if 777 parts could be sourced solely from Boeing's own AOG desk - but this is very much the reality at this time."

Ensuing from its official launch in 1995, the B777 has proven to be a resounding success amassing orders from airlines seeking the fuel-efficiency it afforded over existing wide-body jets.

Current aircraft numbers in active service stand at 1,073 - a figure more than three times that of its direct competitor, the Airbus A340. Additionally, Boeing continues Continued to attract orders for its 777-300ER (extended range), with 32 jets requested by airlines including Cathay Pacific, Emirates and Aeroflot, among others.





'It would be a bizarre case if 777 parts could be sourced solely from Boeing's own AOG desk - but this is very much the reality at this time.' **ZILVINAS SADAUSKAS** 

## MRO

### **CONTINUED FROM PAGE 109**

"In the aftermarket sphere, parts for teardown have been relatively less forthcoming," said Sadauskas. "Although perhaps a testament to the 777's extraordinary safety legacy, only two examples have been written off throughout the jet's service history. Both of these hull losses – the EgyptAir cockpit fire and the widely documented crash of a British Airways 777 at Heathrow – rendered salvageable components. However, the demand for salvaged parts exhausted supplies within months following the release of both airframes."

Peculiarly, the scrapping of three 777 models in recent times has raised eyebrows. Although the examples were fully airworthy, it is clear they were deemed more valuable when reduced to their individual parts – something that would be unheard of ten years ago. Indeed, such an occurrence brings a new dimension to the airline industry with 14-17 year old airframes being worth more in scrap value.

"Although I may open up a can of worms, such early scrapped aircraft could be a telltale sign of obsolescence. Two of the scrapped 777s were -200 series jets, with the most recent example, a -200ER, being assigned for scrapping just last December," said Sadauskas.

"The pivotal issue here is the stronger role that economics plays in determining aircraft values. Quite simply, the 777-200/ER is beaten by the A330-300 for economics on shorter-range journeys and by its larger counterpart – the 777-300/ER on longer range sectors, leaving the jet somewhat obsolete.

"This is reflected in pre-owned market values, with -300ERs fetching values 50% higher than similar vintage 777-200ER jets.

## Cut-throat world

"Although the 777-200/ER is a very capable aircraft, we may see further examples being scrapped over the next 5-10 years. The cut-throat world that is the airline industry holds efficiency and pragmatism at its forefront, so the limited range of non-ER 777s could mean they prove a less attractive option in their target markets.

"But it's not just the 777 affected, with 11 examples of the highly successful 737-700s meeting their untimely demise – some as young as eight years. It goes without saying that this would be unheard of a decade ago.

"From one side, increasing global fleet renewals and a greater acceptance of the scrap value of certain jets does sustain the aftermarket with healthy levels of value-driven parts. Locating and acquiring such parts, however, remains the next hurdle. Delayed AOG situations continue to be a major headache source for airlines around the world and are only compounded by part supply shortfalls, as we are witnessing now with the 777.

"Thankfully, several of the major e-platforms for the aviation aftermarket take on the initiative to source relevant suppliers in times of a deficit in specific parts."

## **AvTrade perfectly to play the part in**

A British spare parts and support company – with strong international links – is busy making a major name for itself in the Gulf, Middle East, North Africa and India, thanks to what regional sales director Jamie Brooks refers to as '...the AvTrade effect'. **Geoff Thomas** reports.

vTrade's regional HQ is in the Dubai Airport Free Zone and from there Jamie Brooks looks after both the company's activities in the region and AvTrade's similar businesses in Singapore, Moscow and – looking towards the end of 2013 – Miami in Florida, USA.

Established in 1985, AvTrade's HQ is West Sussex (a stone's-throw from London's Gatwick Airport) and over the past 28 years it has developed into a major global component service provider to commercial aviation, including the sale, loan and exchange of aircraft spares.

Brooks said: "We support our 500-plus customers 24/7 by providing a reliable, comprehensive and cost-effective service, offering assistance, whether it's an urgent AOG scenario or a regular maintenance and parts supply request.

"Excellent customer service is at the core of our business ethos and our extensive inventory of spare parts (housed in a 400sqm leased area at logistics and freight-forwarding company DB Schenker's Dubai facility) is geared-up for the vast majority of Boeing and Airbus airliners in service in the region, including the A380.

"All of our inventory (as a company – internationally – we carry more than four million spare parts) is certified to FAA Form 8130-3 and/or EASA Form 1 airworthiness and certification standards and we only work with suppliers meeting our own high quality standards to ensure on-wing reliability and overall cost-efficiency."

Brooks began working for AvTrade in 2003 and he moved to Dubai in 2009 to launch the company's successful foray into the region. He explains that the huge growth of Gulf-based carriers – allied with the massive increase of commercial aviation in the area – means that Dubai is the right place to be and the company's positioning within the airport's Free Zone is also proving beneficial.

"We did have a small operation in Tunisia for a while," he said, "but our current location is where our customers want – and need – us to be.

"Dubai is an incredibly convenient hub for our business, as spares can be shipped just about anywhere within my region in super-quick time and with no time differences. And, speaking personally, it means that I can also be in Singapore, Moscow and the UK with relatively pleasant flight times and



Jamie Brooks: "Dubai is the right place to be."

minimal jet-lag. Flying to Miami will be a bit of a pain – but that's just something I'll have to get used to!"

As well as working closely with DB Schenker in Dubai, AvTrade has an on-going business relationship with Jordan-based MRO JorAMCo that, itself, has a growing business providing all levels of aircraft maintenance to airlines and commercial operators in the Middle East, Europe and Asia.

Another strategic partnership for AvTrade is with World Aero, a company with a strong presence in the Gulf that specialises in the overhaul, repair and servicing of aircraft brakes and undercarriages, including those featuring parts made by Messier-Bugatti, Goodrich, Honeywell and Meggitt.

As a company, AvTrade promotes a regulated industry and it is fully certified to the requirements of ISO 9001:2008 and the FAA AC00-56A standard as well as being founder members of the European Aviation Suppliers Organisation (EASO).

In order to assist its customers both regionally and internationally, AvTrade has created a bespoke web-based system called Avnet, an integrated IT solution that uses AvTrade's website (www.avtrade.co.uk) that can be simply adapted to link directly with customers' own IT systems.

PARTS

## placed the ME

This 24/7 electronic data interface gives customers access to the company's sites and services including component requests, MRO status reports, workshop reports, EASA release documentation, shipping data and it also offers streamlined administration.

AvTrade's team in Dubai now comprises eight people (including Brooks himself) and its growing customer base in the region includes all the locally-based international and regional airlines and royal flights, along with airlines and business jets that fly regularly into both Dubai and nearby airports.

And although it has developed a reputation for being far more than an AOG specialist, AvTrade has ensured that it carries what its own statistics show are the top 20 AOG parts, along with a growing stock of regular spares and also 'base kits' for its various customers, be they airline or other commercial aircraft operators.



AvTrade internationally carries more than four million spare parts.



## **INTERIORS**

*Emirates Airlines has extended its contract with OnAir for Inmarsat's SwiftBroadband connectivity aboard the airline's Airbus A380 fleet.* **Steve Nichols** *reports.* 

# The jumbo battle for wi-fly

nmarsat chief executive Rupert Pearce said during a webcast to announce the company's annual results that Emirates and OnAir had agreed to a "multi-year commitment" to provide the airborne internet and phone connectivity on the super jumbo.

Passengers using their Wi-Fi-enabled devices, including smartphones, tablets and laptops, can access the service.

Emirates plans to equip its entire fleet of 90 A380s.

The airline has also said it is committed to fitting Panasonic's Ku-band global communication suite (GCS) on wide-body aircraft, according to the Airline Passenger Experience Association (APEX) blog, although no public announcement has been made.

After a trial on a single Boeing 777, which included four channels of live TV, internet and phone with Panasonic partner AeroMobile, the plan is apparently to roll the service out across more than 100 777s in due course.

In another twist, it appears that OnAir will remain the internet service provider (ISP) on 777s despite the fact that Panasonic's Ku-band hardware will drive the service.

Ian Dawkins, OnAir chief executive, confirmed that Panasonic would provide the connectivity to the aircraft, while OnAir looks after the on-board Wi-Fi service.

"We are responsible for the Wi-Fi service only in this instance. We act as a neutral service provider, working through an IFE vendor, in this case Panasonic. With other customers we provide Wi-Fi and GSM services, including the radio link and



OnAir's Ian Dawkins: "We are IFE neutral and are currently working with the two main IFE vendors."

the airborne system," Dawkins said.

So is this the start of a wider relationship between OnAir with Panasonic – can we expect to see further co-operation in the future and what now for OnAir's relationship with Inmarsat?

"We are IFE neutral and are currently working with the two main IFE vendors. However, we are always examining our options. Our OnAir Wi-Fi services are activated on two Emirates B777s through the Panasonic IFE," said Dawkins.

"This has had no impact at all on our

relationship with Inmarsat, which is fully aware of the versatility of OnAir's technology and its ability to use various types of radio links. We remain very committed to Inmarsat SwiftBroadband and GX Aviation for both the commercial and VIP markets.

"Our aim is simply to enable airlines to provide consistent passenger connectivity services they want. To that end, we work directly with airlines, as well as through other vendors, but ensure our passenger services are aligned with the needs of the

## CONNECTIVITY



airline. We currently work with both Panasonic and Thales and we are happy to work with any vendor," Dawkins added.

The tug of war between Inmarsat and Panasonic has been raging for some time.

The problem is one of speed. Inmarsat SwiftBroadband's maximum 432kps speed, while suitable for e-mail and web surfing, is not really man enough for live TV, which is the goal for Emirates.

Panasonic's Ku-band connectivity, coupled with its eXTV option on GCS, is a big pull. The eXTV solution will provide Emirates passengers with Sport24, as well as BBC World News, BBC Arabic, and Euronews. This is what the airline wanted in advance of the 2014 World Cup, given that it missed out on live TV coverage of the 2012 Olympics.

Inmarsat's L-band SwiftBroadband TV (SBTV) solution is not live – it provides short TV clips that have been uploaded from the ground. Launched in September 2012 and previewed at the Long Beach APEX Expo, the system was tested aboard an Emirates A380, but so far has found no customer.

Inmarsat is due to upgrade SwiftBroadband later this year. By adopting a different type of bearer or waveform (as part of its so-called RAN 4.0 upgrade) it will boost the throughput from 432kbps to around 700 kbps. In technical terms the system is being reprogrammed to pass data over a longer burst, hence upping the throughput. But this is still much less than Panasonic says it can manage via Ku-band with its higher frequency transmissions. Until Inmarsat has its Ka-band Global Xpress three-satellite constellation up and running in 2015, which promises up to 40Mbps to aircraft, the only real option for live TV is multi-megabit Ku-band, which is why Panasonic is keen to sign up as many airlines as possible over the next two years.

Inmarsat's Global Xpress will support live TV and its SBTV product is likely to evolve into GXTV in due course, but Miranda Mills, Inmarsat's vice president, GX Aviation, said at September's Apex Expo that the airborne terminals and worldwide availability won't all be in place until January 2015.

#### Exclusive contract

Honeywell has the exclusive contract to develop antennas and terminals for Inmarsat's Global Xpress Ka-band service on business aircraft and air transport. It is currently developing two different antenna types – one is fuselage mounted for the air transport market and the other tail mounted for high T-tail business aircraft.

The fuselage-mounted antenna will be along the lines of the original antenna for the Connexion by Boeing service, but be mechanically steered, not electronically steered like a phased array. Both antenna designs have recently gone through the performance development review stage and are on target to enter service, fully certified, in March 2015.

It is too early to say whether Emirates will opt for the Ka-band Global Xpress service when launched, although this renewed commitment to Inmarsat via OnAir on the A380s suggests that it could. Given that the airline doesn't appear to like putting all its eggs in one basket in terms of having a single connectivity provider, the odds are that it will deploy Global Xpress on at least some of its aircraft after 2015, if the pricing can be made attractive.

"Airlines now view connectivity as a standard product, not just an optional 'nice to have' – it is becoming part of their embedded programme for customers," said Mills at last year's Apex Expo in Long Beach.

"We will be able to deliver up to seven times the bandwidth of a Ku-band satellite system, which will satisfy the demand that consumers have."

But how will price compare with Panasonic?

"There is a lot of talk about that in the market right now," said Mills. "What we are cognizant about is the long term. We will have a sustainable cost model, which brings value for money and cost effectiveness to the airlines.

"That can be different to pricing at a certain moment in time, but even with the pricing we are hearing today we know we can achieve lower. What is important in the aviation sector is that you don't want to make a long-term decision based on short-term numbers."

Airlines have to think carefully about the overall cost of outfitting their aircraft with antennas, terminals and the associated infrastructure and this has to be factored in as well as the satellite-based running costs once the plane is in the air.

"The sustainability of the service offering is something that is very important," Mills concluded. *The co-located Aircraft Interiors Middle East (AIME) and MRO Middle East events returned to Dubai in January.* **Kelly Green** *was there.* 

# **DOUBLETOP!** Co-located shows prove to be a winner

focus on manpower shortages, the latest in on-board WiFi, and a record attendance were the highlights of the fourth running of Aircraft Interiors Middle East (AIME) co-located with the fifth Maintenance, Repair and Overhaul (MRO) show.

This year's event, organised by F&E Aerospace and Aviation Week, recorded the greatest attendance yet, with three thousand visitors from 70 countries, marking a 25% increase on the 2012 edition. Exhibitor levels were also up by 15% on 2012 with 226 exhibitors.

The two-day show was inaugurated by HH Sheikh Ahmed Bin Saeed Al Maktoum, president, Dubai Civil Aviation Authority, and chairman of the Emirates Group and Dubai Airports, who spent an hour touring the 6,000sqm show, including the new-to-market country pavilions representing the Netherlands and Ireland, and the already established French pavilion.

It was the first time the co-located event had taken place at its new venue, Dubai World Trade Centre, which proved popular with exhibitors and visitors alike. "We prefer the new venue and the quality of visitors has been outstanding," said Sabeti Wain Aerospace director Paymen Sabeti. "We tend to exhibit every year as we have many customers in the region – it is vital we take part in AIME to remind them we are still local."

Another first for AIME this year was the in-



Dubai Civil Aviation chairman Sheikh Ahmed bin Saeed Al Maktoum.

flight entertainment and connectivity (IFEC) pavilion, where new-to-show exhibitor Gogo announced that, to date, it has been selected to outfit more than 400 aircraft with its Ku-band satellite connectivity services across several major airlines operating in the US and internationally. Dave Skwarek, international marketing communications manager of Gogo, said: "As demand increases, technology evolves."

The new IFEC pavilion also attracted first time exhibitor Thales. "This is our first time exhibiting in the Middle East," said Dieter Dhondt, head of sales & marketing, Thales. "The show went very well – we met with new and existing customers and we noticed in attendance countries such as India, Pakistan and Ethiopia. We anticipate coming back next year."

#### Hosted buyers

Sixteen organisations took advantage of the established 'hosted buyers' programme, which connects airline buyers with new and existing suppliers and providers. "The show is an excellent platform for business interactions and provides us an ideal opportunity to meet up with all the right people, most of them suppliers with whom you interact with on a day-to-day basis but you don't get to meet face-to-face," said first time hosted buyer 'Jay' Jayakrishnan, group chief procurement officer, NAS Holding. He added: "As a hosted buyer you have a chartered out programme of meetings – it makes it easier than roaming around trying to catch everyone. It is great to be here and I hope to see more of these events happening in Dubai and the region."

'Fostering Growth through Innovation and Collaboration' was the theme for the MRO conference, with a focus on tackling issues surrounding manpower shortages.

Ahmad A Alzabin, chairman and CEO of ALAFCO Aviation Lease and Finance Company, told the conference. "Our manpower requirement, as per our business plan, is around 9 million man hours per year; if you transfer this to the number of employees it will work out at 7,820 workers. Our current workforce is dropping very fast mainly due to retirement so, for us to achieve our business plan, we need to hire almost 4,500 people and, in our part of the world, there is no 4,500 people that are qualified. We have to hire them, train them, certify them, transfer their experience and keep them motivated – this is a very big job.

"But we are lucky in Saudi Arabia as the government will help – they will pay for a lot of education as long as we guarantee employment," he added.

The co-located events will return to Dubai on February 5 and 6 next year.

## **Desert Tulip** aims

## Kelly Green visited the new Dutch pavilion at MRO Middle East.

Its name juxtaposes the arid terrain of the Middle East and Holland's national flower, but it is hoped that Desert Tulip will conjure up more than just images of sand and shrubberv.

Desert Tulip is a cluster of Dutch aerospace organisations focusing on long-term cooperation with the aerospace industry in the United Arab Emirates and the whole Gulf Coast region.

It is a joint initiative of the Dutch government together with the national trade association Netherlands Aerospace Group (NAG) and its member companies, and formed part of the new-to-show Dutch pavilion when it exhibited at MRO Middle East for the first time in January.

The cluster, which currently has seven members (the National Aerospace Laboratory (NLR), KVE Composites

Group, Quality Aircraft Painting Services, Sun Test Systems, TNT Express Worldwide, Vision Waves and World Class Aviation Academy), was created last year following a successful trade mission to Abu Dhabi, Dubai and Al Ain, headed by NAG.

Since then, Desert Tulip has had contact with some of the region's major players, and its attendance at MRO Middle East sought to strengthen these relationships.

MRO in the Netherlands is an integrated part of the supply chain and Desert Tulip is an open initiative to Dutch companies that want to increase their prospects of Middle East contracts. Sjoerd Keizerwaard, representing international events and communication at NAG, explained: "There are a lot more than seven Dutch companies active within the UAE but this cluster includes these seven companies. Their capabilities



Two of a kind: Aeropair MD Stephen Findlay (left) with Aerokem MD Mike Lines.

## to bloom in the Middle East

vary, from composite repair, training, software, maintenance and others."

With the support of NAG, which itself has 105 member companies spanning education, R&D, engineering, production, MRO and the associated support functions, Desert Tulip's members seek to strengthen and compliment each-other's capabilities wherever possible.

"For us as a trade association it is, of course, to open doors. But, in the end, the business is done by the individual companies," said Keizerwaard. "So, if it's needed, it's good to know that one organisation, maybe an SME company, is part of a bigger group in terms of capabilities."

Desert Tulip builds on the Netherlands' rich history of aerospace pioneers, which includes the likes of national carrier KLM and Fokker, and the European nation's aerospace industry, which has a total turnover of  $\ge$  15 billion and employs 131,500 people.

NAG board member Jan Gerrits explained: "We have a high level of expertise and we have a long history of aerospace in the Netherlands. We have companies like Fokker, which has a good name, and a lot of Dutch companies that work with the likes of Boeing and Airbus and Lockheed Martin.

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"We are very much aerospace-minded because of our big airline KLM, and there is a lot of expertise and highlevel knowledge in Holland because of our past.

"In Europe it is pretty hard to be successful but it is easier to find more customers out here. For the longer run it is a good place to be here. This area has high gross figures, there's money here. In Europe it is difficult to find new opportunities but the people in the Middle East region are very open to cooperation. There is also a big need here for education and skilled people. We are in discussion with the Mubadala group, and Emirates, but also we are now looking for cooperation with some of the SMEs.

"We are a small country, and as such often our companies are SMEs. Sometimes this is an advantage – when you are small and mid-sized you have a lot offlexibility and we have seen that this is appreciated by some of the companies in the region, who are also small and mid-sized."

One future goal of the collaboration is to establish a site in the UAE. "For the moment we are investigating if we can set up something in Al Ain. But also we are considering setting up a repair shop here, for instance, for composites. Because of Desert Tulip we can really focus on one area of the world," concluded Gerrits.

## **INTERIORS**



The Irish pavilion was at AIME/MRO under the umbrella of Enterprise Ireland, the export agency of the government of Ireland.

The company supports Irish companies in building overseas sales and partnerships through its network of offices oversees, including Dubai and Riyadh.

According to Anthony Cabill, market advisor Enterprise Ireland, the pavilion was a one-stop-shop: "It is here to showcase solutions for airlines and includes quality interior carpets and fabrics, RFID technology for monitoring cabin components, MRO inventory planning software, aircraft maintenance docking systems, engine accessory overhaul, airframe maintenance, APU and landing gear overhaul."

Eight companies, including Enterprise Ireland, represented the Emerald Isle.

Already well known in the region, Botany Weaving dominates much of business in terms of supplying quality interior.

"We are very active in the region," said Myles Hobbs, head of sales. "We install carpets for Gulf Air and Flydubai, as well as provide full interior for Etihad, Air Arabia, and Yemini Airways."

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Hobbs said the company is looking into opening a fabric-weaving centre in the Emirates. "It makes sense with all the clients we have in the region to have a facility here."

Another company looking at opening a local facility is MRO service provider Jet Technology.

"We specialise in test, repair and overhaul of engine accessories," explained Michael O'Connell, sales director. "We offer fuel accessory capability on JT3D, JT8D, JT9D, CFM56 and CF6 engine accessories, while MRO services can be carried out on fuel, air, oil, hydraulic, electric and pneumatic accessories on a variety of aircraft.

"We have also developed capability in aircraft safety equipment, including safety slides and rafts, and we can now offer hydrostatic and recharging services for oxygen bottles."

The Dublin-based company, with facilities in

## Irish pavilion charms the show

While Irish aviation companies already have a strong presence in the Middle East, it was the first time to see an Irish aerospace pavilion at the two-day event.

## England and the Netherlands, has customers based in the UAE including, Trust Aviation, Aerostar, and the Wood Group.

"As a global company, we have the opportunity to open up a facility in this region," said O'Connell. "Being at the show is an opportunity to meet our Middle East customers in one location. Being put on the Irish pavilion means we have a greater source of networking. People can identify with Irish products, as well as relate to our well-known friendly nature."

Also at the pavilion was Armac Systems, which provides MRO inventory planning software solutions.

Customers include SR Technics, CSA, Bombardier, Aeroplex and Stork Fokker.

"We work with SR Technics, which is part of the Mubadala Group, so we're here to make ourselves even more known in the region," said Michael Armstrong, CEO.

The ten-year-old company, based just outside of Dublin, specifically helps with inventory.

"Typically, airlines carry twice the amount of stock they need but our software balances the right amount," explained sales director Brian Layden. "Our results are proven within the aerospace sector. Customers have seen up to 40% decrease in inventory investment and service levels increased to above 99%, with annual inventory savings of up to 25%."

Dublin Aerospace provides airframe maintenance for B737NG and A320 aircraft, heavy C-checks, and APU business - covering all the main APU types.

"We also have a landing gear shop looking after both A320 and B737 landing gear," said Frank Burke, head of global sales. "From our Dublin facility we have also been conducting aircraft technical training for more than 40 years."

Dublin Aerospace also has a range of Middle East customers including Eastern SkyJets, NAS Airlines, and Midroc Aviation.

Another Dublin-based company in the pavilion was Aerospace Software Developments (ASD).

The company specialises in the development and implementation of applications specifically designed for the aerospace market sector.

"We have been involved in the aerospace sector since 1996, successfully developing and implementing legacy, client server and J2EE web-based applications," said managing director, Dave Browne.

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More recently, ASD has been requested to provide consultancy services to airlines, MROs and inventory component suppliers in the aviation market sector, which require design expertise or specialist software applications.

Aluminium scaffolding is big business for Instant Upright, which provides it for production, mobile towers, walkways, work platforms, and docking stations for aircraft.

The company also specialises in design and manufacturer of aircraft maintenance access stands, and repair and overhaul on all types of aircraft.

"Our systems are used during MRO operations on a range of aircraft types, from small regional aircraft to large jets, and from narrow-body to wide-body aircraft," said Joe Oxley, Middle East director.

While the company's head office is in Dublin, Oxley has been based in Dubai for four years as its regional representative.

"There is a lot of growth in the Middle East," said Oxley. "Last year we saw production up by 20% compared with 2011. This January was a strong month, which gives a good indication for the rest of the year."

## **EVENTS**

## Two firms with something to celebrate

Two companies exhibiting at the co-located show were celebrating significant anniversaries.

Al Borj Machinery has chalked up a quarter-ofcentury producing interiors machinery and software CAM solutions, while maintenance and refurbishment company Regent Aerospace Corporation is celebrating two decades in business.

"We provide aircraft interior solutions with emphasis on manufacturing, sewing and cutting for aircraft seats, carpets, and curtains," said AI Borj senior manager Nasir Ali Shah. "We use industrial sewing machines from Juki and sophisticated cutting machines from Gerber Technology in the manufacturing of aircraft seat interiors of different fabric materials. There are strict standards and regulations in the aircraft industry, which we are able to meet with our machines."

Customers of the Sharjah-based company, which was established in 1987 and also has an office in Jordan, include Emirates, Qatar and Air Arabia.

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The company also supplies to third parties, one of which is Sabeti Wain. "Sabeti Wain is a big customers for us; we have been supplying our machines to them for seven years now," said Shah. "Our cut-to-sew solutions empathise on higher productivity, low cost but high quality, faster throughput and reduced fabric consumption."

Regent, which inspects, refurbishes and reinstalls aircraft interior parts, from seats and lavatories, to galleys and galley equipment, is celebrating its 20th anniversary this year.

Sales VP Tim Garvin said: "Another key aspect to our company is the modification and refurbishment of interiors so we buy used seats, refurbish and reinstall them."

Since starting operations at its headquarters in California, the company now has ten other facilities globally, which includes a recently opened plant in Singapore. But it now has its eye now on opening another facility in the Middle East.

"The AIME/MRO show is important to be seen at," said Garvin. "While we are a global company, the Middle East region is one in which we would like to grow. We are currently in discussion to open up a facility in the region, likely to be in Dubai."

Customers for Regent include most of the big US airlines, such as American, Delta, Southwest, and United.



Al Borj senior manager Nasir Ali Shah.



SEMA's Michel Rigaud.

## A large show of force from the French

France had the biggest national delegation at AIME and MRO Middle East this year. Kelly Green took a look at what was on offer.

The French were out in force at this year's show with 19 companies using the opportunity to demonstrate their technologies and know-how to the visiting suppliers, manufacturers and buyers, with the hope of establishing new relationships in the Middle East.

UbiFrance, the French agency for international business development, presented the companies in the returning French pavilion, in partnership with the French Chamber of Commerce of Paris.

"The French know-how in the field of aircraft interiors and aeronautical maintenance is wellknown," said Brice Robin, aerospace project manager at UbiFrance. "French companies wish to share this know-how with Middle East companies, especially since they have a good knowledge of the Airbus ranges, well introduced in the region. They can, thus, supply fully adapted services to the airlines and maintenance centres of the Middle East.

"It is the second time we have had a French pavilion at this trade show. We have doubled the space this year, so we have the biggest national delegation at the show."

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On the aircraft interiors side Aplix, Creation & Image Paris, EADS Sogerma, PGA Electronic, and SEMA World all showcased their offerings including passenger seats, metallic and composite structural parts, fastening systems, lighting systems, technology and uniforms.

First time exhibitor SEMA World joined the pavilion to demonstrate its range of security equipment and solutions against flight bombs. The French company, created in 1947, has been working with undisclosed airlines in the Middle East region. "We are working in the security area. When we talk about security, we are talking about terrorist threats in the public area and the airlines too," explained Michel Rigaud, international sales manager, SEMA World.

On display was SEMA World's flight bomb killer

(FBK), an anti-bomb protection solution designed to ward off, neutralise and reduce the disastrous consequences of terrorist bombings. Also being demonstrated was the company's airline bomb killer (ABK) – a solution for flight crew to utilise if they have a suspicious suitcase on board. ABK is designed to drastically reduce the effects of an explosion on board.

The French pavilion also gathered 14 companies from the MRO arena: Adhetec, Airlnt' Services, Ateliers Bigata, Aviatec, Bureau Veritas, Dedienne Aerospace, Desgranges Outils Coupants, Figermind, Fortal, MAINtag, Revima, Sunaero, Tala (Qualitair & Sea), and WiN MS.

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Diagnosis and monitoring of cable analysis expert WiN MS presented its AeroSmart-R kit – a troubleshooting tool that helps maintenance teams in locating a fault on the harness.

"This product will help maintenance teams save time and money," explained CEO Arnaud Peltier. "By locating the fault quickly maintenance can be targeted so they would save time on disassembly and reassembly of lots of panels, seats and everything. It makes the maintenance of harnesses and cables more efficient."

Win MS, which counts Lufthansa Technik and Dassault among its clients, was exhibiting at the show for the first time. "We're based in France and we are now considering opening an office in the Free Zone in Dubai," Peltier added.

Another first-time exhibitor was Figermind, which was hoping to win its first customers in the region.

"This show is great because of the two different components – MRO and aircraft interiors. Last year worked really well for the French companies," said Robin. "French companies love doing business here and I think Middle East companies seem to like the products we have because of the quality and innovation."

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## **EVENTS**

## PARIS AIRSHOW PREVIEW



## Paris to celebrate its 50th anniversary in style

The French capital prepares to welcome visitors to the 50th Paris Air Show and Marcelle Nethersole

finds out there will be plenty to see and do. rganisers of the 50th Le Bourget (Paris) Air Show will be hoping that the FAA finally approves the battery fix for the Boeing 787 as Qatar Airways is expected to be showing the aircraft at the event in a repeat of the successful flying display at Farnborough last year.

The show is always popular with Middle Eastern airlines as a place to make order statements that send shivers down the spines of their European competitors. This year is unlikely to be any different.

However, hopes that low-cost carrier Flydubai would be announcing its likely Boeing 737 Max order at the show will be dashed – almost certainly this headline-grabbing event will happen at Dubai Air Show later in the year.

More than 2,000 exhibitors from 44 countries have booked to be at the event, which takes place at Le Bourget Airport from June 17 to 23.

Emeric d'Arcimoles, commissaire général of the show



said: "All the chalet units and exhibition stands are reserved – 350 chalets, 51,000sqm of stand space in six halls and 43,000sqm of outside exhibition space. Some 120 aircraft are registered and there will be 27 national pavilions occupying an area of almost 30,000sqm. The 2013 Paris Air Show will be a very, very big show."

The defence industry will be out in force with Russian fighter jets making a big comeback.

Visitors to the show will see daily demonstrations of the Sukhoi Su 35, presented by United Aircraft Corporation, and Irkut Corporation's Yak 130 military training aircraft. Super Jet International will also be showing its 100-seat commercial airliner, the Super Jet 100, in the static display area.

"I link our success with two things; the first is the success of aviation around the world, the boom in this industry," said d'Arcimoles. "The second point is that, due to the decreasing of the military budgets of the different countries involved in the exportation of their own production, they say they have to compete more aggressively."

It's probably too early to see an appearance from the anticipated Airbus A350 or Bombardier CSeries.

"The first flight will be around mid-year, just after Paris or maybe a week later. It's difficult to say," Airbus chief executive Fabrice Bregier said. The European manufacturer has said that the first flight of the A350 will take place in mid-2013. "There are many, many tests to pass," added Bregier. "So far the progress is good – we are on track."

Qatar Airways will be among those most anxious to see the new aircraft take to the skies – it is the launch customer.

"With a full complement of exhibitors, the 50th Paris Air Show promises to be a resounding success, said d'Arcimoles. "This is a reflection of the booming aerospace industry and confirms our position as the world's leading air show."

## **EVENTS**

Abu Dhabi Air Expo 2013 took place in March with companies showcasing the latest general aviation products and services. Marcelle Nethersole looks at some of the exhibitors.

# Something in the air for everyone

Bigger than the first Air Expo in 2012, with 160 companies from more than 70 countries participating, there was a wide range of products and services on offer.

There was also 100 aircraft on display from manufacturers including Bombardier, Boeing and Gulfstream.

Highlights included:

### WALLAN AVIATION TO OFFER PILOT TRAINING AT ITS SAUDI FACILITY

Saudi-based Wallan Aviation was at the show with good news for people wanting to learn to fly in the Kingdom of Saudi Arabia.

The company is the exclusive dealer for Cessna aircraft in the Middle East and the authorised Bell Helicopter independent representative for the kingdom.

It also runs Wallan Flying School, which currently offers a fleet of six four-seater Cessna 172s fitted with the Garmin G1000 glass cockpit, and three of the new Cessna 162 Skycatcher light sport types.

Based at Thumamah, just outside Riyadh, the facility is also home to a Cessna Citation CJ (525 model), which would be suitable for students wishing to train for a multi-engine rating. The school currently offers training up to private pilot licence (PPL) level, but is looking to bolster that to a professional standard in the near future.

Speaking at Al Bateen, chairman Saad Wallan said: "We should be in a position to offer training up to airline transport pilot licence (ATPL) standard by April or May. We are just waiting for final approvals from the authorities."

He added that there is a real need for qualified pilots in the region and explained that it is important to offer training "of a very high standard" for both pilots and mechanics.

#### FROM FORMULA ONE TO SELLING BUSINESS JETS

According to Thierry Boutsen, selling an aircraft is as thrilling as winning a Formula One race.

The former Formula One driver is the man behind Monaco-based Boutsen Aviation, along with his wife Daniela.

In the past year the corporate aircraft sales and





Thierry Boutsen: "It's equally as thrilling to sell planes as it is to win races."

acquisitions company has become a regular at the region's aviation shows and Boutsen said the Middle East was a region on which he wishes to focus.

"In 2008 we saw a very bad economic climate for the aviation industry," said Boutsen. "We discovered that the Middle East had the most growth potential. It is becoming a more and more important region for us so we are here at Air Expo to meet people."

Last year the company appointed a sales representative in Dubai.

Boutsen retired from Formula One in 1999 to focus his energies on aviation – establishing Boutsen Aviation.

"It's equally as thrilling to sell planes as it is to win races," said Boutsen. "I know people think the lifestyle of an F1 driver is exciting but, actually, all drivers do is get on a plane to the race destination, see the hotel, race, then fly on to the next one. Now, I can visit my customers all over the world and actually see the countries and spend time with the locals. Five years ago we sold an aircraft to Eskimos... now that was thrilling."

## How Rocket Man became the rainmaker

Shooting rockets over the desert is all in a day's work for Colin Bundy, chief pilot for the National Centre of Meteorology & Seismology (NCMS).

Bundy and his fellow pilots "seed" cumulonimbus clouds by flying to within 500ft of their bases and shooting silver iodide flares into their inflows. This alters the microphysical processes within the clouds. causing them to change and release rain over the arid land around the UAE.

Bundy explained: "We use sophisticated radar to monitor cloud formation. When we see clouds that are seedable we dispatch aircraft and the centre gives us headings and target areas and directs us in which direction to go." The team of four pilots and four

Beechcraft King Air C90 aircraft is based at Al Ain airport and fly when the weather is right. Bundy said: "We sometimes fly seven days a week, or not at all for two months."

This intentional form of weather modification. is just one of the services offered by the NCMS, which is studying a broad range of atmospheric phenomena and processes.

Research projects range in size from small studies involving individual scientists to national and international programmes involving teams of scientists

## GULFSTREAM G650 JETS INTO ABU DHABI IN RECORD TIME

Gulfstream stormed into the show by setting a fresh city pair record of 13 hours and five minutes between Melbourne, Australia and Abu Dhabi in its new flagship jet, the G650. Carrying five crew and two passengers, the ultra-large-cabin, ultralong-range aircraft cruised at an average speed of Mach 0.87 for the 6,329nm (11,721km) flight.

The newest of the Gulfstream family carries the mantle as the world's fastest civilian jet since the demise of Concorde. The Melbourne-Abu Dhabi trip was the OEM demonstrator aircraft's longest non-stop flight since it entered service in late 2012. Although this was the G650's longest time airborne, it has actually travelled further.

## TECNAM SHOWS OFF ITS SINGLE AND TWIN AIRCRAFT

Italian company Tecnam, and its regional aircraft dealer Aviation Home, were at the show displaying two aircraft on the static display - the single engine P2002 Sierra and the twin PT2006.



Tecnam's twin the PT2006 was well received at the show and delighted Walter Da Costa and team.

"These two aircraft are part of a collection of 18," said Walter Da Costa, international sales and marketing manager for Tecnam. "We recently introduced into service the P2008, and development of the advanced technology, fourseater, single-engined P2010 ensures that we continue to offer the widest range of general aviation aircraft."

Tecnam is celebrating its 56th anniversary this year and currently has 60 dealers and 110 service centres worldwide.

#### ALL NEW AT FUJAIRAH AVIATION ACADEMY

Fujairah Aviation Academy had a lot of new things to air at the show. "We have new accommodation, new simulators and new courses," explained instructor Captain Vikram Surana.

On February 1 FUJAA, which was previously based in a collection of temporary structures at the corner of the main terminal building Continued at Fujairah's international airport, on Page 122 moved to the new office building

>

## **EVENTS**

### **CONTINUED FROM PAGE 121**

built by the airport authority to house airline representatives.

"Everything is moving very fast," enthused Surana. "Our old building is now being used for engineering and mechanics."

The simulator department operates Alsim flight navigation procedure trainers (FNPTs), which are identical in every way to the actual Diamond Aircraft.

More recently the academy has expanded, opening an aviation maintenance and engineering college.

"We are aiming to offer all sorts of services throughout the aviation industry," said Surana.

#### EUROCOPTER PREPARES TO UNVEIL NEW AIRCRAFT

Eurocopter was at the show promoting two new aircraft that are expected to be unveiled later this year,

The company describes the EC175 as the "safest, roomiest, most comfortable, easiest to fly, cheapest to maintain, most cost-effective medium class robust workhorse in world".

And about the EC145 it added: "In operations on land and at sea, it is at the top of its class in medium-sized, twin engine helicopter category. With up to 12 seats for pilots and passengers, this multi-mission helicopter combines Eurocopter's latest development, such as an advanced cockpit design, avionics, and a sophisticated electrical system."

## CHOPPERLINE TO THE RESCUE

Rotary and fixed-wing flight training academy Chopperline was at Air Expo looking to expand its pilot and rescue training courses.

Based on Australia's Gold Coast, the company offers theory and flight training in either helicopters or aircraft.

It's choppers and aircraft available for flight training, endorsement training, charter, and airwork services include, R22s, R44s, C120s, Bell206 JetRangers, DA40s, and C172s.

The company has a facility in Dubai's Knowledge Village, which it hopes to open as a theory-training centre.

"The Knowledge Village is where the universities are based, so it is a great location for us to offer a theory training to students there," said flight instructor Aaron McDonald. "The theory course runs for nine weeks in seven subjects. Students can then head over to our base in Australia for the practical training," Chopperline also offers helicopter rescue crew training in association with Westpac Life Saver Rescue Helicopter Service.

"This is something that not many flight training companies offer anywhere in the world but we have a lot of experience in it. We have the knowledge, base facilities and aircraft to do it," said McDonald.

#### SPAAND PRIVATAIR SIGN CABIN EXCELLENCE DEAL

Saudia Private Aviation (SPA) has joined forces with Swiss firm PrivatAir for a specialised training deal. A contract was signed at the show that encompasses training SPA's existing cabin crew, as well as coaching in specific areas of on-board service.

The first group of 20 cabin crew were scheduled to begin their VVIP service training with PrivatAir at SPA's main base at Jeddah, Saudi Arabia, as Arabian Aerospace was going to press.

Meanwhile SPA used the Abu Dhabi expo to launch a new interactive website, which it believes is the first of its kind in the private aviation market. Customers and brokers are able to select their aircraft choice, favourite menu and even entertainment choice through the new site.

## **AIR BRUSHING** Why artist David Bent is looking for a new canvas

David Bent was a man on a mission in Abu Dhabi – to turn aircraft into air art.

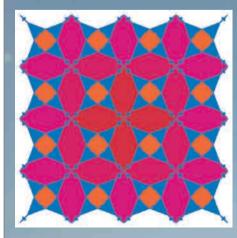
Along with his partner and wife Carole, he was at the show exploring the concept of his Islamicinspired tessellation art being translated into personalised aircraft exteriors.

"It is a unique proposition," explained Carole. "David is one of the world's leading modern aviation artists and now a handful of people have the chance to display his work every time they fly." The Bents will consider a maximum of just five

The Bents will consider a maximum of just five commissions. "This is very special," said Carole. "We are saying to potential clients, be one of only a handful of people in the world to own an original in the skies... it's truly exclusive." Bent comes with a considerable track record and is well known in the Gulf. He has held two solo exhibitions in the Royal Tent at the AI Ain Aerobatic Show and at the Dubai Airshow. His pieces are held in private and corporate collections internationally, including within the Gulf region. In 2007 he was invited to be artist in residence to The Red Arrows – the UK Royal Air Force (RAF) aerobatic team.

"My art is on display all over the world but this is the first time I will have given people the chance to take it with them wherever they fly," said Bent. "It is absolutely right that I'm offering this unique opportunity in Abu Dhabi as the tessellations were inspired by the time I have spent in the Gulf region and by Islamic principles of art and design." "The concept of an exclusive, very limited collection of David's Gulf-inspired artworks on the exteriors of aircraft is fascinating and I look forward to seeing these 'fly'."

It's not just the outside of the aircraft that could be getting the Bent touch. "We can reproduce the artwork on almost any material so people could enjoy matching interior accessories, including fabrics as well," explained Carole.





ABU DHABI AIR EXPO



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## TRAINING

# It's time to tell the 'uncomfortable' truth



Emirates Airline used a London conference on the importance of flightdeck monitoring to present a method that is having success in averting potential incidents.

Monitoring must become as much a core capability as stick-and-rudder skills, the conference heard.

with a considerably more experienced captain. Your flight is approaching its destination and the runway approach lights are in sight. The flaps are deployed, the undercarriage is down and you're less than a minute from touchdown.

Something, however, is not right. The vital parameters – speed, height, rate of descent – are not where the manual says they should be. The approach is unstable. The captain seems unconcerned and the runway is starting to loom larger in the windshield.

This used to be a potential recipe for an accident. Into the 1970s, junior co-pilots were not

supposed to question their captains' behaviour. This was particularly the case with many senior captains who had thousands of hours under their belt, a military background and an imperious manner towards the occupant of the right-hand seat. You needed to be a brave, or particularly assertive, co-pilot to say 'Sir, this isn't right.'

Indeed, this problem persisted well into the 1990s in some regions, such as the Far East, where the 'cockpit gradient' – the difference in rank, age and attitude between pilots – was amplified by cultural rules that stressed the supremacy of seniors. There were cases where

even repeated verbal warnings by a co-pilot were blatantly ignored



## TRAINING

## **CONTINUED FROM PAGE 125**

by captains, sometimes with fatal consequences.

Crew resource management (CRM) began to appear in the 1980s and aims to foster a culture where the freedom to respectfully question authority is encouraged. Some co-pilots, however, can still feel inhibited in questioning a captain.

Emirates Airline has found a way around this by bringing a new phrase into its training regime. It shared this with the audience attending the latest in the UK Royal Aeronautical Society's (RAeS) 'Preparing the aircraft commander for the 21st century' series of conferences in London in March.

Ironically, said Emirates' flight training human factors specialist Lex Rock Heemstra, cockpit gradient was noticeably less steep in Emirates than in many other airlines because of the airline's hiring policy.

"We're taking on pilots with a minimum of 2500 hours, but the average is about 6300 hours." That typically equated to 12-15 years' experience, "so we're not dealing with immature pilots here".

However, the airline had recognised that there should be a formula that, when used in the cockpit, should raise a red flag to make the pilot flying readily aware that his colleague was concerned.

#### **Trigger word**

The 'trigger word' to be used in such circumstances was 'uncomfortable', said Heemstra. "If somebody doesn't like something, they must say, "I'm uncomfortable. That has now gone into practice [at Emirates]."

After the conference Heemstra added that when the word was introduced into the training regime around a year ago, it initially attracted some amusement. "It met with a lot of banter, with people saying things like 'I'm uncomfortable with uncomfortable', but we're getting a lot of reports now from our instructors that it's really working.

"One of our first officers, unhappy with the way things were going as the aircraft neared the runway, said 'I'm really uncomfortable with this approach'. The captain recognised the trigger word and replied 'OK, we'll go around."

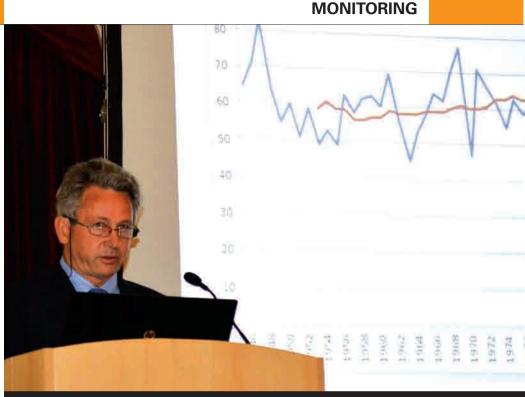
There had been a couple of similar incidents and training captains were reporting that the phrase seemed to have found its way into the vocabulary of flight deck crews.

"Monitoring alone is not enough. Some form of intervention must follow. That's where the trigger word 'uncomfortable' is working. You're saying that something is wrong and that something needs to be done about it."

US low-cost carrier Southwest has a similar system where a pilot, unhappy with a situation, says: "I'm getting into the yellow here," based on a green-yellow-red 'traffic light' system. Again, that trigger word obliges the pilot flying to take action.

Several speakers stressed this requirement for a crew member not only to monitor but also to actually speak up if he or she saw a problem starting to materialise.

The RAeS conference, 'Monitoring - What are



"If somebody doesn't like something, they must say, "I'm uncomfortable. That has now gone into practice [at Emirates]." LEX ROCK HEEMSTRA

we doing about it?' tackled the problem of how to ensure effective vigilance among flightdeck crews on flights where long hours spent on automatic pilot led to boredom and lack of attention.

#### Less passive

One priority is to make monitoring a less passive activity. "Monitoring is not watching," said aviation training consultant Captain Jacques Drappier in his keynote address. In modern cockpits, which displayed almost unlimited amounts of information to crew members, "pilots get lazy and just watch [instruments], like watching television".

Given the fact that crews now actually flew their aircraft for such a small percentage of every flight, monitoring had arguably become the crew's primary task. This was shown by the fact that the formerly used term 'pilot not flying' was rapidly being replaced by 'pilot monitoring'. Despite the new importance of this role: "We're failing to train them for this," said Drappier.

He cited the crash of a Turkish Airlines Boeing 737-800 short of the runway at Amsterdam Schiphol in 2009. The underlying cause of the accident was a malfunctioning radio altimeter, but three pilots in the cockpit all failed to spot that the aircraft's auto-throttle had retarded, causing speed to decay dangerously. "The stick-shaker woke them up at 460 feet, but too late," he said. "I put this accident down to failure of monitoring."

Monitoring, said several speakers, was only effective if done properly. The conference heard

that, in times of stress, pilots' eye movements tended to flicker over the instruments in an uncoordinated way and the pilots did not absorb information.

To try to solve this problem Cathay Pacific is undertaking an eye tracking study, looking at how pilots monitor while responding to requests from the other pilot.

At the other end of the spectrum, there were several instances in recent history where crews had become fixated on instrument readings at the expense of actually flying the aircraft – 'monitoring right down to the impact site', as one speaker put it.

Ironically, given the lack of time pilots spend manually flying today's commercial aircraft, human factors lecturer Professor Helena Reidemar, from the University of Central Missouri, noted that hand-flying an airliner "is the best monitoring you can do, because you're constantly scanning your instruments".

Reidemar, who is also a Boeing 767 first officer with Delta, noted that the US National Transportation Safety Board had stated that monitoring "must become a core skill" in much the same way as a captain's need for stick-andrudder skills.

Several speakers made the point that it was difficult for crews to monitor instruments effectively when nothing unusual

was happening. Emirates' Heemstra noted that people's vigilance tended to increase if there







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– David Neeleman CEO, Azul Brazilian Airlines



## TRAINING

#### **CONTINUED FROM PAGE 126**

was a perceived threat. He likened it to walking the streets in Dubai, when he was relaxed because of the absence of threats, in contrast to when he visited Johannesburg, when his senses were on high alert because of the incidence of street crime.

Problems, or the threat of problems, were excellent motivators to monitor effectively, but even when a perceived threat was present, noted several speakers, it was difficult for humans to maintain vigilance for lengthy periods. Doing so was extremely fatiguing.

#### Multiple advantages

Cockpit automation in modern aircraft was necessary in many respects and had multiple advantages, said Dr Michel Masson, EASA's safety action coordinator. However, there was no doubt that when systems were mainly automatic, manual and cognitive skills tended to erode.

Solutions included keeping flying skills alive through training, he said. There should be training in stall prevention and recovery, even though most commercial pilots might only experience a stall once in their career. There was an argument for commercial flight crews undertaking some training in aerobatic-capable light aircraft, to give them experience of the 'startle factor' that accompanied infrequent events such as stalls. There was also a need to increase the fidelity of simulators in extreme flight regimes.

Changing pilots' attitude to monitoring could also help, he said. Self-preservation, knowing that effective monitoring was something that "helps me to stay alive" could be a powerful motivation.

One problem, said David Learmount, operations and safety editor of Flight International magazine, was that regulators "haven't revised type training or recurrent training requirements since the days of the DC-6" despite aircraft and pilots' roles having changed out of all recognition.

Automation meant that today, "The pilot's role is like that of a goalkeeper. For most of a football match the goalkeeper just watches the game. Then, suddenly, it's all about him.

"However, pilots are not trained as goalkeepers. They are trained as 'drivers' and then as commanders. Commanders are meant never to lose sight of the big picture but they can't know everything – more now than ever."

Increasing levels of automation also meant that pilots were losing the ability to think, he said. The vast computing power available to them in modern cockpits meant that their capacity to undertake mental calculations was diminishing. And younger pilots, coming from a generation that had grown up with technology and assumed it was reliable, were less likely to question information that the aircraft's systems gave them, which could be problematical if those instruments were malfunctioning.

Pilots were not being trained to monitor effectively, said Learmount. While the pilot flying knew which instruments to scan, nobody



"The stick-shaker woke them up at 460 feet, but too late. I put this accident down to failure of monitoring." CAPTAIN JACQUES DRAPPIER taught the pilot monitoring where he should be looking: "There's no best practice for this."

Good airlines tackled such problems in training, said Learmount, but the lack of formal regulations for monitoring meant that the issue was ignored by some airlines that trained their pilots only to the regulatory minima.

In Africa, there remained a real problem in having black African pilots question or override the actions of their superiors in the cockpit, said Captain Sandy Bayne, chief standards pilot with South African Airways (SAA).

In many African societies individualism came second to the wider community and a black African pilot monitoring an airliner's instruments and seeing something going wrong might be extremely reluctant to voice his concerns.

#### **Defined and verbalised**

To get round this problem SAA, like Emirates, had rules that were defined and verbalised in the event of abnormal occurrences during flight, said Bayne. These clearly-defined rules made it easier for pilots to cut through cultural norms of respect or cockpit gradients.

Ironically, the conference heard, a cockpit gradient that was too shallow – where the pilots had roughly similar experience – could also be fatal. What tended to happen was that neither pilot was sufficiently clear in making it understood the he or she was in command. That could lead to a situation where, effectively, the aircraft had two pilots monitoring.

Throughout the two-day conference, several themes recurred.

One was the need for more communication between flightdeck personnel. It was extremely important, said several speakers, that pilots talked to each other and shared their 'mental models' so that the other one understood his colleague's perception of a situation.

"Pilots need to do more briefings and minibriefings to share their mental model so that the pilot monitoring knows what the pilot flying should be doing and can spot any discrepancies," said Heemstra.

Several speakers stressed the need for pilots to tell their colleagues of their intentions. Not doing so could lead to confusion in the command and monitoring roles.

The Air France AF447 tragedy, when an Airbus A330 crashed into the South Atlantic after experiencing a blocked pitot tube and the crew failed to recover from a high-altitude stall, was a classic example of 'how not to do it', said Learmount.

"When the captain left the flight deck for a rest he didn't actively define who [of the two first officers] was the pilot flying. But the co-pilot who climbed into the captain's seat was more senior by far and Air France policy was that he should have taken command. What happened in the end was none of those things and the scene was set for total confusion."

## FLIGHT ACADEMIES



## Hareb Thani Al Dhaheri: "There is no sign of a let-up in the demand for pilot training in the UAE and the wider region." Insets: Cadets from the UAE and elsewhere in the region enjoy first class training facilities - and the Diamond aircraft.

Al Ain's Horizon International Flight Academy is going from strength to strength. Strong pilot demand in the Middle East is driving its ambitious plans to expand, as Chuck Grieve learned. orizon International Flight Academy is certainly doing something right: its student numbers have tripled in little more than two years and now, with demand for its courses at a record high, the academy is contemplating setting up a satellite operation.

This success comes as the Al Ain-based operation, one of the Mubadala group of aerospace companies and the only flight-training establishment in the Middle East to offer both fixed-wing and helicopter training, is celebrating its 10th anniversary.

Set up in 2003 to provide flight training for military and civilian customers in the Middle East, Horizon trains pilots for all the armed forces of the UAE, the UAE Ministry of the Interior police wing, Dubai police, as well as for other GCC states, West African and Middle Eastern countries.

Its main civil customer is the Abu Dhabi national airline Etihad.

Chief executive Hareb Thani Al Dhaheri has been

leading Horizon since 2011. He has nearly 30 years of experience, having served as a helicopter pilot, instructor and squadron commander with the UAE air force. He retired with the rank of brigadier in 2008.

"Our plan," he said in an interview at IDEX, "is to set up a satellite operation, within or outside the UAE.

"There is no sign of a let-up in the demand for pilot training in the UAE and the wider region. We are giving serious thought to this."

Studies are under way, although no time frame has been set.

Al Dhaheri pointed out that this is an entirely demand-driven initiative. "It was because of what we have seen in the past year. We have trebled in number. When I came,

we had around 100 students at one time. Now we have close to 300."



## TRAINING

## **FLIGHT ACADEMIES**



#### **CONTINUED FROM PAGE 129**

The academy is also taking steps that will enable it to increase the number of students it graduates each year from the current 200 to 250. It should reach that capability this year, and then it will monitor the situation "for a couple of years" and increase again if there is sufficient demand.

Horizon's long-term growth prospects are good, he said, partly because of the way the academy works with its customers to tailor programmes for them, for example in the number of hours of simulator or actual flying each student gets. "We are always in touch with them," said Al Dhaheri. "We involve them in the training."

Any expansion will be a careful "controlled growth". The tripling of the student body was handled in this way, as will be the conversion to offering multi crew pilot's licence (MPL) training for fixed-wing aircraft, which Horizon is considering. That development, which involves adding more simulators, will depend on securing an airline as a programme launch partner.

In 2012, Horizon started using iPads in ground school training, doing away with printed books. Al Dhaheri said the move has been a success. "You have to go this way," he added. "This is the technology everyone is using."

A cadet pilot studies all his ground school subjects through the iPad; he even interacts with the instructor through the device. "When he moves to the flight line, he has only to input the flying data, and even when he goes back to his unit – airline or military – he has that data with him and it's accessible online.

"Though aircraft technology has evolved over time, the initial training has basically remained unchanged. We are sending students to very complex aircraft, and want to ensure that we remain at the cutting edge of technology."

Horizon's students come from around the Middle East, although the majority are Emiratis; the number of women studying for their wings is small but growing. Their instructors, who number about 50, come from all over the world. English is the language of instruction: "English is made for aviation," said Al Dhaheri. "We tried translating a long time ago. It doesn't work."

Unlike training academies in Europe, most of Horizon's students are sponsored by their employer, right from the ab initio stage. Only about 3% are self-sponsored, but even they have no difficulty finding jobs at graduation or before. Rotary-wing students make up about 60% of the total number.

Al Dhaheri said Al Ain is ideal for flight training. The airport is not too busy with commercial traffic and the weather is favourable. In addition, more aviation-related businesses are being attracted to the airport by the Nibras Al Ain Aerospace Park initiative.

"We are proud to be in Al Ain and I think, as the city gets to know us, they are also proud when they see a Horizon aircraft flying around the city."

## The first base for learning

Horizon operates its flight academy from a 3,100sqm base at Al Ain International Airport, within the Nibras Al Ain Aerospace Park.

Its fixed-wing fleet includes 13 Cessna 172SP and eight Diamond DA42 aircraft, all equipped with Garmin 1000 EFIS cockpits, a D-SIM-42 simulator for advanced multi-engine training and a multi-crew cooperation (MCC) simulator.

The avionics and instrumentation in the DA42s are similar to those found in airliners such as the Airbus A320, making the transition to the twin-jet easier.

Horizon's fleet of 24 rotary-wing aircraft includes Bell 206 Jet Ranger and Bell 407GX helicopters and simulators.

The academy's training programmes follow the EASA syllabus. Its fixed-wing courses are EASA-approved; both fixedwing and rotary-wing courses carry UAE GCAA approval.

Horizon provides training across the breadth of flight crew licensing. Its fixedwing courses include private pilot licence (PPL), frozen air transport pilot licence (ATPL), qualified military pilot (QPL) and multi-crew cooperation course (MCC).

For rotary-wing students, it offers PPL, commercial pilot licence (CPL), instrument rating (IR), QPL, flight instructor course (FLC), qualified helicopter instructor (QHI) and Bell 206 type rating.

Nibras Al Ain Aerospace Park is being developed by Mubadala Aerospace and Abu Dhabi Airport Company (ADAC) on a five square kilometre site to support the establishment of a sustainable aerospace industry, in line with the Abu Dhabi Economic Vision 2030.

As part of its strategy, the park is encouraging international aerospace organisations and industry leaders to develop opportunities, especially in research and development.

## **Rubb hangars for Horizon helicopter fleet**

Rubb Buildings has installed three hangars for Horizon Flight Academy's helicopter fleet at Al Ain International Airport.

Horizon intends to use the expeditionary forces aircraft shelter system (EFASS) buildings for storage and maintenance.

UK-based Rubb described these examples as a new design for a new market. The deal with Horizon was signed following the introduction of Rubb's EFASS range at IDEX 2011.

EFASS hangars are manufactured to high military standard specifications.

These 842sqm shelters are the first EFASS hangars to feature an internal PVC membrane to provide additional thermal insulation – protecting valuable aircraft and personnel from the soaring summer temperatures of the desert. Rubb's engineers also adapted the EFASS

design so the framework was mostly steel, instead of aluminium, to meet the UAE's stringent fire regulations.

The main body of each hangar uses steel fabricated components with uniquely designed steel roof and leg sections that bolt together to form the span trusses. High strength PVC-coated polyester fabric sheets fit between adjacent spans to form the shelter.

Erection of the buildings, each measuring 23.4 x 36m, was completed in six weeks.

Rubb is a world leader in the design, manufacture, delivery and erection of fabric building solutions.



## ENGINEER YOUR WAY T A CAREER IN AVIATION

The Australian College of Kuwait (ACK) offers a Diploma of Aircraft Maintenance Engineering (Mechanical) TB1.1 or (Avionics) TB2 program to students seeking European Aviation Safety Agency (EASA) approved Part-147 outcome, to allow graduates to seek employment in the Aviation Industry. This is an internationally accredited course delivered as per EASA Part-66 syllabus. Upon successful completion of all requirements, a student will be awarded ACK Diploma of Aircraft Maintenance Engineering (Mechanical) B1.1 or (Avionics) B2, an EASA certificate of recognition (Mechanical) B1.1 or (Avionics) B2, and a Diploma of Aircraft Maintenance Engineering (Mechanical) B1.1 or (Avionics) B2 from Kangan Institute (KI) and endorsed by Lufthansa Technical Training (LTT).

Upon successful completion of the diploma program with a GPA of 2.67 and above, students can enroll into an articulated pathway into Bachelor of Technology (Mechanical) and/or Bachelor Technology (Electronics and Control) Degrees.

The Australian College of Kuwait, has gained approvals as an approved Part-147 Maintenance Training Organization, from EASA and the Directorate General of Civil Aviation (DGCA) in Kuwait, as well as CAR-147 approval from the General Civil Aviation Authority (GCAA), United Arab Emirates (UAE).



Australian College of Kuwait

www.ack.edu.kw

## **TRAINING**



An artist's impression of SAFA's planned permanent facility, located around a kilometre up the runway from the current temporary flight school site.

# Passport plan to boost pilot security

very time we enter an aircraft we have an expectation that the pilot is qualified and competent. Unfortunately, in an increasing number if cases, this is simply not the situation.

Recent checks in different parts of the world have revealed an alarming catalogue of frauds and system failures involving thousands of pilots – some leading to fatalities.

Now the International Association of Flight Training Professionals (IAFTP) and the Saudi Aviation Flight Academy (SAFA) have come together to tackle the problem.

IAFTP president Robert Barnes and SAFA managing director Captain William Roe unveiled a joint paper looking at how the two organisations were introducing unique and highly secure pilot curriculum vitaes at February's ID World conference and exhibition in Abu Dhabi.

Launching the paper, Barnes said: "Every one of the more than 180 member states of the International Civil Aviation Organization (ICAO) issues pilot licenses. The total number of active pilot licenses in the world exceeds one million. Not one of them is a secure identification credential; most are simply paper. In addition, no way currently exists to easily verify a pilot's training or experience on a global basis. Therefore, today's pilot training and licensing system offers an opportunity for fraud that can only get worse.

"It has long been recognised that there should be a way to securely document every pilot's identity, training, experience and certifications – a personal curriculum vitae. Although some form of such record-keeping may be done today by a training organisation or employer, it simply has not yet happened in a globally standardised manner for the individual pilot. Every pilot in the world could soon be expected to carry highly secure, personal electronic details of their identity, training, experience and certifications if a new system being trialled in Saudi Arabia proves a success. **Steve Knight** talked to the men behind the plan – Robert Barnes and Captain William Roe.

"However, if growth projections for air transport over the next 20 years are correct, the need for such a pilot's personal CV will become more critical as employers turn increasingly to the worldwide pool of applicant pilots in order to achieve their staffing goals.

"That thought causes many airline recruiters concern because, assessing a candidate pilot's background and experience, even today, is incredibly challenging.

#### Limited help

"Contacting previous employers is problematic because many candidates have flown for operators based around the globe. Even when reached, the information former employers might provide is often of limited help, especially when mergers and bankruptcies make the retrieval of individual records a time-consuming, costly, or even impossible effort."

The paper outlined how IAFTP and SAFA are tackling the problem by working together to create an electronic CV (eCV), which combines an advanced personal identification credential provided by Oberthur Technologies with a secure system featuring SecureKey technology to collect, authenticate, and use personal data stored in a cloud database.

"The concept of a pilot's eCV was first introduced to the world aviation training community shortly after 9/11 in a series of articles in the Journal of Civil Aviation Training," said Barnes. "The technology was capable but the obstacles to implementation were found to be substantial."

Today, however, things are a little different, as Captain Roe explained: "SAFA is a founding member of IAFTP and I am chairman of its advisory committee. The international organisation was developed in order to share pilot training best practices in an effort to improve global flight training effectiveness and standardisation. As a result, these outcomes will support an increase in flight safety, which is our primary goal.

"In other words, the concept for IAFTP was developed in an altruistic manner. The eCV is tied to this goal as it will allow for the standardisation of training record data while at the same time applying a positive verification filter to this data."

For the SAFA scheme, work is currently progressing with Talon Systems, the provider of its training management system, to define the training milestones and data exchange protocols required.

"That is Phase-1," explained Roe. "Phase-2 should begin in about three months and, at that time, students will have been issued their own

## IDENTITY



eCVs. We anticipate that this operational test should be totally completed during 2013."

The SAFA eCV programme will collect student applicant data, such as prior education, personal background (including any record checks that may be required by regulation), and selected biometric identification features. These will be securely stored in the student's personal eCV database and may only be accessed with the student's permission.

Then, an ICAO-compliant personal identification credential will be issued to the student, which provides highly secure online access to his or her personal eCV database and can also be used for physical access to SAFA facilities.

As each student completes progressive milestones in his or her pilot training, this selected information is automatically extracted from the SAFA training management system and then added to the student's personal eCV database. When a student graduates from SAFA, the personal credential remains with the graduate and the new pilot's personal database can be updated with all future training and experience records through a secure, online validation process.

Roe said: "Every pilot that goes to a flight training facility and makes an application for a student pilot license will require positive verification of identity by enrolling a personal biometric for identification purposes. The entire process is accomplished at a standard personal computer workstation securely linked to the IAFTP personal pilot training records eCV database.

"The pilot's eCV is issued either in a horizontal card or hanging badge format based upon the security preferences of the flight training provider. He or she now has a personal electronic document that not only provides positive identification, but can also record key training, proficiency, and experience milestones – specific training activities, flight checks, type and number of hours flown, medical information, ratings and certifications, employers, etc.

"Each time the pilot attends a course, obtains a new rating, completes a physical or takes a checkride, his or her personal pilot credential will be updated and verified by a third party. This process creates a verified, chronological, unalterable personal record of the pilot's entire flying career."

#### Convenient, usable form

Much of this information is already being stored somewhere, but not in a convenient, usable form for the pilot, the employer, or regulators; nor, as Barnes pointed out, was this data necessarily stored in one place.

"National regulations are already moving in the direction of compulsory digital records for personal flight training," he said. "The IAFTP eCV is the only solution currently available that makes it possible to receive training in any part of the world, gain experience in any part of the world, and have certifications issued in any part of the world while still ensuring that all entries can be verified for their authenticity, no matter where or when they are made.

"The eCV uses a highly secure cloud database similar to international banking and credit card systems. Secure back-ups are provided with controlled access from any part of the world. The eCV is the property of the individual, the data it contains is the property of the individual, and only the individual can authorise access or download this data.

"The eCV does not replace government databases but, rather, facilitates access to these databases to verify those entries made by the pilot in regard to data such as certifications, ratings, medicals, and any criminal history," he added.

Roe also pointed out that a stolen or lost personal pilot credential would, in future, be worthless. "The data will be encrypted, protected from unauthorised access and made unalterable," he said. "In addition, the pilot will need to positively verify identity through a highly secure process whenever the credential is used.

"In these ways, the eCV issued and maintained by IAFTP will be the world's most secure and functional personal electronic CV-a true record of a pilot's entire career.

"Of course, there are training providers who already provide training documentation for their customers (usually operators rather than individual pilots). However, in many ways, this is exactly the same situation as having your personal medical records in one doctor's office and needing them in another in another city or country. How many times has each of us tried to recreate our medical history when we have changed doctors or, for that matter, tried to provide 'acceptable and verifiable' documentation of our flying experience when we changed employers or training providers?

"The IAFTP eCV system has the potential to eliminate this concern and help to ensure the competence of all pilots, no matter where they have been trained or gained their experience."



## Congratulations on Falcon 50<sup>th</sup> Year Anniversary





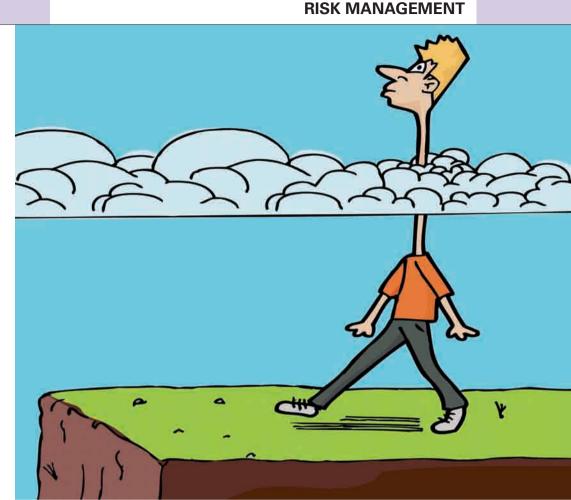
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## SAFETY

When 28% of your country's GDP depends on aviation, then a safe and secure operation of the industry is vital. No wonder, then, that Dubai Civil Aviation Authority led a top-level conference into the world of aviation security. Chairman of the event, Alan Peaford, reports.



# We must not put our head in the clouds over safety

**S** afety! OK, I can feel your eyes glazing over now and rolling skywards. But just think for one second that while you are sitting comfortably in your business class seat, buckled up and keen to be on the ground, your Brazilian captain and his Asian first officer might be having just a little bit of a problem a few metres ahead of you.

Of course the Brazilian is in command (it is a national trait) and while the Asian first officer knows that he probably has more knowledge of the latest avionics gizmo than the older guy next to him, he isn't really comfortable telling the captain that he should be listening more carefully to the automated voice coming from the runway awareness system informing him that he is on an unstable approach heading for a taxiway.

Safety might suddenly be a bit higher up your agenda.

On the ground a maintenance engineer is wracking his brains to try to remember where he left the wrench he was using to make a quick fix on



Dr Nicklas Dahlstrom: warning.

the forward landing gear. He couldn't have left it in the bay, could he?

These are all human factor issues that, according to Boeing's director of aviation safety for Africa and the Middle East, Chamsou Andjorin, can account for up to 80% of all aviation accidents.

Throughout the aerospace industry there are risks that run across all levels of staff, from the cleaner in the clean laboratory of a space satellite programme, through the airport handlers and on to the leadership teams of the airlines. And every one of them has a part to play in ensuring that aviation remains the safest of transport systems.

For many countries in the Gulf, aviation is a major element in the economy. In Dubai, for example, 28% of the gross domestic product is generated by aviation.

Most people doing business in the Gulf rely in some way on aviation for the their customers, their products and their livelihoods.

"A major incident could change all of that," said

## SAFETY

#### CONTINUED FROM PAGE 135

Dr Nicklas Dahlstrom, human factors manager at Emirates Airline.

Dahlstrom was speaking at the Aviation Safety Culture Conference organised by the Dubai Civil Aviation Authority (DCAA) and event organiser Streamline.

Under the auspices of Sheikh Ahmed bin Saeed Al Maktoum, the president of DCAA and chairman of Dubai Airports and of Emirates Airline, the event drew the attention of some 300 industry professionals from around the region, bringing together airlines, airports, air traffic managers, regulators and consultants.

Mohammed Ahli, the director general of DCAA, described the event as an important platform for deliberation about the ways and means to move to the next level of safety. "More importantly, we want to install a culture of safety within everyone in this industry."

The speaker list read like a National Geographic tour with involvement from Russia, Sudan, UK, Australia, Netherlands, Germany, South Africa, Sweden, Switzerland, Denmark, Ireland, and the USA and with leading industry figures from Dubai and Abu Dhabi.

Unlike many safety conferences, this was not about operations and processes. It was about culture.

### Seat belts

Solle Svan, head of aviation, regulation & safety standards at DCAA, said it was like seat belts in a car. "Years ago it was macho not to wear a seat belt; you would only wear one if you thought someone, like the police, was watching. But as more people wore belts fewer people died in road crashes. Today we put those belts on without thinking. Once you do that, and everyone does that, it is part of your culture."

The goal of a positive safety culture is a fairly simple concept. It is a question of everybody sharing the same safety values of following procedures, speaking up if something looks wrong and caring about yourself and the others around you – operating safely and following set procedures without even thinking.

But, as the conference discussed, this is a lot easier said than done.

As a professional communicator this was tried and tested ground and, as chairman of the event, addressing the issue of engagement was a priority from the start.

Engagement is successful only when it is driven from the top of an organisation, while cultural change only works when it comes from the ground floor and pushes up.

Accident investigator Michel Piers, now the institute director of the Amsterdam-based National Airspace Laboratory (NLR) said: "Should leaders try and change behaviours? Yes. When behaviour changes, culture changes. But you only get engagement when people are involved."

Piers cited an example where one organisation's management was found to have a firm



Clockwise from top left: Monica Haage, Mohammed Ahli, Solle Svan, Thamer Habib.

commitment to safety. But at lower levels in the organisation it wasn't happening. "The management hadn't engaged," he said. "They hadn't given feedback to their people about expected behaviours. The system failed."

Dr Sam Cromie, assistant professor of organisational psychology at Dublin's Trinity College, told how students at the university would take a short-cut across the edge of the college cricket pitch, creating a muddy path across the corner of the outfield. Groundkeepers would put up signs and even fences but still the students followed their well-trod path; eventually the college agreed to put a path across the corner. "This is an example of why you should work with people not against them," Cromie said. "You need to adjust your system to fit with theirs."

## Gap between the systems

He warned delegates that, for every formal system in their organisations, there would be an informal equivalent. "Problems occur when the gap between the two systems get too big. Managers need to know what the gap is and engage. Engagement is the engine of change and can drive efficiency and safety."

But at what cost?

Delegates and speakers questioned whether aviation leaders, already under pressure from low margins, would seriously back investment in developing a safety culture if it affected the bottom line. Dahlstrom described it as "making numbers and people meet".

Baba Yerra, from Emirates Aviation College, said there was a balance between products and protection. "Businesses are there to make money. Safety can be a cost, so how do we find the right balance? But for airlines, safety can induce demand. We know premium passengers list safety as one of their key criteria for selecting an airline."

Managing director ground services for United Airlines, John 'JJ' DeGiovanni, turned it around. "We are now charging individual departments the costs of lost time or aircraft damage. We lost 330,000 working days in 2008 and had 235 incidents causing damage to aircraft. That relates to half a billion dollars of staff costs and the equivalent of another Boeing 777 available for operations. Seeing those figures can make a real difference to an airline's profitability."

The airline has subsequently seen a 20% improvement.

Captain Henry Donohue, senior vice president of group safety at Emirates, said that the safety culture in the Dubai airline goes right to the top. "Every single incident report is read by the CEO," he said. "There is an understanding that the message will get through and action will follow."

Donohue said he sees his role as a salesman. "I sell safety. A safety management system is just that, another system. But if it is working we should see an increase in reporting, we should see people

## **RISK MANAGEMENT**



Linda Nicol: "We must always remember we have people's lives in our hands."

freely reporting incidents with a 'just culture' not a blame culture. That is why I sell safety and am not a policeman or a guard. I knock on doors. My ambition is that every one of the 40,000 staff are turned into safety officers and I can be made redundant."

Experience from other industries was shared with the conference. Monica Haage, from the International Atomic Energy Agency, talked about the human factor and system errors that led to the Chernobyl incident in 1986 and reinforced the message that senior executives need to demonstrate the commitment to safety if a true safety culture is to develop.

But that is not just about endorsing a safety policy. "Too many organisations just cut and paste a policy from somebody else that they know had already been approved by regulators," said Piers.

"They will say safety is a number one priority but that is just bullshit. You will see organisations that claim to have an open, just, culture policy but if someone files a report then HR sacks them for breaching procedure. If a safety culture is to work, all of the voices have to be heard."

A key message to come from the second day of the conference was that training is not the panacea to bring about change.

IOSA assessor and consultant Richard Howard agreed. "Training is only a tool," he said. "It has to be embedded. At a policy level we have procedures, processes, systems and they can sit on the shelf like an unused tool. Of course, people need training to know how to use the tools, but they learn from people. We have a lack of mentors. When I started I learned a lot from people around me and supervisors that became mentors.

"But we also need to know that there is complete buy-in. What is the use of training if you don't include contracted or outsourced labour. It has to be holistic and affect everybody."

A same-size-fits-all approach doesn't work. "Training needs to be customised," said Vengelis Demosthenous from Kratis Training. "But training doesn't give you a safety culture, it just gives you certification."

#### Training and learning

Linda Nicol, senior safety officer at Global Aerospace Logistics (GAL), said there was key difference between training and learning. She outlined a successful system in Australia where the civil aviation authority had appointed 'aviation advisors' who would go out and talk – and listen – to the country's aerospace businesses. "It was nothing to do with compliance but more about answering questions like 'how do we deal with this?' It started off with four advisors – there are now 14. Regulators worldwide could learn from this."

Nicol also argued that leadership needed to be seen and needed to listen to the views and suggestions of others. Listening to others proved a successful lesson for Thamer Habib, head of airports HSE regulations and policy at Dubai Airports.

"I did it wrong," he said. "If there was a problem we would produce a new regulation. We were over regulated. By listening and working with people across the organisation we reduced the number of regulations and we have seen a reduction in injuries of 25% year-on-year for the past two years. Safety culture can make a difference."

Ahmad Al Haddabi, chief operating officer at Abu Dhabi Airport Company (ADAC), agreed but warned that there were problems from countries where civil aviation was not seen as important and, therefore, there was no safety culture or system in place. This, he said, could lead to problems for those airports receiving airlines from those countries.

IATA's Auchim Baumann said that lessons could be learned from the nuclear industry, as there was a clear need to work closer and communicate. "In Africa," he said, "we are seeing harmonisation and between different countries." But that means effective communication again.

And there are challenges for communicators.

Dubai Airports has employees from more than 50 countries; Emirates Airline from more than 100.

### National culture

"Language is an issue," said Habib. "So is national culture. We have seen incidents where the reason has been antipathy between nationalities. We have focused on this and at Dubai Airports when they are at work they are now brothers. It was all about communicating."

And so, back to our flightdeck with our multinationally challenged crew. If it is an Emirates flight you are on, the scenario is unlikely as a strong focus on human factors has been embedded into the airline's safety culture and they will be thinking as 'pilots' rather than 'people'.

"We have researched and assessed the national cultures and the pilot cultures and it is the pilot culture that dominates," said Dahlstrom.

By drawing attention to the culture of aviation safety, DCAA has built the foundation of an important event.

"Our vision is for this conference to develop into a global safety congress where professionals from across the world and captains of industries across the globe come together to share best practice about safety and security techniques," said Mohammed Ahli.

For the UAE, the pressure is on to maintain best practice The quality and safety manager for the UAE's GCAA, Kim Christansen said: "Currently we have 2,100 air traffic movements every day. That will grow to 4,300 movements a day in the next 10 years. We have to be engaged and committed to implementing safety management systems."

GAL's Linda Nicol summed it up: "We must always remember we have people's lives in our hands."

## PEOPLE

## **APPOINTMENTS**

## Tony Douglas to lead ADAC

Former London Heathrow chief executive Tony Douglas has been appointed CEO of Abu Dhabi Airports Company (ADAC).

Douglas, formerly CEO at Abu Dhabi Ports Company (ADPC), will lead the transformation of Abu Dhabi's international gateway through its ambitious airport expansion scheme.

At ADPC, which he joined in 2010, Douglas was responsible for the ontime, on-budget delivery of Khalifa Port and its associated industrial zone, KIZAD.

Earlier, he held a number of senior roles at airport operator BAA, including managing director of the  $\pounds 4.3$  billion Heathrow Terminal 5 project, group supply chain director and group technical director.

## StandardAero interim CEO

Dubai Aerospace (DAE) subsidiary StandardAero has announced the appointment of Firoz Tarapore as interim president and CEO to replace Rob Mionis, who has resigned to pursue other opportunities.

Tarapore has been a director and member of the executive committee since 2007.

He will continue to serve as a board member. In addition, the board has appointed David Smoot, a current director, as vice chairman. Smoot is the chief executive officer of Dubai International Capital.

## Nextant bolsters global sales team

Nextant Aerospace, maker of the Nextant 400XT, has promoted Jay Heublein to executive vice president, global sales and marketing,

## **RIZON JET'S DIRECTOR OF FLIGHT OPERATIONS**



and has also added a specific role for an African and Middle East sales director. The American company appointed Peter Walker as vice president of sales for Europe, the Middle East, Africa and Asia Pacific.

## Faury steps up at Eurocopter

The EADS board has accepted the resignation of Lutz Bertling as chief executive officer of Eurocopter and member of the EADS Group executive committee and has appointed Guillaume Faury to succeed him from May 1. Faury joins Eurocopter from Peugeot S.A., where he has served as executive vice president for research and development since 2010 and as member of the managing board since 2009.

## Späth moves to SR Technics role

Mubadala's Swiss MRO subsidiary, SR Technics, has appointed former Jet Aviation senior vice president Christof Späth to head its component repair business.

The Zurich-based subsidiary has named Späth senior vicepresident component maintenance group. He will be responsible for Rizon Jet has appointed Captain Siddharth Bhardwaj as its new director of flight operations.

Bhardwaj comes to the company having worked in the aviation industry for more than 14 years, logged more than 8,600 hours of flying experience, and held senior operations and management positions with a commercial airline.

At Doha, Bhardwaj is a nominated post holder accepted by the Qatar Civil Aviation Authority, overseeing the flight operations and training department. He will be responsible for ensuring compliance with national and international regulations.

SR Technics' existing component repairs shops in Switzerland and Spain, as well as a new facility in Malaysia that is currently under construction.

Before joining Jet Aviation in 2008, Späth was managing director of RUAG Aerospace Services in Oberpfaffenhausen, Germany.

## Cyprus switch for AI Shabi

**BRIDGE TO HEAD MIDDLE EAST BUSINESS** 

Etihad Airways has appointed Rashed Saif Al Shabi as its new general manager for Cyprus. He succeeds John Evans, who is switching to general manager for the Philippines.

## Civil sales mission for Assmann

Sabena Technics has appointed Martin Assmann as its executive vicepresident civil sales.

His mission will be to oversee civil sales, as well as customer support, project management and proposals for all civilian activities.

## Campton earns EMEA appointment

Precision Polymer Engineering (PPE), manufacture of moulded elastomer seals, has appointed Stuart Campton as distribution manager for its EMEA sales territories.

This is a new role to enhance the support that PPE gives existing dealers and distributors and to identify new partners in new geographies. Campton joined PPE in January and his priorities in geographic expansion will be Eastern Europe, the Middle East and Eastern Mediterranean.

## Rogers becomes CEO at AeroMobile

AeroMobile, the airborne mobile phone operator, has announced the appointment of Kevin Rogers as CEO.

Rogers, who was promoted from his previous role as head of revenue development, takes over from Pal Bjordal.



BAE Systems has announced the appointment of a new regional managing director for the Middle East and Africa.

Based in the company's regional hub in Abu Dhabi, Ben Bridge has been named as the successor to Simon Keith and now has overall responsibility for BAE Systems' activities throughout the Gulf region and Africa.

He will play an important role in developing BAE Systems' strategic vision for the region and continue to strengthen customer relationships, especially in the UAE and Oman.Jeppesen has appointed Mark Long as regional director, customer service, Middle East business aviation.

Having joined Jeppesen three years ago, Long moves to business aviation from commercial aviation, bringing with him a wealth of experience of delivering the company's navigation solutions in wider-bodied aircraft.

Long will support Jeppesen's customers in the region and will be a based in Dubai. "I was here 20 years ago, so I've come home, as it were," he said.

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# all in a day

# **Dr Ralf Gaffal**

Marcelle Nethersole talks to Dr Ralf Gaffal, VP of international business at Munich Airport.

What does your role as VP international business involve?

The international business department at Munich Airport handles all customer relations regarding airport consulting and management support. **Our clients are airport** operators and authorities from around the globe that are interested in the worldrenowned expertise Munich Airport possesses on topics such as operational readiness and airport transfer (ORAT) and airport management. Many appreciate, especially, our full-service approach with all airport business areas gathered under one roof. As head of the department, I am responsible for the continuously growing team of full-time experts in Munich as well as roughly 40 consultants currently deployed in our projects. My position requires a lot of client interaction at the project sites, but also visiting airport fairs or giving speeches at conferences. I also serve as an interface between all supporting departments of Munich Airport and our international clients.

What is your background and how did you get involved within the aviation industry?

Aviation had a fascination for me from a very early age. It was only natural for me to choose aeronautical engineering as my field of study.

At the Technical University of Munich, where I received my PhD in 2010, I focused on noise and emission reduction of aircraft and airports.

**Besides my PhD I studied** business economics to expand my knowledge from the technical into the financial sector. The infrastructure development team at Munich Airport proved to be the perfect extension as the start for my professional career, where I was involved in the third runway expansion project. Since the beginning of 2010 I have been in charge of international business at Munich Airport.

What do you see as the greatest challenge in your role to date?

Aviation markets in Europe do not show the arowth rates we were used to in the past. This is partly due to infrastructure limitation or the on-going European crisis. The established airports in Europe need to look abroad for new opportunities. There are countless highly interesting projects in many countries envisioned every day and Munich Airport has a history of successful consulting projects on which we can build to compete in this changed environment. Nevertheless, each project is unique and clients have a very clear picture in mind when selecting their consulting support. We have to understand the needs of every client and exceed expectations each time to live up to our reputation as a trusted and competent partner in airport consulting and management.



What are the opportunities for companies like yours involved in Middle East airport expansion and how do you see its future?

The role that Gulf carriers are playing in the aviation world is significant and will increase further. These rapidly growing airlines need a strong home base from which they can operate. Many substantial expansion plans are on the way for airports in the Middle East, including new entries to the market. Airport operators are interested in the efficient use of their modern infrastructure, state-of-the-art processes, and well-trained and professional staff. We can deliver tailored support in all these topics. During our six-year involvement in the Middle East we not only successfully supported projects on the Arabian Peninsula but also welcomed many executive representatives in Munich for our week-long cross-exposure management training. The combination of various aspects of our portfolio to best suit the desires of our clients promises many diverse projects for years to come.

What are the differences working in MENA to Europe?

Our experiences have sensitised us for the distinctiveness of the working environment in MENA. For example, many difficulties arise not only in the Middle East but when Europeans mistake their monochrome understanding of time and deadlines as international standards. Business in MENA is conducted on a more personal basis and decision-making is an entirely different process. The respect for traditions and religion are fundamental baselines in our customer relationships. Our many consultants who have been deployed there can confirm that with mutual understanding and open-mindedness, the business atmosphere between MENA and Europe is, indeed, a rather pleasant one. **TDH VISIONS** 

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  - Container Loaders Bell Loaders •

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