



ARABIAN AEROSPACE

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

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FLAG-CARRIER RAISES THE STANDARD
IN THE FACE OF ADVERSITY

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Supreme challenge in Afghanistan
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Dubai faces up to resurfacing problems
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Leading the world... but still storms abound



Afghanistan offers great opportunities for our region as *Arabian Aerospace* discovered on our tour.

The Middle East airlines were the main talking point at the IATA AGM in Cape Town in June. On stage, as members of various key panels, the leaders of the region's main airlines were relaxed and confident.

What a change from two years ago. Instead of being pilloried as unfair competitors, there is recognition that the relationship between Governments and airlines can benefit nations – and everyone wants a slice of the Arabian airline pie.

The carriers' drive for safety and operational standards, as well as top-level service, is the envy of airlines around the world. And Qatar Airways – the first airline to achieve IOSA recognition – will have a chance to demonstrate its capabilities first hand when it hosts next year's AGM.

But there is one Middle East airline that may rightly question the value of the IOSA certification. That is the Dubai-based Afghan airline Safi.

As you will see from our story on Page 66, Safi has achieved the highest safety standards and systems in IATA and has the IOSA certification. But it is still on

the EU blacklist, a move that IATA's director general Tony Tyler described as "absurd".

Arabian Aerospace joined the airline to visit both bases in Kabul and Dubai. This is not a big airline like Emirates, Etihad and Qatar but it shares that same passion for quality, for operational excellence and for safety. It deserves so much more.

In this issue we also look at supply chain operations in Afghanistan ahead of the military withdrawals by the American and NATO countries and we also pay a visit to the Kingdom of Saudi Arabia – the region's largest market.

Again there are positive messages and ambitious plans.

The whole aerospace industry in this region is developing despite external pressures and sometimes protectionism. The success of the MENA region is the envy of the world – and now is the time to build on that success.

Safe landings.

Alan Peaford, editor-in-chief
Arabian Aerospace

COVER: Iran Air chairman Farhad Parvaresh. Picture: Billypix.

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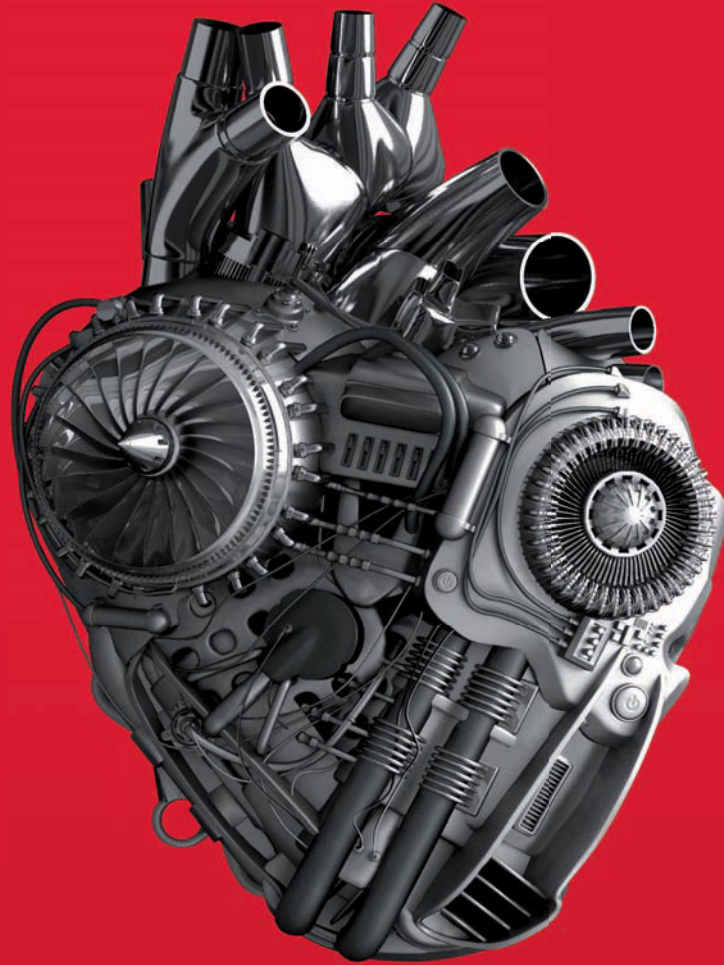
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Emirates select four MROs to fix A380

Work is finally under way to permanently fix the cracked wing ribs on the 31 Emirates A380 aircraft.

Four MRO providers have been contracted to install the permanent full-life wing-rib fix on the fleet and work will continue until the end of next year.

The four include Abu Dhabi's ADAT – a Mubadala subsidiary – as well as Ameco Beijing, Sabena Technics and EADS subsidiary Elbe Flugzeugwerke (EFW).

Work was supposed to have begun in April but delays to the 59 further deliveries of the superjumbo meant that Emirates needed to keep the existing A380s flying.

EASA had ordered modifications to the A380 wings after cracks on some of the airliners in service were discovered 18 months ago.

The cracks, which did not directly affect the airworthiness of the airliner, were on brackets that attach the A380's wing ribs – the frames that run along the width of the wing – to the wing's metal skin. They were caused by stresses generated during manufacturing and exacerbated by the flexing of the wings during flight.

Air Arabia lands financing deal

Air Arabia has signed a US\$ 350 million finance deal with two GCC banks to support the acquisition of 10 new Airbus A320 aircraft.

Qatar National Bank SAQ (QNB Group) and Commercial Bank International (CBI) in the UAE will offer the financing facility to support the purchase of 10 new aircraft, which is part of a larger order for 44 A320s placed with Airbus in 2007.



Maya stars with terminal extension

Low-cost carrier passengers are enjoying an improved airport experience at Dubai International Terminal 2 following the opening of the new extension.

As part of the opening, Flydubai introduced its mascot, Maya,

to her new home. Created exclusively by the producers of the award-winning Emirati animation series FREEJ, Flydubai's most well-known cabin crew member took her co-stars from the company's on-board safety video to see the new terminal.



IATA 2014 heads for Qatar

Qatar Airways will become the centre of the aviation industry for three days next year as Doha has been named as the venue for the next IATA annual general meeting and world air transport summit.

The event, which will draw the top leadership of the air transport industry, is scheduled for June 1-3.

"Qatar will be a fantastic location for the 70th IATA AGM," said director general and CEO Tony Tyler. "It is at the heart of the fast-growing and dynamic Middle East region. The government understands the power of aviation to drive economic growth and development. And the country's approach to aviation is a beacon for our industry."

"I am confident that its flagship airline, Qatar Airways, will host the world's aviation community with the tremendous style and warm hospitality for which it has become famous."

This will be the fourth time that the IATA AGM will be hosted in the Middle East following Cairo, Egypt (1946); Tehran, Iran (1970); and Amman, Jordan (1997).

Etihad targets 50 new pilots

Etihad Airways has plans to recruit more than 50 pilots from its partner airline, Airberlin.

The recruitment transfers began in April when the first batch of six Boeing 737-rated first officers arrived in Abu Dhabi to start type conversion training on to the Boeing 777 at Etihad Airways' Flight Training Centre.

Upon successful completion, the six pilots undertook line training on the airline's global network, before being fully licensed as type-rated Boeing 777 first officers.

Further pilot transfers will take place in the coming months, comprising Airbus A320 captains, Airbus A320 first officers, Airbus A330 first officers and Boeing 777 non-rated first officers.

Turkey takes it to the MAX

Boeing and Turkish Airlines have finalised a firm order for 40 737 MAX 8s, 10 737 MAX 9s and 20 Next-Generation 737-800 jets, valued at \$6.9 billion. The order also includes options for an additional 25 737 MAX 8s and is the largest Boeing order in Turkish Airlines' history.

Big AMAC deal

AMAC Aerospace Turkey has been awarded its EASA Part 145 certification by the European Aviation Safety Agency. The approval enables the company to undertake all base and line maintenance on aircraft under 5700kg, including the Pilatus PC-12 NG.

AMAC Aerospace Turkey will serve as the maintenance service centre base for owners of PC-12 NG in the Middle East.

Syria crisis puts MEA plans on hold

The director general of Middle East Airlines (MEA), Mohamad El-Hout, said that its fleet renewal plans have been put on hold.

The Lebanese flag-carrier had been "quite advanced" with its plans for the new fleet but "everything is stopped" while the latest regional security situation in Syria is resolved.

Middle East Airlines had been considering the Bombardier CSeries and the Airbus A319 as options for opening thinner routes, but El-Hout said the thinking process has been halted as it works to cope with the effects of Syrian tensions.

Qatar CTC training partnership

Qatar Airways has chosen CTC to select and train the airline's future pilots through a new multi-crew pilot licence (MPL) training programme open to international applicants.

'Qatar Wings' provides an opportunity for six trainees to begin their initial flight training with CTC every two months for the foreseeable future.

Courses will originate at CTC's crew training



Airbus Military chalks up a century in Oman

The Royal Air Force of Oman has taken delivery of the first of its eight C295 medium transport aircraft – the 100th of the type to be built by Airbus Military.

The Omanis had the chance to preview the new aircraft as it was on high-profile display at the Paris Air Show.

Sporting camouflage markings and the service number 901, the aircraft was parked alongside the company's larger A400M. The airlifter was transferred to Omani ownership in Seville, Spain, immediately after the show.

"A year ago we discussed this in Spain and here is the aircraft, a little bit ahead of schedule," Airbus Military chief executive Domingo Ureña-Raso said at the show in a special

presentation with Omani defence minister Bader bin Saud Al-Busaidi.

"We look forward to working with the company as we train our initial pilots and loadmasters," said Royal Air Force of Oman commander Air Vice Marshal Matar Ali Al-Obaidani. "By the end of this year, the aircraft will be in service as a tactical transport. It will significantly increase our ability to support our sister services and the civilian population in Oman."

Muscat signed an eight-aircraft deal for the C295 in May 2012 and its aircraft will be split between the tactical transport and maritime patrol aircraft configurations. The new type will replace an aged inventory of Shorts Skyvans.

centres in Hamilton and Southampton, UK, while all initial flight training will take place at CTC's New Zealand training facilities.

All 'Qatar Wings' cadet pilots will go on to complete their basic and intermediate training on CTC's Airbus flight simulators in

Southampton, UK.

Qatar Airways will provide a conditional offer of employment to successful applicants before they start training and deliver the final stages of training and line operating experience (LOE) at its home base in Doha, Qatar.

Praetorian to guard Typhoon customer

Selex ES, a Finmeccanica company, will provide the Praetorian electronic warfare self-protection system for an undisclosed Arabian Typhoon customer.

The company said it has completed deliveries of the

Praetorian system for Tranche 2 Eurofighter Typhoons.

All 236 Tranche 2 Typhoons operated by the UK, Germany, Italy and Spain will be equipped with electronic support measures, electronic countermeasures and missile approach warning elements. Together, these combine to inform the pilot on potential hazards and automatically take measures to protect the fighter.

ADAC's top quality

The Abu Dhabi Airports Company (ADAC) operations division has been awarded the ISO 9001:2008 (quality management system), ISO 14001:2004 (environmental management system) and OHSAS 18001:2007 (occupational health and safety management system) certifications for its activities.



Emirates president Tim Clark with London mayor Boris Johnson.

Emirates takes aviation experience to London

The Emirates Aviation Experience has become London's latest visitor attraction, and was officially opened by Tim Clark, president of Emirates Airline, and Mayor of London Boris Johnson.

The Experience, cost in excess of \$6 million and takes visitors on an interactive journey into the world of flight. In a UK first, it includes four commercial flight simulators under one roof including two A380s and two B777 aircraft. Further attractions include a 3D hologram of the internal mechanisms of an aircraft, an HD video-wall and a full-size nosecone and flight deck of an A380.

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Lufthansa 'not ruling out' closer Gulf links

Lufthansa chief executive Christoph Franz is not ruling out closer links with Gulf airlines, he said at a side meeting at the IATA annual general meeting in Cape Town.

Questions about relationships with the German national carrier have gathered pace since Emirates Airline president Tim Clark said he would not rule out an alliance with Lufthansa, despite years of disagreement with the Government over landing rights.

This is not the first time the two airlines have got close. Emirates pursued a partnership with Lufthansa in 1992, with discussions getting "quite a long way down the road" according to Clark.

"Suddenly Lufthansa pulled the rug. They discontinued negotiations overnight and left me high and dry," he said.

In recent years Lufthansa has strongly opposed the growth of Emirates across Europe and actively stopped the Dubai carrier from flying to the German capital, Berlin.

But in Cape Town Franz said the door is open to future tie-ups. He said relationships with the Gulf carrier were much stronger than sometimes suggested.

Anka's away

Egypt is to become the first export customer for Turkey's Anka UAV – with more orders from the Middle East to follow, manufacturer TAI said.

Anka, a medium-altitude, long-endurance (MALE) design, received its certification from the Turkish authorities at the International Defence Industry Fair (IDEF) in Istanbul. The name means Phoenix in English.

Egypt has ordered 10 of the UAVs.



Pods cast their magic at Abu Dhabi lounge

Abu Dhabi Airports Company (ADAC) introduced a "world first" as it unveiled 'GoSleep' sleeping pods at the UAE capital's international airport.

'GoSleep' is the latest, state-of-the-art chair that converts into a private flat bed.

Ten sleeping pods have now been installed in Terminal 3 and in the Al Dhabi Lounge in Terminal 1 at the airport, with a further 35 on order for installation later this year.

The stylish, Finnish designed pods are easy to operate and

feature a partial or fully enclosed sliding shade that isolates the customer from noise, light and crowds.

After an initial launch phase, the chairs will be upgraded to include internet access, will include secure storage for luggage and other valuables, and will allow customers to charge their laptops, mobile telephones, and other electronic devices.

Passengers will be able to use the chairs at a rate of \$13 using a credit card.



The road to Morocco for AfBAA

African Business Aviation Association (AfBAA) chairman Tarek Ragheb has launched AfBAA Expo, a new event focused solely on the African business aviation sector and run in conjunction with the Marrakech Airshow, which takes place from April 23-26 2014.

The show, which will be located at Marrakech's FRA Airport, will cover 50,000sqm and will feature chalets for those wishing to host corporate hospitality and booths for exhibitors to display their products.

There will also be an expansive static display which, situated adjacent to the runway, will enable fixed-wing and rotary exhibitors to have easy take-off and landing capability for demonstration flights for potential customers.

As an international airport and also a military base, exhibitors and visitors will benefit from the high level of security, straightforward logistical operations and excellent access control to the AfBAA Expo area.

Turkey picks EC135 for heli-med duties

Eurocopter's EC135 will perform medical airlift duties throughout Turkey with a fleet of 17 helicopters to be flown by the Turkish Aeronautical Association's THK Gokcen Aviation commercial arm.

The agreement marks the latest major contract win for this twin-engine rotorcraft in the international emergency medical services (EMS) marketplace.

Operations were due to begin as *Arabian Aerospace* was going to press, with an initial five EC135s, followed by a build-up to the full complement of 17 rotary-wing aircraft.

The EC135 was selected for these life-critical services by the team of THK Gokcen Aviation and Saran Holding, which won a five-year air ambulance service tender from the Turkish Ministry of Health.

Shell opens at Dubai International

Shell Aviation and ExecuJet Middle East have announced a new refuelling partnership at the business aviation company's base at Dubai International Airport. A highly experienced team of Shell technical experts will be responsible for the day-to-day running of fuel operations at the FBO.

Enfidha is no carbon copy...

Tunisia's Enfidha Airport, operated by Turkey's TAV Airports, became the first operation in the African continent to receive the Airport Carbon Accreditation certificate presented by ACI Europe.

Hello Helios

Air transport consultancy Helios has opened a new office in Dubai, establishing a formal presence in the Middle East for the first time.

MENA dominates 2013 Airline Awards

The MENA region dominated the 2013 World Airline Awards, presented by Skytrax at this year's Paris Air Show.

Emirates picked up a total of three awards, winning the highly coveted 'World's Best Airline' title, as well as 'Best Middle East Airline' and, for a record ninth year in a row, 'World's Best Inflight Entertainment'.

Qatar Airways is also celebrating three wins, taking home 'World's Best Business Class', 'World's Best Business Class Lounge' and, for the second consecutive year, 'Best Airline Staff Service in the Middle East'.

Meanwhile, Etihad Airways swept the Skytrax World Airline Awards' first class category, receiving all three awards for the second year in a row.

The Abu Dhabi-based airline won 'Best First Class' for the fourth consecutive year, as well as winning top honours for 'Best First Class Seats' and 'Best First Class Catering'.

There was success, too, for low-cost carrier Air Arabia, which was awarded the accolade of 'Best Low-Cost Airline, Middle East' and was also recognised as one of the top 10 airlines in the Middle East.

The Skytrax World Airline Awards polled over 18 million travellers from more than 160 countries.

Freeing up airspace to beat congestion

The UAE and Bahrain have restructured airspace between the two countries in a bid to ease congestion as the number of aircraft movements continues to grow. The change consists of introducing three routes, instead of the current unique entry route, in



Libyans get the French connection

DCI, the French Government-backed training arm, has been selected to supply training to 20 officers from the Libyan Air Force and Defence Force, the company said at the Paris Air Show.

This follows the development of a partnership between the French Air Force, Aix-Marseilles University and DCI.

A course has been created for foreign officer trainees to gain an aeronautical

bachelor's degree by studying at France's Air Force School.

"Academic training plays an essential part in structuring elite military personnel. DCI has made it one of the central poles of its activities and we are proud to welcome the first Libyan trainees due to spend time within the French Air Force," said General Jean-Marc Denuel, executive vice-president of DCI-AIRCO.

addition to other procedural improvements.

The changes were introduced following the development of an improvement plan from GCAA in partnership with the Kingdom of Bahrain and Dubai Foundation for Air Navigation Services.

The Bahrain sector is the air traffic management gateway to the lower Gulf area.

FAI boost for Al Bateen

German air ambulance specialist and VVIP jet operator Flight-Ambulance-International (FAI) rent-a-jet AG has named Al Bateen Executive Airport as its preferred stop-over airport in the Middle East region.

A fully-equipped air ambulance Learjet 60 can accommodate a medical team, one patient and two patient escorts, and has the capability of carrying critically ill patients between Abu Dhabi and anywhere in the world.



Second French honour for RAF navigator

An RAF navigator has been awarded a medal for the second time in three years for heroism under fire while protecting civilians from attack by Colonel Gadhafi's forces in Libya.

Flight Lieutenant Ian Abson was attached to the French Air Force when he took part in the dangerous night-time missions near Tripoli that won him the award.

It's the second time the airman, now serving with the RAF's iconic 617 'Dambusters' Squadron, has received the honour from the French Government – two years ago he received the same decoration for bravery on operations in Afghanistan when flying on a three-year exchange posting with the Armée de l'Air, the French Air Force, operating the two-seat Mirage 2000D attack fighter aircraft.

He was presented with the Croix de la Valeur Militaire with Bronze Star (Cross of Military Valour with Bronze Star) at a ceremony in London's exclusive Carlton Gardens, a former residence of France's legendary wartime leader General Charles de Gaulle.

ASA expand with Middle East help

Asian VIP aviation services provider, ASA Group, has expanded its operations and opened offices in Indonesia and Malaysia, thanks to support from the Middle East. CEO Joe Wilson said: "We have seen an enormous interest in these two countries, partly through the natural links between Muslim communities throughout the world and a general increase in business opportunities in these locations. We are increasingly seeing more and more travel between the Middle East and Indonesia and Malaysia and are very pleased to now be situated and operational to support this."

Turkish Technic in the pool

Turkish Technic has signed a five-year component pool services agreement with MNG Airlines for the Airbus A330-200F cargo aircraft.

In addition, it will be providing line maintenance and parts support for these aircraft, with negotiations on-going for the provision of base maintenance services in the future.

MNG has recently added the aircraft to its fleet and is expected to receive deliveries in the coming years.

A new component to Avtrade's operation

Component support expert Avtrade has contracted DB Schenker to store, manage and provide local logistics services to support its Dubai and Singapore operations. Benefits include the ability to hold increased inventory of A320, A330, B737, B757 and B767 aircraft components, local storage with 24/7 availability, same time-zone support plus reduced transit and customs clearance times.

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Oman ponders launching LCC

Oman is mulling over the potential for launching its own low-cost carrier (LCC) in response to rivals targeting the Omani market.

Salim Nasser Said al Aufi, chief executive of the Public Authority for Civil Aviation, told journalists at the Arab Aviation and Media Summit in Salalah that the sultanate will have at least one LCC by this time next year, with a possibility of more licences being issued.

Al Aufi said the aviation authority was also considering other aviation aspects, including budget airlines, executive aviation and helicopter aviation.

He said: "We are looking at restructuring the aviation sector, including some of the companies. The next two-to-three years will see a lot of work and the aviation business in Oman will be changed completely."



Syphax to launch the A320neo

Tunisia's Syphax Airlines has become the African launch customer for the Airbus A320neo.

The Tunisian start-up is to buy three of the type and will be powered by CFM engines.

"Syphax Airlines is focused on continuing to grow its Tunisian, north Africa and Europe routes, and an expansion of its network to

Asia and North America through its hubs in Tunis and Sfax, while offering passengers a luxurious service," said Syphax chairman and director general, Mohamed Frikha.

"Adding the A320neo to our fleet means we can achieve all of these goals while benefitting from a 15% fuel saving."

An oasis to drink in knowledge

Emirates and CAE have officially inaugurated their ultra-modern pilot training facility at the world-class commercial park Dubai Silicon Oasis (DSO).

The DSO is the second training centre owned and operated by Emirates-CAE

Flight Training (ECFT).

Completed in May after a year in the planning construction phases, this state-of-the-art centre brings Emirates and CAE's joint investment in the region to more than \$260 million.

Emirates and CAE celebrated the 10-year milestone of their joint partnership last year.

The new DSO facility will initially house five full-flight simulator (FFS) training bays with three already installed, substantially increasing the region's vital pilot and technician training capacity and providing much-needed support for its established and increasing group of airline customers.

Flag-carrier wraps up support deal

AFI KLM E&M and Afriqiyah Airways have signed an agreement covering support for the CF680E1 engines equipping the Libyan flag-carrier's two A330-200s.

This exclusive, long-term contract is for 'time and materials' engine repairs. Afriqiyah Airways will shortly be taking delivery of three new A330-200s, the first by the end of this year and the other two in 2014, and these will be automatically included in the scope of the contract.

Qatar Executive gets Bombardier OK

Qatar Airways' private jet division, Qatar Executive, has been granted regulatory approval by the Qatar Civil Aviation Authority to conduct base maintenance services for Bombardier Challenger 604 and 605S and the manufacturer's Global series of aircraft.

Emirates silver lining celebration

The Emirates Group, which owns Emirates Airline and Mercator, announced its 25th consecutive year of profit and company-wide growth.

The company posted an \$845 million net profit, up 34% from last year. Even with external challenges, the group's revenue reached \$21.1 billion, an increase of 17% over last year's results.



A flight back to the beginning

The Gulf Flight Safety Committee (GFSC) visited its birthplace when it held its annual general meeting in Muscat. It left with a new name and new senior officers.

The committee was hosted by Oman Air, with support by Nexus Flight Operations Services and MedAire/International SOS.

The Gulf Flight Safety Committee (GFSC) was originally founded in Oman in 2004 by a group of Gulf-based safety professionals from various aviation companies located within the GCC region. It now has more than 250 members, representing 80 organisations within the region, and meets quarterly to promote safety improvement initiatives, including coordination with international organisations and bodies such as ICAO and IATA.

New elections during the AGM resulted in Saudia Captain Mohammed A Malatani and Nexus Captain William Mermelstein being voted in as co-chairmen, while Captain Mark Trotter was appointed secretary/treasurer.



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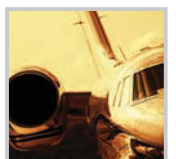
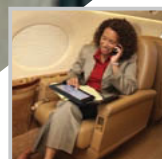
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*Even for the notoriously demanding airline industry, the challenges faced by Iran Air on a daily basis are truly exceptional. Chairman Farhad Parvaresh explains to **Martin Rivers** how the flag-carrier is slowly but surely expanding its 50-aircraft fleet and flying in the face of US sanctions as it does so.*

Iran's evolution flies in the face of adversity

Although all flag-carriers are, to some extent, entwined with the vagaries and fortunes of their home government, few will have their course through history as profoundly and irrevocably altered as Iran Air.

From its founding as Iranian Airways in 1946 up until its rapid expansion in the 1970s, the airline was considered an early success story for Gulf aviation.

It became one of the first carriers to operate the Boeing 747SP – deploying it on daily non-stop flights from Tehran to New York – and had even placed an order for two supersonic Concorde.

But, halfway through its history, the 1979 Islamic Revolution completely reconfigured Iran's standing on the international stage. Iran Air came to be seen as a

dangerous wing of a hostile government by America, and its route network began contracting in tandem with its list of overseas partners.

The shooting down of Iran Air Flight 655 by a US warship in 1988 – which claimed the lives of 290 civilians – epitomised the level of suspicion between the two sides. American officials claimed that they misidentified the airliner as an attacking military jet, though no formal apology was ever issued.

In the years that followed, international sanctions blocked Iran Air from acquiring aircraft, spare parts and even maintenance contracts. But the airline hit back by developing complex and secretive procurement channels that continue to source units from the

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'We have such a variety because of the sanctions, which do not give us the opportunity to expand the fleet as we would like.'

FARHAD PARVARESH

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secondary market.

"Today we have a fleet of 50 aircraft," said chairman Farhad Parvaresh, listing 16 Fokker 100s; "about nine" Boeing 747s, including four SPs; six Airbus A320-200s; "three or four" cargo aircraft; and an unspecified number of A310-300s, A300-600s and A300B2Ks.

"It has always been our policy to purchase aircraft, not to lease," said Parvaresh. "We have such a variety because of the sanctions, which do not give us the opportunity to expand the fleet as we would like.

"But there are lots of aircraft available now and we have a lot of approaches. Of course, it's not easy to handle. You have to find ways. There are always ways."

The US Government is not shy about disrupting these efforts. In May, the US Office of Foreign Assets Control (OFAC) added three European and central Asian carriers to its sanctions list, accusing them of serving as intermediaries for dozens of aircraft transactions with Iran Air and private Iranian carrier Mahan Air.

Last year, US criminal proceedings were launched against a Texas aircraft mechanic, who allegedly conspired to broker a \$136.5 million deal for seven Airbus jets destined for Iran Air.

The allegations levied by OFAC could hardly be more serious. It claims that Iran Air's Government owner uses such aircraft "to move illicit cargo to Syria for the [President Bashar] Assad regime's violent crackdown against its own citizens". Previous allegations have centred on munitions smuggling to militias in Iraq and Afghanistan.

On-going transactions

But news of on-going transactions is not hard to come by. Iranian carrier Aban Air briefly hoodwinked Qantas into selling it a 747-300 in March 2012, hiding behind a trail of paperwork that saw the aircraft shuffled from Sydney to Arizona to the United Arab Emirates to Gambia and finally Tehran. The US got wind of the deal and the aircraft has since been returned to the UAE.

Although many deals are thwarted, Flightglobal's Ascend database shows that Iran Air's fleet includes aircraft previously owned by the likes of Emirates Airline, Turkish Airlines, All Nippon Airways, Iberia and Finnair. There are even reports that Mahan Air – working with Ukrainian intermediaries in 2011 – acquired an A310 once used by German Chancellor Angela Merkel.

Predictably, Parvaresh was unwilling to talk about plans for specific transactions in the near future. But he made no bones about discussing the flag-carrier's broader fleet requirements.

"This is not a secret for us, or for Boeing or Airbus," he began. "We have said that we need more than 100 aircraft and they know this. We don't see a good future with Boeing, but Iranian airlines have been Airbus operators for a long time. The A320 family is a good fleet, and specifically A320s and A321 would be a good fleet for Iran, because Iran is a big country."



'We don't see a good future with Boeing, but Iranian airlines have been Airbus operators for a long time.'

Fokker 100s are currently the workhorse of Iran Air's domestic fleet. About 95% of flights operated by the 100-seater aircraft are to internal destinations, Parvaresh said, linking up 30 of the country's roughly 75 airports.

It is a popular aircraft nationwide, with a total of 45 units deployed by domestic carriers. But the addition of Iran Air's A320s has altered the economics of some longer domestic routes.

"Five years ago we didn't have any A320s. Now we have a fleet of six and we plan to add to it," he continued. "We have some domestic flights which are 2hrs 40mins in Iran. There are not many countries in the world where you can fly for this long domestically."

The A330 and A340 are also potential targets for the overseas network, while Parvaresh said he will "wait and see" what the A350 is like.

Although Iran Air does not talk formally with Boeing, he added that the two sides still run into each other at air shows. "We are losing, and they are losing as well," he sighed.

The final straw

Russian-made aircraft are now largely shunned by the flag-carrier. Although Tupolevs were once commonplace in Iran, the fatal crash of a Caspian Airlines Tu-154 near Tehran in July 2009 was the final straw for the Iranian Civil Aviation Organization (CAO).

Since 1993, three crashes involving subsidiary Iran Air Tour's Tu-154s had already claimed more than 250 lives. Following comments by Russian officials that blamed lax maintenance standards for the latest incident, Tehran angrily grounded the fleet in February 2011.

"We used to have Tupolevs in Iran but they are

all gone based on the CAO decision," Parvaresh confirmed. With the Government also cancelling talks to buy up to 35 Tu-204s, he added: "There are no more Tupolevs flying in Iran at all. Not even one.

"The Sukhoi Superjet 100 is the only [Russian-made] possibility for the future, in my opinion," the chairman said. "There are some discussions. They're not finalised yet." However, he pointed out that a high proportion of components in the type are western-built. That means sanctions would almost certainly come into play, as they do for European-made Airbus jets that incorporate US parts.

Further down the road, Chinese aircraft like the Comac C919 may have appeal. "For sure if Iranian airlines are not able to expand their fleets with Boeing or Airbus, they will automatically buy from China," Parvaresh said. "The future market is in China."

It is easy to see why Iran's appetite for new aircraft continues growing year-on-year. The country is home to more than 77 million people spread across 1.65 million square kilometres of territory.

The five-million strong Persian diaspora maintains close relations with its homeland, and this cumulatively creates "huge demand" for air travel both inside and outside Iran's borders. There are now 16 domestic carriers, ranging in size from two to 50 aircraft.

Indeed, were international relations not as they are, Parvaresh dared to speculate on the country's true potential within the global aviation scene. "Tehran would be a much better hub than Dubai or Doha, for cargo and for passengers," he said, referring to its geographical location at the crossroads between east and west. "Of course, if we had the capability we would expand like them, even more than them. But our expansion is still

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happening, just slowly.”

One impediment to growth is the need to replace the country’s oldest aircraft, which are fuel-inefficient and costly to maintain. Iran Air withdrew its last 727 at the end of last year, Parvaresh confirmed, with the oldest unit reaching 37 years of age.

“I think the next [to be phased out] will be the 747SPs, one by one, and maybe the very old A300s,” he said. Withdrawals will be made with or without replacements lined up, he insisted, adding: “If we think an aircraft is not economical, if the overhauls cost too much, then it will be phased out.”

Although the challenges of operating under international sanctions are immense, the restrictions only appear to have strengthened Iran’s domestic aviation facilities.

Home-made aircraft such as the HESA IrAn-140 – a variant of the Antonov An-140 – are not popular with operators. But across the broader civil aviation spectrum, the country has made strides in growing its capabilities.

In December 2011, the CAO claimed that 98% of MRO work on Iran’s Airbus, Boeing and Fokker aircraft is now conducted inside the country. It is a development which Parvaresh welcomes.

“If you go back 20 years we were not able to do C-checks or D-checks [domestically],” he recalled. “Of course it has not been easy for us, but we are able to do this now. We don’t send aircraft outside of Iran for D-checks any more. As well as building good facilities for overhauling aircraft, we have our own pilots, we have our own technicians.”

Government subsidies

Other aspects of Iran Air’s business are showing resilience, too. Parvaresh said that domestic load factors remain above 85%, albeit with air fares benefitting from continued Government subsidies. The two-year-old privatisation process is also nearing completion, with “more than 55%” of the company expected to be sold to “two or three parties” as soon as this autumn.

“Instead of being controlled by the Government we will soon be able to rule the company independently,” he said, though privatisation will not end the sanctions. “This is the Government’s goal as well as ours.”

And yet every step forward is accompanied by a firm push back. OFAC’s enforcement action targets the entire supply chain, including fuel providers. Restrictions on supplying Iran Air with fuel at London Heathrow briefly saw its 747s stop over at Manston Airport in Kent on the return journey to Tehran. But even though the tiny airport had no US trade links, it bowed to intense pressure from Washington and axed the arrangement.

Although other suppliers have held firm, disruptive stop-overs and above-average fuel charges are the norm.

Other sanctions-related difficulties have included a “considerable delay” – in the words of



Rome boost to Iran Air network

Despite the best efforts of the US Government to ground Iran Air, the flag-carrier continues to operate a network of around 60 destinations.

Roughly half of its routes are domestic but it maintains links with key regional partners such as Lebanon, Qatar and the United Arab Emirates.

Further afield, while Iran Air has only a modest presence in Asia, it serves around a dozen major European cities.

The airline recently restored Rome to its network, Parvaresh said, though he admitted that overseas expansion is problematic. “We have a lot of competition on international flights,” the chairman explained. “If Iran Air flies to Frankfurt, then Lufthansa wants to fly to Tehran. And you cannot compare our problems with theirs.”

Sanctions affect the commercial viability of Iran Air’s international routes in a variety of ways. As well as driving up the carrier’s operating costs – by blocking its ability to purchase modern aircraft, or even to sign fuel contracts at airports – they have a deeper impact on Iran’s currency.

The Rial lost two-thirds of its value against the dollar last year, as America and Europe tightened restrictions on Iran’s oil exports and blocked it from the global banking system. This, in turn, pushed Iran Air’s foreign ticket prices up by as much as 90%.

“The competition is very hard and the price is not controlled by the Government,” Parvaresh said, drawing a distinction between heavily-subsidised domestic routes and free-market international routes. “But we are surviving. We are still in the market.”

The myriad of difficulties has forced all Iranian carriers to focus on their strengths. While Iran Air consolidates its presence in Europe, Mahan Air is seeking to grow in the Far East. The private carrier launched a new service to Guangzhou in China last May, complementing its existing services to Shanghai, Bangkok, Kuala Lumpur and Delhi.

Other airlines are turning to markets that have shown solidarity with Iran in the long-running sanctions battle. Istanbul, for example, is now served by about 10 of Iran’s 16 airlines.

In the domestic market, reports that Qatar Airways was looking to begin cabotage services in Iran quietly fizzled out in 2011. Parvaresh confirmed that talks reached an advanced stage, but he said some Iranian carriers raised objections, citing the lack of a level playing field. “They were right I think,” he concluded. “It may be discussed again in the future, but not now.”

Swedish investigation commission SHK – into the probe of a January 2010 engine failure that struck an Iran Air A300 in Stockholm. The airline was even suspended from IATA’s clearing house payment system due to sanctions.

“We are used to having problems,” Parvaresh said with a wry smile. “But we have been able to solve them so far. As I said, there are always ways.”

Though he fastidiously avoided politics throughout the interview – focusing on the challenges at hand, rather than their geopolitical causes – Parvaresh’s true feelings came to light when he was asked about his country’s air safety record. More than 700 Iranian passengers have been killed in 13 aircraft crashes since 2005. OFAC’s sweeping sanctions cover maintenance contracts, spare parts and documentation such as operating manuals.

“As a person who has been working in aviation

for a long time, I really don’t understand this,” he said. “This is a safety issue. This has nothing to do with politics. We are not only carrying Iranian civilians, we are carrying foreign civilians too. The only effects of these sanctions will be on innocent people, not on the Government. The people don’t understand it.”

Those words carry a chilling significance when set against the comments of US Congressman Brad Sherman, who wrote in 2011: “Critics [of tougher sanctions] argued that these measures will hurt the Iranian people. Quite frankly, we need to do just that.”

Nonetheless, Parvaresh quickly restored his optimistic demeanour. “We are always hopeful,” he insisted. “For all the people in my company, and even for the politicians if you talk to them, it is a safety issue... I hope the US will consider it as a separate issue. This is not the right way.”



'If you visit Yemen you can really see the difference now. It's improving.'

CAPTAIN AHMED ALWANI

*A cargo bomb plot, a mass-casualty crash in the Indian Ocean, and a full-blown political crisis at home – Yemenia has had its fair share of problems in recent years. Chairman and chief executive Captain Ahmed Alwani tells **Martin Rivers** how the airline is positioning itself..*

Yemenia plays down the past as it looks to the future

The final report into the June 2009 crash of Yemenia Flight 626 off the Comoros Islands surprised no-one when it was completed this summer.

Chief investigator Bourhane Ahmed Bourhane said that “inappropriate action by the crew” during “an un-stabilised manoeuvre” resulted in the A310 stalling. Though pilot error was ultimately to blame, the report acknowledged that concurrent alarms within the cockpit had created a “stressful situation” for the crew of the night-time flight.

The joint probe by Comorian, Yemeni and French investigators – dozens of the 152 fatalities were French – brings to an end the darkest chapter in Yemenia’s history, which stretches back more than six decades. However, it is unlikely to

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usher in any sweeping changes at the flag-carrier.

Yemen is the poorest country in the Middle East, with average incomes of just \$6 per day. Although security has improved since the 2011 political crisis, the country remains home to one of the world's most active Al Qaeda branches.

Yemeni society is also built around complex and, at times, volatile tribal alliances, which makes central governance all but impossible. Little wonder, then, that Yemenia has traditionally shied away from the limelight, mirroring the reserved persona of its 49% stakeholder the Saudi Arabian Government.

But Alwani betrayed no hint of conservatism as he sat down to speak at the IATA AGM in Cape Town. The chief executive candidly discussed the flag-carrier's highs and lows over recent times, painting an optimistic – but by no means over-ambitious – vision for the future.

"Last year the country was much more stable than in 2011," he said, referring to the Arab Spring-linked civil unrest that overthrew Yemeni president Ali Saleh. "If you visit Yemen you can really see the difference now. It's improving."

Though progress has been made, the airline still feels the effects of the revolution through its home nation's damaged credit rating. "Due to the crisis in Yemen, we are facing financing difficulties," Alwani explained. "We are struggling to get loans from the usual sources, so we are trying to get local loans, which will take time."

Yemenia's commitment for ten Airbus A320s is most immediately affected by this. The aircraft were ordered from Toulouse-based Airbus in November 2009 – widely seen as an olive branch following the war of words with France over the Comoros crash – but the timeline for the outstanding eight units is now unclear.

Financial deals

"Unfortunately, we are not up-to-date with the pre-delivery payments (PDPs)," Alwani said. "We will fix a delivery time but we have to fix the financing deals first. We could get local banks to finance this project, but up until now the interest rates have been too high. So we are asking the Government to intervene. We hope that we can solve this problem with different sources of finance."

Alternative financing could come from international banks, he confirmed, adding: "Now that the situation is improved, people are looking to Yemen and trying to support us. We do get offers, but it takes time."

If next year's scheduled delivery of two units from Toulouse is postponed, Alwani said Yemenia may investigate interim solutions. "In case we

cannot get financing to purchase the aircraft, we could lease them instead," he noted. "We have received several offers – a lot of aircraft are available. But we would prefer to own them."

Given the difficult financial climate, uncertainty now also hangs over Yemenia's commitment for 10 wide-body A350s. The order is "still there", Alwani said, but it is "on hold" and the airline is for now "focussed on the A320s".

Yemenia's operational fleet today comprises three A310s, two A330s and two A320s. Its three Bombardier Dash 8 100s are no longer in service, Alwani confirmed.

With a relatively small fleet, the route network is modest and carefully targeted. Alongside its domestic and regional connections, Yemenia has

the DfT] came to Yemen to check all the airports and they have submitted their report," he confirmed. "I hope that their report will be enough [to gain approval for UK flights]. In my opinion, Yemeni airports are all secure. We take the same measures as any other airport in the world."

Although London flights are unlikely to launch before 2014, Alwani hinted that he will consider a fifth-freedom extension of Yemenia's existing Paris service while talks with the UK continue.

That may work as an interim solution, he suggested, but the airline is determined to launch direct flights to the British capital. To that end, Alwani has already ruled out security stop-overs akin to Iraqi Airways' Baghdad-London service,



prioritised strategic links across east Africa as well as a handful of other intercontinental routes. In Europe, it serves only Paris and Frankfurt. In Asia, only Mumbai, Kuala Lumpur and Jakarta.

There are no firm plans to expand the network this year, with the airline focused on consolidating its post-crisis operations. "After we recover, we will look again," Alwani said. One destination on the wish list for 2014 is London, though Britain's risk-averse Department for Transport (DfT) will require some persuasion.

In October 2010, the world's gaze turned to Yemen after two sophisticated bombs – concealed within printer cartridges in mail packages – evaded airport security in capital city Sana'a. The devices were first transported on passenger aircraft, before being loaded on to cargo jets bound for the United States. They were timed to detonate mid-air. Al Qaeda's prolific Yemeni wing claimed responsibility for the attacks, which were only thwarted at the 11th hour by Saudi intelligence.

With the same terror group claiming responsibility for the failed 2009 underwear bombing of Northwest Airlines Flight 253, Yemen's airport security has long been viewed with suspicion. Alwani said this reputation is not justified – "It could happen anywhere, it's not specific to Yemen" – but the authorities have, nonetheless, redoubled security compliance efforts.

"A British delegation from the security team [of

which diverts to Malmo, Sweden for three hours. "We will not do that," he insisted. "It's difficult for passengers."

While Yemenis are eager to turn a new page and embark on a brighter future, memories of Flight 626's deadly crash continue to stir emotions.

The initial probe into the Indian Ocean disaster was characterised by bitter fighting between all parties. Yemenia's previous chairman, Abdulkalek Al-Kadi, accused French Government officials of "harassment", while French air crash investigation agency BEA accused its Comorian counterpart of "unacceptable" delays.

Signed up to conclusions

Though the final report has at long last been published, it is not yet clear whether all sides have signed up to its conclusions. When Yemeni media reported the findings, they reiterated allegations by government ministers of an Israeli conspiracy.

But Alwani was diplomatic when asked about the subject. Speaking shortly before the investigation was completed, he expressed regret that it had taken so long. "We had to all sit together and see what caused this crash," he explained. "The best way forward was to have the committee sit together – the French, the Yemenis, the Comorians – and see what caused this crash. Whatever is the result of the committee, we will accept it."

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The test programme for Airbus's new A350 is now under way with the first production model due to enter service in the Gulf in just over a year. Alan Dron visited Toulouse to hear the European airframer's plans for the future.

The first flight of Airbus's A350 twin-aisle airliner on June 14 and first public flyby at the Paris Air Show a week later opened a new chapter for the European manufacturer.

"It's often said that if an aircraft looks right, it flies right and boy, does this aircraft look right," said A350 project test pilot Frank Chapman at an Airbus innovation day media briefing in Toulouse a few days before the aircraft's first flight.

Airbus is positioning the core A350-900 and the smaller -800 version against Boeing's 787-8 and newly-launched -10, while the largest -1000 member of the A350 family will compete against the 777, including the forthcoming 777X.

In typical three-class configuration, the -800 will seat 270, the -900 314 and the -1000 350 passengers.

The show was marked by Airbus chief salesman, John Leahy, revealing that the company was planning a new 'regional' version of the A350-900, with its Rolls-Royce Trent XWB engines de-rated from 84,000lb to 75,000lb thrust and a shorter (but unspecified) range.

With five pre-production aircraft undertaking a 2,500-hour flight-test programme, the first A350-900 is due to enter service in late 2014 or early 2015 with lead customer Qatar Airways, which has no fewer than 43 -900s and 37 -1000s on order.

In December 2012 it switched its initial order for 20 -800s to the two larger variants (three -

900s and 17 -1000s) because of delays to the smallest version.

The A350 is due to become a regular sight in the MENA region by the second half of the decade as it undertakes medium- to long-haul operations for six of the region's carriers.

Apart from Qatar Airways' order, other MENA airlines signed up for the new aircraft are Afriqiyah (10 -900); Emirates (50 -900, 20 -1000); Etihad (12 -1000); Libyan (four -800) and Yemenia (10 -800).

Tunisair's order for three -800s disappeared from Airbus's order book at the end of May.

Initially dubbed the A350 XWB ('Xtra Wide Body'), Airbus said that, at 220ins (5.59 metre) from armrest to armrest the A350's interior is five inches (12.7cm) larger than the Boeing 787.

More than 70% of the A350's airframe is made from advanced materials including composites, titanium and aluminium alloys. The carbon fibre reinforced plastic (CFRP) fuselage will give lower fuel burn and easier maintenance, said Airbus.

It claimed this new fuselage – along with the latest Rolls-Royce Trent XWB engines and an advanced wing optimised for Mach 0.85 cruise speed – will give the A350 25% lower fuel burn, 25% lower operating costs, and 25% lower CO emissions than current competitors.

Preparations for the first flight of

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A350 IN THE



Test aircraft with different missions

The A350's 2,500-hour flight test programme will be undertaken by five aircraft.

Aircraft one and three will be heavily instrumented and handle systems testing while aircraft two will have medium instrumentation and a passenger cabin interior. It is destined for the climatic chamber at Eglin Air Force Base in the US, where it will endure temperatures ranging from -40°C to +50°C. This aircraft will also be used for the first flight with a full complement of passengers.

Aircraft four will be lightly instrumented and handle avionics development and certification. It will also be used for noise testing.

Meanwhile, aircraft five will be used for a 300-hour programme of route-proving, carrying a full load of passengers around the world. It will also be used to train the first instructors and crews.

Certification is planned for summer 2014.

WINDOW

CONTINUED FROM PAGE 26

the aircraft included around 700 virtual simulator flights, while the Rolls-Royce Trent XWB engine has been flown on the company's A380 test-bed for more than a year, with two sessions of hot weather testing in the UAE in August 2012 and February 2013.

To help ensure that as many kinks as possible are eliminated from the A350 before its entry into service, Airbus plans to handle the flight test programme in a novel way.

"The next step will be to call ourselves 'Airline One'," said Didier Evrard, executive vice-president in charge of the A350 programme. "We have five flight-test aircraft and we're going to use them, not merely as flight test aircraft, but as a small airline. We're refurbishing an airport building at Toulouse to accommodate airline-like operations and will have a hangar for working parties and daily maintenance." With this aim in mind, the second and fifth flight-test aircraft will have fully-outfitted passenger cabins.

According to Airbus, A350 cabin design for 10 airlines has already been frozen at its customer definition centre in Hamburg. "We know exactly what the first customer's cabin is going to be," said Evrard.

Airbus, which experienced considerable problems with the wiring looms of the A380 during the super-jumbo's development period and wing rib weld problems after it entered service, and which has seen the major problems Boeing has faced with overheating batteries on its 787, was keen to eliminate as many potential problems as possible on the A350 before it even got into the air.

This included some 2,000 hours of tests on the undercarriage, around 3,000 on the hydraulic system of the 'iron bird' static rig and 2,800 in the simulator. "We have a good grip on the aircraft itself as well as its customisation. We have modelled everything we can. The level of uncertainty is not high," said Evrard. However, he cautioned: "We've made a lot of progress in the last year but it's still a very challenging programme."

One pleasant surprise for Airbus, added Tom Williams, executive vice-president, programmes, was that the new aircraft had not seriously affected sales of the current A330, which seats 250-300 passengers. "We thought the A350 would cannibalise the A330 more aggressively than it has, but it's held up surprisingly well."

After the 'core' A350-900 will come the shortened-fuselage -800 model, which is due for service entry in 2016.

Despite an order book which, at around 80 examples, is around half the size of its peak order backlog as several airlines switch their orders to the larger models in the range, Airbus says it remains committed to the model.

The latest blow for the -800 came in June when Tunisair's order for three aircraft disappeared from Airbus's list of customers, indicating that the airline had cancelled its commitment.

Despite the shrinking order book, the -800 remained part of Airbus's plans, said president and CEO Fabrice Brégier, although at the moment the -1000 was a higher priority. "The -800 will be ready when the market wants it."

John Leahy, revealing the new 'regional' version of the A350-900.



Talking points from the Innovation Days

- **The huge backlog of airliner orders is not a 'bubble' that will collapse, believed Airbus. The increasing global desire to travel would be encouraged by stronger competition driving down fares.**
- **The company believed the low-cost market in the Middle East would gain more momentum.**
- **A stretch of the A380 is still possible, but not before airlines more fully utilise the space inside the existing aircraft. Airbus will look at a larger aircraft when carriers start asking for capacity upwards of 560 passengers. An 11-abreast economy cabin is possible, but would only be suitable for short-haul trunk routes.**
- **Airbus's current 15% market share in North America "is not satisfactory", said Williams. "We need to get to the 40-50% we have elsewhere. There's not a lot of growth there but there's a big replacement market and we want to be well-positioned for that." Airbus plans to open an A320 final assembly line in Mobile, Alabama in 2015, with first deliveries in 2016.**
- **The weakness of the cargo market. "It's a difficult 'sell' at the moment to persuade an airline to buy a new dedicated freighter," commented Williams. "There are a lot of dedicated freighters parked out in the desert. The market will come back but it could be another couple of years before we see it."**
- **The supply chain has caused some concerns, he added. "In some cases we've had to inject management or money to solve supply problems. We even had to take management control [in companies] in some cases. Some work being undertaken in Tunisia had to be repatriated because of political problems there."**

The stretched -1000 will appear on the final assembly line at the end of 2015, with first flight the following year and entry into service in mid-2017. It will have an extra six frames inserted into the fuselage ahead of the wings and five frames aft. The Trent XWB-97, with an upsized core and improved-efficiency fan, will provide the necessary extra thrust.

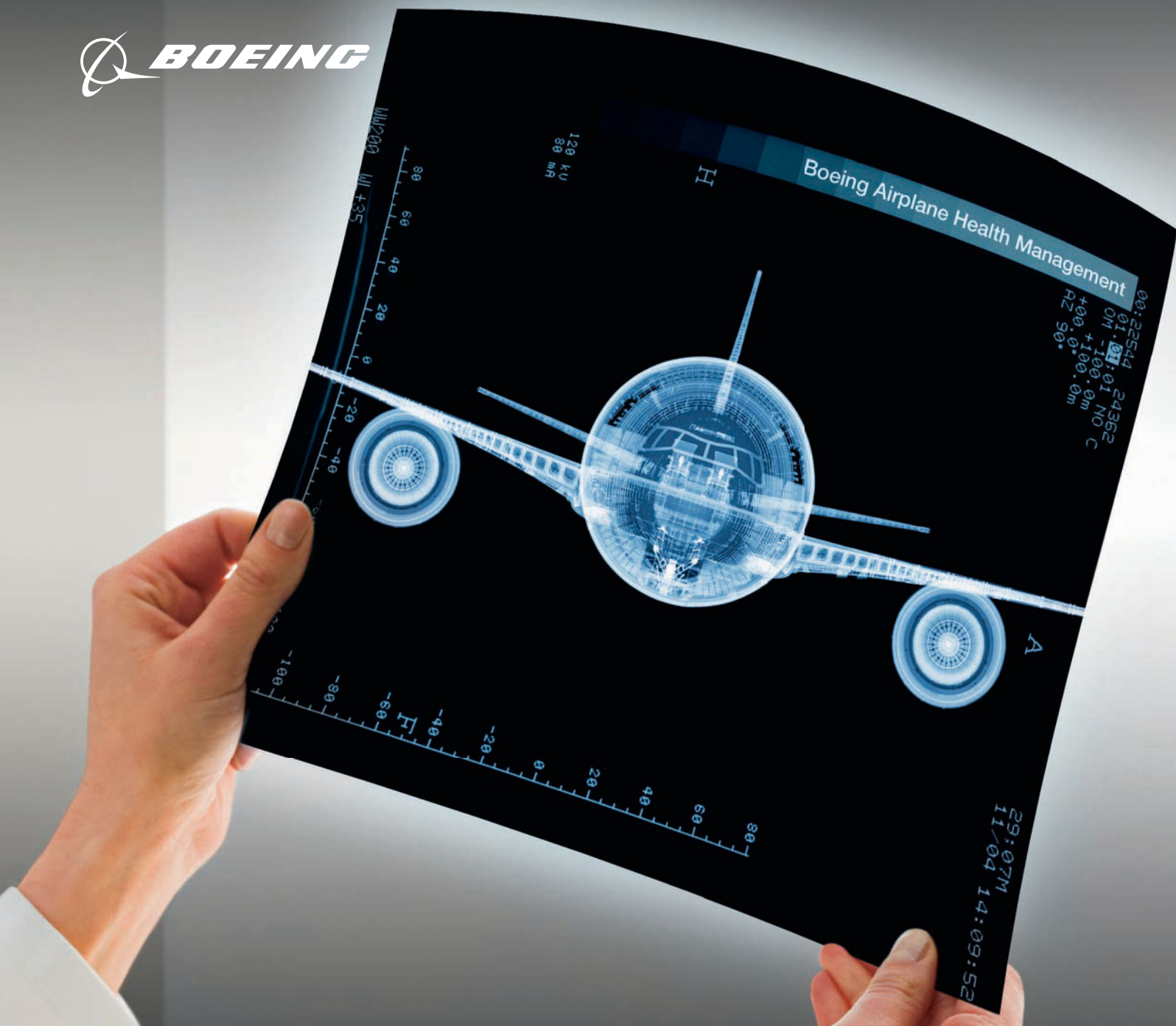
Apart from the new engines, said Airbus, the only areas of difference required by the larger aircraft will be in the landing gear and flap system.

Despite Airbus's success in world markets, the Middle East currently lags behind other regions in terms of aircraft deliveries for its range of models. Airbus's figures show that just 7% of the 588 aircraft it delivered in 2012 went to the Middle East and that figure is anticipated to drop to 6% this year. This compares with roughly 40% of deliveries that go to the Asia-Pacific region.

Around 8% of Airbus's order backlog of around 4,900 aircraft are slated for the Middle East. Asia-Pacific will take 37%, Europe 13%, North America 12%, Latin America 7% and Africa 1%, with 2% bound for corporate, military or undisclosed clients. The remaining 20% will go to lessors; some of which may end up in the MENA region.

The reason for the relatively low percentage bound for the Middle East, said Chris Emerson, senior vice-president, head of marketing, was the nature of the Middle East market. Its geographical position meant that 80% of the world's population was one long-haul flight away. This meant that the region was primarily a market for smaller numbers of higher-value, long-haul aircraft, rather than large numbers of smaller types such as the A320. (Airbus's short-haul airliner had an astonishing 3,894 aircraft order backlog at the end of May, with 42 a month being produced. The latter figure could rise to as high as 50 towards the end of the decade.)

This point was taken up by Brégier: "We're not doing badly in the Middle East market. The majority of the growth of Emirates, for example, comes from the introduction into service of the A380. Right now they would like to have more aircraft delivered faster, rather than slower."



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Raphael Haddad:
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vote of confidence
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now choosing the
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chose."



Gulf's C Change

Gulf Air was revealed as being one of the mystery buyers of the new Bombardier CSeries jet just ahead of the aircraft's first flight in June. Alan Peaford talked to Bombardier's man in the Middle East.

The first flight of the Bombardier CSeries – delayed until the end of July – is the catalyst that Raphael Haddad, the vice president for Bombardier sales in Africa and the Middle East, believes will give the manufacturer the breakthrough it needs to make an impact in the narrow-body market across the continent.

Speaking in a hotel next to Cape Town's convention centre on the sidelines of the IATA annual general meeting at the beginning of June, Haddad was enthusiastic about the new model.

"It is a 100% new aircraft, ideal for Africa and the Middle East and well adapted for those markets. The aircraft will offer the right cost per seat and the right trip cost so airlines can manage risk according to the mission. It will fill a gap in this market place."

He was talking just weeks ahead of the historic first flight and, like his colleague, Bombardier senior vice president, sales for commercial aircraft, Chet Fuller, he expected a "strong uptake" in CSeries orders in the Middle East.

"Markets like Bahrain to Jeddah, Bahrain to Beirut, Sana'a to Doha and Muscat to Riyadh all need an optimised product," he said.

"You don't need the current narrow-bodies to get the right cost per seat. A smaller capacity with the newest technologies and right maintenance

cost gets you where you want with 100 seats rather than 140. That's where it has its advantages."

Haddad said the big two manufacturers, Airbus and Boeing, had recognised the technological differences that the CSeries brings and responded with the Neo (Airbus) and the Max (Boeing). "They talk about it, even the engine manufacturers admit it. This is the biggest vote of confidence because our competitors are now choosing the technology that we chose."

Haddad said that both the CS100 and the CS300 would prove ideal for the Middle East and North African markets.

"These markets are liberalising little by little. Airlines are putting more frequency ahead of capacity. The way of meeting demand is with the most frequency. The 100 and 300 are adapted for that," he said.

Haddad believed the entry into service (EIS) one year from now would make the big difference but the on-going flight test programme, with five test vehicles for the -100 and two for the -300, would demonstrate the value of the new technologies adopted on the airframes.

"We didn't ask an old lady or an old man to put on a new dress or a new suit. We have a young guy in

Continued
on Page 32



Despite the delays to the first flight, Bombardier is still aiming at a 2014 entry into service.

CONTINUED FROM PAGE 31

new suit. It is not just window dressing or embellishing what we have. We have gone all the way with 100% new technology, whether it is on the wing, on the fuselage, on the engine, or in the cockpit. We've done the right thing and that is the appealing part," Haddad said.

Irish lessor Lease Corporation International has a firm order for three CS100s and 17 CS300s, while Russian lessor Ilyushin Finance is committing to 42 CS300s. The first CS300 should enter service in Q3 2015.

The airliner's performance will match its economic advantages, according to Haddad. "The ability to operate at hot and high airports, as well as on short runways, will make a difference," he said.

"Most of the interest for the CSeries is from those airlines that recognise it as an optimised tool to cover a particular segment – the 100-150 seat market. We know current solutions are not designed by the market. Airlines are now doing their maths, going through performance and economics. First of all they don't believe the figures then, as they realise, they become really attentive."

Bringing new aircraft to market is nothing new

for Bombardier, the most prolific of manufacturers having certificated 21 aircraft in the past 20 years.

"Airlines recognise the advantages of technology from today – not from 35 years ago," said Haddad.

The CSeries introduces a number of new technologies for Bombardier.

Pratt & Whitney certificated the PW1500G engine with Transport Canada in February, the first such milestone in its new product line of PurePower-g geared turbofans.

Developed a work-around

Shenyang Aircraft Corp (SAC) is still unable to deliver the entire fuselage but Bombardier has developed a work-around while its Chinese supplier builds its skills by delivering the rear section.

The fly-by-wire supplier, Parker Aerospace, faced the most critical period of testing as Bombardier sought to avoid a repeat of the fly-by-wire problems that grounded the CRJ1000 for nearly a year shortly after it began flight-testing. It has invested in an elaborate testing infrastructure on the ground at Mirabel to detect any major technical surprises before the flight-test phase begins.

Bombardier forecasts that 1,000 deliveries will be made to the Middle East and Africa in the 20 to 149-seater market segment over the next 20 years.

And, while facilities are improving, so are service standards. Haddad said that Bombardier is investing in its support service to airlines in the region.

"There is no use in selling an aircraft without support. If you do it is going to fail. We are not just interested in the EIS but to develop successful relationships and support for years."

Even ahead of the first flight, Bombardier has been targeting CSeries aircraft line maintenance checks ("A" Checks) at intervals of 850 flight hours rather than the planned 750 hours and a base maintenance check ("C" Checks) at intervals of 8,500 flight hours.

"The proposed maintenance plan will allow operators of CSeries aircraft to benefit from minimised downtime and more competitive maintenance costs, all while ensuring the inherent safety and reliability of the aircraft," Haddad said.

With a presence in Dubai for the past 18 months, Bombardier has demonstrated its commitment to the region. "Support is essential and we want to be close to our customers."



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MORE TO BELIEVE IN



The science of alliance

The three main alliances include Sky Team now with Saudia Arabian on board. One world now has Qatar and RJ, while Turkish and EgyptAir fly the flag for Star Alliance.

Today, more than half of the world's airline seat capacity is offered on one of three global airline alliances – Star founded in 1997, Oneworld in 1998 and SkyTeam in 2000.

In the early days these were simply marketing ventures where a few airlines flirted with one another – an umbrella brand, a few more points on the route map and modest efforts to improve the ranking of a flight on a global distribution system (GDS) screen.

More than 15 years later the global alliances have matured and created a real competitive threat which leaves smaller, unaligned carriers struggling to compete – Star Alliance alone serves more than 1,300 destinations worldwide.

The three alliances now have central organisations, a growing airline membership base, thousands of lounges between them and the relationship between alliance partners now extends not just to frequent flyer agreements but also to corporate deals, round-the-world fares and co-operation in ground handling, catering, maintenance, training, joint airport facilities and joint procurement.

Surprisingly, given the speed at which they have been rising up the global airline rankings and the product awards issued to Qatar, Emirates and Etihad, up until last year the major Arab carriers had been left out of the global alliance race for new members.

With the exception of Royal Jordanian's entry

into Oneworld in 2007, the region remained very much a blank spot on the global alliance map. But surely the region's major airlines were too important to ignore when two thirds of the world's population rest within eight hours' flying range?

If size matters, the 'big four' – Emirates, Qatar, Saudia and Etihad – dwarf most of the other airlines in the Gulf.

Transfer operation

And, if a decent transfer operation was a qualifying criteria, these airlines capitalise on world-class infrastructure with home base airports that carry significant sixth freedom traffic. There is also capacity for state-of-the-art facilities to be added over the next few years with a freedom that has long been absent from the western world.

As a result, these fast-growing airports are set to outstrip many of the larger airports in Europe. Indeed, International Airlines Group chief executive Willie Walsh expects Dubai Airport to surpass London Heathrow in 2015.

When you consider that Emirates and Qatar now rank among the top 30 airlines worldwide, that Emirates finished 2012 as the largest global airline outside the USA by available seat kilometres, and that Emirates, Qatar and Etihad between them have more than 400 aircraft on order scheduled for delivery by 2020 (most of them wide-bodies), it is reasonable to assert that



Sudeep Ghai, *managing partner at airline consultancy Athena Aviation*, takes a detailed look at global airline alliances and reveals their true effects on the Gulf region.



the Gulf airlines are now market leaders bringing about a new world order in aviation and their hubs will be making a giant sucking sound, shuffling passengers on one-stop itineraries around the globe for many years to come.

So why, then, did the three global alliances fail to court the leading regional players into an alliance?

Ironically, much of this appears to be a blend of fear, envy and mistrust. European airline majors complained at length about the perceived favourable treatment Arab carriers receive around taxation and airport fees.

The extremity of ill feeling towards the unstoppable rise of the Arab airline industry was best encapsulated in Jean-Cyril Spinetta's "The Gulf companies are killing our industry" remark a few years ago as CEO of the combined Air France-KLM group.

It is hardly surprising that the Star Alliance has not figured highly in alliance considerations within the Gulf given the aggressive stance its leading airline has taken – Lufthansa has lobbied to limit Arab carrier access to Germany and last year CEO Christopher Franz commented that Gulf nations were a place "where nothing exists besides sand and a box of money".

That Qatar has been successfully courted by Oneworld is no surprise, given that Willie Walsh has communicated a very different viewpoint from his competitors in Europe and built a

relationship of mutual respect with Qatar CEO Akbar Al Baker: "Many of my European counterparts will complain about the way the Middle East carriers operate; they think that it is unfair competition. I don't buy into that," he stated in *Business Travel News* in 2010.

The addition of Qatar to Oneworld is significant. At the time of its announcement last year, the carrier increased Oneworld's share of global seat capacity by only 0.6 percentage points to 12.2%, and left the alliance well behind Star Alliance on 24.8%. However, Oneworld is the only alliance to have a hub in the Gulf and this should provide better connectivity for some member airlines, though not everyone in Oneworld will want to route sixth freedom traffic over Doha.

Reshape its foundations

Herein lies the dilemma: Qatar's arrival in Oneworld has the potential to reshape its foundations. Up until now the alliance has operated as a gentlemanly club of disparate airlines that share little strategic overlap – they have not been given the direction and structure that Lufthansa has provided in masterminding the evolution of Star.

We can expect tensions to surface. Qantas, an ailing Australian carrier and a Oneworld founder, recently announced a codeshare deal with Emirates, which is, in turn, Qatar's biggest regional competitor. So Qantas may find itself forced out.

Royal Jordanian operates a small Middle East-focused route network that, in many cases, duplicates Qatar's, so it may opt to defect to a rival alliance.

The promiscuous Airberlin, already 30% owned by non-member Etihad, has already concluded a deal with non-member Air France-KLM, and may also leave.

The good news for Oneworld is that the departure of peripheral members could leave behind a streamlined core of airlines that are committed to further integration and co-operation in their most important markets. For instance, a global frequent-flyer programme – which is Star's masterstroke when it comes to winning premium customers – might entice transatlantic traffic on to business and leisure routes operated by Qatar to destinations elsewhere in the world, including the Far East and Australia.

Co-ordinated marketing might consolidate British Airways' traditional strength in Africa, while offering American Airlines' passengers alternative routes to Africa and Asia via Doha, instead of London.

The effects on Oneworld's rival alliances, Star Alliance and the Air France-KLM-led SkyTeam, are less clear. Air France-KLM's ticket-selling tie-up with Etihad leaves Star as the only big club without a Gulf-based affiliate.



CONTINUED FROM PAGE 35

Star may try to poach Emirates, the last remaining unaffiliated major carrier in the Gulf, but the advantages for Emirates are limited: it is more than capable of standing on its own feet. If anything, Emirates alone among the world's airlines, has the strength to force the creation of a fourth alliance centred on the Middle East rather than Europe or the USA.

The pressure is also being turned up on SkyTeam. Qatar complements Oneworld's portfolio of top-quality carriers, which includes several given a five-star rating by Skytrax. But SkyTeam's members are not quite so glamorous – passengers boarding flights on Delta or Air France can find themselves transferred to Aeroflot and crash-prone China Airlines. MEA may be a decent small airline but it is not about to offer a large connecting hub in the Gulf, and Saudia is something of a lumbering behemoth that falls some way short of international standards of product and service.

It follows that SkyTeam must continue efforts to attract better-quality carriers that will offer more uniform standards of service, or invest in improving how partners run their business.

Honeymoon period

Experience of interviewing new entrants to a global alliance after the initial honeymoon period has passed suggests most feel a sense of frustration because there is often a general assumption that buying entry into an alliance should, itself, give rise to significant value.

But membership of the club does not, of itself, generate results. It's a bit like going to the gym – you might feel better about buying membership but to get results you have to consistently work out.

With the right efforts alliances can add 10-20% of an airline's revenue and the good news about alliances is a lot of this is incremental revenue and flows straight to the bottom line. But a smart partner will manage its costs carefully, invest in enhancing its own offer to the alliance customer base and structure bilateral relationships to derive the maximum benefit from how revenue is prorated across legs flown.

Hence, while airlines may enter an alliance ready to pitch their tent alongside new partners and take on other global alliances, few often realise the first battle they need to be prepared for is the boxing ring battles with the partners within their alliance.

Real benefits turn on adopting a disciplined and structured approach that covers all the angles before you enter and understanding how to execute and maintain that focus once you have become a member.

New entrants often neglect to prepare a sufficiently independent business case in advance of joining. Without so doing, it is impossible to measure and quantify whether the alliance lives up to its promise. In fact, in our experience, most alliance members are unable to quantify what an alliance brings them. Where

airlines do commission this work they look purely at the network benefits without looking at the cost of entry and offsetting against this the opportunities that may arise in relation to joint sales activities and frequent flyer membership. Most will readily comply with the technical requirements to meet the entry timetable but neglect to build the commercial and operational support internally to deliver the proposition at launch and then scramble to put in place the alliance organisation structures, processes and cross-company KPIs needed once an airline is a member.

The implications for other airlines in the region, left out in the cold, is interesting.

For some of course, it does not really matter. We have already said that an airline with the stature of an Emirates does not need to be part of a global alliance because it is already a global brand.

Nothing typifies that more than Emirates president Tim Clark's stated ambition for the relationship with Qantas – he wants A380s providing round-the-world service as part of the Emirates proposition.

At the other end of the scale, Flydubai and Air Arabia have set out their stall as hybrid carriers serving mainly value-conscious, intra-regional traffic flows that serve segments different from the full service airlines.

There are other small survivors such as MEA that do very well by maintaining a disciplined focus on their 'ethnic' traffic that keeps them profitable and below the radar of the larger players in the region.

The troubles arise for the airlines in the middle, the ones with legacy structures or ambitions, which do not recognise the competitive realities of the Gulf.

Kuwait Airways is attempting to privatise, again. Gulf Air is still restructuring. And Oman Air has built a great product only to discover originating and departing traffic flows have no reason to transit through Muscat when there are established world class alternatives close by. And this leaves aside, entirely, the question of the role of Iran Air, Mahan Air, Yemenia, Syrian Arab and a revived Iraqi Airways.

Arguably, to survive (and ready themselves for alliance membership if this is part of their strategic roadmap) each of these airlines needs to go back to basics:

- develop a strategic plan built around a demand-based assessment of their market potential;
- segment their customers to identify what they want and are willing to pay for;
- analyse the competition to understand what is tenable in terms of product, service, channels, and market position;
- test the operational network and models to see how the airline compares on customer feedback and KPIs, including on-time performance, mishandled bags and aircraft utilisation;
- build a financial model that looks at revenue, profit or contribution, cost per available seat kilometre, and passenger revenue per kilometre;
- craft a value proposition that creates a profitable revenue stream;
- execute with an efficient operations team and a commercial organisation that is demand, rather than production, focused and optimised across network, fleet, product, pricing, sales and distribution and revenue management.

Political outcomes

This is not an easy process because it may not lead to palatable political outcomes – but while jobs programmes are fine, they only have value if they lead to credible long-term employment. Otherwise a country is simply propping up an uncompetitive product.

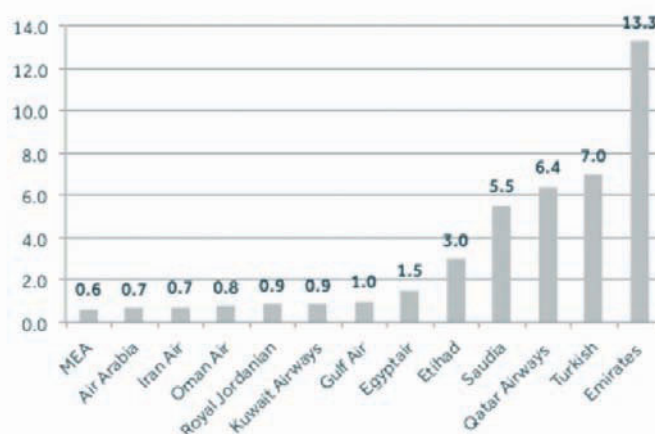
The fact is the first mover advantage has gone. Emirates has the global mega hub for the region with future order positions that make catch-up nigh impossible. The fast followers of Qatar and Etihad have been building their business for 19 and 10 years respectively. They are no longer market followers but very much market leaders.

So airlines that don't make the top five have to ask themselves if they have a viable core business. If not, they need to consider their options.

Once they have the core business right they can build on this position by working with partners to establish interline and codesharing relationships. They may want to enter an alliance because they have developed a clear strategic and financial case. Equally, they may not want to enter an alliance because the business is not mature enough.

Most airlines contemplating an alliance sensibly flirt and experiment to work out what they have to offer partners, what partners can offer them, how to measure and track incremental value, the cost of entry and which partners are right for them, not just from a commercial perspective but also as a trusted relationship, a cultural fit.

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A400M shows its flair in Middle East

The first of ten A400Ms for the Turkish Air Force (MSN9) is nearing completion at Seville, ready for a planned delivery in September 2013. Airbus Military hopes this will be the first of many A400Ms for the Middle East region. Jon Lake reports.

Airbus Military claims to have “consistently” taken more than 50% of orders in the light and medium military transport markets, and points out that while the A400M is still running behind the rival C-130J, the company hasn’t seriously started marketing and export campaigns for its new heavy lifter.

When it does so, the company hopes to gain a similar share of the market for large military transport aircraft, expecting global sales of its A400M to reach 400 aircraft over the next 30 years – 50 to 100 of them going to customers in the Middle East and north Africa.

The company maintains that its A400M is “the right aircraft at the right time”, as the only aircraft that meets both tactical and strategic requirements, with its unique ability to combine jet-like performance (cruising at Mach 0.75 at 40,000ft) with a turboprop’s agility and ability to fly low and slow and to operate from soft and short austere strips.

This makes the A400M “the only aircraft on the market able to transport heavy loads right through to their final destination”, according to Rafael Tentor, Airbus Military’s head of programmes.

He contrasted this capability with aircraft like the An-124 and C-17, which operate in a ‘hub and spoke’ fashion, using an intermediate aircraft to then reach unpaved airstrips.

As a tactical aircraft, the A400M can fly steeper approaches than the C-130J. On top of

that, it is certified to both military and civil standards, and meets civil airliner noise standards.

The A400M is also a potentially useful dual-role tanker/transport, able to refuel fast jets comfortably, but also capable of refuelling helicopter receivers at speeds as low as 100kts, using Cobham low-speed baskets.

Tentor said the market was flat in Europe and “would not be the driver of sales and strategy in the years to come”, while contrasting this with growth in Saudi Arabia, Brazil and India.

Core customers

Export success is fundamental to the A400M, which may not be profitable for Airbus on the basis of its core customers – Belgium, France, Germany, Luxembourg, Spain, Turkey and the UK – together with sole export customer so far, Malaysia. They have ordered just 174 aircraft between them but their commitment to the programme is, in some cases, slipping. In Germany, for example, the 53 aircraft ordered are likely to reduce to 40, while Spain is likely to reduce and in France reductions are also thought to be possible.

Airbus Military already enjoys a good presence in the Middle Eastern and north African market, with 70 aircraft in service in (or on order for) nine countries in the MENA region, comprising nine A330MRTTs, 28 C295s, 25 CN235s and eight C212s.

Airbus Military’s definition of the MENA region includes Morocco, Algeria, Libya, Egypt, Jordan, Saudi Arabia, the UAE, Yemen and Oman, but does not include Turkey, where the Air Force, Navy and Coast Guard are all operators of the CN235 – many of the 61-strong fleet being assembled locally by Turkish Aerospace Industries.

It is, therefore, fitting that Turkey should be providing the A400M with its regional ‘springboard’.

Turkish Air Force pilots have already flown the A400M, which was displayed at Izmir for the 100th birthday celebrations of the Turkish Air Force, and the type has conducted airdrop trials at Eskisehir and hot-and-high trials in Oman, as well as attending the Riyadh Air Show in 2011.

Airbus Military’s understanding of the market for the A400M seems to have developed in recent months.

Two years ago, the company was still talking about opportunities to replace the C-130, and for the aircraft to offer an alternative to the C-17.

But recently, and especially in the Middle East, senior personnel clearly see opportunities for the aircraft even in countries where the new model C-130J and (in some cases) the C-17A are already in service, with their aircraft augmenting and complementing the older US types as it will do with Britain’s Royal Air Force.

Though the company is careful not to talk



about individual potential customers, it is clear that it is hopeful of attracting interest in Qatar (which operates both types), Saudi Arabia (where the C-130J is on order and a C-17 order is widely expected) and in the UAE (already a C-17 operator).

But, despite its focus on getting the A400M into service, Airbus Military is not neglecting the light and medium transport aircraft that have, hitherto, provided its bread and butter.

In the last year, orders from the MENA region have included three additional C295s for Egypt and eight C295s for the Royal Air Force of Oman (including four in MPA configuration).

The latter included the 100th C295 aircraft, which was scheduled for official handover to the Royal Air Force of Oman (RAFO) – initially for training in Spain, but whose delivery was ceremonially marked on June 19, during the Paris Air Salon at Le Bourget Airport, where Airbus Military

president and CEO Domingo Ureña-Raso was joined by the RAFO commander, Air Vice Marshal Matar bin Ali bin Matar al-Obaidani and by the Omani minister responsible for defence affairs, HE Sayyid Badr bin Saood Al Busaidi.

Airbus Military is continuing to develop the C295 for the export market and, before Paris, Angel Barrio Cardaba, the company's head of engineering and technology, unveiled a new variant, the C295W, which combines an existing enhanced performance package (giving a higher powerplant rating) with newly designed winglets.

Flight trials

Design of the C295W began in May 2013 and will be frozen in September, leading to flight trials from January 2014 and certification in May.

The company has also completed carriage and release trials of the Marte air-to-surface missile,

and is evaluating different weapons options for the so-called C295 Gunner.

The company is even improving and upgrading the C212, having launched the NC212i in association with Indonesia's PDTI. This will feature a new EFIS cockpit, and increased seating capacity to 28!

There are also hopes of new orders for the A330 MRTT tanker, following the revelation that the type has "recently" been demonstrated to the Algerian Air Force, flying with Sukhoi Su-30 receivers.

It is now in service with the Royal Saudi Air Force and is undergoing clearance with large receivers in the UAE, with the clearance of the F-16 expected imminently.

Following issues with the original refuelling drogues, the RAF has switched to Sargent Fletcher (SFI) drogues for its A330 MRTT Voyager tankers, and the UAE is following, with the Saudis expected to switch to the SFI drogue subsequently.



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YEMEN AIR FORCE STANDS UNITED

The Republic of Yemen came into being on May 22 1990 when North Yemen (the Yemen Arab Republic) and South Yemen (the People's Democratic Republic of Yemen) finally united after decades of conflict and tension. Separate armed forces were unified, resulting in the formation of the Republic of Yemen Air Force.

Jon Lake looks at where the air power now stands.

North Yemen had been independent since the effective collapse of the Ottoman Empire in 1918, initially as a monarchy (the Mutawakkilite Kingdom of Yemen) but becoming a Nasserite Arab nationalist republic in 1962.

The Yemen Arab Republic Air Force was originally equipped with Soviet-supplied MiGs, subsequently receiving F-5As and F-5Es from Saudi Arabia in the 1970s, as well as a pair of C-130 Hercules transports.

South Yemen came into being in 1967, when the British withdrew from Aden, with the new state becoming known as the People's Democratic Republic of Yemen. Its air force was originally equipped with British-supplied de Havilland Canada DHC-2 Beavers, BAC Jet Provosts Mk 52s and Strikemaster Mk 81s, and some Westland/Bell 47 Sioux helicopters.

South Yemen soon shifted away from Britain and, from 1971, started to take delivery of new equipment from the Soviet Union and Eastern bloc, including MiG-21F-13s, Su-20Ms, Il-28 bombers, and Mi-4 helicopters.

After the 1990 unification, the Republic of Yemen Air Force operated a mix of inherited aircraft from both air arms, some of which remain in service today, including the ex-Saudi F-5E Tigers and F-5B Freedom Fighters inherited in 1971.

The former North Yemeni air arm formed the bulk of the new air force, much of which is based at Sana'a International Airport (the old North Yemeni capital).

Continued
on Page 42



A Yemen MiG 21 was listed among casualties of internal uprisings.

CONTINUED FROM PAGE 43

Aden (former capital of the south) accommodates only a small helicopter detachment.

The new national markings are based on the old North Yemeni brand, consisting of a black, white and red roundel and fin flash, albeit without the small green star used by North Yemen. This insignia dates from the Egyptian-led United Arab Republic, which saw similar markings adopted by Egypt and Syria.

The new air arm has also procured new aircraft, largely from Russia and other states from or allied to the former Soviet Union, though in recent years some assistance has also been obtained from the USA, which has been keen to bolster a valuable ally in the fight against Al Qaeda.

Training element

And the Republic of Yemen Air Force training element was largely provided by Czechoslovakia, with 12 Zlin 242s for elementary training and 24 L-39C Albatross trainers for basic and advanced training.

Twelve of these were directly delivered by Aero Vodochody in 1999 but 12 more delivered during 2005 were refurbished and overhauled ex-Ukrainian Air Force examples.

Though the fighter force still includes ageing F-5Es and MiG-21s, the backbone is provided by at least 20 Mikoyan MiG-29 'Fulcrum' fighters, some of which have been upgraded to MiG-29SMT standards, with enhanced avionics and in-flight refuelling probes. However, the air force lacks an organic tanker capability.

Delivery of the first of six MiG-29SMTs and two MiG-29UBT trainers began in 2004 and, at the end of August 2006, it was announced that Yemen had signed a letter of intent covering the supply of an additional 32 MiG-29SMT aircraft at a cost of around USD1.3 billion. In the first quarter of 2007 34 MiG-29SMTs were officially ordered from Russia.

The MiG-29SMTs have a robust air-to-ground capability with free-fall bombs and Kh-29 (AS-14 Kedge) air-to-surface missiles.

However, they are primarily tasked with air defence, using R-27 (AA-10 Alamo) and R-73 (AA-11 Archer) air-to-air missiles.

It is not clear whether newer active radar homing R-77 (AA-12 Adder) AAMs have been supplied.

Sukhoi Su-20/22 'Fitters' augment the MiG-29s in the air-to-surface role.

The ageing transport fleet of Antonov An-12, An-24, An-26, Ilyushin Il-76 and Lockheed C-130 Hercules is now being modernised with the addition of the first CASA CN-235-300 for the Republic of Yemen Air Force in February 2012.

The helicopter fleet consists of Russian-supplied Kamov Ka-27/28s and Mil Mi-8s, Mi-14s, Mi-17s, Mi-24/35s and Mi-171Sh helicopters, with a handful of western-supplied Bell 206s and Bell 212/214s, and with persistent reports that the air force is operating Bell or Agusta-Bell 412s.

The air force has also taken delivery of four UH-1H-II Super Hueys, upgraded at Fort Worth Alliance Airport and supplied as part of a support package provided by the US Government to help

Yemen in its fight against Al-Qaeda in the Arabian Peninsula (AQAP).

The Republic of Yemen Air Force maintains a high state of operational readiness and has exercised with various coalition air arms in recent years. It has also gained significant operational experience, not least during the Sadah War (also known as the Houthi rebellion, a Shia insurgency in Northern Yemen), when Saudi and US air forces were also involved.

On November 8 2009 three fighters (a MiG-21 and two Sukhois) were lost, the Government blaming technical problems, while the rebels claimed to have shot them down with man-portable air-defense systems (MANPADS).

Terrorist bases

The Republic of Yemen Air Force has also been involved in attacks against terrorist bases throughout Yemen as part of the campaign against AQAP, though US Predator drones have borne the brunt of this effort.

In September 2011 the Air Force undertook missions against forces opposing the Saleh Government during the Yemeni uprising, losing a Su-22 to ground fire in the process.

On October 30 2011, rebel forces attacked the al-Daylami air base near Sana'a destroying two or three fighters (including at least one MiG-29) on the ground.

The aircraft were fully armed, ready to mount a major offensive the following day.

Major efforts continue to improve the combat effectiveness of the Republic of Yemen Air Force and further re-equipment seems likely.



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disaster recovery transport and immigration & security assistance.

The fleet they operate for air ambulances are vary from executive to large long distant jet.

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MODEL – HAWKER 900XP

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Europe's annual major business aviation event, EBACE, is always popular with Middle East owners and operators. **Alan Peaford** was there to see what caught their eye.

On the ball



Bombardier takes up a new Challenger

Bombardier was under the spotlight at Geneva as it revealed a new member of the Challenger family – the Challenger 350 – in partnership with fractional ownership giant NetJets.

“The Challenger 350 jet will take our existing Challenger family to new heights,” said Steve Ridolfi, president of Bombardier Business Aircraft.

“Passengers will experience improved comfort levels as they relax in the completely new cabin, enjoy a purpose-built and intuitive cabin management system and increase their efficiency with superior performance, and all at best-in-class operating costs,” he said.

The 10-seat business jet will be produced alongside the 10-year-old Challenger 300, the best selling super midsize type on the market, with deliveries fast approaching 400.

When it enters service in 2014, the Challenger 350 will be pitched against Dassault's recently certificated Falcon 2000S, Gulfstream's G280 and the Cessna Citation Longitude, which is also currently under development.

The new Challenger will offer increased performance from the new twin Honeywell HTF7350 engines, each producing 7,323lbf (32.57kN) of thrust and reduced emissions, and increased aerodynamic efficiency, with its new canted winglets. It will fly eight passengers 3,200nm (5,926km) and boasts an impressive direct climb to 43,000ft (13,106 metres).

This is the latest engine in Honeywell's successful HTF7000 series, which has now passed more than 1.5 million flight hours. Honeywell is also supplying the 36-150 APU, as well as avionics, including the enhanced ground proximity warning system (EGPWS).

The Challenger 350 aircraft's cockpit will feature Rockwell Collins Pro Line 21 Advanced.



Launch for world's first super-versatile jet

Swiss manufacturer Pilatus Aircraft, renowned for its military trainers and single-engine turboprop, took a dramatic new turn as it revealed its new twin-engine jet, the PC-24.

The new jet not only has the ability to use short runways but can also land on unpaved surfaces and will have a cargo door fitted as standard.

Several operators expressed immediate interest because of its capability to bring jet performance for hunting trips, particularly popular in the Gulf region.

The Swiss manufacturer described the new aircraft as “the world's first super-versatile jet”.

The cabin interior will be available in a wide choice of different configurations, ranging from an executive layout with 6-8 passenger seats to a commuter set-up with room for up to 10 passengers, or even combi-versions with ample space for passengers and cargo, right through to special installations for emergency medical flights.

According to the technical specifications, the PC-24 will have a maximum speed of 425kts (787 km/h)

and a maximum range of 1,950nm (3,610km) with four passengers. It will be powered by two Williams FJ44-4A turbines, each producing 15,124kN of thrust.

“The PC-24 is the first business jet to have the ability to use very short runways, paved or unpaved, and a cargo door as standard,” said Pilatus chairman Oscar Schwenk.

“We started asking our PC-12 customers what they would like to see in the next Pilatus aircraft more than 10 years ago,” Schwenk said. “The answers were always the same: further and faster – while retaining the much-appreciated strengths of the PC-12, such as the ability to use very short runways. It was a huge challenge for our development team. We are all the more proud to be able to unveil an aircraft with exactly those qualities today.”

The new jet will be certificated for single-pilot operations. Roll-out is expected in the third quarter of 2014, with first flight before the end of that year. Certification is targeted for 2017.

The list price is expected to be just short of \$9 million.

at EBACE...



< New Legacy hits the heights

Embraer's newest business jet – the Legacy 500 – made its first appearance outside of Brazil when it landed at Geneva airport to participate in EBACE. The aircraft, the first mid-size business jet to operate with full fly-by-wire technology, is the third of the type to join the test programme, which has now passed the 300 hour stage. A fourth aircraft is due to join the programme shortly.

The \$20 million jet landed in Geneva with Embraer Executive Jets president Ernie Edwards, who had joined the aircraft for its trip across the Atlantic from North America, declaring it: "A fantastic flight."

Edwards said: "There were no surprises. We engaged the autopilot for only the second time. It all worked perfectly."

The final leg of the journey from St John Newfoundland to Geneva took six hours, arriving with 25% fuel remaining.

The Legacy 500 is expected to be ready for certification and entry into service by mid-2014. It has a 3,000 mile range and will compete against types such as the Gulfstream 150, the Cessna Sovereign and the Hawker 950XP.

Supersonic changes > as Aerion looks again

Brian Barents, president of supersonic business jet (SSBJ) designer Aerion, said he remains optimistic that the programme is sound, well financed, and realistic.

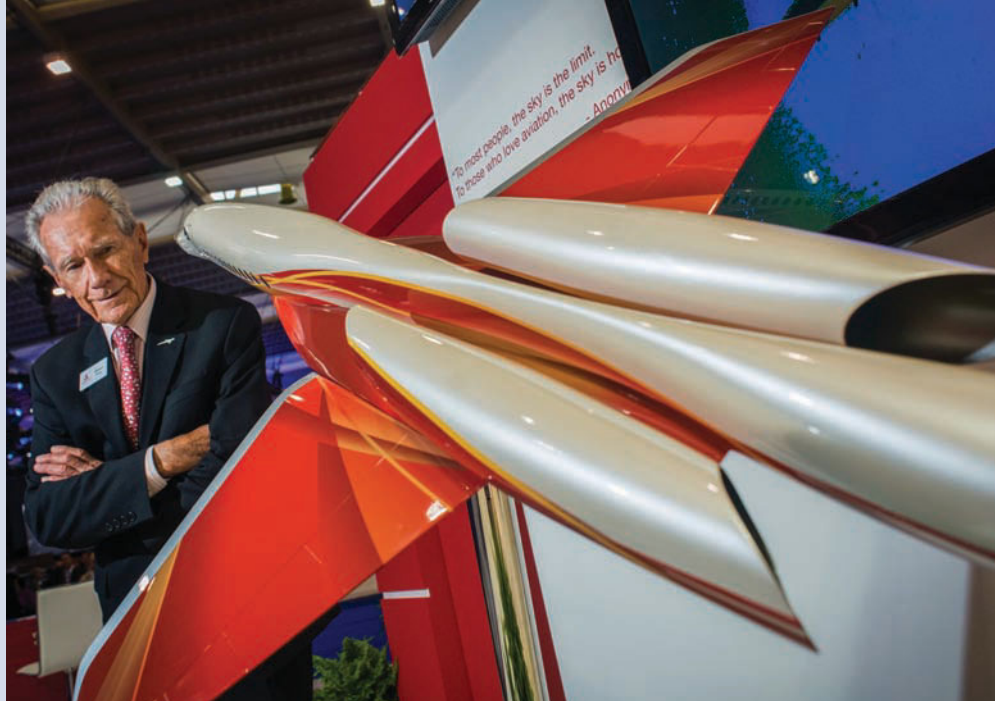
Speaking in Geneva, Barents said the project was well advanced but the company is now looking again at some of the key elements. "We have the time and the opportunity to do this," he said.

Barents revealed Aerion had reopened the engine selection and airframe configuration which, he said, would "pave the way" to a family of jets stretching way beyond the original 12-seat supersonic jet concept.

Existing plans include a supersonic variant of the Pratt & Whitney JT8D-219, but this could be dropped as Aerion meets with engine suppliers General Electric, P&W and Rolls-Royce, revisiting certain concepts. These include a GE F110 derivative, or a clean-sheet supersonic derivative it considered more than a decade ago during the original engine selection process.

According to chief technology officer Richard Tracy, Aerion selected the low-bypass JT8D to power the twinjet because it was already certificated by the US FAA and could reach the Mach 1.6 speed target with few modifications.

But, earlier this year, ICAO published a new standard for Stage 5 noise regulations that would require Aerion to make more costly changes to the JT8D, Tracy said.





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**Eurocopter launches
VIP plan for EC-175**

Eurocopter launched a VIP variant of its developmental EC175 super-medium helicopter at EBACE.

The 175 should receive certification within the next few months with its offshore transport configuration, but said at the show that it will look to bring the executive version to market by the end of 2015.

Eurocopter partnered with Peder Eidsgaard, of Pegasus Design, to develop the interior.

The French manufacturer will offer the new model in two formats – firstly as a 9-12 seat executive model, which the company showed as a full-scale mock-up on its EBACE stand, and then in a more luxurious VIP version with six to eight seats. It will feature 434 cubic feet (12.3 cubic metres) of available space.

Eidsgaard, who has not previously worked on rotorcraft interiors, said: “The helicopter market has not really addressed the VVIP market before and we see this as an opportunity to bring another level of luxury to the market.”



Piaggio revises MRO intervals

Piaggio Aero, the Italian turboprop manufacturer part-owned by Abu Dhabi’s Mubadala, is introducing a reduced-maintenance programme for its Piaggio P180 Avanti II. In its on-going quest to make the already fuel-efficient aircraft even more cost-effective to operate, Piaggio has approved a revised maintenance programme, with extended inspection intervals for C and D checks upped from 1,500 and 3,000 flight hours to 1,800 and 3,600 respectively.

It had earlier reduced the tasks covered by its A check service, making it a “light inspection and servicing” operation, while at the same time extending the compliance interval from 150 to 200 flight hours.

This change, together with the cancellation of the previously required daily check and monthly inspection, represents a reduction of up to 18% in the maintenance man-hours for the aircraft.

The Nextant big thing in MENA...

Nextant Aerospace will be making a push on the Middle East and North African markets after unveiling its next generation 400XT at EBACE.

The company also showed off a new air ambulance configuration – the first of its special missions applications for the re-engineered aircraft type, featuring air ambulance equipment manufactured by Spectrum Aeromed.

Nextant has re-manufactured used Beechjet 400XP aircraft to create a new zero-houred, faster and lower-cost business jet. The 400XT is said to have the performance, range and comfort of competitive aircraft but at half the purchase price and with significantly lower operating costs.

According to Nextant, the aircraft is supported by a full factory warranty, factory engineering support, a global network of owned and authorised service centres and an

international parts distribution infrastructure.

“We’ve had tremendous initial success, delivering 26 aircraft to six countries in our first 18 months of production,” said Sean McGeough, Nextant’s president.

“We’ve gained EASA certification and delivered three aircraft to European customers and have been looking forward to the launch of our next generation model at EBACE. We’re announcing significant innovations to the cabin and cockpit, creating the ideal environment for both work and relaxation.”

The Nextant 400XT features Williams FJ44-3AP engines and the Rockwell Collins Pro Line 21 integrated avionics suite. It has major aerodynamic enhancements and an improved engine-mounting configuration, with redesigned nacelles and pylons.



Jet Aviation’s BBJ3 makes show debut



One aircraft on display at Geneva certainly caught the attention of the Middle Eastern visitors and operators. It was the first time a Boeing Business Jets BBJ 3 had been put on display.

The aircraft, based on the 737-900ER, was presented with an interior from Jet Aviation, well known in the Middle East through its operations in Saudi Arabia and the UAE.

The custom-built interior was created at Jet Aviation’s Basel, Switzerland, base.

The exterior was green – leading to confirmation that it was available for sale at the show and ready for a livery to be selected by a new owner.

The range of the BBJ 3 exceeds that of other business jets in its class. It can fly 4,900 nautical miles – more than 1,500 nautical miles (three hours) further than its direct competitor.

“The BBJ 3 range advantage is the reason why it has outsold its direct competitor by seven-to-one,” said Captain Steve Taylor, president, Boeing Business Jets. “Our customers demand planes with great performance, enabling them to conduct business around the world.”

The BBJ 3 also features lower cabin altitude, pressurising the cabin at 6,500ft against the 8,000ft of other business jets. This allows BBJ passengers to arrive at their destination relaxed and refreshed without feeling jet lagged.

The cabin interior is finished in a bright, high-gloss sycamore wood, with hand-crafted marquetry woodwork integrated in the entrance panel. It features a large main lounge and a smaller area for staff, a dining room and a bedroom suite with a queen-sized bed and bathroom with a shower.

Dubai duo go to ground

Dubai-based flight support specialist Hadid International Services has launched a partnership with Saudi Arabia’s Wallan Aviation to offer ground handling for business aircraft across Saudi Arabia.

The two companies finalised the deal at EBACE.

King Khaled Airport in Riyadh will become the first physical sign of the new partnership, with the joint Hadid/Wallan team providing both airside and groundside support including fuelling, ground transportation and hotel reservations.

MEBAA bonus for training

A new deal between Emirates-CAE Flight Training (ECFT) and the Middle East Business Aviation Association (MEBAA) was announced at EBACE.

The new service package, to be offered exclusively to MEBAA members companies, will be known as the MEBAA-Total Training Service.

It is open to member companies signing the CAE contract for a period of three years, and will make them be eligible for: free e-learning courses each year (21 courses available to date); free updates on training manuals released at ECFT upon request; free safety and emergency procedure training (SEP); free remedial sessions (up to two sessions per pilot per year); and free use of a simulator under supervision of a CAE instructor for interview (eight hours per year per company).

ACJ special care

Airbus used EBACE to introduce a new corporate jet customer care centre (C4you) for its private jet customers, aimed at providing dedicated access to an experienced team co-located within the Airbus Airtac Centre in Toulouse, and complemented by field service representatives in the Middle East.

Customers will be able to get technical advice on both their airframe and their cabin through a single point of contact, and will also be able to benefit from packaged services, such as arrangements to implement service bulletins (SBs).

XJet switches to Dubai

US-based private aviation service provider, XJet, announced at EBACE that it is to move its headquarters to Dubai and develop a new luxury FBO at Dubai World Central. Under an agreement signed with DWC, the aviation city will build a world-class terminal for XJet at the new airport.



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ERNEST'S ENIGMA

Alan Dron visits Embraer's new assembly facility in Melbourne, Florida and reports that, with Phenom production at the plant expected to be close to 60 aircraft next year, the company is in buoyant mood.

Ernest Edwards is a puzzled man. Despite the rumbling crisis in the Eurozone, the global economy is generally on the up. There have never been more rich people in the world than there are today. Bank financing for aircraft purchases is improving. The supply of good quality, relatively young, pre-owned executive jets is declining, which should mean an upturn in demand for new business jets.

So why, wonders the president of Embraer Executive Jets, are people still not buying?

There are, of course, exceptions to this rule and it will come as little surprise that the Middle East is bucking that trend. Embraer itself is doing well. But globally, buyers are not beating a path to the doors of business jet manufacturers.

"There still seems to be a lack of confidence," said Edwards. "That puzzles us."

"US corporate profits are at an all-time high, \$2.2 trillion in Q4 2012. There are now 11 million high-net-worth individuals [those fortunate people who have a minimum of \$1 million available for investment] around the globe.

"Frankly, there are enough customers for all of us."

Continued
on Page 52



'There still seems to be a lack of confidence. That puzzles us.'

ERNEST EDWARDS

CONTINUED FROM PAGE 51

Reluctance to invest in new business jets is holding back the sector's recovery. Europe is still stumbling along, but even here the economic predictions are for a gradual recovery over the next few years, said Edwards. Elsewhere, economies are strong.

President Obama's criticism some years ago of the US business community's use of private aircraft was "not helpful", he admitted, but he also believed that the community was now inured to such comments.

However, he believed that pent-up demand would start to show itself.

"Buying patterns at Fortune 1000 companies are on hold. I know some of those companies have mandates that their business jets can't be more than a certain number of years old. What I think is going to occur is that, as the economy picks up in North America, we will see a resurgence of corporate flight departments replacing old aircraft."

Some economies are not waiting. In his review of the business jet marketplace, Edwards noted that Embraer Executive Jets had moved its vice-president, EMEA, Colin Steven from Farnborough in the UK to Dubai, to be closer to potential and current customers.

"We're keeping a very close eye on Turkey," he noted, adding that Embraer saw great potential in Africa. Embraer's 2013-22 business forecast predicted that EMEA would take 29% of business jet sales, second only to North America.

Steady flow

Edwards was speaking at Embraer's new assembly facility at Melbourne, Florida, where a steady flow of Phenom 100 and 300 entry-level and light jets is now established.

In 2012, the first full year of production, 21 Phenom 100s were produced. This year, it will be 32, with the larger 300 model making up around two-thirds of that number. The first US-assembled Phenom 300 is being used as a demonstrator; the second, the first to be handed over to a customer, was delivered at the end of March.

Next year, Phenom production at Melbourne will be close to 60 aircraft. Also on site is Embraer's new Global Customer Center, where purchasers of Legacy and Lineage models – and, frequently, their wives – come to choose their aircraft's interior 'look', from literally hundreds of combinations of seat leathers, carpets and trim panels.

An engineering and technology centre that will employ 200 engineers is under construction next door.

This is all part of the equation that has seen Embraer's share of the worldwide business jet market rise from 3.5% in 2007 to 15% in 2012 in terms of unit volume, and from 4.6% to 7.3% in terms of revenue volume over the same period.

Middle East owners are helping drive that expansion, particularly in revenue terms, as they tend to favour the larger, more expensive executive jets.



Why the joint is jumping in Jacksonville

A few hours' drive north of Embraer's Melbourne facility, the Brazilian airframer in March officially opened the 40,000sqft hangar at Jacksonville International Airport, where it plans to assemble the A-29 Super Tucano for the US Air Force's Light Air Support contract.

Despite continuing efforts by losing contender Beechcraft to halt the contract, Embraer and its US prime contractor, Sierra Nevada Corporation, were, as Arabian Aerospace went to press, pressing ahead rapidly with the aim of getting industrial processes under way by the end of this year and delivering the first of the 20 Super Tucanos by the end of June 2014, if not sooner.

The aircraft are destined for the Afghan Air Force, with the possibility of up to 50 eventually being procured by the US Air Force for onward transmission to other friendly air arms around the globe.

As with the Phenoms at Melbourne, Embraer will ship the fuselage, wings and empennage from Brazil for assembly in Florida. The area around Jacksonville has a labour pool with a military background following the closure of the nearby Cecil Field Naval Air Station in 1999.

Indeed, one of the most striking statistics deployed by Edwards was that, of 12 Lineage 1000 ultra-large business jets (the model is based on the Embraer 190 regional jet) that the company has sold worldwide, no fewer than five have gone to the MENA region, to customers in Morocco, Kuwait and the UAE.

"The critical mission for Middle East aircraft is Dubai – London," noted Edwards. "Both the Lineage and the Legacy 650 meet that mission. And the Lineage 1000 has enormous luggage space; it will hold 19 people very comfortably. That's not an untypical entourage for a Middle East owner. And it will take all the luggage that people from that part of the world tend to bring with them."

Edwards added that 34 Legacies had also been sold in the Middle East to date. And the type appears in the region's skies even more frequently than that number would indicate, as a further 35 have been sold in Russia "and a lot of Russians are taking their business jets down to the Middle East, particularly the UAE".

But selling executive jets is not just about range and payload. Embraer's staff have to be aware of cultural differences between different regions.

Some cultures, for example, take off their shoes on entering a business aircraft, in the same way as they would when entering a house. This affects the interiors that the Brazilian manufacturer can offer. It enables it to suggest lighter colours for carpeting, for example, as it will be unlikely to get as dirty as carpet in aircraft in which passengers wear their outdoor footwear.



Left: Fuselages, wings and empennages are shipped to Embraer's Melbourne, Florida facility for assembly. Centre: The size of the Lineage 1000 ultra-large business jet appeals to Middle Eastern buyers.

Right: Painting the Phenoms produced in Florida is carried out in a purpose-built facility whose temperature can be raised to 140 degrees to bake successive coats.

Embraer also knows that different regions like different cabin colour schemes: “The Middle East is more into what I call the very strong look,” said Riba Talib, senior manager, interior design at Melbourne.

Whereas western customers (or their wives) tend to choose either muted, relatively bland shades or more monochromatic colour schemes (‘the Versace look’, as Talib and her boss, Jay Beaver, vice-president, interior design put it), Middle East customers break from this pattern.

“They like a lot of colours such as green, red and blue, as well as a lot of gilts,” said Talib. “They don’t like colours such as cream. They consider that boring.”

“They also like to have something that nobody else has. They want to be unique. They like to have silk in their carpets: the minimum is a 50-50 mix with wool.” Specially-engraved surfaces are another way in which Middle East owners like to make their mark on their aircraft’s décor.

That quest for something unique can sometimes become a matter for wonderment. “One customer wanted the aircraft’s interior doors covered in lapis lazuli,” recalled Beaver. “To do that, the manufacturer took a veneer of the stone and, because the door wasn’t a flat surface, gently cracked it, then filled in the cracks with dust from the rock and bound the facets together, so that it looked like a curved slab.”

Leaving aside lapis lazuli, another type of rock is appearing increasingly commonly on Embraer’s executive jets. This time, its use is

more practical, in the form of a granite floor in the galley area. At just a 1.5mm veneer on an aluminium honeycomb base, it adds less weight than you might initially think.

“It’s been a huge enabler for high-end customers,” said Beaver. “People want to clear up spills in the galley easily. The other option is [replacing] perhaps a \$30,000 piece of carpet that has had red wine or grease spilled on it.” But even granite is not indestructible. That veneer has to undergo testing to ensure that it can stand up to one of the most severe tests of any surface – the pressure that is inflicted by a woman’s stiletto heel.

Frequent sight

With the latest member of the Legacy family – the 500 – due to start deliveries next year, Embraer seems likely to become an increasingly frequent sight on Middle East airport aprons.

Given that in the Arabian market ‘size matters’, the smaller Phenom range is less likely to appeal in the Gulf, but is already showing signs of doing well in nearby regions. The typical owner of the \$4 million, entry-level Phenom 100 is either an owner-operator individual, or a retired CEO or chairman with disposable income.

While this category is enthusiastic at the thought of owning or piloting their own jet, their plans are also more susceptible to being blown off-course by either stock market dips or geo-political events. When Syria shot down a Turkish RF-4E Phantom reconnaissance jet off the Syrian coast in June 2012, “Two Phenom 100 customers in Turkey,

who were about to sign contracts, stopped in their tracks,” said Edwards by way of illustration.

“If you go up the food chain [to larger organisations] they become less sensitive to these sorts of events,” he added.

Since Embraer announced the first Legacy executive jet (based on the Embraer ERJ-135 regional jet) in 2000, its range has expanded from the latest mid-light, 2300nm range Legacy 450, an interior mock-up of which is located at Melbourne, to the large 14-passenger Legacy 650.

In fact, the only market category of executive jet not currently covered by Embraer is the ultra long-range class. Edwards declined to say whether the company planned to fill that gap, but hinted that it eventually would. However, he did not believe a shrunk ‘Lineage 800’ would emerge to fit the bill: “You couldn’t get ultra-long range out of an E-Jet platform.”

Then, there was what he called ‘the elephant in the room’, the fact that Beechcraft, newly out of Chapter 11 proceedings, has dropped the Hawker product, including the Hawker 4000 super-midsize jet. “That’s an opportunity we hadn’t seen when we launched the Legacy 450 and 500.

“There will be a lot of Hawker owners wondering what they do with their aircraft and what they move into.”

He and his team hope that many will shift allegiance to the Legacy 450/500 – further adding to Embraer’s growing presence in the executive jet market.

Swiss enjoying their role in Vertis

While relative newcomer Vertis Aviation looks forward to adding three new aircraft to its fleet in 2013, partner Luca Madone insists that the company will not exceed 10 aircraft. Marcelle Nethersole reports.

The 28 East Group is an independent aviation company specialising in air charter, consultancy, aircraft acquisition, sales services and fuel provision.

In January 2012 the Swiss company, led by partners Luca Madone, Jeffrey Emmenis and Erica Da Veiga, purchased air charter company Vertis Aviation outright from private jet company Glaronia Aviation.

Since then, Vertis Aviation has offered four aircraft for charter – a Bombardier Global XRS; a Bombardier Global Express (since June), a Dassault Falcon 7X, and an Airbus Corporate Jet (ACJ).

“We focus specifically on selecting jets for charter that can provide ultra-long range services,” said Madone. “Notably the Global Express, operated by German-based K5, was given extended-range twin-engine operational performance standards (ETOPS) 180 status last November. This confirmed that each of the aircraft we market can now offer extended distance performance, so enabling us to present a broader range of global destinations to our clients.”

Client base

While the company boasts clients in Europe, Africa and the CIS states, Vertis has a strong client base in the Middle East – in particular in Saudi Arabia, Qatar and the UAE.

Madone points out its Middle Eastern customers tend to like the ACJ aircraft in particular.

“The ACJ represents the ultimate in comfort and luxury and has a custom interior designed by world-renowned Alberto Pinto. It pairs cities such as Abu Dhabi and London, Geneva and New York,” said Madone.

The company already has plans to add a further three aircraft to its portfolio in 2013, with two due as *Arabian Aerospace* was going to press.

The Airbus A319 Corporate Jet and the Bombardier Global XRS will be exclusively marketed and available for charter through Vertis Aviation AG from August 1 2013. The aircraft, which are based at Moscow’s Vnukovo Airport, will strengthen the company’s Russian client base.

But Madone also points out there is a limit to the fleet.

He said: “I think once we have reached 10 aircraft we will draw a line. We are a new company that is growing very nicely. We’re an active company and want to stay active. In order to do that we don’t want to lose control with too many aircraft. We still focus on the original concepts and values, which aim to really learn about the client’s requirements and fulfil them each time. We want to stay close to our clients.”

Vertis privileged services now include on-board chefs, sommeliers and butlers.

Operating in partnership

Madone, who has completed his commercial pilot training and holds an instrument rating (IFR), and his business partners have a lot of fingers in pies at 28 East Group. In December 2012 the company launched iFuel, a new aviation fuel and associated services provider operating in partnership with fuel supplier Jet Aero Fuels, and charter broker Open Aero.

“Together we offer competitively priced fuel and ground handling services. Currently we are focusing on the CIS region, where iFuel is already offering services at most of the CIS airports,” said Madone.

To add to this, the company’s latest technology project is to market and promote Sky Dragon, a Hong Kong-based venture between the group and financier Matthias Karl.

“As an iPad app, Sky Dragon serves as a project management tool, which enables completion managers to share project progress directly with their clients,” explained Modena.

“Through an innovative use of app technology, those working on the completion project can upload progress reports such as documents, photographs and videos, enabling the aircraft owner to keep up to date, anywhere in the world during an aircraft green completion or refurbishment project.”

The Sky Dragon app is available directly from the Apple Store or it can be pre-loaded on to an iPad by completion managers.

Three of a kind: Jeffrey Emmenis, Erica da Veiga, and Luca Madone – all partners in Vertis Aviation.

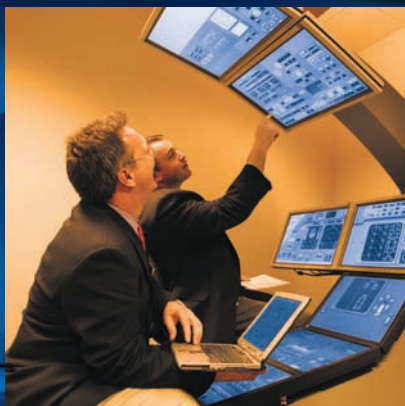


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SPHERE FEAR

Growing industry must be wary of a space jam

The 2013 Global Space and Satellite Forum was held at the Ritz Carlton Hotel in Abu Dhabi. Steve Nichols was there.

Attracting experts from across 30 countries, the Global Space and Satellite Forum looked at the blossoming space industry in the Middle East and how satellites have an important role to play in terms of Earth observation and communication.

Delegates were welcomed by Dr Mohammed Al Ahababi, CIO and ICT advisor for the UAE Armed Forces.

He said the global space industry was now worth around \$300 billion a year, posting 12% growth in 2012. In the MENA region he added that the UAE recognised the importance of space for its knowledge-based economy, citing the success of Yahsat in Abu Dhabi and Thuraya and EIAST (DubaiSat) in Dubai.

Wheels have been set in motion to try to develop and implement a federal Emirati space agency, he confirmed.

The forum's inaugural address was given by HH Prince Dr Turki Saud Mohammed Al-Saud, vice president for research institutes at King Abdulaziz City for Science and Technology (KACST).

He said that "while oil has been good to us" Saudi Arabia had looked to diversify to a technology-based economy, adding that the kingdom now contributed 25% of its annual budget to education, had around a million students and 90% of high school graduates go on to a college education.

Saudi Arabia also invests heavily in science and technology, now setting aside a budget of around \$4.4 billion a year to help the kingdom achieve its



Key speakers: Frank Rose and HH Prince Dr Turki Saud Mohammed Al-Saud.

goal of becoming one of the leading technological nations in the world.

“We have so far launched 12 satellites,” Prince Turki said. “And we now have a strategic plan to help us develop further and join the world’s leading countries in advanced scientific and technological achievement.”

Frank Rose, US deputy assistant secretary for space and defense policy, said he was pleased to see the UAE joining around 60 nations that owned or operated satellites with the on-going launches of both the Yahsat and DubaiSat spacecraft.

Rose added: “The space industry makes a direct contribution of around \$67.6 billion a year to the US economy and the Government has invested at least \$43 million in the global positioning satellite (GPS) system.”

But he had a word of warning – increasing orbital congestion could bring problems in the future if it was not controlled.

“The US Department of Defense now tracks around 22,000 objects in space, including 1,100 active satellites. The RF spectrum is also getting increasingly congested, which can lead to interference if not carefully managed,” he said.

“The threat of space debris and its consequences to the industry must also be confronted.

“It is a serious challenge that can only be addressed through international cooperation.”

Rose cited one event – the 22,000mph collision in 2009 between the 689kg Iridium 33 satellite and the 900kg Russian Cosmos 2251 satellite,

‘The threat of space debris and its consequences to the industry must be confronted.’

FRANK ROSE

which resulted in thousands of pieces of space debris being created, all with the potential for causing future problems.

Rose pointed out that an international code of conduct was being drawn up with the EU for a long-term commitment to reducing space debris and preserving the space environment.

Sessions throughout the rest of the day looked at satellite-based information and services and their economic impact, emergency response using Earth observation data and how having a space policy could benefit countries like the UAE.

After a networking lunch, delegates had the opportunity of visiting the offices of Abu Dhabi-based Yahsat for a behind-the-scenes look at the major satellite and telecommunications provider.

Day two focused on local satellite operators, how small and effective satellites can be used and how satellite imagery has many applications.

Yahsat and Thuraya, both UAE-based satellite

companies, are leading their fields, but in different market areas, the GSSF heard.

Abu Dhabi-based Yahsat demonstrated how its two Ka-band satellites were satisfying demand for increased bandwidth, for government, military and commercial customers, while Sharjah-based Thuraya was best known for its hand-held satellite telephony services via two geostationary satellites – one based over Kenya and the other over Singapore.

In a session on small satellites, SSTL, Boeing and SpaceX showed how new technologies are driving down the size and cost of launching effective spacecraft.

Steve Young, marketing director of UK-based SSTL, showed that it is now possible to build an effective Earth observation satellite that could fit on a coffee table.

The company, which has its routes as a spin-off from the University of Surrey, has been building small satellites since the 1980s.

Now majority-owned by EADS-Astrium and with around 550 staff, SSTL first pioneered commercial off-the-shelf (COTS) satellite technology, taking standard consumer products, such as used in personal computers, and adapting them to the space environment.

SSTL has now delivered 40 satellites into orbit with many more in the pipeline.

The company has a wide range of customers. Its satellites cover both technology demonstration, such as the STRaND-1 satellite – launched earlier this year and which uses

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CONTINUED FROM PAGE 57

mobile phone technology – to Earth monitoring with the RapidEye family of satellites, launched from Baikonur in 2008.

The RapidEye system enables global monitoring of the Earth's surface, providing the rapid delivery of land information products and services to the agricultural industry for crop monitoring and mapping, yield predictions and natural disaster assessment.

"SSTL has been able to develop international leadership in small satellite constellations, such as the disaster monitoring constellation (DMC), with key export markets to both established and emerging space nations worldwide," said Young. "All 22 payloads for the Galileo full operational capability (FOC) satellites are being manufactured by us in the UK."

At the same time Boeing, not usually known for building tiny satellites, has now developed an all-electric satellite that can manoeuvre itself into the final orbital position using efficient plasma thrusters.

Launch costs

Steve O'Neill, Boeing president, satellite systems, said this effectively reduced the mass of the satellite, which brought down the launch costs and, therefore, the overall insurance premiums.

"Boeing currently has 20 satellites using electro-propulsion for station keeping but this next step is game-changing," he said. "In five to eight years' time all-electric satellite propulsion will be commonplace."

All-electric satellites use xenon gas, which is ionised and then propelled, using high voltages, out of the back of the spacecraft. A satellite can carry enough xenon for 15-20 years.

It can take up to six months for an electrically-propelled satellite to reach its final orbital position, but they can be built faster, so the overall timeframe can be similar to that of getting a rocket-powered spacecraft to orbit, O'Neill said.

The GSSF also heard from SpaceX's Christophe Bauer. The company is pioneering commercial access to space. It says it will be able to deliver a 5.3tonne geostationary satellite to orbit for \$60 million by 2016.

"We are also working on a reusable first stage that could bring that down to \$40 million," said Bauer. He showed a video of its Grasshopper launcher being tested, which could form the first stage of its Falcon 9 rocket.

The footage showed the rocket take off, rise and then land again perfectly, exactly where it took off. The idea is that the first stage launcher could be recovered and used again, without it being dropped in the sea – which effectively wrecks it.

"When introduced this could take a 2.3tonne spacecraft to geostationary orbit, or a 5 tonne satellite to low-Earth orbit, for \$40 million," he said. "We are the only company that states our launch prices on our web site – what you see is what you pay," he concluded.

The next Global Space and Satellite Forum is planned for Abu Dhabi in May 2015.

DubaiSat-2 to launch late this year

The Emirates Institution for Advanced Science and Technology (EIAST) has confirmed that DubaiSat-2 will launch in the fourth quarter of 2013.

Salem Al Marri, assistant director general, EIAST, said that Dubai's second Earth observation satellite now has a launch slot and will be lofted aboard a Dnepr LV vehicle, provided by Russia's Kosmotras.

The satellite will orbit 600km above the Earth's surface, compared with the 690km orbit of DubaiSat-1.

The orbit has also been changed from an ascending orbit (south to north) to a descending orbit (north to south), which will allow both satellites to work well in constellation as well as give better coverage of the UAE area.

Among other improvements, the UAE team, along with their South Korean partners (Satrec Initiative), have designed the satellite to produce higher quality images at one-metre resolution, which can serve various applications including environmental projects, urban planning, infrastructure, telecommunications and electricity projects.

Al Marri said that EIAST's goal is to empower Dubai's scientists and engineers. To this end it also recently announced plans for DubaiSat-3, which will initially be designed in conjunction with Satrec Initiative, but will then be wholly built in the UAE.

EIAST is now working on clean room facilities that will enable it to build the new satellite.

"We are not focused on making money from its imagery necessarily, but in using the satellite to develop new technologies in the country and to

engage our next generation of scientists and aerospace engineers," Al Marri said.

Meanwhile, DubaiSat-1's imagery is being used both in the UAE and internationally. EIAST's Omran Anwar Sharaf said that DubaiSat-1 imagery had been used to study the effects of the so-called 'red tide' in the region – the algal bloom that has caused problems in the Gulf, threatening the quality of the beaches in the area and the water used by desalination plants.

"We want to educate people and spread awareness of how the images can be used in decision making," Sharaf said.

Sarah Amiri, EIAST's head of research and development, added that space technology ticks all the right boxes in terms of developing the "intellectual capital of the country".

She said that it is, perhaps, time for the UAE to have its own Emirates-wide space policy and even a unified space agency.



Riyadh chosen for new Arabsat HQ

Arabsat, the Arab satellite communications organisation, has signed a contract to build its new headquarters in the diplomatic quarter in Riyadh.

The new building will be constructed on land provided by the Government of the Kingdom of Saudi Arabia and covers an area of nearly 14,000sqm.

Khalid bin Ahmed Balkhyour, president and CEO of Arabsat, said: "This project has been in collaboration with the High Commission for Development of Riyadh, where His Royal Highness the Prince of Riyadh issued his consent.

"Al-Bawani will build the Arabsat headquarters within 30 months and the Riyadh Principality will handle the supervision of the design and implementation of the building after an international competition in which more than 25 local and global designers

participated."

Mohammed bin Abdulaziz Al-Tuwajiri, chairman of Al-Bawani said: "We thank Arabsat for providing the opportunity and putting their trust in us."

Arabsat was founded in 1976 by the 21 member-states of the Arab League.

Now one of the world's top satellite operators, it carries more than 400 TV channels and 160 radio stations, reaching tens of millions of homes in more

than 100 countries across the Middle East, Africa, Europe and central Asia.

It operates a growing fleet of satellites at the 20° East, 26° East and 30.5° East geostationary orbital positions.



Khalid bin Ahmed Balkhyour, president and CEO of Arabsat signs the new HQ deal.



Abu Dhabi spaceport could be up and running by 2016

Proposals for a Middle Eastern spaceport have been put forward to both the Virgin Galactic board and financial backer Aabar Investments, according to Steve Landeene, Virgin Galactic's chief advisor, Abu Dhabi spaceport.

"Information has been put together on the possible size and scope of the Abu Dhabi spaceport and that is now making its way up for a leadership decision," Landeene said. He added that it was conceivable MENA-based missions could start one or two years after Virgin launches its commercial activities out of New Mexico, USA.

Virgin Galactic achieved the first powered test flight of its SpaceShipTwo air-dropped rocket plane in May and now expects to carry fee-paying passengers from the USA sometime next year if everything goes to plan.

Landeene said difficult decisions remained about Abu Dhabi – where should the spaceport be; do you go for an existing airport (military or civil), or build from scratch? Also, there is currently no regulatory framework in place for spaceflights from the UAE, plus there are international traffic in arms regulations (ITAR) and missile technology control regime (MTCR) hurdles to be tackled in respect of licensing the rocket technology outside of the US.

"It is really a case of what outcome you want from a spaceport," he said. "It can be a catalyst for economic development, for tourism and/or for education. The activities you decide to engage in have a direct impact on each of those."

Virgin Galactic also announced its LauncherOne

project last year, a new approach to getting satellites into low-Earth orbit. The air-launched LauncherOne rocket would be carried aloft underneath its WhiteKnightTwo mothership before being released. A two-stage rocket engine will then ignite, taking the launcher and its payload on into space. Virgin Galactic said LauncherOne could enter commercial service in 2016 and there is significant interest in the MENA region, as it would be the cheapest way to get a small payload into low-Earth orbit.

"As satellites get ever more miniaturised, with smaller components and greater capabilities, the cost paradigm is coming down. Add cheaper, faster ways to get them to low-Earth orbit and a whole industry for intelligent small satellite constellations opens up," Landeene said.

He added that there were many other good reasons for having a spaceport facility in the UAE. For example, the SpaceShipTwo and WhiteKnightTwo mothership both use a lot of carbon composite technology, which is a good fit with locally based industries, such as Mubadala-owned Strata.

"Once we get to the stage of having regular flights, the vehicle production cycle starts to become important and could become the critical path. You may have a lead-time production of two to two-and-a-half years, so producing the vehicles in multiple locations could become attractive."

Virgin Galactic is also talking with Khalifa University to see how it could integrate its spaceport activities with academia.

UAE satellite companies leading their fields

Abu Dhabi-based Yahsat is demonstrating how its two Ka-band satellites are satisfying demand for increased bandwidth, for government, military and commercial customers.

Meanwhile, Sharjah-based Thuraya is developing innovative solutions for its L-band satellite customers, including a unique interface for the Apple iPhone that turns it into a satphone.

Yahsat's two satellites provide Ka-band communications to its commercial and government users in the Middle East, Africa and South-West Asia.

Thanks to its multi-spot beam technology, the company offers high-speed broadband internet services to private and government/military customers. Its latest satellite, Yahsat Y1B, complements the Y1A satellite launched in 2011, completing the UAE Government's mission of significantly increasing the country's total secure communications capacity over the Middle East.

With a launch mass of approximately 6,000kg and a spacecraft power of 14kW, both satellites have a lifetime design of more than 15 years.

Hisham Fadel, Yahsat director, said that its services to the UAE military, including high-bandwidth applications and secure encryption, are mirrored on the commercial market, including the deployment of satellite-based internet broadband to remote areas.

"The military's first priority is security but with the commercial world costs are paramount," Fadel said.

"One of the most important developments has been our ability to interface our terminals with other systems, such as microwave, fibre and even VHF radio for the military. This has been useful in understanding how to connect our commercial systems with the internet.

"We are very proud of what we have achieved, with 55-60% of our employees being Emiratis," Fadel concluded.

Meanwhile, Sharjah-based Thuraya is best known for its hand-held satellite telephony services via two geostationary satellites – one based over Kenya and the other over Singapore. Signals come down to a Thuraya ground station in Sharjah.

Sanford Jewett, VP marketing, Thuraya, said that traditionally the company had been seen as a Middle Eastern company, but it was now keen to be seen as a global player.

In fact, Thuraya's satellites cover two-thirds of the world's geographical area across more than 140 countries, serving approximately four billion people.

"Our lightweight hand-held satellite phones saw a lot of use by military personnel based in Iraq and Afghanistan and we also have a range of maritime terminals in use," said Jewett.

But it is the company's latest product that is capturing the market's attention. Thuraya's SatSleeve is a small clip-on interface for the Apple iPhone, turning it into a portable satellite phone. The SatSleeve also has a built-in battery pack and connects to the iPhone via Bluetooth.

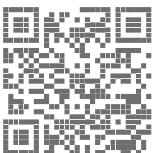
Jewett said: "There are still plenty of parts of the world that don't have GSM mobile phone services so the demand for satellite phones will continue."

He added that Thuraya was busy working on its future plans, including the possibility of a joint venture or partnership for the supply of Ku or Ka services. This may be an economic way forward, rather than launching its own Ku/Ka satellites, which has not been discounted.

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SPECIAL REPORT

FROM AFGHANISTAN

The old adage says that an army marches on its stomach. That is as true today as in the days of the Charge of the Light Brigade. And one freight and logistics company is making sure that the armed forces in Afghanistan are getting their daily rations. Marcelle Nethersole reports from Afghanistan.



MY SUPREME CHALLENGE



The Supreme Group has been providing critical, life-sustaining services to defence, government, and commercial sectors across the globe in challenging environments since its beginning in 1957.

Its current clients include the United Nations (UN), the North Atlantic Treaty Organisation (NATO), and leading military forces, including the US Department of Defense (DoD) and the UK Ministry of Defence (MoD).

Since 2005 the company, which has its Middle East operations hub in Dubai, has been operating in Afghanistan delivering food, water and other supplies to around 250 forward operating bases (FOBs) for up to 130,000 troops. It is the only company to do so.

Its expertise extends to fuel supply and full life-support services for military clients in the country.

Its facilities within Afghanistan include 21 bulk fuel installations; nine food, chilled, frozen and dry goods warehouses with an area of 801,705sqm, 27 dining facilities (DFACs) that serve around 3 million meals per month; and a state-of-the-art water bottling plant with the capacity to produce 8,000 litres of drinking water per hour.

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SPECIAL REPORT

FROM AFGHANISTAN

CONTINUED FROM PAGE 61

Aviation plays a vital role in its missions and it was with a certain trepidation, matched by a fascination about how this logistical challenge is achieved, that I joined Supreme on a two-day trip from its warehouse hub in Sharjah to Camp Bastion and Kandahar in Helmand Province to see how the operation worked.

I was flying to Camp Bastion on a 747-200 loaded with food. Before the 10am departure, work had already been going on throughout the night.

The company operates two warehouses, one of which is a chilled store, alongside the UAE's fourth largest airport.

"We get goods in from all over the world with most of it being fresh fruit and vegetables," said Stuart Peacock, Supreme's Sharjah Airport operations manager. "It's a huge supply chain that is purely for the military. We also fly dry cargo, which literally can be anything from cans of drink, sheets of cling-film, pillows, and piping, but the food produce always takes priority. Any room left over on the aircraft we load with dry cargo to make sure we utilise all the space."

As a lot of the food is chilled or frozen, the importance of keeping it to the right temperature is paramount. The whole process starts with food companies putting temperature loggers on a sample of the tri-wall boxes of packed food. This logger will record the temperature every half-an-hour. Once the produce gets to the other end, the logger is pulled from the box, where a graph is able to indicate the temperature throughout the whole process.

Quality control

Military quality control will reject the cargo at the other end if there is temperature abuse.

"Perishable food-stuff arrives at our chilled facility by trucks from the packing factory in Sharjah," said Peacock. "We have four build stations and the whole idea is that we maintain the cold chain, from arriving on refrigerated trucks, getting built up in a refrigerated environment, then transferal to the aircraft, which is air-conditioned. We fly a lot of chilled and frozen food, such as huge amounts of ice cream, so the last thing we need are troops falling ill due to tampered food."

A 747 will take around 38 pallets, which amounts to around 90 tonnes of food per flight.

Sealed cargo is received each morning and the build-up takes all day, until it is stored overnight ready for flight the next day.

One role of great importance is that of the loadmaster. One shift in load on the aircraft and there could be a catastrophe.

"Once we have finished the build-up in the warehouses, we provide the loadmaster with all the individual weights of the pallets and the overall weight. He will then plan the load order that he wants to put them on the aircraft," explained Peacock. "It is extremely important to get the aircraft in balance and keep it within trim, so the loadmaster needs to make those



Clockwise: The Supreme Group has around 600 trailers on the road at any one time; The company delivers food and water to 250 locations within Afghanistan for up to 130,000 troops; Charlie Szar, SupremeGroup's commercial director, Afghanistan; Once in Afghanistan, food is flown on rotary or fixed-wing aircraft to the various FOBs. Centre picture: Fuel hub.

calculations correctly. He will then give instructions to the ground crew, who will carry out the loading. It takes about an hour-and-a-half to load a 747."

The 24/7 Sharjah operation looks after its Afghanistan mission by serving five hubs; Camp Bastion, Kandahar, Kabul, Tarankowt, and Mazar-e-Sharif. It supports all International Security Assistance Force (ISAF) multinational forces there.

"Most flights depart in the morning to make sure the supply chain at the Afghan end has plenty of time to carry on the delivery," said Peacock. "Most are scheduled flights but we do have one-off charters as well. At the moment we average three or four flights a day."

In 2009 Supreme transitioned from IL-76s to 747s, not only for efficiency sake but also to assist the infrastructure on the airport, as only so many aircraft can be absorbed each day.

Supreme realised that one cargo flight on a 747 aircraft was the equivalent of flying three IL-76s, so it made the switch to reduce the strain. As aviation became more of an emphasis, Supreme became the first freight company to fly commercial 747s into Afghanistan. Today, there are approximately 14 B747 flights to Kabul each week.

Charlie Szar, Supreme Group's commercial director, Afghanistan, explained: "When it comes to leasing aircraft, we have a very deliberate financial screening process that basically is a mini audit of the supplier to make



sure they're viable. In this environment, working capital is tied up for a long time, as you're not paid instantly by the military, so we want to make sure our suppliers have the financial means to not go out of business.

"We look at everything from a financial standpoint, then our quality assurance guys do document checks, aircraft checks – including where they procure the parts, desktop audits and, at some point, will inspect the aircraft.

"We also communicate with the civil aviation authority to make sure there is no issue with the aircraft or its operator."

Now, on this hot morning after watching food pallets being loaded, it was time for me to join the crew for take-off.

Sitting in the jump seat of this huge cargo plane was already fairly daunting, but to know we were landing in one of the most volatile countries in the world made it all the more so.

It helped to learn that 97% of the pilots, who come from all over the world, have former military backgrounds – so they know how to handle the aircraft if a threatening situation arises.

All the pilots receive periodic training to stop complacency, such as seasonal weather, threat, and first-aid training. And Supreme has made sure it has the most sophisticated of aircraft tracking systems to ensure it can spot one of its aircraft in any trouble.

Szar, a former US military combat search and

rescue pilot, said: "Our automated system allows our ops centre in Kabul to track the aircraft in real time. So, if an aircraft gets a mile-and-a-half off course or slows down below 50 knots, and it's not within two miles of its intended point of landing, then an e-mail alert will go out to our ops centre that we might have an aircraft in distress. If there is a sudden stoppage in the aircraft, the system will assume the worse and activate the alert. But it means we can then try and communicate with the aircraft to try to sort out or understand any problems.

"We also have scripted codes where, if the aircraft is returning due to bad weather, it can input a code so we can then understand the situation."

He added: "The crew have the autonomy to do what they need to based on the weather, terrain, orographic turbulence (turbulence from the wind flowing over the mountains), or if they're exposed to a threat."

With all that putting my mind at rest, I enjoyed the three-hour flight, taking in the stunning mountainous views of Afghanistan upon our descent.

Built quite literally in the middle-of-nowhere, Camp Bastion is one of the world's largest military bases accommodating troops, contract workers and civilians.

It has two runways, with the second able to accommodate a 747 and a C-17 Globemaster.

Desert heat

Once we had touched down and were out in the desert heat, work quickly started on unloading the cargo, which was either trucked or flown on rotary or fixed-wing aircraft to various FOBs around the country.

I was given a tour of the sprawling fortified camp, with its 30ft fences topped by concertina wire, and with an inner concrete blast wall ringing the facility. Heavily armed soldiers and vehicles man the many watchtowers.

As a total 'alien' to the camp it seemed a very safe, organised and controlled place to be, with a strong sense of a community.

I was given a security drill, which was to be taken very seriously.

Camp Bastion is no stranger to attacks, so everyone is prepped.

Supreme staff are located just outside the camp in their own little community called the Helmand Regional Distribution Center (HRDC). It operates as a complete life support system, with the capacity to support up to 2,000 people.

Szar explained many of its staff are local: "Supreme's 'local first' approach means that we support the communities in which we operate by creating employment and development opportunities, using local service providers and local product utilisation. In some areas of Afghanistan, up to 65% of our workforce are Afghan nationals. We have also provided training,

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SPECIAL REPORT

FROM AFGHANISTAN

CONTINUED FROM PAGE 63

development and employment opportunities for our local Afghan employees through our Afghan First Programme (SA1P)."

Getting to HRDC is a just a 10 minute drive outside the camp, known as 'outside the wire', but one that needs security armoured cars and the wearing of a flak jacket.

Supreme uses a number of security companies within the country.

"The security companies are trained, proofed and vetted – we choose the best as we need to keep staff safe in the conflicted environment," said Szar. "We've had attacks on HRDC, as well as a heavy rocket attack on a warehouse in Bagram that destroyed it. It's what we have to expect in a conflict zone."

It's a daunting but exciting drive to HRDC and it really makes you realise you're in a war zone.

HRDC is an impressive integrated logistics hub for southern Afghanistan. It includes a 27,000sqm warehouse, bulk fuel installation, generator farms, sewerage plant, waste and water facilities, 800 truck parking slots, accommodation, recreation and office facilities.

"At HRDC we maintain complete control and provide holistic solutions and not just partial solutions," said Szar.

I am shown around the huge chilled warehouses containing all the food – each country has its own budget and food requests.

Camp dining experience

Later on, I have my first HRDC camp dining experience – nearly every type of cuisine is available and it's safe to say I needed to be rolled out afterwards. This food experience is what all the troops have to look forward to thanks to Supreme.

The company's staff accommodation is VIP, compared to what the troops rest in. I was treated to my own single room with a shower room. A flak jacket and helmet were on standby for any emergencies in the night. Thankfully, I slept soundly.

Day Two involved a 45-minute chartered FlyDubai flight to Kandahar Airfield (KAF). As soon as we were off the aircraft I was aware that this was a totally different set-up to Bastion, and there was an aura that we were in a true battle-zone. KAF seemed more like an anthill and not quite as organised as Bastion.

KAF, predominantly a US camp, is the most 'hit' camp in Afghanistan and only that week it had faced three rocket attacks.

But, on a tour round, it also had a relaxed feel, especially in an area called The Boardwalk, an entertainment complex for the troops offering restaurants, cafes, a football pitch and running track.

As for Supreme, which has a hotel on the camp, KAF is more fuel-focused than Bastion.

"We have the Northern Distribution Network (NDN) that runs from Riga down to Afghanistan," said Szar. "We store the fuel here at Kandahar and fuel all the aircraft at the camp



Above: Supreme's Kandahar Hotel was built in 2009 at the Kandahar Airfield (KAF).



Left: Supreme's staff living quarters at KAF surrounded by blast walls and offering a bunker in case of emergencies.

at one of the forward arming refuelling points (FARPs). We also have a facility here that is a water bottling plant."

One big job Supreme now faces is the downsizing in the camps across Afghanistan. The military drawdown has already started and is due to be complete by 2014.

One of Szar's roles is overseeing the retrograde effort and managing client relationships for long-term strategic growth.

"We have shifted our focus to the 'reverse' end-to-end supply chain in support of the retrograde effort to transport the military equipment out of Afghanistan," he explained.

Assets decrease

"Over the past ten years Afghanistan was inundated with supplies; so as the military forces reduce, the assets decrease and there is more reliance on contractors. It is estimated that there are around 90,000 20-foot containers full of equipment scattered around the country belonging to US troops alone that will need to be removed."

He added: "There is also an enormous amount of vehicles and military equipment on the bases from all of the various military forces. Aviation will play a key role in the retrograde effort as the clock is ticking to remove all of that equipment on time.

"We currently fly around 20 747s into Afghanistan per week loaded with food for the war-fighters. We are now filling those 1.4 million kilograms of available space on the return leg of the journey with a wide variety of equipment, ranging from containers to vehicles."

Supreme will continue with its work in Afghanistan once retrograde is complete.

Szar said: "As long as our clients have operations in Afghanistan, we will support their needs by ensuring adequate resources are available. We have made significant investments in projects located all over the country. In terms of value, it's not just about what it cost to build our facilities; it's also about how much they benefited the war-fighters in Afghanistan, and how much value they will bring to the future Afghan sustainment effort."

But Supreme's dedication to supporting the war-fighters in Afghanistan comes at a price that is more than just financial, with the danger of working in a warzone ever present as I discovered when I was awoken in the middle of the night by the sound of rockets and heavy gunfire in the distance.

Realising this must be going on outside of the camp, as the siren didn't go off, I lay awake prepared to dive to the floor for cover if the camp was hit.

After a sleepless night at KAF, I joined the Supreme team I was travelling with for breakfast the next morning, excitedly mentioning the previous night's activity. They all looked baffled. "Didn't hear a thing. Slept like a baby," said Szar. "Unless the siren goes off we're used to it."

And with that it was back to work, just another day. And for the foreseeable future Supreme will continue its presence in Afghanistan with staff effectively risking their lives to support the troops on their mission, as well as help rebuild a broken country. But for me, it was time to enjoy a final breakfast before taking a chartered flight back to Dubai.

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SPECIAL REPORT

FROM AFGHANISTAN



A national carrier is operating successfully far from home at a base at Dubai's Airport Free Zone.

Alan Peaford takes a look at the airline of Afghanistan and follows it back to its roots.

Safi by name, safe by nature

If you stopped to ask anyone about Afghanistan, you could almost certainly guarantee that they would tell you that the past three decades of almost constant wars have made it one of the world's most dangerous countries, with the unenviable record of being the largest producer of refugees and asylum seekers.

With the much-publicised withdrawal of the western forces that are currently occupying the country, there are major concerns about the future – but for now Afghanistan is not high on the agenda for route developers.

And yet there is a future – and people need to be there to do business and prepare the way for the rebuilding of the country.

Afghanistan has a proud history. It was an ancient focal point of the Silk Road and human migration. Archaeologists have found evidence of human habitation dating back from more than 5,000 years.

The land has been home to various peoples through the ages and has been the battleground for foreign invaders, including Alexander the Great, Genghis Khan and, in the modern era, Russia and the coalition forces led by the Americans.

However, it has also been the source of a number of major empires such as the Greco-Bactrians, Kushans, Hephthalites, Saffarids, Ghaznavids, Ghorids, Khiljis, Timurids, Mughals and Durranis – many of which still have control or respect in certain parts of the modern Afghanistan.

As a Briton, the advice from my Government

'If you want other airlines to use your services you have to match their safety standards – or even be better.'

NAEEM MAHAMOOR

about visiting Afghanistan was clear: Don't go!

As a European, the travel message was also clear: "Afghan airlines are on the EU blacklist." Safety, it seems, is an issue.

All of which makes the challenge facing a carrier that describes itself as "the airline of Afghanistan" somewhat greater than most.

From a modern administrative office in the Dubai Airport Free Zone, Safi Airways is working to surmount that challenge.

Safi was the first private airline in the history of Afghan aviation. It was founded in 2006 by Ghulam Hazrat Safi and Hamid Safi, Afghani businessmen from the Herat region close to the border with Iran.

The Safi family has a wide range of interests including property, agriculture, hotels and retail, with a name known throughout the country.

"From the start the idea was to run the airline properly to international standards," said marketing manager Naeem Mahamoor.



The airline has its headquarters in the heart of Kabul but opened the office in Dubai for security and safety reasons and to use the UAE as a gateway for other airlines to pass passengers for the final stage of the journey to Afghanistan.

Safety is a key issue for any passenger and that has been the number one priority for the Afghan airline.

"If you want other airlines to use your services you have to match their safety standards – or even be better," Mahamoor said.

For Safi, its world collapsed in February 2010 when the European Union (EU) put all Afghan airlines on its blacklist. The carrier was effectively banned from European airspace, putting an immediate end to its newly formed and successful flights to Frankfurt and its plans to expand to other key European or even US routes.

Zaidan Khalifat is Safi's director of quality and safety. "It was disastrous for us and we had done nothing wrong," he said. "The EU decided that the Afghanistan Civil Aviation Authority had failed to prove it could monitor and control its AOC holders. It was all about the oversight."

Safi knew its level of standards was right – its immediate problem was demonstrating that to the world.

The answer was the International Air Transport Association (IATA), which spearheads the world's airline operations.

"We needed to join IATA and we needed to get the safety audit," Khalifat said.

The IATA operational safety audit (IOSA)



programme is recognised globally and is the accepted evaluation system designed to assess the operational management and control systems of an airline. It is supported by the FAA and EASA.

The audit process is intense but, in February 2012, Safi passed and was accredited by IATA. The airline was also admitted as a full member of IATA.

For chief executive Pierfranco Prato – formerly COO of Kuwait’s Wataniya airline and previously Alitalia – this was a key step in emphasising the reputation of the airline.

“We have come a long way and it has been no easy task in establishing a commercial airline from this part of the world,” he said. “The aviation industry and the country’s infrastructure are gradually being built and improving every day. Safi Airways is patronised by the expatriate Afghan community, the western community working for a variety of NGOs, the local business community, and the blue collar workforce, who are residents in Afghanistan and the GCC.”

But that reputation has not reached as far as Brussels. And, despite being recognised by IATA as a “safe” airline, Safi remains on the EU blacklist.

IATA director general Tony Tyler described the EU’s stance as “absurd”. Speaking at the IATA annual general meeting in Cape Town in June, Tyler said that Safi met all international safety standards and was IOSA certified.

“They say the issue is oversight and yet it is ok for European carriers to fly in. If it is not safe for Safi, then it is not safe for all airlines. I think it is time for the European Union to think again.”



Safi offers a full service airline for Afghan connections from Dubai.

Top left: The company handles all ground services at Kabul Airport, an oasis compared to the chaos on the roads outside of the airport.

Above: A first-class international and Afghani team practise fine customer care.

Left: CEO Pierfranco Prato and below Zaidan Khalifat see safety as key to the airline’s growing reputation.

Tyler took the opportunity to criticise the whole concept of the EU blacklist. “There is no transparency and no international standard. The whole ban list is not helpful for safety. Airlines don’t know why they are on the banned list – and they don’t know how to get off it. That is simply wrong.”

I was invited to see the operation for itself, to visit Kabul, witness the ground handling and talk to passengers and staff.

“Remember Afghanistan is a war zone, it is different. But it is also like being in Karachi, Rio or Mexico City. Security is a matter of real life, but is it worth seeing,” Prato said.

And it was.

Kabul’s main airport is small but there was a warm welcome from the immigration and customs officers. Even the machine-gun toting security staff on the airfield were polite and friendly as they pointed photographer Ian Billingham’s camera lens away from the rows of Afghan Air Force G-222s, (similar to the USAF C-27A transporters) and Russian-built helicopters, while overhead, American Apache helicopters patrolled the military base at the far

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SPECIAL REPORT

FROM AFGHANISTAN

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side of the runway.

The mountains on the route between Dubai and Kabul are stunning with rugged views that match any of the Nepalese or central Asian postcard points. At 35,000ft Safi's full service was also up to scratch.

The team is truly international, with American or European pilots, cabin crew – including Afghani women – providing a range of languages and dialects, and service standards that match most international airlines.

The Thursday afternoon flight from Dubai was packed. Passengers were from all over the world. One Australian Government official had flown to Dubai with Emirates before transferring to Safi; an American NGO worker was on a regular journey from Texas to the Afghan capital. "I have flown with other airlines to Kabul but Safi does a good meal, it goes on time and it has a good reputation for safety," she said.

On the ground, Safi's own staff are quickly removing the baggage and busying the passengers to the arrivals lounge.

Ground handling services

Unusually, Safi provides its own ground handling services. Director of ground operations is Hamit Kahveci. TV screens in the Dubai office enable him and his team to see how the operations are working at any time. "We have much greater control and can provide a better service to our customers by managing this with our own staff," Kahveci said.

At the moment routes from Kabul are limited. The airline is reviewing it fleet options. It currently operates just four aircraft – a Boeing 767, a Boeing 757 and a pair of A320s. It flies twice daily to Dubai, has a daily service to Haret, and flies four times a week to Delhi.

Prato believes there is much more in store. "We are working vigorously on route expansion. Jeddah and Riyadh in Saudi Arabia, Mashhad and Najaf in Iran and Islamabad in Pakistan will be coming up soon. We shall also add more frequency to our Delhi sector," he said.

Safi Airways also operates ACMI charters, Hajj and Umrah flights, and VIP and special flights. It frequently welcomes Afghanistan president Hamid Karzai as a passenger.

Last year the carrier operated Hajj charters and carried more than 10,000 pilgrims from Kabul to Jeddah and back

"As the only full-service carrier operating out of Dubai to Kabul, we have an edge over the low-cost carriers on the route. We have targeted the premium upmarket sector," Prato said.

The airline has been investing in people with a new highly experienced management team. Heading the commercial business is Husain Nalkhanday, an industry veteran, who has worked with British Airways, Gulf Air, Etihad and Nasair.

Nalkhanday is focusing on the route development and also driving up the service standards even higher, whether it is on board or through the airline's passenger-facing sales



In control: Husain Nalkhanday (left) and Hamit Kahveci.

offices in Kabul and Dubai.

Of course, by operating from the two centres we are doing a lot of things by remote control," he said. "Afghanistan has a complex business environment with the challenges of security. But there are a lot of opportunities. Air travel has great prospects because of the mountainous landscape and the resulting poor road structure and total lack of a rail network.

"The country has lost 30-40 years of its operational life. It is trying to get back on the world map. But it is making huge progress, not only in managing the security situation but also through development as well."

Regional airports

Afghanistan is planning on five new regional airports with funding from the international community and the Afghan Government. "The country is good at heart. Moving forward is the way. There are a lot of people inside the county and internationally who want to make it work," Nalkhanday said.

Of course, getting Safi off the banned list and seeing the civil aviation system meet international standards, is one of those key aims.

"The FAA is working with Ministry of Transport to bring aviation to the level. It has chosen Safi as its partner and we are helping. Hopefully in the year the hurdle will be over and we can get on," Nalkhanday said.

He believes that, once the EU ban is lifted, the airline will grow quickly with long-haul point-to-point flights and re-connecting again with the popular German market through Frankfurt.

Safi is currently reviewing its fleet options. "We clearly need more short-haul aircraft, which we can use for domestic or neighbouring countries," said Nalkhanday.

"We are looking at options now. It has to be the right aircraft. Kabul is dusty and has a 6,000ft

elevation. The aircraft need to be capable of hot and high operations. A320s, Fokkers, even MDs can be used."

The airline could also be increasing its Dubai flights. "Dubai is most important. It is a great gateway to the world," he added.

"Our flights are currently operating 85-90% full each day and we could add a third flight and start targeting the labour market to grow market share.

"We are certainly not planning to compete on cost. We want to add value and we are looking at improving service even more."

In June the airline launched a new food service on its routes, with the catering supplied from Safi's own Landmark Hotel at Sha-e-naw in central Kabul.

Mahamoor said: "Business class passengers will be welcomed with our very own Safi Airways signature drink and will be able to enjoy a selection of carefully prepared canapés with refreshing beverages and tempting appetisers, local and international main courses and a choice of delectable desserts served on fine china and glassware.

"Passengers seated in economy class will enjoy the best of local and international cuisines, made fresh and prepared to the highest standards, as we are the only full-service carrier operating to and from Kabul, we believe in quality and excellence for Safi Airways' valued clientele.

"The majority of our clientele are western expatriates and the affluent local population. Our flight attendants are busy going through the process of attaining excellence in various disciplines of catering and presentation.

"There is a high emphasis on how to exceed guests' expectations and how to pay attention to the smallest details of service. This is what will set Safi Airways apart from its competition in the region and stay on top as a leader in the full-service category," Mahamoor concluded.



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FOCUS ON SAUDI ARABIA



The Eurofighter Typhoon and (inset) the Airbus MRTT reflect Europe's growing importance to the Saudi air power.



THE SECRETS OF SAUDI SUCCESS

*Saudi air power is going through a process of rapid transformation and much has changed for the Royal Saudi Air Force (RSAF) although, as **Jon Lake** reports, high levels of secrecy and an insistence on rigid adherence to commercial confidentiality often make such changes hard to track.*

The RSAF's new Eurofighter Typhoons are now fully operational and the air force has become the first operator to exploit the enhanced air-to-ground capabilities provided under the phase one enhancement (PIE) programme.

The RSAF has also cleared the aircraft for air-to-air refuelling from the new A330 MRTT tanker (again the first operator to do so, beating Britain's RAF to the punch). Integration of the Storm Shadow stand-off Cruise missile on to the Typhoon is also proceeding apace, with a service clearance now expected in mid-2014.

Such upgrades to RSAF aircraft are seldom officially announced but it seems that they are relatively frequent.

The RSAF's ageing F-15C and F-15D Eagles seem to have received a capability upgrade, with two-seat D-models having been photographed during Exercise Anatolian Eagle carrying the latest AIM-9X version of the Sidewinder short-range missile. The joint helmet mounted cueing system (JHMCS) helmet-mounted sight has not yet been spotted in service, so the upgrade may fall short of the full (high off boresight (HOBS) capability integrated on USAF Eagles.

The Tornado sustainment program (TSP) upgrade is also complete, with 73 aircraft fitted out to be able to carry Brimstone and Storm Shadow missiles and to deliver Paveway and Enhanced Paveway bombs, with IRIS-T IR-homing AAMs for self-defence and Thales Damocles laser designation pods.

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The Eagle - in the shape of the F-15SA - has also landed a great deal with sales of 84 of the type.



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This will keep the Saudi Tornados operationally viable into the next decade, when their capabilities will have been taken over by Eurofighter Typhoons and Boeing F-15SA Eagles.

While in-service types are being kept at the peak of operational effectiveness through sensible upgrades, there have also been a host of high-profile orders of new aircraft types – not least for 84 Boeing F-15SA enhanced Eagles for the RSAF, with 70 surviving F-15S Strike Eagles to be retrofitted to the same standard.

More recently, the US Defense Security Cooperation Agency notified Congress of a proposed \$6.7 billion foreign military sale (FMS) of 20 stretched Lockheed Martin C-130J-30 transports and five KC-130J Hercules tankers to Saudi Arabia.

All would be equipped with Link 16 multifunctional information distribution systems (MIDS) datalink terminals, and there is some speculation that the KC-130Js could be to Vigilant Hawk or Vigilant Watch standards.

Roll-on/roll-off

This would mean a roll-on/roll-off armed, or intelligence, surveillance, target acquisition, and reconnaissance (ISTAR) capability respectively – making them equivalent to the US Marine Corps Harvest Hawk-armed ISR derivative of the KC-130J tanker or to the USAF's Shadow Harvest ISTAR platform.

Less obviously, Saudi Arabia requested a US \$250 million buy of eight Hawker Beechcraft King Air 350ER special mission intelligence, surveillance, and reconnaissance (ISR) aircraft. By August 2012, the requirement was for four new ISR-equipped King Airs, and for four existing Saudi Beech air ambulances to be converted to the same standards (see separate story Page 103).

The aircraft will be tasked with a range of internal security missions, including border patrol and surveillance, counter-terrorism, smuggling interdiction, as well as coastal protection and search and rescue.

Though the Beech 350 does not have the same

There are also believed to be a number of impending orders for the RSAF – which remain officially unconfirmed, but which are widely expected – and in some cases may have even been signed already.

persistence/endurance as UAVs like Predator, it flies faster and higher, with a much greater mission payload and with better flexibility.

There are also believed to be a number of impending orders for the RSAF – which remain officially unconfirmed, but which are widely expected – and in some cases may have even been signed already.

A follow-on order for between 48 and 72 Eurofighter Typhoons is now widely expected – allowing the force to expand to five or six squadrons, and allowing the Typhoon to replace the F-15C/D as well as the F-5E/F (albeit with a huge expansion in capability terms), while the F-15SA (with six or seven squadrons) replaces the F-15S and Tornado.

Beyond that, there are persistent reports that further expansion (rather than mere recapitalisation) is planned. *The Washington Post's* David Ignatius predicted that Saudi Arabia would “spend more aggressively as a regional power broker”, and that the Saudis “would roughly double their armed forces over the next ten years”, predicting an air force expansion of about 400-500 new aircraft.

A more assertive Saudi Arabia could fill the gap left by the down-sizing of US forces in the region but to do so would require greater regional reinforcement capabilities and greater deployability for ‘out-of-kingdom’, if not ‘out-of-area’ operations. This would help to account for the RSAF's recent investment in tankers – its six new A330 MRTTs will augment the existing KE-

3s rather than replacing them, while the new KC-130Js will shore up the KC-130H tanker force.

There is also expected to be a dramatic increase in the RSAF's transport force, with many expecting an order for the C-17 to be announced imminently, and with further C-130J and/or new Airbus A400M orders seeming increasingly likely.

To facilitate this kind of expansion, the Royal Saudi Air Force is also overhauling its training machine.

Under the Saudi British defence cooperation programme, the RSAF has placed a £1.6 billion order for 55 Pilatus PC-21s and 22 BAE Systems Hawk Advanced Jet Trainers, as well as the provision of equipment and training devices such as simulators and training aids.

Cirrus SR-22 primary trainers have been ordered under a separate contract.

Greater throughput

While the PC-21 may simply replace the RSAF's existing fleet of PC-9s, some may be retained to allow a greater throughput of students (perhaps for those pilots destined for rotary or heavy fixed-wing types), and it is understood that many of the existing Hawks will be retained.

In future, under current plans, Saudi student pilots will transition from the Cirrus SR-21 to the glass cockpit PC-21 and will then go on to fly the Hawk 65/65A (with an analogue cockpit) before finally progressing to the new Hawk AJT (which has a modern glass cockpit).

This leaves an obvious requirement for a glass cockpit upgrade for the Hawk 65/65A, or for a follow on Hawk AJT buy to replace these older Hawk aircraft.

Deliveries of the Pilatus PC-21 will begin in 2014, with the first Hawk AJT aircraft following from 2016.

But the training machine is already overstretched and the RSAF is turning to overseas allies to help train more Saudi pilots and other staff.

The CENTCOM Division of the USAF's Air Education and Training Command Air Force Security Assistance Training Squadron

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manages Saudi SUPT, AWACS, KC-130J, F-15S, and F-15SA training – and undergraduate pilot training in the USA is set to expand markedly.

Saudi Arabia also plans to ‘export’ pilot training to the UK, where No 208 Squadron at RAF Valley has been rescued from disbandment, and its ageing Hawk T.Mk 1s saved from the scrapheap pending a final decision as to whether Saudi aircrew will train at the Anglesey airfield.

The plan to use 208 Squadron for Saudi training would be an interim activity that could last up to three years until the RSAF’s new Hawk Mk 165s enter service in the kingdom later in the decade.

As well as aircraft and personnel, the RSAF is also upgrading and modernising infrastructure at frontline and support bases, with the aim of improving readiness, operational effectiveness and survivability.

The RSAF is believed to be on the verge of opening a new base and, unusually, in view of previous US objections to bases in the north of the country (thanks largely to Israeli sensitivities) it is in the north, close to the Kuwaiti border.

King Saud Air Base (as it is expected to be known) is not, strictly speaking, a brand new base, in that it is an airfield used by US forces during operations Desert Shield and Desert Storm, and subsequently by odd helicopter units and Army aviation elements.

Ageing airfield

But the ageing airfield is being extensively modernised and refurbished ready to receive Typhoon and F-15SA units, which will see the RSAF maintaining a real offensive air-to-ground capability on the Kuwaiti/Iraqi/Jordanian border. This contrasts with Tabuk, the other northern base, which has been restricted to flying training and pure air defence fighter aircraft.

But it is not just the RSAF that is expanding.

The air force, the Royal Saudi Land Forces and Royal Saudi Naval Forces, are being joined by two new air arms – one belonging to the Saudi Arabian National Guards (SANG), and the other to the Saudi Arabian Royal Guard.

The SANG Aviation Command was officially established in 2006 but it is only relatively recently that actual orders for aircraft have been announced.

However, the acquisition programme is on an epic scale, costing some \$25 billion and involving the purchase of more than 180 helicopters, including 72 Sikorsky UH-60M Black Hawk assault helicopters, 36 new AH-64D attack helicopters, 36 AH-6 Little Bird light attack helicopters, 12 MD530 scout/liaison light helicopters, and upgrades to existing Apaches.

The Saudi Arabian Royal Guard will buy 10 Apache Block IIIs, in an order worth \$2.2 billion.

■ The last Saudi country focus (in Volume 3, Issue 1 – February-April 2011) is available in the publications archive on our website.

Royal Saudi Air Force (RSAF)

Air Order of Battle

TABUK (KING FAISAL AIR BASE)

RSAF 7 WING

2 Squadron	McDonnell Douglas F-15C/F-15D	Air Defence Fighter
21 Squadron	BAe Hawk T.65	Advanced Training
79 Squadron	BAe Hawk T.65A	Advanced Training
88 Squadron	BAe Hawk T.65/65A	Advanced Training/Display

No.29 Squadron at Tabuk has disbanded, and its 17 or so surviving Panavia Tornado ADVs are in storage at Tabuk.

HAFR AL BATIN (KING SAUD AIR BASE)

RSAF Unknown Wing forming

12 Squadron	Agusta Bell AB212	SAR/Liaison
15 Squadron	Eurofighter Typhoon	Tactical Fighter
17 Squadron	Eurofighter Typhoon	Tactical Fighter

The 15th and 17th Squadrons are believed to be the next Typhoon units to form, and are expected to do so at the refurbished, re-named and re-opened King Saud Air Base – used by USAF F-117As and B-52s during the 1991 Gulf War. Some sources suggest that the new-build F-15SAs will also be based here.

DHAHRAN (KING ABDUL AZIZ AIR BASE)

RSAF 3 WING

13 Squadron	McDonnell Douglas F-15C/F-15D	Air Defence Fighter
44 Squadron	Bell 412EP	SAR/Liaison
92 Squadron	McDonnell Douglas F-15S	Interdiction/Attack

RSAF 11 WING

7 Squadron	Interdiction/Attack	Panavia Tornado IDS/TSP
35 Squadron	Navigator training	BAE Jetstream 31
75 Squadron	Interdiction/Attack	Panavia Tornado IDS/TSP
83 Squadron	OCU Interdiction/Attack	Panavia Tornado IDS/TSP
7 Squadron	Agusta-Bell AB212	SAR/Liaison
Weapons and Tactics School	Loaned aircraft	Tactics and weapons training

RIYADH (KING KHALED AIR BASE)

RSAF 1 WING

King Faisal Air Academy

8 Squadron	Cessna F172G/H/M, Super Mushshak	Primary Training/Screening
9 Squadron	Pilatus PC-9	Basic Training
22 Squadron	Pilatus PC-9	Basic Training

RSAF 10 WING

1 Squadron/Royal Flight	Various types *	VIP transport
11 Squadron	Cessna 550, Gulfstream IV	VIP transport

**Airbus A340-213, Bae 125-800A, Bae 125-800B, Boeing 747-301M (Comb), Boeing 747SP-68, Boeing MD-11, Boeing 757-236, Boeing 737-700(BB1), Boeing 737-800(BB12), CASA CN-235M-10, Lockheed Hercules (C-130H, C-130H, L-100-30), Learjet 35A, Agusta Sikorsky AS-61A-4. Most, if not all, wear Saudi Arabian titles, colour scheme and civil registrations.*

Saudi Armed Forces Medical Services (SAFMS)

33 Squadron	Bell 412	Liaison/SAR
Flying unit	Various types **	Aeromedical

***Aerospatiale SA365N, Agusta-Bell AB212, Beech 300C, Boeing 757-23A, G1159A Gulfstream III, G1159D Gulfstream IV, Learjet 35A, Lockheed Hercules (C-130H, C-130H-30, L-100-30), Sikorsky S-70A-1L. Most wear Saudi Arabian titles, colour scheme and civil registrations.*

AL KHARJ (PRINCE SULTAN AIR BASE)

RSAF 4 WING

16 Squadron	Lockheed C-130H	Tactical transport
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RSAF 6 WING

32 Squadron	Lockheed C-130H	Tactical transport/training
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RSAF 13 WING

18 Squadron	Boeing E-3A	AEW/AWACS
19 Squadron	Boeing RE-3A	Sigint
41 Squadron	Beech 350	Sigint
23 Squadron	Boeing KE-3A	AAR
24 Squadron	Airbus A330 MRTT	AAR
37 Squadron	Lockheed KC-130H	AAR

JEDDAH (PRINCE ABDULLAH AIR BASE)

RSAF 8 WING

4 Squadron	Lockheed C-130H, C-130H-30	tactical transport
20 Squadron	Lockheed C-130H	tactical transport/training

TAIF (KING FAHD AIR BASE)

RSAF 2 WING

3 Squadron	Eurofighter Typhoon	Tactical Fighter/OCU/OEU
5 Squadron	McDonnell Douglas F-15C/F-15D	Air Defence Fighter
10 Squadron	Eurofighter Typhoon	Tactical Fighter
34 Squadron	McDonnell Douglas F-15C/F-15D	Air Defence Fighter/OCU

RSAF 9 WING

12 Squadron det.	Agusta Bell AB212	SAR/Liaison
14 Squadron	Agusta Bell AB212/Bell 412EP	SAR/Liaison

KHAMIS MUSHAYT, (KING KHALID AIR BASE)

RSAF 5 WING

6 Squadron	McDonnell Douglas F-15S	Interdiction/Attack
14 Squadron det.	Agusta-Bell AB212, Bell 412EP	SAR/Liaison
55 Squadron	McDonnell Douglas F-15S	Operational Conversion
99 Squadron	Eurocopter AS532M CSAR	Combat Search and Rescue

42 Squadron (F-15) and 66 Squadron (Tornado) have disbanded, donating their aircraft to other units.

Royal Saudi Land Forces (RSLF)

HAFR AL BATIN (KING KHALID MILITARY CITY)

1 Aviation Battalion	Bell 406CS, Sikorsky S-70A-1, VH-60L	scout, utility, VIP
2 Aviation Battalion	AH-64A	attack/anti-tank

The aviation elements of the Royal Saudi Land Forces are mainly co-located alongside the RSAF Helicopter detachment at Hafr Al Batin.

Royal Saudi Naval Forces (RSNF)

DHAHRAN (KING ABDULAZIZ NAVAL BASE)

77 Squadron	Aerospatiale SA365F Panther	ASW/ASV/Liaison
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The Royal Saudi Naval Forces aviation elements based at King Abdulaziz Naval Base north of Dhahran are tasked with supporting the Eastern Fleet.

JEDDAH (PRINCE ABDULLAH AIR BASE)

62 Squadron	Aerospatiale SA365F Panther	ASW/ASV/Liaison
72 Squadron	Eurocopter AS332F-1 Super Puma	ASW/ASV/Vertrep

The Royal Saudi Naval Forces aviation elements based at Jeddah are tasked with supporting the Western Fleet.

Ministry of the Interior –

General Civil Defense Administration (GCDA)

There are GCDA detachments at Dhahran, Riyadh and Abha, near Khamis Mushayt. These are mostly equipped with Kawasaki Vertol KV107 helicopters which are used for Special Forces support & Medevac, though the Riyadh detachment has started to convert to the Sikorsky S-92.



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Merlin RAMCo will be looking for key personnel to work with Saudi pilots on C-130 training.

Contract won – now Merlin must conjure up the personnel

Merlin RAMCo is to provide the Royal Saudi Air Force (RSAF) with instructor pilots for its F-15 and C-130 aircraft under a recently awarded contract. But, as Claire Athorp reports, it could be a tough job.



Brian Raduenz:
“Recruiting is difficult.”

The \$10.8 million foreign military sales contract was awarded to Merlin RAMCo following a competitive tender let by Air Force Security Assistance Training at Randolph Air Force Base, Texas.

It will run through August 2014, with work to be primarily conducted at King Abdul Aziz Air Base, Dhahran; King Khalid Air Base, Khamis Mushayt; King Fahad Air Base, Taif; King Faisal Air Base, Tabuk; Prince Sultan Air Base, Al Kharj; Royal Saudi Air Force, Riyadh and King Abdullah Air Base, Jeddah.

The RSAF has on-going training requirements for its F-15 and C-130 aircraft – the backbone of the force’s fighter and transport fleets – and Merlin RAMCo will play an important part in fulfilling these, hiring qualified trainers and offering them to the RSAF.

The company will provide cultural and transitional training for selected personnel, with final currency training to be completed by the RSAF once they are in-country.

Brian Raduenz, vice president, programs, Merlin RAMCo, said the company has initiated work on the contract, with an in-country programme manager already working in Saudi Arabia to bed down training personnel as they arrive in the country.

While some of the positions have already been filled, the company is still seeking qualified candidates to take the other available openings.

A total of 26 personnel will be sourced, including training personnel, programmer and research analyst positions. Although the trainers will work for Merlin RAMCo, they will live in Saudi Arabia and be embedded within the RSAF units, working directly with the force to fulfil training requirements.

Merlin RAMCo seeks candidates exclusively from the ex-US military market. While this ensures that the most

experienced personnel with the right platform knowledge can be provided for the RSAF, there are a number of challenges that come from drawing from this pool.

“Recruiting is difficult because, right now, US military folks have been under a lot of pressure for deployment for a long time, so a lot of the people we are looking to recruit simply don’t want to head straight back overseas,” said Raduenz.

“Add to that the sizeable bonuses being paid out by the military for people to stay in the fighter community – it presents a challenge for us.”

In addition, the conditions set under the contract are extremely stringent.

Raduenz explained: “Our requirements mean personnel need to have flown in the very recent past in order to be selected, so even though we might have F-15 pilots with thousands of flight hours under their belts, if they’ve been out of the cockpit for two-and-half years they aren’t acceptable.

“But that’s what sets Merlin RAMCo apart – we find the best people for every contract and we are very good at sourcing unique and hard-to-find individuals who have the right skill set to meet demanding requirements.”

Although Merlin RAMCo has supported the Pakistan Army in the past on its King Air aircraft, this will be the first time the company has had personnel resident in the Middle East for a contractual effort.

The contract is part of a larger shift within the company’s focus as it moves toward extending its overall training capability efforts beyond its UAV intelligence, surveillance and reconnaissance support services origins.

“This is an extremely important contract for Merlin RAMCo and we see a very bright future as we position ourselves to continue this type of effort,” Raduenz said.

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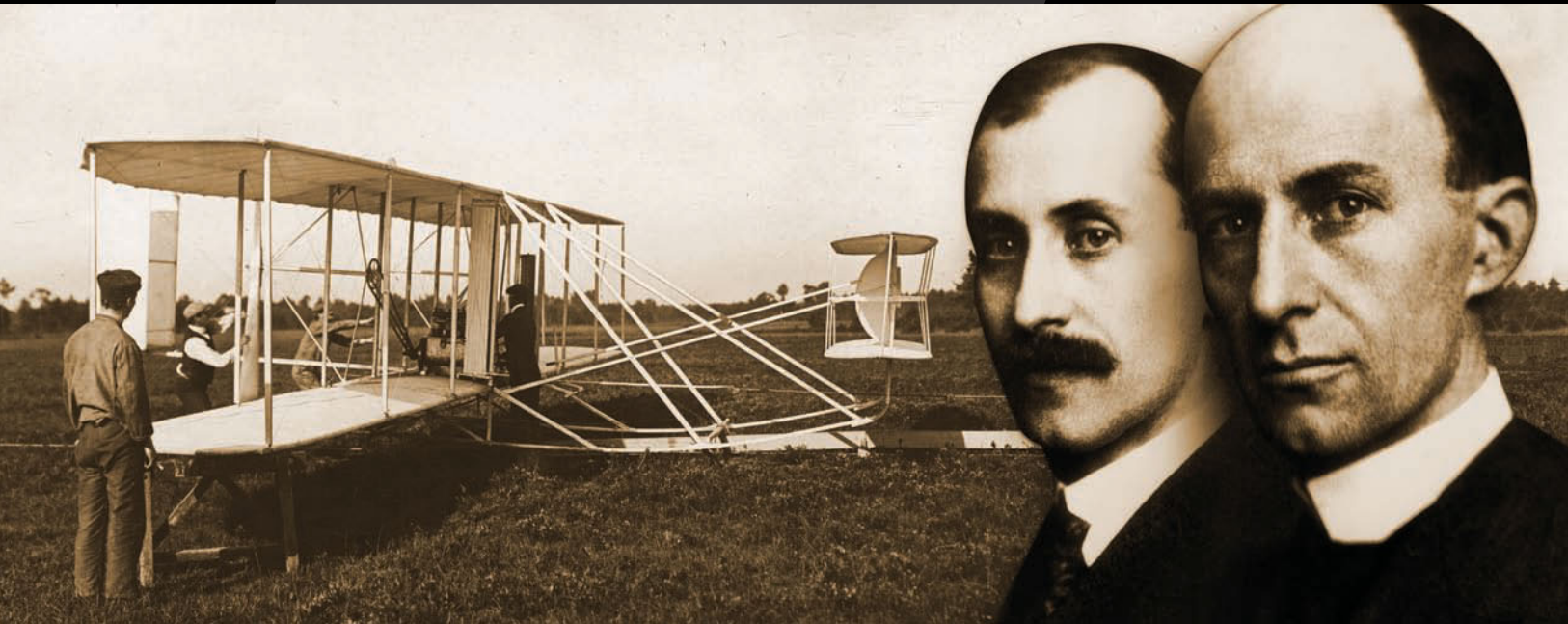
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THE STRONGEST TEAM FOR THE A380



Saudi Arabia's air transport sector has moved on apace with the issuing of licenses to foreign airlines for the domestic market and the on-going privatisation of the national carrier.

Alan Peaford reports.

LICENCE TO GROW



The Saudi Arabian market offers huge potential for the airline business. With a population of around 30 million people and some 27 regional airports – plus several international hubs – it is not surprising that the industry eyes the kingdom with interest.

But, for many years, the domestic market has been stunted with growth well below regional and global averages due to a long background of a monopoly on domestic routes by the national carrier Saudia.

In 2007 the Saudi Government, through its civil aviation authority GACA, granted operating licences to two new carriers – National Air Services (Nasair) and the low-cost carrier Sama.

The Government's aim was to trigger new growth in the local and international travel market. The Saudi regulator backed the initiative with the implementation of a number of policies to encourage more travel and support the local aviation sector.

The experiment failed.

Fuel subsidies given to the national carrier were not extended to the newcomers but a fare cap, which was used to ensure passengers from the rural areas would be encouraged to use air transport, was strictly enforced. The result was operating losses for the two newcomers and the eventual collapse of Sama.

Nasair continued to operate but changed its strategy to begin opening more international connections. The issues over fuel continued and earlier this year the then chief executive Francois Boutellier complained he could buy fuel cheaper anywhere than in his own market.

Boutellier brought Nasair back into the domestic market and, just days before resigning from the hybrid carrier, he said that the growth had finally proven that a domestic market is viable.

Under Boutellier's watch, Nasair increased its domestic

Continued
on Page 80



Francois Boutellier – until recently CEO of Nasair – brought the airline (inset) back into the domestic market.

CONTINUED FROM PAGE

passenger numbers by 54% over the final nine months of 2012, reversing a previous shift in focus to international flights. It now accounts for 13% of domestic traffic, up from 6% in 2011.

"Fuel is still an issue and there are other monopoly issues but the market is opening up," he said.

But a major move by GACA at the end of last year opened up the market even more when the Saudi regulatory body said it had granted licences to two foreign airlines – Bahrain's Gulf Air and Doha-based Qatar Airways – after a long drawn-out tendering process.

Akbar Al Baker, the Qatar airline's outspoken leader, had clearly laid out his concerns ahead of the GACA decision.

In talks with Prince Fahad bin Abdullah Al Saud in Riyadh, Al Baker said he recognised the kingdom represented a key growth area with a market that is under-served and keen for greater domestic air services.

However, he expressed particular concern over excessive fuel charges in the kingdom and the Government's policy of controlling domestic air fares which, he said, were not in the interests of the travelling public, nor airline operators.

"Such factors are detrimental to airlines as fuel represents a major cost of operations," he told Prince Fahad.

Capping airfares, he said, "will never allow any airline to operate commercially in the kingdom".

Rising costs

He stressed that other airlines operating domestic flights within Saudi Arabia were facing the same problem of rising costs, pointing out these needed to be seriously addressed.

The message clearly got through and the Saudi Government has said the fuel discounts offered to the flag-carrier will be matched. According to GACA, there is a 19% increase in domestic passengers.

Meanwhile Saudia, recognising the new threat, has been developing a new lease of life and is reinvesting in the fleet and its backroom systems. Many of these needed to be adjusted in order to support Saudia's membership of the Sky Team alliance.

In the next few years Saudia will start to take delivery of large numbers of next generation wide-bodies. In 2010, it ordered 12 777-300ERs, as well as options for another 10 aircraft, which it has already exercised.

It also ordered eight 787s at the same time, which are due to start delivery either in late 2015 or early 2016. Saudia expects to add 12 new aircraft by the end of 2013.

Saudia's executive vice president for public relations, Abdullah Al-Ajhar, said the airline needs at least 35 new aircraft to meet the competition for the growing demand on the domestic fleet. He said



National carrier Saudia has been focusing on customer service and new aircraft to mount its defence of the market.

the Saudi travel market faces a shortage of two million seats, and added that the operation of domestic flights by Qatar Airways and Gulf Air would fill the gap. "We transported 14.5 million domestic passengers in 2012 and the figure is expected to reach 15.5 million this year," he said.

HE Khaled Al-Molhem, director general of Saudia, said the improvement in infrastructure and the investment in the carrier's own IT systems was making it easier for travellers to use the airline.

"Many of our services can be had using electronic systems, without approaching a travel agency. These include reservation, purchase of ticket, issuance of boarding pass and selection of seat and meals," he said. "A lot of improvement has taken place in our in-flight services for first class, business class and guest class passengers."

Al-Molhem said that in response to the Saudi Arabian cabinet urging the airline to increase its domestic routes, there has been a 47% increase (compared to 2010) in seats made available on Saudia's summer season flights to the kingdom's northern regions and 57% increase in flights to southern regions that house many of the country's tourist centres.

"For example, this summer we offer 40,656 seats weekly on our flights to and from Abha," Al-Molhem said.

According to Saudia sources, the two new entrants will be pledging 20 aircraft for domestic flights. But, before leaving Nasair, Boutellier expressed some doubts about the entry of Qatar and Gulf Air to the market citing "the extremely slow" pace of regulatory reform and inadequate infrastructure.

He said he was "sceptical" of GACA's promise to address the country's domestic fare cap and uneven fuel charges.

"GACA sees the need for the change; its intention is to make changes, but the speed at which changes would take place is extremely slow," he said.

Boutellier also warned

that the proposed revisions to the fare cap were not going to make a big difference.

"GACA accepted the idea of having consultations about the fare cap but so far there's absolutely no confirmation of any action."

Boutellier expressed concern that, until the new major airport expansion programmes are complete, the country would struggle to manage the growing numbers.

The Saudi Government has plans to invest more than \$30 billion in its airports by 2020, including \$10 billion in private investment for the sector.

More than \$12.5 billion has already been committed for the country's four main international airports at Jeddah, Riyadh, Dammam and Madinah. These handle 91.5% of total air travel in the country, including 72.5% of domestic travel.

Delays in order

"They want to have a 20% increase in flight operations just in Riyadh and Jeddah," Boutellier said. "But today existing airlines still see delays in order just to get a gate in Riyadh. If you're then adding 112 frequencies between Riyadh and Jeddah per week, they won't have the gates. It's a concern."

Like many, Boutellier believes the move into the market by the Gulf carriers will be a gradual one.

"Both Qatar and Gulf Air said that they would be up and running in six months' time after they received their concession," he said. "That was a few months ago and the process hasn't started yet to my knowledge. I think hoping that this would be achieved in six months is not quite realistic."

The two Gulf carriers are still sketchy about their plans. Industry sources suggest that a high-profile CEO is involved in helping Gulf Air establish its strategy but the likelihood is that both Gulf Air and Qatar will be looking to feed their respective hubs in Bahrain and Doha – something that will not please Saudia.

Meanwhile, quietly, Nasair has a deal with Etihad and could soon be offering connections through Abu Dhabi.

Whatever happens, Saudi's commercial aviation market will never be the same again.

The Saudi market

According to OAG, the busiest route is between Jeddah and Riyadh with a current capacity of more than 2.6 million seats – almost 50% more than six years ago.

The greatest capacity on international routes is between Cairo and Jeddah with around 1.2 million available seats.



Saudi Airlines Catering Aims for Excellence in Quality, led to the “Golden Award” for the fourth consecutive year.

For the fourth consecutive year Saudi Airlines Catering wins the “Golden Award” by Medina Quality for quality, safety and hygiene of meals on board

Saudi Airlines Catering has won, for the fourth time in a row, the “Award of Excellence in Catering Quality” which represents an international recognition for its commitment to the highest standards of excellence in food safety and quality on board of flights. It outperformed its competitors in Europe, Middle East and Africa, and ensured its continuous commitment to provide the best quality in its services. The award represents a motivation for the company to maintain its globally recognized level of quality in its services.

SAUDI AIRLINES
CATERING



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Last year was the best year yet for Saudia Cargo, the cargo subsidiary of Saudi Arabian Airlines (Saudia).

The carrier, which has been independent since 2007, recorded a 20% growth over 2011 but that still left commercial vice president Peter Scholten with mixed feelings.

“We are doing more business and growing when times are tough. It’s very satisfying,” he said. But he also added there were plenty of improvements to be made, especially if Saudia is keen to take on the likes of Emirates.

“Our on-time performance wasn’t fantastic,” he admitted. “More modern equipment – we have some 747-8s coming in – would obviously help our performance and schedule integrity. Also, the current facilities at Jeddah Cargo Village were built in the 1980s and they are too small.”

Saudia Cargo has access to 15 freighters, including two recently delivered 747-8Fs, four 747-400Fs, four 747-200Fs, four MD-11Fs and one A310-300F. Only the MD-11Fs and one of the 747-200Fs are owned outright, while the rest are leased from and operated by other companies on Saudia’s behalf.

One of the oldest

Many of these freighters are conversions, making the fleet one of the oldest of any major carrier and demonstrating why Saudia is eager to update its metal.

In addition to freighters, Saudia Cargo also makes use of belly space capacity in parent Saudia’s wide-body passenger fleet. With several 777s, which have belly capacity to rival some smaller freighters, capacity is not going to be in short supply. Nonetheless, Scholten says the company will be focusing more on its network and frequencies.

“The expansion we shall see will be through extra frequencies; one more each out of Hong Kong, Dakar, Frankfurt and Lagos,” Scholten explained.

FREIGHT DEVELOPER

Saudia Cargo recorded its best year yet in 2012 but one boss still wasn’t entirely happy. Tom Pleasant finds out why.

In terms of additional routes, Saudia only intends to add one this year, into Nigeria. The West African oil giant has provided the cargo industry with a lot of business; Saudia Cargo now runs a daily flight into Lagos, though consistency elsewhere in the region hasn’t been so forthcoming.

“We tried Accra last year and that was under a tonne one week and over five the next,” said Scholten.

The European market doesn’t present many opportunities for Scholten. That being said, the carrier has announced an additional weekly 747F from Dhaka to Frankfurt (bringing the total number of freighter flights from Dhaka to four) and one additional weekly flight from Frankfurt to Saudi Arabia (now up to five a week).

As part of the same schedule changes Saudia is also adding an additional weekly flight from Hong Kong to Lagos (bringing weekly flights from Hong Kong to nine and from Lagos to eight).

“We are increasing capacity on these routes on the request of our clients in Hong Kong and

Bangladesh,” Scholten said. “Of course, all flights make commercial stops at our hubs in Saudi Arabia, from where we connect to other destinations in our network. In Dhaka we are anticipating strong demand from our clients to the European markets. All our four weekly flights are already sold out until March 2014.”

China, despite the drop in its overall production, remains a key market. “We’re increasing our capacity significantly where others have been dropping,” Scholten said. “We’re looking at Chungking and Chengdu, where there is an iPad factory. We have the rights to operate both of those in one flight, hopefully starting in October or November.

“China’s still a very volatile market though,” he warned. “It’s very production and sales driven, always going up and down. It’s a good market, though, that pays good prices.”

With China’s factories chasing low wages further inland from the traditional manufacturing hub of the Pearl River Delta, Scholten says the carrier will continue to expand into Western China.



What he is truly keen to develop, though, is Latin America. “If we had the traffic rights to fly there, we would probably already be there,” he said.

“Our plan is to go to São Paulo, then on to Bogotá for flowers, then Houston before flying back. We want to have a round-the-world service, but all the lanes are full. We now have the rights to fly down to Brazil, but we also need to formalise a lot of other paperwork, like an AOC, and we still need to fix Colombia. We were hoping to start late last year, but the permissions didn’t all come through. We’re ready and the market is there. It will be soon,” he added.

Permissions and other similar bureaucracy is something Scholten wants the industry to be more aggressive at cutting.

Too much paperwork

“There’s too much paperwork and protectionism,” he said. “The US, the biggest economy in the world, just imposes the most ridiculous security requirements and we have to provide all kinds of information before we even fly there. It’s very challenging but what power do we have to change it?”

“That’s why I fully support IATA and GACAG’s e-freight and other initiatives, but it would be better if they went faster though; changes are only going very slowly. It would make the industry much healthier.

“In the meantime, power is moving to the Middle East and Asia. It’s happening but the US doesn’t realise it yet. In 10 years’ time the industry will be very different. With China, Africa and South America coming up why would you go via Europe or the US?”

“There’s massive investment going into aviation, transport and other industries in Saudi Arabia. So, while it won’t be a Dubai, it is the centre of the Arab world – it’s a holy place – and the Middle East will be at the heart of global aviation. It’s a very interesting time.”



How to integrate social networking into your marketing

Steve Nichols
looks at the award-winning airline that has found the perfect marriage between social media and travel.

If you want to know how to successfully integrate social media into an airline you should talk to Nasair's Akram Husain in Riyadh. No, seriously, he and his team have won so many awards I don't know why other airlines even bother.

Let's give you a taster. In 2012, Nasair won four awards, including 'Best Interactive Facebook Page' and 'Most Popular Airline in Social Media'. It started with around 8,000 Facebook fans and grew this to 710,000 by December 2012.

That number has subsequently grown to more than 1.25 million and the low-cost airline has 74,000 Twitter (@nasair) followers too.

It won even more awards in 2013 and is now ranked number nine in the world for social media – that's one above Lufthansa.

So, without giving too much away, how has Nasair done it in just over a year?

"Passion and empathy," said Husain, director, interactive marketing. "We don't set out to sell anyone anything via social media – that would be a big mistake. What we do, though, is get inside the heads of passengers, figure out what they need, and then give it to them."

For example, the company monitors its Twitter mentions 24-hours a day. Many passengers use Twitter while they are at the airport, so any question or comment that involves Nasair's service gets answered quickly by one of Husain's team.

"This can be anything from 'why is my flight delayed?' to 'can I take fish on board the aircraft?'," he said.

That last one came through while he was being interviewed, so we know it's true! Oh, and in case you are wondering, it depends whether the fish are alive or not.

In terms of Facebook, Nasair uses it to inform people about special offers or give details about upcoming events. It recently held a 'Buy1Get1' campaign on tickets that targeted around

266,000 people. Around 9,500 subsequently bought tickets in just 20 days.

Revenue directly attributable to social media sales is up 783%; web site visits up 1,132%.

Saudis love social media. There are six million youngsters on Facebook and 28% of all Facebook users in the kingdom are female.

But why do people use social media?

"People want to share their experiences, so travel and social media go hand-in-hand," said Husain.

"They want to share photographs, tell people what's good about a place and what's bad, and find out what other people are doing. We just tap into that. We build up a rapport with customers, empathise, help them out and give them what they need – and it works.

"You also need to be transparent, very transparent. If you are honest and open you will gain trust. This can be very difficult at times but is essential to build positive relationships."

Husain said Nasair also uses social media to entertain. "We have three funny commercials running on YouTube (flynasdotcom) that feature two local comedians. These were viewed more than 194,000 times in just two weeks," he said. (Did you know that Saudi Arabia has the highest YouTube usage per capita in the world, with around 90 million views a day?)

So what's next for Nasair and social media?

"We are going to start introducing games on to Facebook shortly. These will be educational and help anyone coming to Saudi Arabia," said Husain. "We have already been telling our Facebook users more about the kingdom, its customs and places to visit, and that has gone down well.

"Beyond that we tend to plan only a few months in advance. It is pointless planning three or five years ahead as, who knows what the social media scene will look like then?"



Samana

SPECIAL MISSION



Samana Special Mission Al-Saudia was established and registered as a flight inspection company in January 2010. SSM is the only GACA designated company who is responsible to carry out the flight inspection of Radio Navigational, Landing/Visual Aids and Radars of all civil airports, military bases and private airfields. To accomplish this task, SSM is operating Beech King Air 350 equipped with a fully automatic DGPS/RTK based Flight Inspection System (UNIFIS 3000). SSM operates with the latest available flight inspection technology, manned by trained / highly skilled air crew and managed by experienced engineers.

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Wallan is still sitting comfortably with Cessna

The doyen of business aviation in the Middle East, Saad Wallan, talks to Alan Peaford about his challenges and aspirations.

Saad Wallan is an outstanding salesman. His office in the suburbs of Riyadh is adorned with certificates and memorabilia reflecting his successes.

And it is not just aeroplane manufacturer Cessna that benefits from his experience and network, Korean automotive manufacturer Hyundai is also now reflecting in the successes of the Wallan family as they achieve remarkable sales of the company's vehicles across the kingdom.

One beneficiary from the successful development with the Koreans is French manufacturer Dassault, which has sold Wallan a Falcon 900 EX – the announcement at MEBA last year that a new Falcon 900 LX was following created headlines about Wallan's potential move from Cessna.

Wallan is adamant there is no move away from Cessna. "In our role as Hyundai dealers we have to go to Korea and we needed an aircraft with longer range than we had. The Falcons are lovely aircraft and they are available for charter – but we are not moving away from Cessna," Wallan said.

Wallan is putting his money behind his comments and already has a new Cessna M2 – the upgraded sibling of the Citation Mustang – on order. It is a first for the Middle East and he believes that, by having one in Saudi, there could be a change in the approach to the smaller aircraft.

"There is a lot of nonsense talked about light jets," Wallan said. "They can be a good local transport. With the range of 1,300nm the M2 can reach the whole of the Middle East. It is good for five people for these short missions. You don't always need a BBJ."

Wallan also believes the new Cessna entry-level will have a role with training schools and the airlines.

"Singapore and Korean airlines are already using the Mustang for jet training. They are absolutely ideal."

Wallan said the market had slowed down in recent years but that Wallan Aviation was still selling aircraft.

"There is interest in Caravans; we have sold a couple of the Cessna 400s [formerly the Corvalis]

and there is even interest in the new Cessna 182 Skylane that uses Jet A1 fuel rather than Avgas," he said.

The price of Avgas is something that gets Wallan's blood pressure rising.

"We have resorted to buying our Avgas in bulk from the UK at a third of the price we have to pay for it in Saudi Arabia. It is ridiculous. The Saudi Arabian Government is keen to encourage Saudis into careers and this industry has a lot of interest among young Saudis. We get a lot of enquiries but people are put off by the cost," he said.

Wallan Aviation operates its own training school at a Government airfield close to Riyadh's international airport. The company has six Cessna 172s as well as three of the new Cessna 162 Skycatchers, which are set to become operational.

Supporting the flight school ties in very much with the Cessna philosophy that pilots will move through the aircraft family – from the 172 training light aircraft to the faster single-engine aircraft up to the Citation jets.



‘We are not moving away from Cessna.’

SAAD WALLAN

And Wallan Aviation is there to help prospective aviators through the processes.

“We are there all the way,” said Wallan.

The Saudi market is keenly awaiting two of the new aircraft from the Cessna production lines – the Latitude and the Longitude.

The Longitude will comfortably perform the popular missions from the Gulf to Europe.

“Despite what people think, cost is important. If you are buying an aircraft you need to ask yourself, ‘what is the mission?’ and then look at what is right. Buy the aircraft for the mission. Most flights in the Middle East are for less than 1,500 miles. If you only make that long journey once or twice then stop half-way. The cost savings are incredible. Planes that do 6,500 miles non-stop are great for medevac, when the passenger needs heart surgery, but for someone going to a meeting he knows where and when he will have time to stop half way.

“No single aircraft can do every job. We know people now who have moved up to a large jet but buy a smaller one for the right missions – remember Riyadh to Jeddah or Dubai is only 500 miles, Beirut and Cairo only 900.”

When Abdulaziz Al Rowaished formed Aviation Link in 2004, the company aimed to provide consultancy services on the purchase, acquisition and completion of private, VIP and business jets – primarily for Saudi clients. Now, as **Jon Lake** discovered, it is doing a little more than that.

THE STRONGEST LINK!

Today, Aviation Link provides total aircraft management services, including operational and maintenance management, using its expertise in the legal, financial, commercial, engineering and quality assurance fields.

Either from its headquarters in Jeddah, or from offices in Egypt, France, Lebanon, and Switzerland, the company can deal with aircraft operators on an owner's behalf.

Vice president Keith Bonson said the company had undertaken 17 completions projects – 14 for Saudi customers with the remainder going to Bahrain and the UAE – ranging from a Gulfstream G550 to a VIP-configured Boeing 777.

Aviation Link signed a deal for two Airbus ACJ319s in 2011 and these are going through completion by the Airbus Corporate Jet Centre (ACJC) at Toulouse, with aircraft interiors styled by Francis Munch of the Studio E/Motion design firm.

They were due for delivery as *Arabian Aerospace* was going to press.

The majority of the company's completions have been of Airbus aircraft, Bonson said, "initially due to the availability of aircraft".

He acknowledges the market position and strength of the Boeing BBJ which, he said, was "the first to market in 1999, when it was launched and the first examples were sold for completion".

But he points out that the majority of BBJs in Saudi Arabia were bought as 727 replacements, when the type was new, and that Airbus Corporate Jets (which came to market later, in 2003-2004) are now starting to sell strongly.

But, while Boeing 737-based BBJs and A319-based ACJs dominate the Middle Eastern market, with their ability to carry 20-30 people in great comfort (making them very much 'right-sized' for a Gulf market where owners often

want to carry a family group), Aviation Link has already overseen the conversion and completion of much larger jets.

These have included a four-engined A340, whose long range and four-engined safety made it ideally suited for VVIP and 'head-of-state' flying, according to Bonson. Perhaps, unsurprisingly, this unlikely private jet has since passed to the Government of Azerbaijan, where it has been joined by a pair of ex-Kingfisher Airways aircraft.

Aviation Link's latest 'giant' has been a 124-seat Boeing 777-200LR BBJ delivered in November 2010 for a 19-month, 500,000 man-hour interior completion by Amac Aerospace of Basel, Switzerland.

The unidentified customer for this aircraft (and customers for this class of aircraft are notoriously publicity shy, and usually safeguard their anonymity) wanted a wide-body aircraft that would be capable of connecting virtually any two city pairs non-stop, while carrying a full cargo load.

After a thorough review of the options, the Boeing 777-200LR was the natural choice. Boeing claims that the 777-200LR (which also serves as the basis of the Boeing 777 Freighter) can carry more passengers and more cargo further than any other jet airliner.

Aviation Link worked closely with Boeing, ensuring that the aircraft was built specifically for VIP cabin conversion, without the usual passenger fittings that would have served only to increase the conversion/completion time and cost.

The completed aircraft has an elegant VIP interior and is viewed as being something of an advertisement for Aviation Link's formidable project management skills.

The cabin has a new humidification system and includes a private hallway and lounges, a master bedroom, a master lavatory, several private lounges, a majlis, as well as guest and staff areas.

The big BBJ (AMAC's first wide-body VIP completion and the first Boeing 777-200LR to be delivered to a private customer in the Middle East) was subsequently delivered during 2012.

Al Rowaished subsequently claimed that the 777 completion showed that Aviation Link was becoming "the go-to company for clients seeking large and very large cabin aircraft."

In order to be able to offer aircraft charters, Aviation Link signed an exclusive contract with NetJets Middle East Programme for the management of its new Gulfstream 550 (delivered in early 2010), which was the first G550 in the Middle East region to be available for charter under a Part 135 certificate.

More was to come, as Bonson explained: "In 2011, one client asked us if we could look after and manage an A320 and a Boeing 777, and we commenced operations in November 2011. We already had a Cayman OTAR 125 for the Boeing 777 and we are applying for a GACA Part 125.

"We will manage the two new ACJ 319s, we are looking to manage a Legacy 600 and a Boeing BBJ, and we are in negotiation to wet lease a Challenger 605. We would look to have six aircraft under management by the end of the year."

Keith Bonson: the company has undertaken 17 completions projects.



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Hashem Jamalallail General Manager of Arabasco, is a man with a plan. "General aviation in Saudi Arabia is steady and the development of new infrastructure is on target" he said.

"With the largest number of privately-owned aircraft in the Middle East being in Saudi Arabia, our market also feeds off the business aircraft from other GCC countries."

"There are more competitors, too, since GACA issued additional AOC and FBO licences. This will undoubtedly affect Arabasco to a certain degree, but we have already initiated steps to counter this challenge and I believe that we will be fine.

"I cannot elaborate at this point, but details will be released to the media once we are ready."

Arabasco was founded at King Abdulaziz International Airport in Jeddah in 1982, opening a Riyadh operation at King Khaled International Airport in 1986. The company has since opened further FBOs in Medina and Yanbu.

Today the company is based at the Private Aviation Terminal at King Abdul-Aziz International Airport, having moved into its new FBO in 2011, gaining an expanded apron in the process.

Already handling an estimated 20,000 flights per year (45-55 per day), the company claims to be handling the lion's share of all corporate aircraft movements in Saudi Arabia.

Signed several partners

But Jamalallail is unwilling to allow the company to 'stand still' and Arabasco has signed several MoUs with partners in the GCC and Europe, expanding the company's target market to reach the USA and Europe.

There have also been a number of developments in the company's MRO division, adding the Isle of Man to existing approvals from the US FAA, the Saudi General Authority of Civil Aviation (GACA), the UAE's General Civil Aviation Authority (GCAA), the Bermuda Department of Civil Aviation, the Caymans and the Registry of Aruba.

It has the capabilities it has for virtually the entire Hawker and Beechcraft line (except the Hawker 4000), the Gulfstream II, III, IV and 450, the Falcon 2000 and the Boeing 737 and BBJ.

The company performs all checks on the Hawker and Beechcraft line and most of the Gulfstreams, and up to a B check on the BBJ.

Arabasco is a dedicated (FAR) Part 145 base and line maintenance facility, with a team of trained and type rated A&P mechanics and avionics technicians. The MRO hangar includes a range of support shops, including wheel and tyre bays, avionics, battery, and non-destructive testing (NDT) facilities, with component storage and logistical support around the clock.

Already an authorised service centre for Hawker Beechcraft aircraft and for the associated

ARABASCO MOVING ON UP...

For more than 30 years Arabasco has provided aviation services in Saudi Arabia.

A one-stop-shop for the aviation industry, it offers aircraft maintenance, management and ground handling services to the business jet communities worldwide.

*However, one man believes there is much more still to be achieved as **Jon Lake** found out when he met Hashem Jamalallail.*

Honeywell TFE 731 (-2 to -5 series) engines and GTCP36-6 series APUs, Arabasco also became an authorised Honeywell avionics service centre on May 10 this year.

Authorised service centre status enhances Arabasco's ability to perform work under warranty for the owners of newer Hawker aircraft in the region – which Jamalallail described as "the most lucrative market in the Middle East and north Africa", thereby saving owners and operators from having to spend time and expense ferrying their aircraft elsewhere."

The company is also clearly pleased with its sophisticated new aircraft wash/care bay, which it claims to be the first of its kind in Saudi Arabia, and which it hopes will pull in customers for other services.

Arabasco has expanded its fuelling operation, UGAFCO. This subsidiary, established in 2003, was recognised in 2007 by King Abdulaziz

International Airport, as the Best Fuel Supplier, and is claimed to be the only company in the kingdom and one of only three fuelers in the entire region having state-of-art refuelling equipment with automated fuel information system.

"Our fuel business has expanded and is generating higher returns than expected," Jamalallail said, adding that the company is now: "enjoying good market share, operating in a 51:49 partnership with Emirates National Oil Company (ENOC) for the last six or seven years, and supplying fuel at King Khaled International Airport in Riyadh, as well as the international airports in Jeddah and Medina".

The company does have four aircraft on its AOC, and four more are 'under process'. These include Boeing Business Jets, Airbus A318s, and Gulfstreams.

The company continues to offer charters with



Hashem Jamalallail: Leading Arabasco's investment charge. Inset: The new FBO at Jeddah.



the Boeing 737 and BBJ, Falcon 900B and Hawker 900XP, and supports the UAE's Royal Jet, a company which Jamalallail says "shares common values" with Arabasco

Three of the Royal Jet BBJs and two Gulfstream 300s are on the Arabasco AOC, allowing the UAE-based company to offer its well-established brand and product offering within Saudi Arabia – the single largest and most mature private jet market in the region. Royal Jet is, therefore, able to position a Boeing Business Jet and a Gulfstream 300 at Arabasco's key hubs in Jeddah and Riyadh together with crews, a full operations team and all necessary supporting logistics, allowing it to better serve the Saudi market.

The BBJ and Gulfstream 300 can comfortably accommodate 30 and 12 passengers respectively, flying within the region, or to further flung destinations like London, Moscow, and Bangkok.

An agreement marking this alliance was signed

in July 2009 by Arabasco and Royal Jet, in the presence of company chairmen Sheikh Khalil Mohammed Awad Bin Laden (Arabasco) and Sheikh Hamdan Bin Mubarak Al Nahyan (Royal Jet).

With a growing fleet of 10 jets, including six BBJs, Royal Jet is the world's largest single BBJ operator.

The BBJ is a firm favourite in the Saudi market, with no fewer than 21 based in the kingdom. Arabasco said it is committed to providing services to as many of these aircraft as it can.

"We are fully engaged in attracting BBJs as charterable aircraft within our operational specifications," said Jamalallail, although he was downbeat about the charter market generally. "It was down for the second consecutive year due to the illegal charters, although we are working with GACA to control that grey market."

He also identified the distressed aviation

markets in the USA and Europe as having resulted in higher sales of both new and used, second-hand aircraft to Saudi operators, and said that Arabasco was gearing up to support these aircraft.

Today, however, he is increasingly focusing attention on ground handling for larger commercial aircraft.

Jamalallail admitted that Arabasco signed a MoU with a "major player" two months ago, but was unwilling to identify his new partner.

In the future, Jamalallail hopes for further expansion at Jeddah, with a new maintenance hangar being added as part of the new GACA airport development masterplan.

Similar expansion is planned at Riyadh, with a new FBO and MRO forming part of a new private aviation zone at King Khaled International Airport, and with further improvements and functions planned to serve what Jamalallail calls the "expanding Riyadh market", though he remains coy about elaborating the nature of these improvements.

Ground support equipment

The company is investing several million riyals in new ground support equipment for Jeddah, Riyadh, Medina and Yanbu. He also hopes "to take another catering company under our umbrella", serving both private and commercial customers.

From 2015, Jamalallail hopes that Arabasco could recapture the contract for providing out-sourced navigational aids calibration and flight inspection services for GACA. The company undertook this task for 11 years, losing out to Norwegian Special Missions (now Samana Special Mission) in 2010.

"I think we are coming back," Jamalallail said, pointing to the capability and quality of the company's previous work in the field.

He would not be pressed as to what aircraft Arabasco might use as the basis of its bid, pointing out that the process was still at a very early stage, and that the request for proposal (RFP) had yet to be issued. But he did add that there were more airfields, with more and more sophisticated nav aids, making the task a very different one today.

nexus



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Saudia Private Aviation (SPA) dominates the VIP charter business in the kingdom but now it is diversifying. Alan Peaford reports.

VIPs enjoy the SPA treatment

Managing the changes: Faisal Bin Abdulaziz Al-Saddik general manager of commercial affairs with Tarik Alkathiri, SPA's general manager of maintenance and services. Top left: The new FBO.

Fixed-base operations (FBOs) are big business in the Kingdom of Saudi Arabia as the number of private aircraft movements increase.

The country's airports are undergoing major development in order to handle the massive rise in numbers, a large percentage of which pass through during the Hajj pilgrimage.

But the airports have now recognised that providing those special VIP services is something best left to the experts – and the country's largest charter operator certainly has that expertise.

"We carry VIPs all the time," said managing director Wajdi Alidrisi. "We know what they need and we are constantly assessing how we operate our business. We also know what we need on the ground."

As a result, the company has opened its own FBO catering for royalty and the top VIPs at Jeddah's international airport.

The 6,400sqm building has no fewer than six lounges to enable privacy and security. "They can be used by people bringing families and friends and one is for females only, so there are many options," Alidrisi said.

The building, situated alongside the FBOs of Jet Aviation and Arabasco, was completed and ready to welcome guests early in July.

"It meets all international standards and is impressive," said Tarik Alkathiri, SPA's general manager of maintenance and services, whose team has been leading the development of the new facility.

SPA has also taken over the ground handling responsibility for private jets at Saudi Arabia's 24 international and regional airports.

What we offer

"We have been visiting events like EBACE and Farnborough. We are working with flight service and planners and people get to know what we offer," said Faisal Bin Abdulaziz Al-Saddik, general manager of commercial affairs.

"We definitely expect to see growth. We have our own clients but we think we will attract more."

Al-Saddik said that the elite and business community accounted for the bulk of its business. However, he added, an increasing number of business travellers and wealthy individuals from

Europe and the US are also using SPA's services. "By having FBOs at airports that are frequently used by our customers, we can control their travel experience from start to finish and keep them in the SPA family," he said.

SPA makes use of the executive terminal FBO in Riyadh but the company is reportedly planning to build a new facility in the Saudi capital by 2016.

It expects to build new FBOs in Medina and Dammam within six years.

As well as Saudi Arabia, the company is looking to have a presence at Le Bourget, Paris, and at a key London airport. "We could do this alone or in partnership with another FBO provider or operator," Alidrisi said.

"It is a huge plan and all the airports will be covered and managed by SPA then," Alidrisi said. "Our business is growing. When we started in 2009, we had only 69 customers. The VIP customer base touched 596 in 2011 and, by the end of this year, we shall have 750."

SPA was founded in 2009. It was created on the back of what was previously known as Saudi Arabian Airlines 'Special Flight Services'.

CONTINUED FROM PAGE 93

Alidrissi has served as CEO since inception, having formerly been vice president of royal and VIP affairs at Saudi Arabian. "We managed three Gulfstream IIs for Government agencies," he said.

In the four years since developing its own identity, the company has created a brand recognisable across the Middle East and is seeing increasing demand for service from outside of the kingdom as well as within it.

With the largest Dassault 7X fleet in the world – four aircraft – the company has been impressing on the Saudi executive market that it only operates "legal" charters.

SPA manages a fleet of 28 business aircraft and owns 10 jets – with six light-cabin Hawker 400s alongside the four Falcon 7Xs.

Charter demand, particularly for the 7X, is very strong, Alidrissi said. Each 7X is flying 650 hours a year – a 100% increase on the previous year and the most utilised of the world's 7X fleet.

Alidrissi has always driven customer service as the company's main priority.

Every month the SPA top team holds a special meeting with only one item on the agenda – to review customer complaints.

Nothing is too trivial

The issue might be as simple as the customer who was dissatisfied with the food because it contained a spice he did not like, but nothing is too trivial to be addressed by the senior executive team

"Our vision was to create an operation which was of a very high level," said Alidrissi. "So part of the process is to study and understand everything that our customer does not like. And we change it, so our customers understand that we think of their needs and are focused on them all of the time."

The relationship with the 'mother company', Saudia, is strong and has provided a source of crew.

"We needed to take it further though," said Al-Saddik. "We are dealing with the elite of the elite. We should be going beyond expectations."

This drive for perfection saw SPA turning to Swiss expertise to help take the standards way higher than first-class.

Earlier this year, SPA announced at Abu Dhabi Air Expo that it had signed a contract with PrivatAir that would encompass training its existing cabin crew as well as coaching in specific areas of on-board service.

The first group of SPA's 20 cabin crew recently completed their VVIP service training in Jeddah.

The move delighted the Swiss firm. Victor Grove, senior vice president selection, training and customer service for PrivatAir, said: "Following on from the Royal Flight of Oman, we now have an opportunity to demonstrate our level of service in the Kingdom of Saudi Arabia."

Even the CEO of Saudia, a board member of SPA, sees the training move as essential. Khalid Abdullah Almolhem said: "It is our prime objective



Wajdi Alidrissi: Demand is strong especially for the Falcon 7X.

to continually improve our services so that we always remain ahead with our competitors and exceed our clients' expectations, in order to win their absolute loyalty. Following the tradition of Saudi Arabian Airlines, we are determined to build on our commitments by training our staff and crew to the apex of excellence."

Demand for premium class seats on Saudia flights has traditionally been high but Alidrissi said that the advantages of the Hawker 400 light jet was being recognised.

"People try out the service with the light jet and realise how valuable private aviation can be. We have seen customers move from the 400 to the 7X. It is fuelling the growth."

Large families

SPA also supports Saudia when customers – often large families and their entourage – want to travel together.

"There is a great demand for wide-bodies – the ACJ or BBJ – or even larger aircraft like the Boeing triple seven," said Al-Saddik.

SPA is able to take a Saudi jetliner and put it on to the private charter market. This certainly meets the requirement for huge baggage space, although Al-Saddik has that covered for the Falcon business too.

"The Falcon 7X is a great aircraft for 14 passengers," he said. "But there were some questions about the baggage capacity." The result was a special deal with Saudia Cargo that sees customers' luggage taken and flown to their destination by freighter. "That seems to be working really well," he said.

The whole operation is running smoothly, according to Alkathiri. Issues over the chapter 11 bankruptcy of Hawker Beechcraft have been resolved. "We were worried for a time," he admitted, "but things have been resolved and there is a commitment to continue to support the fleet. We also have a good relationship with Dassault and have been very pleased with the 7Xs. The whole provision of spares is much quicker."

SPA has been investing in iPad-based in-flight entertainment. Last year it launched an application – the first of its kind in the region's private aviation industry – which includes many services, such as the latest Hollywood movies, audio, games, aircraft details, Islamic Dua'a, partners' list of hotels, car rentals, and telecom services and much more. The SPA Apple iPad application has full bilingual support for English and Arabic.

Based on SPA elite client preferences, cabin crew synchronise the content to the Apple devices to be available and work in off-line mode on board the aircraft.

"We always strive to find better ways that offer our elite clients the most innovative and creative technology and the iPad app did just that for us," Alidrissi said. "It's a nice feeling to see how excited our clients get when we present our services with an attractive packaging", he added.

SPA has also upgraded its website, which is personalised for key customers who can change their personal profiles, order special meals or even a magazine. "We need to demonstrate we are higher than first class in everything we do," Al-Saddik said.

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Jon Lake looks at the changing face of a private aircraft community that was once mostly controlled by expatriates and dominated by foreign-owned companies but is now, increasingly, being taken over by Saudi nationals.

The private aircraft community in Saudi Arabia is small but highly professional, according to Mohammed Bokhari, CEO of the Jeddah-based Aviation Horizons.

His is one of the many new companies that have been started and are being managed by Saudi nationals – changing the face of an industry that was once controlled by expatriates and dominated by foreign-owned companies.

Bokhari is an ex-airline engineer, a former employee of Raytheon's Hawker business unit in Wichita and a graduate of the prestigious Embry-Riddle University, before becoming the director of sales at Netjets.

By his own admission, Bokhari "learned a lot working with Netjets' experts".

Brokerage company

Aviation Horizons was established in Jeddah in January 2007, initially operating as a brokerage company, since, as Bokhari explained: "Most of us had a background in sales, we had built a strong network, and the only one who makes money in aviation is the broker!"

"But," he added, "we quickly built a strong reputation, providing consultancy to some VIPs, and became more visible to the General Authority of Civil Aviation (GACA)

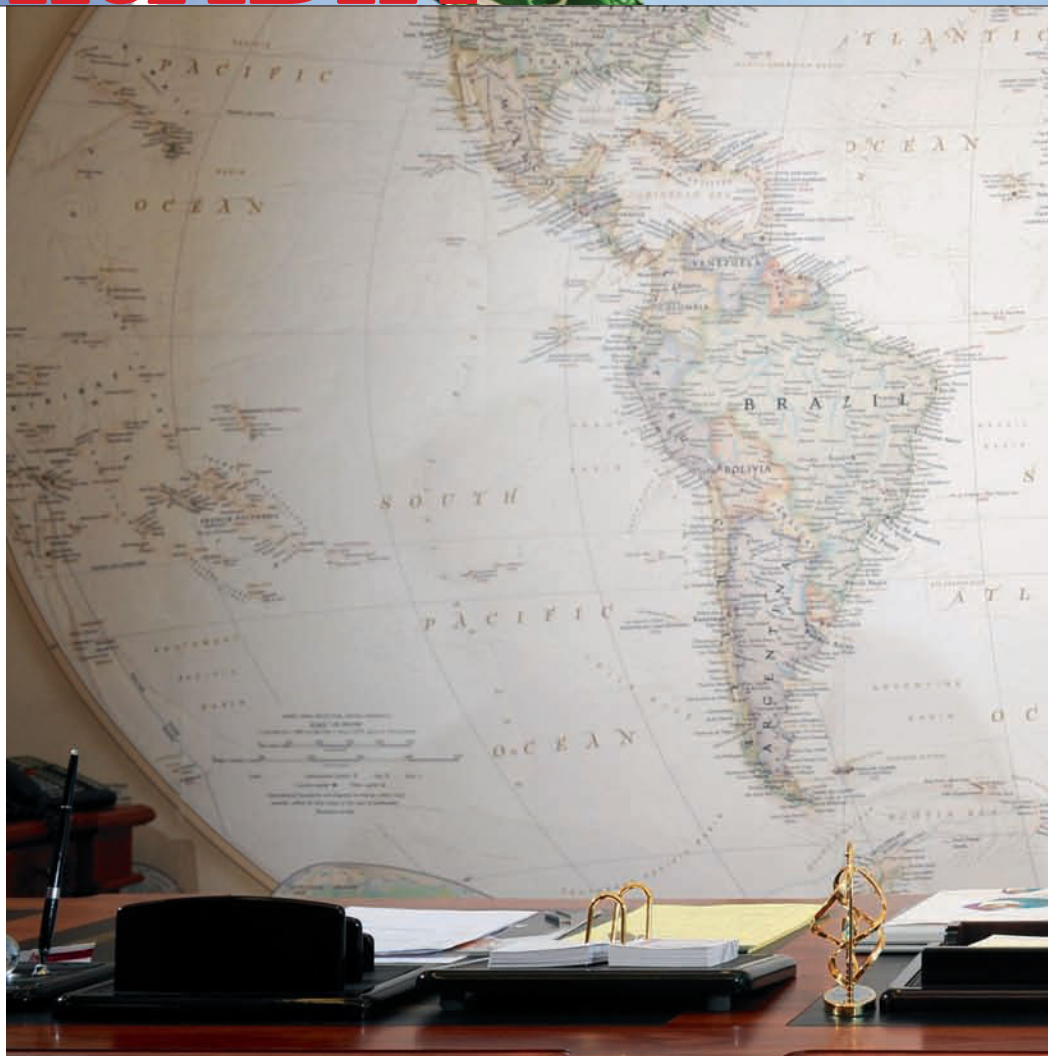
and to the market and so, when we had the right resources, we realised that it was time to move on and become an operator in our own right."

Part of the reason for the time being right was that the booming Saudi market represented a tremendous opportunity for the new company.

It has been estimated that some 75% of the Middle East business market is concentrated in Saudi Arabia, and with it a similar proportion of the demand for private/business aircraft and flying.

But there were too few Saudi aircraft and companies to cater for the demand, leading major players from elsewhere in the GCC (including companies like Royal Jet, Rizon Jet, Al Jaber and Bexair) to move in, taking for as much as 60% of capacity in some cases.

Like a number of other Saudi companies, Aviation Horizons is keen to 'claw back' some of this often highly-lucrative business and to promote the interests of Saudi business, while



A new world on

helping local aircraft owners make the best and most cost-effective use of their aircraft.

"Aircraft owners come to us when they realise that they are not getting enough utilisation out of their aircraft," said Bokhari. "If you don't need to fly 400 hours per year you don't need to buy an aircraft – if you're only flying 100 hours per year in a small Hawker you might as well charter a Falcon 7X, it will cost less."

Or the enterprising owner can place his aircraft under management with Aviation Horizons, which will charter it out when it is not needed.

"Ways of thinking have changed," Bokhari explained. "Owners are much more willing to charter their aircraft.

"And we can give them a more personal service and more personal care. With a bigger company your aircraft is just a number, but with us we're actually building a business that is based on you, guaranteeing you flying hours so it's very

comfortable for an owner to sign a deal like that."

Aviation Horizons gained its AOC from GACA in May 2012. At much the same time the company, which had diversified into focused consultation in private jet operations, aircraft charter, aircraft sales and acquisitions (maintaining strong relationships with all of the major aircraft manufacturers), split into two parts. Horizon Middle East continued on the brokerage side and Aviation Horizons took responsibility for the operational side of the business.

The various arms of the company have now moved into a new, three-storey 1,200sqm building on Mohammad Bin Abdul Aziz Street, which runs parallel to the famous Tahlia Street, the most prestigious commercial area in Jeddah.

"We are delighted to have moved into our own building. Its premium location better represents who we are as a successful private aviation company," Bokhari said. "There are a lot of



‘Ways of thinking have changed. Owners are much more willing to charter their aircraft.’

MOHAMMED BOKHARI

annual utilisation, Aviation Horizons politely declined.

Bokhari sees the Airbus Corporate Jet (ACJ), Boeing Business Jet (BBJ), Global Express and Challenger as being the most popular and most useful aircraft in the Saudi context.

Smaller jets do have a niche role to play in Riyadh and Dammam, he said, and he also saw a role for a mid-sized aircraft somewhere between the bigger jets and aircraft like the Hawker 400 – his personal preference being the Gulfstream G450.

Beautiful aircraft

He described the Dassault Falcon 7X glowingly as a “beautiful aircraft but very expensive”, while he dismissed the Falcon 2000 because: “it can’t get to London from Riyadh”, a key journey for Saudi-based business/private jets. Whereas “the Gulfstream G450 costs much less and does the job”.

But it is larger aircraft that Aviation Horizons is targeting, and the company expects to have four under management by the end of 2014.

“The aircraft that I want are the ACJ 318, the BBJ, the Global Express and the Challenger 604,” Bokhari said.

The company is in the final stages of signing a management contract for a Challenger 604, which (with the BBJ) is regarded as

being more ‘right-sized’ for the Saudi marketplace.

Bokhari is also in talks to bring an ACJ 318 under the company’s AOC, guaranteeing 400 hours per year to its owner.

He said that he would “love to have Challengers, BBJs or ACJs under management”, and is confident of being able to guarantee high utilisation to their owners.

This is because aircraft type and ‘quality’ is more important than the quantity of aircraft in the managed fleet, according to Bokhari. “Give me five BBJs and I’m a king but give me five Hawkers and I’m still a nobody!”

And the energetic CEO of Aviation Horizons is optimistic of getting the right kind of aircraft under management.

“You don’t have to buy an aircraft when others are struggling to get proper utilisation,” he observed. “We are more than happy to talk to any respected operator to broker their excess capacity.”

the Horizons...

wannabies in this business and this building is a useful differentiator. Clients come to see us and see that we are really serious about our business (and theirs) and that makes them more relaxed. Having our own building provides an integral part of the future development and expansion of Aviation Horizons.”

Aviation Horizons occupies the first floor and the rest is taken up by its sister companies.

And Aviation Horizons has ambitious plans for growth – especially in aircraft management – building on the award of its AOC.

“Not many companies in Saudi Arabia have an AOC, especially not a Part 135, which is more strict than a Part 125,” Bokhari said.

“Ours is AOC number 12, but we were actually the fifth, before Saudi Private Aviation and Alpha Star!”

Whether fifth or 12th, Aviation Horizon’s AOC is widely acknowledged to have been the first to

be issued following the royal decree that separated GACA from the Ministry of Defence. And soon afterwards the company became an operator member of the Middle East Business Aviation Association (MEBAA).

The company currently provides business air charter services with a Learjet 60XR (HZ-NGN) based at Jeddah (King Abdulaziz International) airport, and has also signed a management contract with New Zealand Aerial Mapping.

Bokhari admits, however, that the Learjet 60 is not a popular sized aircraft in the Saudi market with many clients preferring larger jets. “Business travel is not that popular in Saudi Arabia,” he confided. “Most people want to fly with more space and more luggage.”

The Learjet 60 flew just 250 hours in its first year of operation and so, when the company was offered management of a Hawker 800XP by an owner who wanted a guarantee of 300 hours

Jet Aviation Saudi Arabia, with FBOs in Jeddah, Riyadh and Medina, prides itself on first-class service. Steve Nichols finds out why.

Swiss banking on Arab partnerships

In the new Jeddah FBO that opened in 2011, the company handles around 15-35 business flights a day and can deal with everything up to a Boeing 747 if need be.

The parent company was founded in Switzerland in 1967 and is one of the leading business aviation services companies in the world providing maintenance, completions and refurbishment, FBO services, along with aircraft management, charter and personnel services.

Close to 4,500 employees cater to client needs from 22 facilities throughout Europe, the Middle East, Asia and North and South America.

The Saudi Arabian company was set up in Riyadh in 1979 and opened its Jeddah operation nearly 30 years ago in late 1983. It provides complete FBO services and limited maintenance to business aircraft operators of all sizes.

Joint venture

Trading under the name of its Basel-based parent, Jet Aviation Saudi Arabia is a joint venture, with the parent managing and developing it locally through a general manager from the group, and with the support of more than five unnamed local partners.

Swiss-born Hardy Butschi is the company's vice president and general manager. He wouldn't disclose who the local partners were, but confirmed that they weren't otherwise involved in the aviation business.

"Our partners have been with us from the outset," said Butschi. "We have the benefit of the global brand – and the all-important Jet Aviation name across the front of the building – but we also have the local touch that is so important in this region."

So what does the company offer?

"We have full FBO services, including ground handling, flight planning, light maintenance, and helping out with immigration and transport," said Butschi.

'We have the benefit of the global brand but we also have the local touch that is so important in this region.'

HARDY BUTSCHI

"We can arrange landing permits (even annual ones) obtain weather reports, collate NOTAMS and generally make the crew's life a lot easier.

"We can also help obtain visas for visiting flight crew or even offer air-side accommodation for them, including rest areas, showers, beds, TV, Wi-Fi – you name it.

"While we have a great relationship with the Saudi immigration authorities, there are times when we can't get visas organised and the ability for crews to have somewhere to relax and sleep airside is much appreciated."

The business can be seasonal – the run-up to the end of the financial year can be very, very busy, as can the period just after. Then VIPs like to use the Jet Aviation facilities at vacation and school holiday times, plus the annual Hajj religious festival sees the more well-heeled pilgrims flying in for the onward trek to Mecca.

So how is business?

Butschi said that, overall, the number of flights per year had gone down slightly over the past couple of years, but the size of the aircraft it was handling has gone up.

"We are seeing more Airbus A310s, ACJ319s, ACJ320s and A340s," he said. "Even Boeing 737s, 767s and 747s are in use by vVIP customers.

"Last year we gained a large number of new customers and are seeing an increase in passengers, if not the total number of flights overall."

It also does the handling for Jeddah's royal terminal, and offers a similar service at the Riyadh and Medina airports.

Jeddah, with its royal terminal, will also get ready to handle the Airbus A380 – as some VIPs will have them sooner or later.

"I would also say that 50% of our international customers account for 70-80% of our movements," said Butschi.

Jet Aviation also provides the business aviation community with ground handling services at Prince Mohammad Bin Abdulaziz International Airport in Medina, the fourth busiest airport in the kingdom.

"We experienced increasing demand for passenger assistance at Prince Mohammad Airport and expanded our services to ensure clients receive properly-coordinated ground handling services that meet their needs," said Butschi.

The company's ground handling services at Medina include passenger handling, immigration and customs clearance, transportation, hotel and catering coordination, aircraft refuelling, cleaning and turnaround assistance.

Jet Aviation in Jeddah also handles light maintenance work and is working on FAA approval.

"Our main focus is on our FBO work," explained Butschi. "But we can offer maintenance work, such as the smaller inspections. We can also source spare parts for customers and get them shipped to us far more easily than they could get hold of them.

"Any larger maintenance inspection can be handled by our Dubai operation, as they have

Hardy Butschi: "Our partners have been with us from the outset."



access to a larger market at present, but we do not rule out maintenance services for larger inspections in the years to come."

The FBO market is also changing, with new competition in Jeddah and Riyadh. So is Butschi worried about the competition?

"Not really," he said. "We lost a couple of customers to a local competitor and are glad to see that they came back after a while. Apart from that, competition will help us to continuously improve our services to stay ahead. I am confident that my excellent team is up to the challenge."

"We have a certain quality of service, a certain set of values that we think our customers appreciate. We have loyal customers and loyal employees that were with us from the start. That says a lot about a company."

Renowned for excellence

Butschi added that the company was renowned for its excellence when it came to aircraft cleaning, both inside and out.

"Many say they won't have their aircraft cleaned anywhere else," he said. "We incentivise our staff and make sure they are rewarded for doing an outstanding job – it works very well and means the end customer is happy too."

He has also introduced a 'Newspaper Direct' service, whereby a whole host of the latest newspapers from around the world can be printed off at Jet Aviation and delivered to customers as they depart or arrive.

"I'm very happy with the team we have here, which combines Arab hospitality with Swiss efficiency and quality. A lot of customers stay with us because they can't get the same level of service elsewhere – that's very satisfying for me and makes me proud of the entire team," Butschi concluded.



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SAMANA OPENS THE DOOR TO SAFER FLYING

Engineer Abdullah Beshawri, right with Mohammed Aljaidi.

Samana Special Mission Al-Saudia was established in January 2010 to ensure and verify the safety of Saudi airspace for both civilian and military traffic.

Jon Lake finds out more about the organisation.

Samana Special Mission Al-Saudia (SSM) took over responsibility for the inspection and checking of all of the navigational facilities, radars, approach and landing aids (including instrument landing systems) from the kingdom's General Authority of Civil Aviation (GACA), which had hitherto run its own Flight Inspection Directorate.

The reliability, continuity and accuracy of these facilities and aids is absolutely critical to safe air operations.

ICAO/FAA regulations require internationally agreed and defined standards to be certified, maintained and then periodically checked.

Because signals from these facilities are influenced by a host of external factors and particular site conditions, including ground conductivity, terrain irregularities, the presence of metallic and other structures, they can only be properly checked and calibrated from the air, using specifically-equipped, dedicated aircraft operated by specially-trained crews.

There are, essentially, four categories of flight inspection – including site proving, which determines the likely effect of the local environment on a particular planned facility or aid even before it is permanently installed.

These include commissioning checks, which calibrate and prove the

Continued
on Page 102

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performance of a new facility or aid, leading to certification and operational use.

There is also a need for regular periodic checks, scheduled at regular intervals, to determine that a particular aid or facility is still meeting standards and is still within laid down tolerance limits.

Finally, there may sometimes be a need for one-off inspections after a facility has been reconfigured, or after an accident.

SSM also provides surveillance/monitoring and route verification services.

With some 125 facilities needing to be inspected in Saudi Arabia, including military, border security, ARAMCO and other private airfields – and with each airfield typically having four or five separate facilities/aids to be checked – in addition to GACA's own requirements, SSM's services are in high demand. The company averages between 70 and 100 hours flying per month, giving an annual total of between 800 and 900 hours.

This, in turn, requires a dedicated flight inspection directorate to undertake regular flight inspections, which can be organised under the auspices of a nation's own Civil Aviation Authority, or that can be out-sourced to a dedicated commercial or military flying unit.

Proud history

Flight-checking in Saudi Arabia has a long and proud history, dating back to the 1970s, when GACA established a dedicated flight department operating a Cessna 420 and a Gulfstream IIN.

The Cessna gave way to a Sabreliner in 1982 and this was, in turn, replaced by a Beech 1900C in 1990.

In those days, the Saudi Flight Inspection Directorate was also responsible for checking facilities and aids in neighbouring Yemen and Kuwait.

When GACA decided to outsource flight checking operations, what would become SSM was one of three bidders, operating as part of a joint venture with the Norwegian Special Missions company, headquartered in Oslo. The Norwegians specialised in the development of advanced and cost-efficient special airborne mission solutions for flight inspection, airborne surveillance and remote sensing applications.

After winning the five-year flight inspection contract, SSM was established and registered as a limited company in January 2010, and began operations that February.

The company currently operates a Beechcraft King Air 200 (HZ-PC2) and a Beechcraft King Air 350 (HZ-SSM), and plans to purchase a second Model 350 next year.

Samana's manager flight inspection logistics, Mohammed Aljaidi, who has been in the flight inspection business for 35 years, believes that the King Air is ideally suited to the role, combining, as it does, competitive performance characteristics with relatively low operating costs, as well as having sufficient capacity to accommodate the required crew and equipment. It also has sufficient range and endurance, while being



Abdullah Beshawri, left, with Mohammed Aljaidi.

aerodynamically stable throughout the operating envelope and providing a quiet and vibration-free working environment for the crew.

The aircraft are naturally equipped with a specialised flight inspection system that allows them to collect data from radio navigation aids and compare them with accepted international tolerances. In all, the aircraft can be used for the certification and flight inspection of the following facilities and aids:

- Instrument landing systems (ILS) up to Category III;
- Marker beacon systems (MKR);
- Distance measurement equipment (DME);
- VHF omni-directional range (VOR) including CVOR and DVOR;
- Tactical air navigation system (TACAN);
- Non-directional beacons (NDB) – though these are no longer used in-kingdom;
- VHF communications (VHF);
- UHF communications (UHF);
- Primary surveillance radar systems (PSR);
- Secondary surveillance radar systems (SSR);
- Precision approach radar systems (PAR);
- Microwave landing systems (MLS);
- Visual landing aids (including PAPIs, VASIs, and normal approach lights);
- GPS approaches; and
- R-NAV procedures (SIDS, STARS and en-route), and area navigation.

SSM's King Air 200 is equipped with a fully automatic DGPS/RTK-based UNIFIS 3000 flight inspection system, while the King Air 350 was equipped with Aerodata's FIS-6 flight inspection system, though recently the aircraft was ferried to Norway for an eight-week, \$5 million installation of a new, state-of-the-art UNIFIS 3000 system.

During this period, the company 'bought in' flying hours from the Pakistan CAA, using a Beechcraft 200, to fill any gaps.

Technology and equipment alone are not sufficient for the inspection and certification of navigation facilities and aids.

To accomplish its task, SSM also relies on its team of highly trained and highly skilled air crew, dedicated engineers and a management and

operations team who really know and understand the industry's needs.

The company's crews include three former Pakistan CAA pilots, as well as three flight inspectors and two mechanics. The aircraft usually fly with two pilots and one or two flight inspectors. The role requires extremely accurate and precise flying and an in-depth understanding of navigation aids, and pilots have to be specially trained and certified for the role.

The flight inspectors also require extensive training, since they are authorised to schedule and perform the required inspections, and to then verify that the facilities being inspected meet the required ICAO and FAA standards and tolerance limits. They certify the operational status of these facilities and report on any potential hazards based on signal variations and/or terrain restrictions.

Flight inspector

A good flight inspector will coordinate with engineers and maintainers to enable them to correct any malfunctions discovered during the inspection, and to maximise the performance of the facility being checked/inspected.

SSM's expansion plans centre around providing flight inspection services to some of Saudi Arabia's neighbouring states, perhaps including Kuwait and Yemen – which used to use GACA's own Flight Inspection Directorate – but also targeting Bahrain, Dubai, Qatar, Sharjah and the Sudan.

"The strategy for expansion would generally be to offer services to other Gulf States first, then to the rest of the Middle East, and then later to Africa," said Aljaidi.

But for the time being, and at least until the present contract ends in 2015, SSM's primary focus will be in-kingdom.

The company remains the only GACA-designated and authorised organisation able to carry out the flight inspection of radio navigation facilities and aids, landing/visual aids and radars at all Saudi civil airports, military bases and private airfields, and with aerospace in Saudi Arabia continuing to expand, demand for the its services is set to grow, and to underpin the acquisition of further aircraft.

Beechcraft getting back to prop-er business

Saudi Arabia is noted for its large jet fleet – but the makers of the world's largest number of turboprops is seeing a steady growth in sales to both the private and public sectors. Alan Peaford reports.

“Welcome to my office,” said Scott Plumb, the Beechcraft vice-president of sales for Europe, Middle East and Africa.

The office in question was the cabin of a King Air 350 in the new Beechcraft livery and part of a great push by the Wichita company to shake off the problems of the last few years and send a clear statement to buyers, ‘Beechcraft is back’.

“It is great to be talking about what we are doing going ahead and not having to keep asking questions about the bankruptcy,” said Plumb.

“A lot of people outside the United States don’t really get the whole Chapter 11 thing. But we are out of that now and we are pushing forward with what we know best.”

The financial woe that Plumb was referring to was the bankruptcy of the Hawker Beechcraft company. Under the special financial protection that the US corporate system allows, the company was able to restructure and, as a result, has stepped away from the production of the former Hawker jet aircraft and, instead, has focused on the turboprop – or the traditional Beechcraft – business, which has seen it achieve global market leadership through the King Air family of aircraft.

One of the big successes has been the sale to Saudi Arabia of eight King Air 350ER aircraft in special mission configuration.

The \$250 million contract saw the King Airs outfitted for intelligence, surveillance, and reconnaissance (ISR) missions.

The August 2012 requirement was for four new ISR-equipped King Airs, and for four existing Saudi Beech air ambulances, to be converted to the same standards.

While Plumb remains tight-lipped about the specifications of the ISR aircraft, sources in Saudi Arabia suggest the aircraft carry a sensor package that includes a multi-sensor

electro-optical payload, a synthetic aperture radar (SAR) and a modern signals intelligence (SIGINT) system, and will be fitted with a self protection suite that includes an AN/AAR-60 infrared missile warning and AN/ALE-47 countermeasures system.

The King Air special mission aircraft can be fitted with a high-rate data-link, AN/ARC-210 VHF/UHF/satellite communication transceiver radios with Have Quick II and encryption, and an AN/APX-114/119 identification friend or foe transponder.

The King Airs are part of the formation of a new RSAF unit, the 41st Squadron.

Plumb said that private business was also looking at the King Air.

“It is the best selling turboprop in the world and can operate from smaller airfields and in hot and high conditions. It is ideal for the Saudi market.”

Even jet owners are on Plumb’s target list as he echoes the calls of several Saudi operators for owners to look at right-sizing their corporate operations.

Commercial market

Beechcraft believes a large part of its potential commercial market in EMEA consists of high- and ultra-high-net-worth individuals, who own businesses or have the personal wealth to justify purchasing an efficient twin-engine turboprop alongside or instead of jets.

Beechcraft is no longer building jets, but Plumb said the company’s global customer support division would continue to support and service the world fleet. The fleet includes many aircraft in Saudi, including SPA’s Hawker 400s and many of the Hawker 800 family in private ownership.

The total fleet of Hawker Beechcraft aircraft still in service, including jets, totals about 36,000 worldwide.

At the recent Paris Air Show, Beechcraft said it expected growth in certain international defence budgets, which would lead to new demand for its trainer and light-attack aircraft.

The company said military spending has risen 7.8% in north Africa and 8.4% in the Middle East.

Beechcraft is working to secure a launch customer for the AT-6, an attack version of the company’s popular T-6 training aircraft.

The company said it has a launch customer for its AT-6 light attack aircraft, and could announce an order for 24 examples of the type before the end of 2013.

The customer has not been identified but Beechcraft chief executive Bill Boisture said it has seen interest in the type from countries in the Middle East.

Scott Plumb: “We are pushing forward with what we know best.”



One Saudi company has found a niche in the flight support business – and is taking its business model global, as Alan Peaford found out.

NEXUS PROVIDES THE MISSING LINK

Behind the shaded ground-to-ceiling glass windows in a modern office block in the northern suburbs of Jeddah exists a room that looks like the mission control in a sci-fi movie.

Sophisticated biometric security allows access to the room and inside is the buzz of computers sending messages from this head office environment to back-up services in Florida and to frontline offices in Europe, Africa, India and the Middle East.

Warning signs remind staff about the strict rules regarding mobile phones, photography, recording devices and use of the company's computers. Even personal SMS messages can be intercepted within the room.

Security is paramount.

This is Nexus, a flight support and services business with a difference.

The Middle East has traditionally been a world-class provider of flight support. But Abdullah Al Sayed, the company's president and chief executive, believed there was something missing. "There are a lot of companies offering different elements of flight operation and flight support but none of them were providing the whole thing, like flight dispatching, crew scheduling. There was a clear opportunity."

Al Sayed has an impressive background in the industry. He is the former CEO of NetJets Middle East and was director of flight operations for NAS. He also headed flight operations at Royal Jet in Abu Dhabi, whose chairman, Sheikh Hamdan, Mubarak he credits as being a remarkable leader.

"It was an excellent place to work because of the huge respect the chairman had for the people who worked there and the way he treated them and the concentration on human resources. There was also a massive commitment to safety. He supported safety, not just talking about it. He did it."

This two-pronged approach has been adopted as a style by Al Sayed, who has introduced a special "02" room for operations staff with films, games and fresh oxygen pumped into it, as well as championing the case for female workers and developing Saudi national females for licensed flight dispatcher roles.

Commitment to people

This commitment to people is matched by the commitment to safety and systems.

"I have always said I want us to be to our industry what the Four Seasons is to the hotel industry. We are about quality. We are about service," he said.

With Nexus launching the flight despatch and crew scheduling there was a high risk. "People have avoided it because it is expensive to do, as you need highly specialised and talented people and secondly you need a strong system in place. There is a high liability. If you forgot to get a first officer for the trip it could cost 400 to 500 thousand dollars," explained Al Sayed.

"Traditionally airlines haven't sub-contracted dispatch or scheduling. I wanted this when I was at Netjets but it didn't exist. I applied to the civil aviation authority here and asked for a flight operation or dispatch centre. The first time they

kicked us out of the office and said we were crazy and it couldn't be done. I went and insisted and they said I could have a flight support company. I said, 'A support company, anyone can take it. I want an operations company'. Credit to them. They went through the process to develop a licence. I had to deal with the economic regulations, safety and standards, legal and other things but I got approval for what is still now the only licence for a complete dispatch centre and scheduling operation in the Middle East. Even Captain Al Gaoud – then the head of civil aviation in Bahrain – credited them for making this unique licence."

Nexus opened an office in Bahrain to give the company two centres and enable continuous service to customers, with Bahrain acting as the main office and Jeddah as the back-up. The first flight took place in June 2010.

When the riots and demonstrations in Bahrain reached their peak, the company decided to relocate the head office to Jeddah and moved to a new office building shared with Nexus's sister company, MAZ Aviation. It made Bahrain the back-up.

"It was a hard decision and a tough time for the company during that period," Al-Sayed said. "We had a number of expatriate staff who had been in Bahrain with their families and they had to relocate. It was challenging."

In late 2011, Nexus took its first aircraft under full management.

"But it is with a difference," Al-Sayed said. "We don't do any charter and we have refused

'There are a lot of companies offering different elements of flight operation and flight support but none of them were providing the whole thing, like flight dispatching, crew scheduling. There was a clear opportunity.'
ABDULLAH AL SAYED



CONTINUED FROM PAGE 104

customers who have said we will bring aircraft and you will do charter. We tell them this is illegal. We operate under Part 91 and want owners who want to enjoy their aircraft. Just the owner and their family.”

The so-called grey market is a major problem for the Middle East and exists where an aircraft licensed for personal use only (Part 91) is chartered out to third parties. Neither the owners nor the passengers are insured for these trips, as they would be if they were with an aircraft chartered under the air transport (Part 121) rule.

Unscrupulous owners or brokers who carry out these illegal trades can generate hundreds of thousands of dollars a year to reduce their costs of owning an aircraft. The practice is particularly rife in Saudi Arabia, but Al-Sayed believes that by sticking to the rules, the business improves.

Pressure put on us

“We have had pressure put on us from VIP owners but we have principles. We must stick to our standards. As a result, we have gained a lot of respect from the regulator for our position. The General Authority of Civil Aviation of Saudi Arabia (GACA) is also working hard to eliminate the grey market. Now when we apply for the annual permit it comes through quickly because GACA knows how we operate. Others have to prove they are a genuine Part 91 business and are not using the aircraft for private charters.”

The Nexus reputation grew.

“After our first aircraft at the end of 2011, we rapidly took six more under management. By the end of 2012 our fleet had grown to 13 aircraft. We needed to be offering something special,” said Al-Sayed.

“Owners had told me before that they had put aircraft under management and when they saw it again it would have the management company’s logo and the crew uniforms would be in the colours of the management company. Again, we were different. From the start we have a designer sit with the owner and family to create the uniform for them that is exclusive. The interior is in their colours. The only place our logo appears

The nerve centre of the Nexus operation in Jeddah is like something from a sci-fi movie.

is in the manuals. We even create their individual stationery, even the playing cards. Then, to make it exclusive, we ask the wife and the VIP what’s their favourite perfume. We go to London and get the perfume put on the aircraft.”

Each customer has an individual concierge, who manages the relationship with Nexus. They book restaurants, theatres and know the customer needs. “The concierge is the account manager and all contact is through them.”

Nexus has also been growing its ad-hoc business and is working more with airlines. “We spent more than \$2 million on our customised system and we have seen some of the major top 100 airlines using it. We are now working on crew scheduling and planning for Saudi Aramco, including managing the helicopter fleet. Scheduling is vital for that business and for Saudi Arabia’s oil economy.”

Nexus is also providing support for the Saudi Government in training and manning its aircraft.

The company is strict on its safety standards and is also committed to training – a key string to the Nexus bow.

Partnered with international training leader FlightSafety, Nexus brought flight dispatch training to the region and developed its own training centre at Jeddah.

“We were the first to push GACA to allow women to take the flight dispatch license and our first lady student is taking hers now,” Al-Sayed said.

“Also, traditionally, people have gone from here to train outside. We have reversed that. We have people coming from outside to train with us.



“We have a contract for 100 Nigerian students in 10 groups to come here, train and then leave the country. We mix them with Saudi students. It is good to mix with other nationals.”

Nexus has been certified by the International Business Aviation Council (IBAC) to carry out audits for the International Standard for Business Aircraft Operations (IS-BAO). “We have a strong safety and quality team,” Al-Sayed said.

Following a deal with MedAire at MEBA in Dubai last November, Nexus is sending staff to Singapore to train as MedAire trainers and help crews learn how to handle medical emergencies.

Internationally the company is spreading its wings.

It has opened offices in Rwanda and India and is in the process of receiving authorisation to establish a European presence with a base in Monaco.

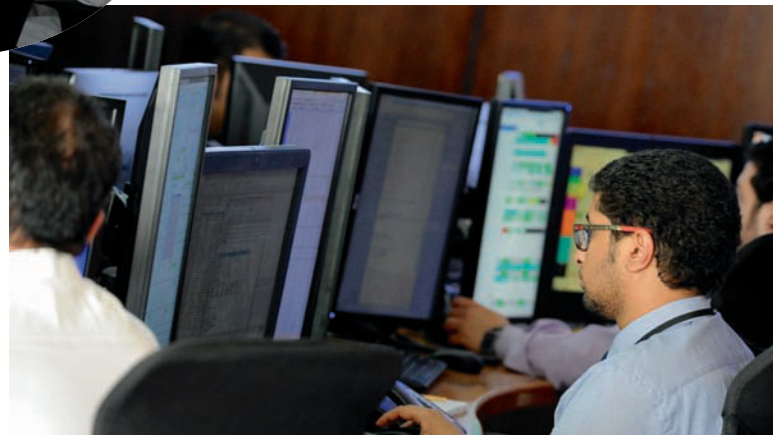
Learn our systems

“India started in November 2012 and we now have four aircraft under management,” said Al-Sayed. “We brought Indian staff to Jeddah to learn our systems and they deal direct and are our face in that country. All the scheduling, flight planning and despatch is done from here. India is an amazing country and the business prospects are very exciting.”

The African venture is also exciting for Al-Sayed and his team. It, too, will operate as a satellite office with the core services managed from Jeddah and documents stored on the Nexus secure system.

“Rwanda is like the Switzerland of Africa. It has high standards and is always highly rated in the lists of countries in which to invest and those fighting corruption and enjoying GDP growth,” said Al-Sayed. “It provides more troops to the UN than other countries and is a great place to be. It is aviation friendly and the president, Paul Kagame, is working hard to improve the social and community aspects in the country.

“On the last Saturday of every month, everyone aged between 15 and 50 donates three hours of community service to clean streets, paint schools and so on. It is that attitude that will make the country succeed and I think it is the right place for us to be for development in Africa,” Al-Sayed said.





Alubat Middle East FZCO



Alubat Middle East FZCO is a supplier of realistic aviation crew training solutions and able to meet all present and future requirements of aviation training centres worldwide. Alubat specializes in the consultancy of training centre designs and the fabrication of Cabin Service Trainers, Cabin Emergency Evacuation Trainers, Door Trainers, Real Fire Fighting Trainers, as well as customized designs for Tactical Aviation Security Trainers used by special forces. Located in the Emirate of Dubai, United Arab Emirates, Alubat has access to excellent logistics with the possibility of shipping goods by road, sea or air.

Alubat was awarded the contract to install world class Cabin Service Trainers for Saudi Arabian's new In-flight Training Center in Jeddah. The delivery of the Airbus A320 and A330, Embraer E170, as well as Boeing 777, 787, and 747 main and upper deck CSTs with varying class configurations and 400 cycle electrics is due to take place in the 3rd quarter of 2013.

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Saudi Airlines Catering Company was launched more than 30 years ago to supply its parent airline. Now the first of the airline's divested businesses is finding its own feet.

Alan Peaford looks at the progress so far.



PRIVATISED SACA GETS A TASTE FOR GROWTH

There are many catering companies that claim to make dishes fit for a king. For Saudi Airlines Catering Company (SACA) that is more than just a claim, it is a regular task.

Five years ago SACA became the first of the airline's business streams to be floated off and listed on the Riyadh Stock Market.

The airline maintained a 36% interest in the catering company that has its offices and kitchen facilities close to Jeddah's King Abdulaziz International Airport (KAIA). But today, SACA is developing beyond the world of aviation by using its skills, processes and imagination to reach other business sectors with growing success.

"We were the first to be privatised and are now doing very well," said Ayman Al-Hilali, the company's business development manager. "We have won a number of awards worldwide and are seeing recognition for the work that is being done here."

The latest accolade was a gold award by the global flight catering audit company Medina from Montreal, which rated the Saudi business as the number one across Europe, Africa and the Middle East.

The audit company presents the awards to caterers who are leaders in delivering safe, high-quality in-flight food and achieve the highest standards in the food safety and quality management standard (QSAI) as determined by a multiple airline panel, including Air Canada, KLM-Air France, Aeroflot and Singapore Airlines.

SACA had already been voted the best airline food provider in the region by the KLM-Air France partnership.

But Al-Hilali said the caterer is now taking its skills to new outlets.

"We are growing a focus on to other catering opportunities," he said. "The biggest of these is Princes Noura University in Riyadh."

Princess Noura bint Abdul Rahman University is the world's largest all-women university with some 50,000 students and SACA has the contract to supply the catering.

"In terms of the cooking and hygiene there is no difference between what we do for the university and what we do for the airlines. Of course the main difference is in the delivery," Al-Hilali said.

Hot and fresh

"We have to supply hot and fresh for the canteens and chilled for airlines as the heating is done on board. It is just a different mechanism." SACA supplies the catering for Saudia Private Aviation (SPA), which provides VIP charter, and also other private flights – including for the Saudi Arabian royal family.

"The quality of food and presentation has to be good," Al-Hilali said. "And that goes right across the board."

The company sources local produce where possible and has a worldwide network of suppliers for the private and royal flights.

"We get seafood from Norway and Scotland and the beef we get from the United States," Al-Hilali said.

There are five major catering units in the SACA group.

The main Jeddah facility opened in 1998, followed by Riyadh a few years later. Damman was opened in 2001 and then Medina in 2007. The fifth was launched in Cairo, Egypt.

"Cairo is our only catering unit outside of the

kingdom," said Al-Hilali. "There were some restrictions in getting money from the country – a difficult obstacle for a number of airlines operating in Egypt – and we decided to solve the problem by having our own catering unit, which could then guarantee the quality of the meals. We then get the standard we need for consistency across our fleet."

"We are still hoping to offer this service to third parties but we need to convince the authorities that it is in their interest, too, to have other suppliers for airlines."

SACA has management contracts with airlines where it also manages the meal supply at outstations. "They tell us the food quality budget and we do the management for them," Al-Hilali said.

SACA has more than 3,000 staff at its five facilities. And, with the growth of the external catering business, which is now taking in oilfields and other corporate contracts such as banks, those numbers are growing.

However, 70% of the work is still for the airlines, of which the majority of the 90,000 meals a day are for the former parent company Saudia.

"There are new airlines coming to Saudi Arabia every other day and we think the growth ratio will remain the same," Al-Hilali said.

In the company's catering unit at Jeddah airport, the operation is run with military efficiency. Hygiene and food safety are clearly priorities. The facility is spotless and there is constant audit.

"Each unit in the whole operation will self-audit as the first stage," Al-Hilali said. "Then we have internal audit, where each department will audit another department. Then we have the external



Stake on the menu

Singapore-based ground handling and in-flight catering company SATS is selling its 40% stake in Jeddah-based catering company Adel Abuljadayel Flight Catering (AAFC).

The company said in a statement to the Singapore Stock Exchange that it would sell its entire holding in AAFC for a cash consideration of \$18.4 million, subject to regulatory and other approvals, in order to pursue other investment opportunities in the Middle East.

Far left and far right: Feverish activity in the pristine environment of the SACA kitchens. **Centre:** Ayman Al Hilali: the company reaching new markets. **Left:** SACA chefs serving up dishes fit for a King.

audit, where a third party randomly checks that we are following standards. We have our own department called food safety and quality, which operates 24/7. These people work around the clock and do sudden inspections and will penalise anyone not meeting the standards – even terminating their employment. We have to ensure the quality of our meals is always maintained. And that also means we visit suppliers without notice. We just turn up and check standards are being met – if there is a problem they are out.”

Massive central unit

SACA is embarking on a new process with the opening of a massive central unit in Riyadh; where it will prepare all of its economy class meals and then blast freeze them.

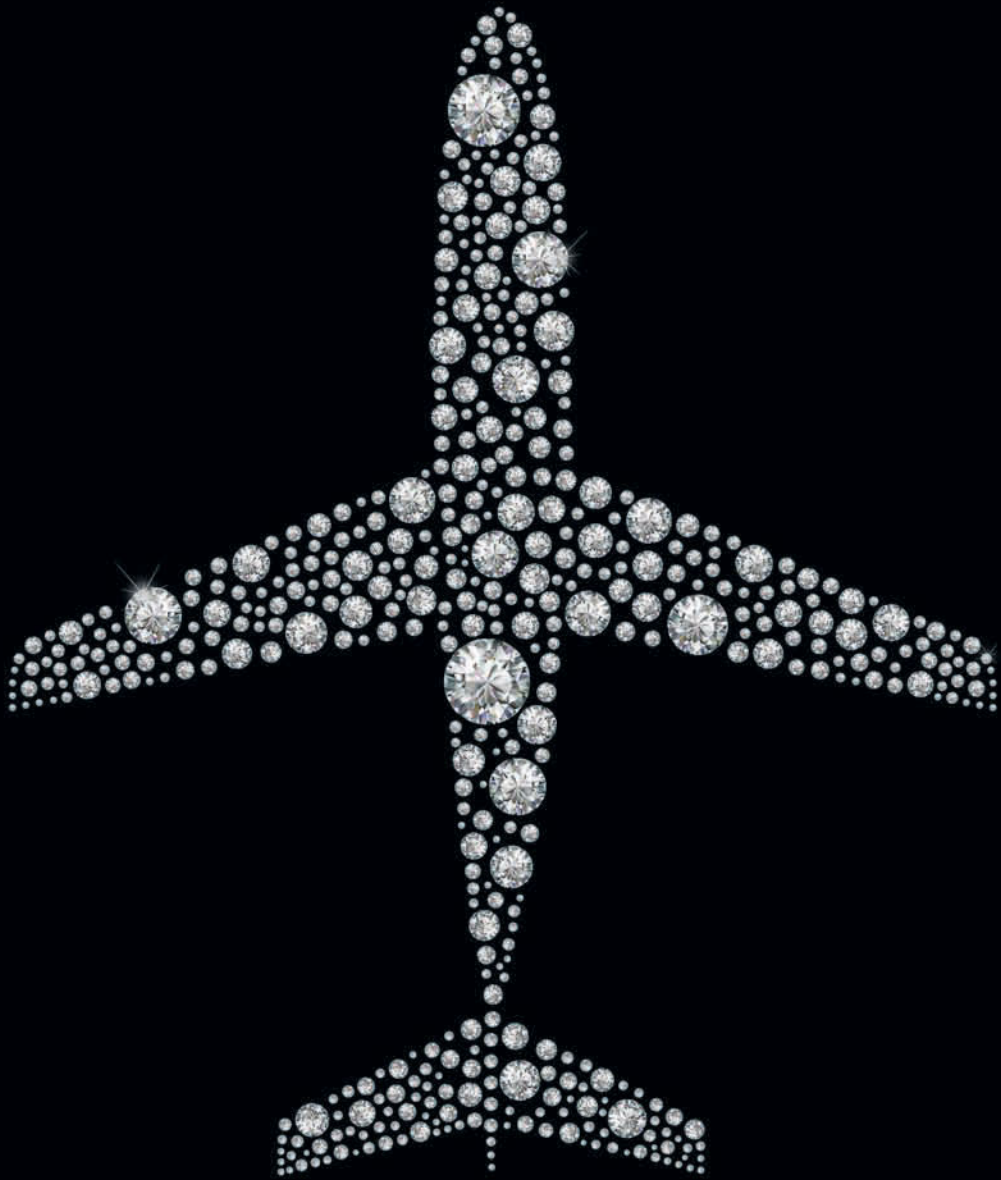
It has already begun with Saudia’s economy class and is hoping to roll out to other airlines.

The frozen dishes are then trucked to the SACA facilities at the four major airports. “We will be re-engineering rather than cooking in each unit,” Al-Hilali said. The move will free up space for the individual requirements of premium markets, such as the royal flights and those for SPA.

“I am proud of what we do,” Al-Hilali added.

The standards of food produced at the Jeddah facility match the top restaurants in the world. “There are still some airlines that double-cater, in that they bring their food from their base on the outbound flight. We try to convince them that having weight on a flight is a cost so it is better we cater with fresh meals. It is cost-efficient.”

From a first-hand tasting experience I can personally assure airlines – this food really is fit for a king!



Luxurious Personalized Services...





Work on projects, such as the Tornado, demonstrates how Alsalam is about a lot more than just partner Boeing.

Future looks golden as Alsalam celebrates silver

The Alsalam Aircraft Company is celebrating its 25th anniversary this summer, having been established in 1988 as part of the US-Saudi Peace Shield command, control and communications programme. Jon Lake looks at its progress.

Alsalam has grown far beyond the roots that saw it established under the patronage of Saudi Arabia's Ministry of Defense and Civil Aviation Economic Offset Programme in a joint venture with Boeing.

The company today operates independently as a full commercial entity in its own right.

Alsalam competes for all the business it gets, rather than relying on Boeing for sole-source contracts, and even partners with Boeing's rival, BAE Systems.

And the company is profitable, paying dividends and growing, while also gaining the respect of customers and competitors alike.

The company is also contributing strongly to the kingdom's strategy of developing self-sufficiency in aerospace through technology transfer and the development of Saudi nationals.

Alsalam is constantly striving to gain additional training and technology transfer for Saudi nationals so that it can provide self-sufficiency for the kingdom in aviation maintenance and support. A measure of its success is that the company employs more than 2,800 people across the kingdom, engaged in both commercial and military programmes, and already achieves a 'Saudisation' rate of 56%.

Alsalam chief executive Mohammed Fallatah, who has been at the helm for eight years, said: "Saudisation is a challenge but it is one that we take very seriously. We are working to increase this rate. Over the next few years we expect to add additional people and we will be establishing training plans and courses to ensure we have top-notch staff to support our requirements."

In keeping with the changing social environment, Alsalam already employs some female staff. "We have been fortunate to recruit talented women to work in public relations, media and IT," Fallatah said. "As the business situation permits, we will be likely to add more women in roles that are suitable for their particular skills."

Fallatah also expressed pride in the company's achievements.

"Looking back on the past 25 years, Alsalam has amassed an impressive array of milestones. Some important achievements include the completion of the first 747 D check; obtaining the General Authority of Civil Aviation of Saudi Arabia (GACA), FAA and EASA certifications; securing depot maintenance contracts for the AWACS, F-15 and C-130s; and, perhaps, more

Continued
on Page

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importantly, being recognised in 2007 by the then Minister of Interior, HRH Prince Naif bin Abdulaziz, for achievements in Saudisation in the aviation sector.

“The visionaries that conceived Alsalam as a vehicle for developing local talent in aviation are to be commended on their foresight.”

Alsalam’s initial focus was on commercial aircraft but, over time, the company has migrated more toward the military market. Today the company has a tripartite approach reflected in the layout of its facility at Riyadh’s King Khalid International Airport, where it has three 5,300sqm hangars – one each for commercial airframe MRO, military operations, and VIP completions.

On the commercial side, Alsalam is certified for both Boeing and Airbus products – with Fallatah observing: “Since we have focused on large aircraft, we see more Boeing products in our hangars. The mix is about 75/25 in favour of Boeing aircraft.”

Bright spot

Alsalam’s management sees the VIP completion and refurbishment market as being a bright spot in the company’s future. Its commercial MRO activities provide an excellent springboard for its VIP activities, allowing it to maintain vital licences and core competencies on a range of relevant aircraft types, while completing more than a dozen extensive refurbishments ranging from Boeing 737s and 757s to Lockheed L-1011 TriStars.

The company’s facilities and personnel can handle narrow-body and wide-body C and D checks, ageing aircraft inspections, corrosion prevention and correction, avionics and communications upgrades, and exterior painting.

In 2012, Boeing designated Alsalam as one of its Boeing Business Jet modification centres – and as the sole MENA repair centre for the BBJ.

Alsalam has developed a significant VIP completion capability and can handle complex projects. It now hopes to capture business from other parts of the world.

Fallatah highlighted two recent completion projects that demonstrated Alsalam’s capability. The first, a Boeing 757, required the installation of in-flight video conferencing with Wi-Fi and LAN capability; while the second, a VIP Lockheed L-100/C-130, had to be fully recertified after the installation of a new digital cockpit, and a new interior.

The company’s VIP completions have driven an expansion of manufacturing capabilities – three recent VIP aircraft upgrades having required extensive composite manufacturing to build all-new cabinets, sidewalls, ceilings, tables, galleys and lavatories.

The company sees assembly and manufacturing as value-added growth areas and is now moving into component assembly for military aircraft.

Fallatah explained: “Alsalam made significant

investments in new facilities and in training to handle the local assembly of the Royal Saudi Air Force (RSAF) second batch of 48 Eurofighter Typhoons. Unfortunately, the local manufacture of Typhoon components and the final assembly in-country has not occurred, even though Saudi industry was prepared to step up to the challenge. However, we have been able to win other projects to make use of the people and facilities.”

One such project is the new Boeing F-15SA programme, although Fallatah was a little reluctant to give too many details.

“Due to on-going discussions we will need to defer publicly acknowledging our involvement until later in the year,” he said.

It is clear, however, that Alsalam has been awarded a sub-contract from Boeing to assemble the wings and forward fuselage of the F-15SA, which Fallatah describes as “a game-changer”.

He said: “This launches the company into the assembly and manufacturing area and will afford our Saudi nationals the opportunity to gain a wonderful experience in aircraft assembly, something that has never been accomplished in the Middle East to my knowledge, especially with anything as sophisticated as the F-15SA.”

Fallatah has also acknowledged that Alsalam is in continued discussions with Boeing for other industrial participation projects and that the company was: “poised to take on the upgrade of the RSAF fleet of F-15S models to the F-15SA configuration” – which he described as “one of the most challenging aircraft upgrades ever proposed in the Middle East”.

Fallatah said Alsalam is “in the early stages of discussions with the RSAF, US Air Force and Boeing regarding this project”.



Mohammed Fallatah: “Alsalam made significant investments in new facilities and in training to handle the local assembly of the Royal Saudi Air Force (RSAF) second batch of 48 Eurofighter Typhoons.”

He added: “There will be tremendous engineering challenges as well as logistical challenges to assemble all the required parts and kits that will be needed. The Alsalam team has been working on the manpower and logistical requirements for many months. We are more than two years away from starting the work in Saudi Arabia but we will use this time to plan, to train and set up the factory for implementation of this upgrade.”

On the military side, the company’s primary maintenance activities are driven by the fleet distribution of the RSAF, its key customer. Alsalam currently performs maintenance on the RSAF’s Boeing E-3s (including KE-3 tankers and RE-3 Elint aircraft) and F-15s, as well as Lockheed C-130s and Panavia Tornados.

Though the F-15 re-engining and Link-16 projects have now been completed (ahead of schedule and within budget), these merely set the stage for future F-15 work.

Alsalam won the latest F-15 technical services programme (TSP) contract and started work in January 2011. This programme will run through to December 2015.

With the Royal Saudi Air Force expanding the F-15 fleet through the F-15SA acquisition, this was a significant win. As well as marking the largest contract award in Alsalam’s history the company “viewed the TSP contract as a must-win to keep it at the forefront of F-15 support”, according to Fallatah.

Complex agreements

Alsalam has successfully managed to simultaneously work on Boeing and BAE Systems aircraft types, negotiating the often-complex technical assistance agreements with the OEMs’ home nations to manage technical data on the respective aircraft types, and safeguarding who has access to that system.

On the Tornado programme, for example, Alsalam had only Saudi nationals and British nationals working on the project.

Alsalam has also expanded into a deeper involvement in helicopter (including commercial helicopter) maintenance.

“Alsalam already has a dedicated hangar for helicopter maintenance and we will be expanding our capabilities to meet the demands,” Fallatah said.

Alsalam has been involved in helicopter maintenance and support since the mid-1990s, when it performed some maintenance for ARAMCO. Subsequently, the company gained maintenance and support contracts for helicopters operated by the Royal Saudi Land Forces Aviation Command (RSLFAC) and the RSAF, supporting Bell 212 and 412, Boeing AH-64, and Sikorsky UH-60 helicopters.

More recently, Alsalam has been providing heavy maintenance for the Ministry of Interior helicopter fleet and is providing support for Petroleum Helicopters, the current air ambulance provider for the Saudi Red Crescent Authority.

Abdulkhkim Al-Allawy:
 "We're very excited about the opportunities available."

GATCO seeks the key to the kingdom



As well as new MRO facilities in Riyadh and Medina, GATCO is planning to set up sites at some of Saudi Arabia's regional airports – Jizan, Abha, Ta'if, Tanbu and Tabuk. It is also about to launch a new aircraft management and charter company.

GATCO opened a new MRO facility at King Abdul-Aziz Airport in Jeddah last September and the new Riyadh operation was hoping to be up and running as *Arabian Aerospace* went to press.

GATCO said in May that it was also about to sign maintenance agreements with a number of leading-name airlines, although it didn't name them at that point due to contractual reasons.

The EASA-approved Part 145 company, which has been providing maintenance services since 2010 and is part of the Horizon Holdings group, said when the Jeddah operation was opened last September that it intended to double its presence across the region before the end of 2013, and it is running true to its word.

Wide range of aircraft

GATCO provides technical services for a wide range of aircraft, including the Embraer 170/190, the Boeing 737NG/747/757/767/777 and Airbus A300/A310/320/A330/A340 and A380. It also provides airline consultancy services, lease transfer management and quality assurance auditing and inspections.

Its aircraft-on-ground (AOG) support offers emergency services 24/7 throughout the Middle East and Africa.

The Jeddah operation launched in time for the Hajj season last Autumn. It offers a range of services, including on-call and scheduled maintenance, overnight, pre-flight, daily, and weekly checks, plus component replacements, inspections and repairs. The plan is to offer similar services at the other locations in the kingdom when they are up and running.

GATCO chief executive Abdulkhkim Al-Allawy said that

The Bahrain-based Gulf Aviation Technology Company (GATCO) has extensive plans for expansion.

Steve Nichols
reports.

the time was ripe to expand in the kingdom. "Saudi Arabia's aviation industry is expanding enormously. But there has been a lack of maintenance facilities for airlines. We aim to put that right. There has been a lot of grey-market activity, which the General Authority of Civil Aviation (GACA) needs to stop. But our approach is to make sure there is a viable MRO alternative in the kingdom for airlines."

The Medina facility at Prince Mohammad Bin Abdulaziz International Airport should be fully operational within two years – after the planned extensive airport expansion work has been completed.

GATCO is also about to launch a new aircraft management and charter company. Called Noufa Aviation, it will cater for VIPs in the kingdom.

Partnership with local investors

The company is a partnership with local investors and will have HRH Princess Nouf bint Mohammed Bin Fahad as its chairman. Her royal highness is the granddaughter of the Saudi king and a very active businesswoman in the region.

The company registration for Noufa Aviation was due to take place in early June and the aim was to then get GACA approval for the venture.

"We have access to the aircraft already, so it makes sense for us to set up this enterprise," said Al-Allawy. "We're very excited about the opportunities available to Noufa Aviation."

"We are also speaking to consultants and looking at other business opportunities in the local aviation industry, too. The Government is opening up a new licence for a second ground-handling company, which may be something we look at.

"Plus the new licences for regional flights that have been awarded to Qatar Airways and Gulf Air could lead to new opportunities. We may be a Bahraini group but we have local shareholders and see a good future for us in the kingdom," Al-Allawy concluded.

Anyone taken on a tour of Saudi Arabian Engineering Industries (SAEI) facility at Jeddah's King Abdulaziz International Airport can't fail to be impressed but, as Steve Nichols found out, there is still much more to come.

Watch this SAEI space

The massive SAEI building houses separate workshops for just about everything you need on an aircraft, from wheel and brake maintenance, through avionics, even to a print shop for stickers and decals. Engine work is handled by another facility down the road. But even all of this isn't good enough for SAEI – it is currently building a new facility that will have 10-12 times the capacity of the current one.

Saudia's technical services division has been in existence since 1959 and has its origins in the airline's earliest days, when US President Franklin D Roosevelt presented a single Douglas DC-3 to King Abdul Aziz ibn Saud in April 1945.

As the country's fledgling airline grew, Trans World Airlines (TWA) was brought in to manage the technical side and, as the years passed, more and more Saudis were introduced to the MRO business.

In time, they were sent to the US and England for training and, as the programme got bigger, Saudia started recruiting youngsters from junior high school and sending them out of the country for training. Fast-forward to the present day, when SAEI employs around 5,200 staff, 92% of whom are proudly Saudi.

The turning point came in the late 70s when the agreement with TWA was cancelled and Saudia's technical services division was born.

Ribhi Al-Husseini, SAEI's director, technical sales and marketing, said that by the year 2000 the Government had given the go-ahead to privatise parts of Saudi Airlines and in 2009, what was to become SAEI, got the green light.

"We had to completely restructure the company, setting up our own HR, finance and sales marketing divisions," he explained. "By 2009 we were up-and-running, having signed a long-term contract to supply maintenance services to the airline."

At the time, Abdullah Al-Ajhar, Saudi Arabian Airlines' executive vice president for public relations, said: "SAEI's privatisation has many dimensions, most importantly the strategic dimension of making Saudi Arabia the main centre for the commercial aircraft industry in the Middle East and Gulf regions and boosting the national economy."

Consortium of investors

Al-Husseini added: "The new company may be backed by a consortium of investors and one day we may have an initial public offering (IPO). This is possible in the future, but we just don't know when and if it may happen."

SAEI now has three business lines for aircraft maintenance, components and power plants. It can handle structural airframe repairs and anything up to the larger D checks.

It undertakes major modifications, upgrades and

cabin refurbishment, as well as aircraft recovery, engineering services, component and engine repair and overhaul, non-destructive testing, equipment and tooling calibration, plus fluid analysis.

To get some idea of the scope of the services on offer, the facility was carrying out everything from carpets being cut for a refurbishment; a Honeywell weather radar system being in for repair; wheels and brakes being refurbished; and even dinner trays from a first-class cabin being rebuilt with new plastic inserts.

Every maintenance area was a revelation in terms of the services on offer.

"Our only limitation is space," said Al-Husseini. "But that will change when we get the new state-of-the-art facility in 2015."

This will be more than a million square metres in scope (the size of more than 280 football



"Our only limitation is space. But that will change when we get the new state-of-the-art facility in 2015."

RIBHI AL-HUSSEINI

pitches) with 10 aircraft hangar bays, capable of handling anything up to the Airbus A380 and Boeing Dreamliner.

Alongside will be comprehensive component repair and overhaul shops. Additionally, SAEI's new facilities will include an advanced aircraft engine and APU repair and overhaul centre, equipped with an engine test cell capable of handling units of up to 15,000lb engine thrust.

Once SAEI moves out of its current premises, the whole area is destined to become a cargo village for the airport.

"Our plans also focus on an expansion and diversification of our customer base and continued expansion across the Gulf, Middle East and north Africa," said Al-Husseini. "This will involve strategic partnerships and alliances with OEMs and other industry players."



Ribhi Al-Husseini and workers at the SAEI facility.

Meanwhile, SAEI has to “make do” with its existing site, which it does very well, even though its main hangar can only accommodate two wide-body jets at any one time.

The jet propulsion centre down the road can handle the overhaul of many different types of engines, including the Rolls-Royce RB211, Pratt & Whitney JT9D and General Electric CF34. It has also just introduced a full capability on the CFM56, plus various others types of APUs flown on Airbus and Boeing types.

Saudi Arabian Airlines currently operates a fleet of 110 aircraft, the largest being the Boeing 747 (the airline has also just acquired two 747-8 freighters) and the smallest the Embraer 170. The fleet is expanding (it has plans to buy another 30-40 aircraft), not only in the kingdom but outside as well. Many of these have maintenance work undertaken in Dubai, Indonesia, London and Paris.

SAEI also undertakes analysis prior to new purchases of aircraft and sends staff to the airframers to complete acceptance testing. And another division looks after private and business

jets. This can handle many aircraft types, including the Gulfstream G-II, G-III, and G-IV, Falcon 900 and 7X, plus the Hawker 400XP.

The company may be based at Jeddah, but it also handles line maintenance work at all Saudi airports, including Riyadh, Dammam, Medina and nine others in the regions.

Our strategy

“We don’t do any work for the military,” said Al-Husseini. “But it could happen at some stage. Our strategy is to attract more business to this part of the world and the target is to have around 40-50% of our work coming from outside of Saudi Arabian Airlines. But we can’t do this until we have our new facility in 2015/16.

“The demand for air transport in the region just keeps going up and up and airlines struggle to keep up with passenger demand,” said Al-Husseini.

But what of training?

SAEI has its own General Authority of Civil Aviation of Saudi Arabia (GACA)-approved technical school and is looking at building a new

aviation college that would train people from other companies, too.

“This would be a project for the whole country,” said Al-Husseini. “And it isn’t all about one-off training – there is a big demand for recurrent training, too.”

SAEI will need the school if it is to reach its ambitious growth targets. It sees its workforce increasing to 7,500-8,000 employees by 2020.

At the moment no women are employed but that will change soon. “Our current facilities were not built with women in mind but our new facilities most certainly will be,” Al-Husseini said. “There are currently no qualified female aerospace engineers but we aim to recruit women for sales and marketing roles or perhaps to work front of office.

Saudi Arabian Airlines itself has females working in PR, finance and customer services, as well as cabin crew roles.

“In time, who knows? In 10-15 years time the workplace will look completely different – and at least we will be in our new larger premises,” Al-Husseini concluded. “They will make a big difference.”

From outside the razor-wire-topped perimeter wall of Saudi Arabia's Aircraft Accessories and Components Company (AACC) you gain few clues as to what goes on inside but, once past the heavy metal gates, it is, as Steve Nichols discovered, a different world.

BEHIND THE WIRE

A ACC is hidden away in the Al-Safa district of Jeddah, eight kilometres from King Abdulaziz International Airport.

Inside the massive building, employees are busy repairing and refurbishing a wide range of military aircraft parts, mostly originating from the Royal Saudi Arabian Air Force (RSAF).

Set up in 1991, AACC was originally established as a joint venture between several Saudi partners, including Saudi Arabian Airlines, and what was then Dowty (later to be acquired by TI Group, before eventually becoming Safran).

AACC is a product of the kingdom's economic offset program, established under the auspices of Saudi Arabia's Ministry of Defence and Aviation.

The ISO 9001:2009-accredited and FAA-approved MRO facility first started work on propellers for the RSAF Lockheed Martin C130 E and H (Saudi Arabia is one of the largest users of the C-130 in the world), and subsequently moved on to work on the RSAF Boeing F-15 C/D/S aircraft variants. It quickly expanded from handling small components for the SAAF's new fighter, to work on its landing gear, wheels and brakes.

Azzam Addas, AACC's chief executive officer, says that it now undertakes MRO work on a variety of equipment for many aircraft types, including propellers, actuators, gearboxes, wheels and brakes, hydraulics, fuel cells and small gas turbines.

"In the 1980s the government started its Tornado programme and we were keen to get involved with that as well, which we did," he said. The Tornado main landing gear, plus flap and slat screw jacks quickly joined AACC's inventory.

"Our work is very specialised and to a high standard. The fact that the kingdom has chosen 72 of the new Eurofighter Typhoons is also an



Azzam Addas: "We will be the only facility in the Middle East able to undertake such work."

opportunity for us and one where we intend to take full advantage."

Saudi Arabia announced in 2006 that it had agreed to purchase the Typhoons. The RSAF received the first 24 from BAE Systems, including six two-seat trainers, between 2009 and 2011. Two more Typhoons were delivered to the kingdom in April.

In 2010, AACC also became Honeywell's first military repair and overhaul licensee for military aircraft accessories in the Middle East.

Although International Traffic in Arms Regulations (ITAR) restrictions and supplier agreements prevent photographing the work

being undertaken at the AACC facility, it was obvious that it was very busy.

The shops were working on propellers from the C-130 E and H; numerous parts from the F-15; and had landing gear struts from the Tornado in for overhaul. The non-destructive testing (NDT) area was also fully utilised.

AACC employs around 160 staff and has invested heavily in a new 100,000sqm facility on the north-east part of the airport in Jeddah. This should open in the first quarter of 2014 and will handle repair and overhaul work on the landing gear for the Boeing 777, along with AACC legacy components.

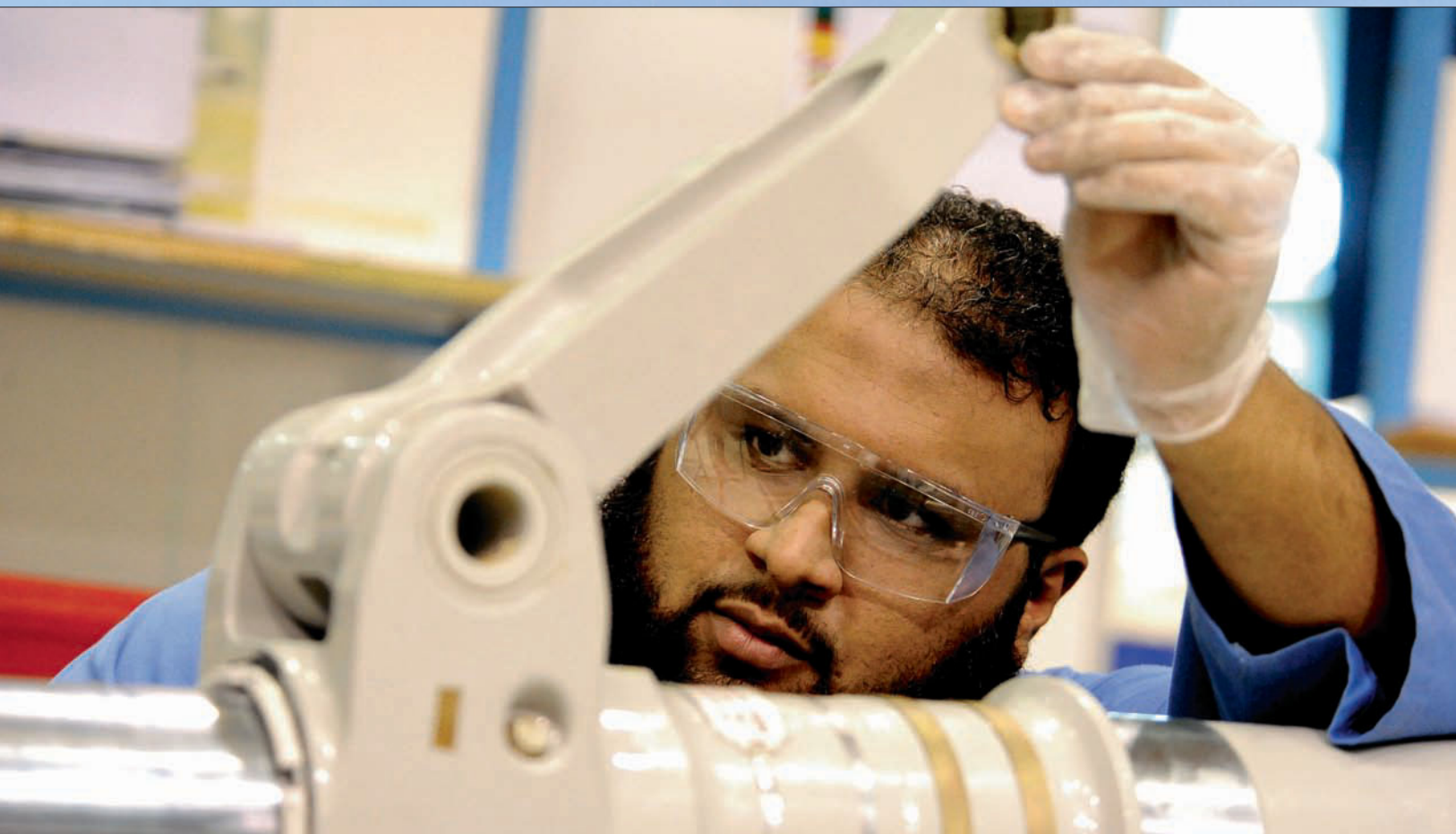
It will eventually focus on other key business lines, including turbine maintenance and overhaul. Given the current economic growth in the region and a large and growing aircraft market that would prefer to be supported by a local MRO infrastructure, AACC has high hopes for the project.

"We will be the only facility in the Middle East able to undertake such work," said Addas. "With our capabilities we will be equipped to handle similar work on other types too, even the Airbus A380.

"The Airbus A320 is another platform we are looking at – being part-owned by Saudi Arabian Airlines. It is important that our service offering complements what they are doing and what they need, rather than being in competition with them."

In December 2011, the kingdom signed a \$29.4 billion order to buy 84 Boeing F-15s in the Saudi Arabian fly-by-wire configuration. The sale also included upgrades for the older F-15s to bring them up to the Saudi standard.

"The new F-15SA model will carry many new technologies and we will acquire the skills and



equipment needed to support them,” said Addas. “The size of the fleet will justify our commitment.”

AACC will also handle work on other aircraft types, including rotor heads for helicopters, C-130 APUs, environmental control systems (ECS) and oxygen generation systems. It even handles some calibration work on equipment used by the oil and gas industry.

But, to keep the business running, it needs skilled staff. So has AACC found it difficult to recruit people with the skills they need?

“It can be difficult,” admitted Addas. “We want to recruit and train Saudis, especially as we have plans to grow the business.

“But we have sometimes trained people, only to lose them – this year alone we have lost five good engineers. Everyone in the kingdom is looking to recruit trained and qualified aerospace engineers, which makes it even more difficult.”

AACC’s answer has been to recruit and train its own engineers in a partnership with Yanbu Industrial College. This facility was established in 1989 to provide Saudis with technical education and training, being located at the centre of Yanbu Industrial City, about 350km north of Jeddah on the Red Sea side.

AACC screened and selected a cohort of 10 trainees, who spent four months developing better English skills and learning more about the MRO environment, before completing their



AACC recruits and trains its own engineers in a partnership with Yanbu Industrial College which helps keep the business running with skilled staff.

course in 12 months. At the end, AACC took them on as fully employed.

“Their English skills were very important,” said Addas. “All of the technical manuals for the aircraft we are working on are in English, so you cannot afford not to be able to read, write and speak the language.

“The training we did was very successful and we will repeat the process. We are also keen to recruit other aerospace engineers as well. At the end of the day, you may not find people with an F-15 engineering background, but we can and do recruit qualified engineers with good skill sets and teach them what we need them to do.”

So what of the future?

“We are keen to develop our business further and are happy to look at opportunities beyond Saudi Arabia,” said Addas.

“But you have to look at the aircraft types our neighbours are using – such as the Dassault Mirage and Lockheed Martin F-16 in the UAE for example, both of which we don’t support. And the nearest Boeing F-15 operators are in Singapore, South Korea, Japan and the USA.

“This makes it difficult to support other countries’ military aircraft fleets,” said Addas.

“But if the UAE opted for the Eurofighter Typhoon [Britain is pushing for the sale of 60 BAE Systems-backed aircraft to the kingdom] we would definitely be interested in helping them with MRO work – wouldn’t you?”

Private practice

Once considered a doubtful prospect, airport privatisation is slowly gaining momentum in the Gulf with Saudi Arabia leading the way. Keith Mwanalushi discovers whether privatisation can work and how the kingdom is developing its airport infrastructure.

Earlier this year Saudi Arabia's General Authority for Civil Aviation (GACA) announced plans to set up a holding company that would ease efforts at privatising airports in the kingdom, with the aim of separating the services provided by the executive arm of the company from the control and policy-making sections.

The sands of time have clearly changed the way the Saudi Government plans to run its airports, starting with the Tibah Consortium – led by TAV Airports Holding and comprising Al Rajhi Holding and Saudi Oger – which made history by winning the tender to operate Medina's Prince Mohammad Bin Abdulaziz International Airport.

Under the terms of its 25-year build-operate-transfer (BOT) concession for the airport, which officially commenced in June 2012, it agreed to construct a new terminal and carry out a number of airfield enhancements within three years to effectively double its capacity to eight million passengers annually.

Many believe the privatisation of Medina Airport is considered to be a milestone in the Middle East in terms of size, significance and innovation, but the Saudi authorities had already dipped their toes into familiar waters. "Earlier, a number of public private partnership (PPP) projects had been established in the airport sector in Saudi Arabia, for instance the Hajj terminal project in Jeddah, but Medina Airport was the first full airport privatisation in the kingdom," noted Karen Hanne Petersen, who was the technical project manager at international consulting group COWI during the process of evaluation of the bids and financial closure for Medina.

IFC-World Bank was the lead consultant and advisor on the Medina BOT and subsequently



contracted COWI as the technical consultant. "Furthermore, the Medina Airport privatisation project has received no less than two prestigious recognitions from the international financial community," added Hanne Petersen. The project was chosen as the 'infrastructure deal of the year' in the Middle East and Africa in 2012 by Project Finance International (PFI), as well as awarded 'best transport project' by the financial magazine, *World Finance*, whose readers have nominated the best PPP projects in 2013.

"Being the technical advisor on an airport privatisation project always includes being part of a larger professional team that incorporates financial and legal advisors. Knowing your role on the team is as important as knowing your profession," explained Hanne Petersen.

She added that this expertise was based on

several projects working for investors on the buying side, as well as working on the selling side, as in the Medina project.

"The starting point of COWI's assignment was a technical due diligence of the existing operation and facilities at Medina Airport. We prepared the technical part of the information memorandum and the presentation to investor consortiums seeking shortlisting. This included traffic forecast, business plan and a development plan for the infrastructure at Medina Airport," she explained

Originally, she said, a master plan for the airport was developed before the assignment started.

"However, this had to be altered in order to provide a sustainable basis for the future business case. During this phase a set of minimum





Karen Hanne Petersen was part of the technical consultancy team on the Medina Airport project, which is seen as a pilot programme for airport privatisation.

technical requirements was developed as an basis for the BTO tender.”

For the evaluation of the final technical bids, COWI developed an evaluation model with more than 200 score categories.

GACA’s PPP team and the COWI sub-consultant team responsible for traffic forecast and the business plan then separately evaluated the technical proposals using the evaluation model.

“After this process the two teams met and, for a whole week, discussed the proposals and the scoring. Finally they agreed on the technical evaluation and, after the completion of this process, the financial proposals were opened and the preferred bidder was appointed,” Hanne Petersen revealed.

Tibah Consortium, led by TAV Airports,

ultimately won the 25-year concession to develop and operate the airport.

Hanne Petersen added: “Throughout the project, we had an intensive and smooth collaboration with the client, IFC and the GACA. Hopefully the good results and the good relations can pave the way for COWI’s involvement in Saudi Arabia’s wider plan to increase airport capacity across the region.”

Observers believe that what the Saudi Government wanted from the deal was to bring in some outside expertise and create an environment for change, and possibly use it as an example for further change, in the aviation sector, using Medina as a pilot programme.

Influencing public opinion about the advantages of placing key assets in the hands of private investors is crucial, particularly where it is a new concept.

The main benefits of airport privatisation, as noted by COWI, are not specific to the region and include areas such as access to private financing, hence no burden for public budgets. Another benefit is the involvement of international operational experience in terms of business planning, management, infrastructure planning and development from the private partner airport operator.

“Optimising the business usually includes minimising risk,” asserted Hanne Petersen. “Private part investors, operators and contractors each have a role, since they are able to minimise risk within their field of competence; hence maximising the overall business for the airport.”

In terms of challenges, she also sees them as not being specifically related to the region. However,

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providing services to the religious traffic visiting the Holy places had been a very important part of the project.

The Medina privatisation is probably one of the world's more unusual BOT concessions, as Saudi Arabia is one of the richest countries and is widely perceived not to need external financial involvement. However, TAV Construction managing director Umit Kazak warned that BOT concessions should not be interpreted only as a tool to utilise private funds.

"This is a partnership with Government authorities to improve the level of service, operational quality, customer satisfaction, smooth operation and accommodation of the steady increase in passenger traffic. Funding is only one arm of the model," he clarified.

The GACA recently awarded the TAV-ACC joint venture, led by TAV Construction, to build a new Terminal 5 at Riyadh King Khaled International Airport. GMW Architects will carry out the preliminary and final design, and construction will be completed in around 18 months.

From a functionality perspective, Kazak said the new Terminal 5 would be required to render services for only domestic passengers within the first four years after completion and to handle only international passengers thereafter. "Therefore, the design of the terminal aims to provide a modular, flexible, adaptable and expandable framework to enable enhanced passenger comfort and operational efficiency," he explained. "On the other hand, the terminal building also addresses specific local requirements regarding climatic factors and energy-efficient design."

The main component of the terminal complex is the rectangular processor building covered by a tent-like steel roof structure. Kazak said the tent concept had been chosen to reflect the need to create a roof structure that could be built rapidly and provide an inherently flexible shelter for the organisation of the various processing areas and the public spaces below.



Top: The Riyadh T5 will be completed in 18 months. Above: Umit Kazak warned that BOT concessions should not be interpreted only as a tool to utilise private funds.

"Mindful of the local climatic conditions, the fully transparent perimeter walls are set back from the edges of the roof to combat heat gain and glare from the sun. With the addition of vertical solar shading elements, effects of the sun are minimised without creating undesirable visual obstruction.

"The fully transparent external walls not only allow the interior spaces to enjoy optimum levels of daylight but also help the passengers orientate themselves with ease through their journey from the landside to airside and vice versa," he said.

The interior design has been planned to achieve both the desired cooling effect and to create a calm and peaceful interior. "They will be occasionally articulated by features evocative of Saudi Arabian art forms and architectural features. Terminal 5 will enable the passengers to enjoy the grand scale of the roof structure and focus on their journey within the building with a clear sense of orientation," said Kazak.

Reportedly, the project included some redevelopment work on the existing Terminal 4 but Kazak clarified that the scope of work at TAV

did not include any redevelopment related to the existing terminal. "It only includes the design and construction of the new Terminal 5 and multi-storey car park," he said.

The Saudi regulator plans to also privatise the Riyadh airport, which it hopes will operate independently from the GACA on the basis of competitive standards to extend better services to customers, including passengers and airlines.

Kazak highlighted some of the key benefits in support of privatising, which included improving airport infrastructure, handling higher levels of air traffic, responding to more international trade or providing better air traffic control infrastructure.

In this context, he said, privatisation was very important while meeting the needs of the airport sector.

Turkey is a good example of how privatisation projects have been implemented, especially in the transportation sector over the last 10 years. The country invested billions of dollars to renovate existing airport infrastructures, especially terminal buildings, with the PPP model. As a result, brand-new, state-of-the-art, high-technology terminal buildings are being constructed in the six largest international airports of the country within a very short period of time.

"I think, like Turkey, Saudi Arabia could also use privatisation as a tool to improve airport infrastructure and to solve capacity problems within a very short period of time," Kazak said. "Additionally, using the private sector in terminal operations gives time and opportunity for civil aviation authorities to focus more on security and flight safety issues."

However, he pointed out that the legal framework could be a challenge for privatisation. "Countries usually do not have a legal framework needed for clear definition of the roles and responsibilities of the parties in PPP projects. Therefore, it is very important to adapt legislation for privatisation in order to implement successful projects," he concluded.



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Helping the pilgrims

If you run an airport ground handling company, how do you gear up for more than a million people attending the annual religious Hajj? Steve Nichols finds out.

During the Hajj, up to 1.3 million pilgrims descend upon Jeddah and Medina Airports – and all at the same time?

To make matters worse it is all one-way traffic – at least until about a month later when the pilgrims all want to go home and the traffic flow reverses.

It is questions like this that Abdul Rahman Bin Saad Al-Hilali, chief executive officer of the Saudi Ground Services Company (SGS), has to take in his stride.

The Hajj is one of the five pillars of Islam, a religious duty that must be carried out by every able-bodied Muslim who can afford to do so, at least once in his or her lifetime.

“The Hajj is massive,” he said. “We have to triple our manpower, hiring in contractors from abroad to meet the massive demand. But we manage it, and we manage it well.

“We bring in around 5,000 extra staff, from places like India, Sri Lanka and Pakistan, to help passengers. We have to recruit, complete medical examinations, arrange visas, transport, arrange accommodation, train them, secure airport passes and much more – yet they will only be with us for two months.”

SGS is well placed to handle that kind of

commitment. Formed from a division of Saudi Arabian Airlines, it came into being in December 2011 as part of a privatisation programme. The company is the result of a merger between the Ground Service Strategic Unit, National Handling Services (NHS) and the Al Attar company. It is working on an initial public offering (IPO) of shares that should take place in the first quarter of 2014.

Al-Hilali said SGS handles around 500,000 flights a year and supports 55 million passengers flying to and from Saudi Arabia’s 27 airports, including Jeddah, Medina, Dammam and Riyadh.

Numbers keep on coming

It also employs around 11,000 people, including about 6,000 labourers. The numbers keep on coming – SGS has 1,700 motorised vehicles that are tracked via GPS and 6,000 other pieces of non-motorised equipment.

In addition, it looks after ground handling for the Royal Saudi Air Force in Riyadh and for ARAMCO – the Saudi Arabian Oil Company – at seven airports in the east.

“This is a huge country. While many countries introduced road and rail networks for people to get around, we went straight to airports. That is why we

have such a developed internal flight system,” Al-Hilali said.

So what exactly does SGS do?

“Everything really,” said Al-Hilali. “From checking in passengers and their baggage, issuing boarding passes, organising jetways and steps, baggage handling, push backs, ground power systems and ground-based air-conditioning systems for aircraft.”

Anyone who has spent more than five minutes in the kingdom will appreciate just how important air conditioning is – even after the aircraft has landed. With temperatures often exceeding 45°C-50°C (113°F-122°F) in the summer it is important to keep the aircraft cool for boarding passengers and the aircrew.

Aircraft cleaning is also on SGS’s list of services, including supplying/disposing of aircraft water and providing newspapers, magazines, headphones, pillows and other essential passenger items.

“We also handle fleet services, weight and balance control, aircraft marshalling and other logistics services. Passengers with special needs are catered for and we will shortly start offering a ‘meet and greet’ service too.”

The list of SGS services keeps on growing. Lose a bag during a flight and SGS will be charged with helping track it down. Those calls that are made to announce departing flights? Yes, that’s SGS too.

The Hajj pilgrimage to Mecca (about 70-80km from Jeddah) is in October this year. The exact date moves annually due to differences in the Gregorian



progress...

and Islamic (lunar) calendars. Jeddah Airport even has a separate terminal for pilgrims, which is only used during the Hajj.

During the rest of the year pilgrims visit Mecca as part of Umrah – a pilgrimage that is performed by Muslims at any time. So Medina and Jeddah Airports are always busy. In fact, Jeddah is building a new airport terminal, which should be ready by mid 2014.

So will this mean more work for SGS?

“We hope so,” said Al-Hilali. “We have a very ambitious plan to buy new equipment – every year we spend around 100 million Riyals (about \$26.5 million) on equipment, but we need to do this to support new platforms, such as the Airbus A380.”

Emirates currently operates three A380 flights a day out of Jeddah but, with Qatar and Singapore operating the aircraft too, SGS expects A380 usage in the kingdom to increase.

“To service the A380 we have already placed orders for new lifts, brake coolers and mechanical equipment. The list will grow,” said Al-Hilali.

SGS also takes its commitment to green issues very seriously and is looking at using more electric vehicles. “We are pushing for more green solutions. This is important but can be hard in a country where gasoline and diesel are cheaper than electricity. Actually, they are both even cheaper than water!” joked Al-Hilali.

So what other services could SGS introduce?

“We are introducing ticket sales at the airport in the near future, as well as the ‘meet and greet’ service I mentioned earlier,” said Al-Hilali.

Designed to assist passengers through the airport, including helping them through immigration and customs, ‘meet and greet’ was due to launch as *Arabian Aerospace* was going to press.

“This should be a popular service for passengers, especially those who are not used to flying,” said Al-Hilali. “We are also looking at how ground transportation could be improved.”

Fly in the ointment

One fly in the ointment is that the Saudi Arabian Government will shortly invite tenders from companies for a new ground-handling licence. This will obviously create competition for SGS but Al-Hilali shrugged it off. “Competition can be good,” he said. “And it will keep us on our toes – we have a very good offering developed over many years and we keep on improving.”

SGS is proud of its IATA and ISO certification, and has put a lot of effort into training to achieve this. In 2010 it opened an academy equipped to train people to IATA standards – in fact, IATA-accredited companies helped develop its academy’s programmes.

More than 5,000 people went through the academy last year and the best and most qualified graduates subsequently moved into management and training roles.

“It is important that we train Saudis in the kingdom – around 150,000 Saudi students go to the USA alone for training and education. The more we can do in this country the better,” said Al-Hilali.



Abdul Rahman Bin Saad Al-Hilali: “We have to triple our manpower, hiring in contractors from abroad to meet the massive demand.”

Top: SGS refueling an Yemen Airways aircraft.

SGS also has the IATA Safety Audit for Ground Operations (ISAGO) accreditation. This aims to improve safety and cut airline costs by drastically reducing ground accidents and injuries.

So what’s next for SGS and the kingdom?

Last year saw a change in operator licensing by the General Authority for Civil Aviation (GACA). This will see the introduction of domestic and international flights by carriers Qatar Airways and Gulf Air at the end of this year, creating competition.

“We think that tourism could be a big growth area for Saudi Arabia,” said Al-Hilali. “Not just for pilgrims, but general tourism.”

“The country has a lot to offer but this hasn’t, perhaps, been exploited up until now.”



Package deals? It's a wrap

Alan Peaford *meets one Saudi Arabian businessman who saw a niche opportunity and has built a global business on the back of it.*

When Maher Al-Nahdi strolled through Frankfurt Airport back in the year 2000 for a connecting flight back to his Riyadh home, he stopped in his tracks to watch airport workers wrapping a bag with plastic film.

"I hadn't seen it before. I knew we didn't have anything like this in Saudi Arabia so I thought I would see if I could buy a machine, import it, put a 20% mark-up on it and sell it to the Saudi Airports company in Jeddah," he said.

While the airports company liked the concept, they instead offered Al-Nahdi a place on a tender exercise to do it himself.

The Al-Nahdi family business was in security products and real estate but, he said: "I saw this as a 'happy business' – one where I could get the machine, a labourer and just make a small return – so I went to the pitch."

Today Al-Nahdi's Safewrap company is found at 24 airports in the kingdom and is now developing international markets through franchises.

The products have changed significantly, too.

"We were the only people bidding to do this," Al-Nahdi said. "When we started I could see why. We paid an annual rent of a million riyals at Jeddah and our daily income was just 300 riyals (\$100). I went to the airport and told them but they said we had signed a contract and had to deal with it."

The result was Al-Nahdi really studying the needs of passengers passing through the airport.

International travellers

"For the domestic market it was nothing. People were passing through with a bag or a briefcase. But watching some of the international travellers – particularly those coming to perform the Hajj or Umrah – they didn't care about the weight or the size of their bags. Some had sold their homes or had help from their villages. I knew we could help them."

Al-Nahdi developed modifications to the wrapping equipment and got a higher quality stretch rather than heat wrapped plastic material. He was able to get the material in Saudi and business started to grow.

The pilgrims also led him to another idea.

Each year millions of people visit the Holy Well of Zamzam, while performing the Hajj or Umrah pilgrimages, in order to drink its water.

According to Islamic belief, it is a miraculously generated source of water from God, which began thousands of years ago when Abraham's infant son Ishmael was thirsty and kept crying for water. The well has never dried, despite droughts, and many pilgrims would take a bottle or a jar of the Zamzam water back to their villages.

"The water was causing a problem for the airlines. Leakage was a challenge and, of course, security was an issue too," Al-Nahdi said.

He looked at producing cartons and a much sturdier wrap and found the water could be secured to solve many of the airline problems. "We showed it to Saudia and now we have the exclusive contract to wrap the water."

It is impossible to enter the flagship Jeddah Airport without seeing Safewrap in action. The brightly uniformed staff are constantly working



Maher Al-Nahdi: "People can see their luggage is protected against the knocks it can get in the journey, and it is secure."

Insets left: The safewrap service centre at Jeddah, and operators in action.

Insets above: Wrapping include ZimZam water, while above, marketing manager Franz Cruz has it all wrapped up.

the lines with a smile to help people quickly and efficiently.

"As we have developed our equipment, we have added scales, CCTV and so on. People can see their luggage is protected against the knocks it can get in the journey, and it is secure. Our material is strong and needs to be cut with a knife. You can see if your luggage has been tampered with," said Al-Nahdi.

The company can also wrap unusual items. "We have wrapped bicycles, pushchairs, gardening and construction tools; we spent a lot of money making our equipment do this. It is so different from the basic systems that you see at some other airports – and if you try my service once you will see when you arrive at your destination how good it is."

The franchise is rolling out with Africa, Europe and the US as targets. Safewrap is also planning to launch an insurance scheme to provide a worldwide guarantee.

"From a happy business to a big business. This is exciting," Al-Nahdi said.

Beware the law and the new order...

Steve Nichols finds out why foreign companies wishing to take advantage of Saudi Arabia's burgeoning aviation industry may need a little local help.

Ahmed Rashed Albihery, founder of Albihery Lawyers and Legal Advisors, says the Kingdom of Saudi Arabia is undergoing major change.

"The Saudi Arabian aviation industry is undergoing a transformation," he said. "The result of the first change was the switch to the General Authority of Civil Aviation (GACA) and the next step consists of a 10-year plan aimed at GACA becoming financially independent and operating as an autonomous entity."

This has seen the privatisation of numerous divisions of Saudi Arabian Airlines, many of which are now either seeking investors or planning initial public offerings.

Another project is Medina International Airport, which is being operated as a private-public partnership (PPP) project under a 25-year concession by a consortium comprising TAV airports of Turkey, Saudi Oger Limited and Rajhi Holding Group.

GACA is also in the process of transforming the air navigation services sector into a company owned fully or partially by the authority, and/or involving the private sector.

Qatar Airways and Gulf Air are also starting domestic flights in the kingdom later this year, after gaining new licences.

"With so much change, international and local companies see great opportunities in the country," says Albihery. But he also sounds a warning.

He believes that only specialist Saudi law firms like his are in a position to deal with the intricacies of local law and relationships with the Government.

Graduating from Case Western Reserve Law School in Cleveland, Ohio in 2000 with a masters degree in law, Albihery says his team also includes advisors who have worked with GACA, which he says is invaluable.

The company handles aircraft leasing and charter work, and also represents airlines and aviation industry businesses in their relations with the Saudi Government, maintaining strong working relationships with various regulatory agencies. It also has a strategic alliance with Helios, a UK aviation consultancy.

Helios, which was established in 1996, specialises in air transport, airports and air traffic management.

With the recent introduction of a law allowing women to practice law in the kingdom, Albihery is also one of the first few legal firms to take the initiative, employing four female lawyers, two of whom were educated in the US.

"Our firm provided GACA with advisory services for the air navigation services department and has helped develop economic regulations and guidelines for policies for the aviation sector," Albihery said.

The company has also helped draft several requests for proposals (RFPs) for GACA, including the second ground handling licence for services at Saudi airports that will be issued in the kingdom, which it is handling in conjunction with Helios.

"This is a wonderful time to be involved in the aviation business," said Albihery. "There are huge opportunities for local and foreign companies and it will have a positive effect on the Saudi economy."



Ahmed Rashed Albihery: "The Saudi Arabian aviation industry is undergoing a transformation."

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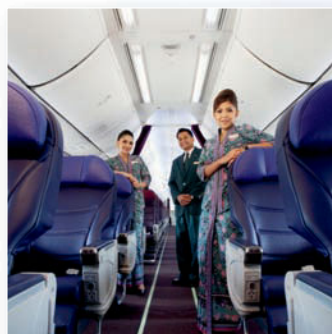
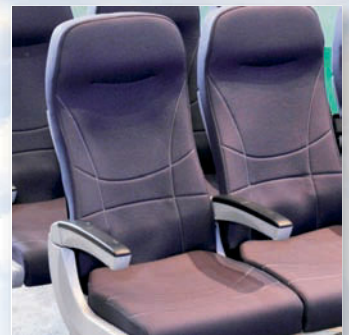
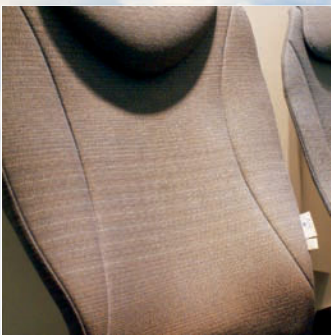
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Pride of fleet BBJ gets a right Royal makeover

The Middle East has the world's largest collection of Boeing Business Jets – now the biggest BBJ operator in the world has a new flagship.

Mohammed Ahli
reports.

The new look Boeing Business Jet (A6-AIN), owned by Abu Dhabi's Royal Jet, is now back in service after its \$9 million complete upgrade and refurbishment in France.

The BBJ – one of six in the Royal Jet fleet – will be put to work on corporate and VIP private charters across the globe from its base in Abu Dhabi in what is expected to be the operator's busiest summer in its 10-year history.

"The A6-AIN is now the pride of our fleet after her return to service," said Shane O'Hare, president and CEO of Royal Jet. "This is the second such upgrade to our fleet and is part of Royal Jet's strategy to ensure that we continue to raise the benchmark in the private jet travel market. All our BBJs are individual and are five-star luxury flying hotels. It is luxury undefined when it comes to serving our VIP and corporate customers.

"The technical expertise of our project management, operations and technical teams ensured that the tag of the world's smartest looking BBJ stayed within Royal Jet. The professionalism of our engineers and staff from quality assurance, installation and the procurement teams was reflected in this product and we are confident that our guests will appreciate the thought that went into upgrading this aircraft."

The refurbishment was designed by Edése Doret Industrial Design (EDID) – the acclaimed New York aircraft interiors consultancy – to give the BBJ (A6-AIN) a new and more modern and contemporary interior, furnishings of the highest quality, luxury seats and sleeper beds.

"The reason for the on-going refurbishment of our fleet is to keep our interiors fresh and modern, in line with the expectations of our guests," enthused O'Hare. "At this end of the market we must always keep up with customer expectations and offer the very best in cutting-edge technology and luxury."

The task of performing the multi-million upgrade fell on Sabena Technics at its VIP completion centre in Bordeaux, France. As well as the cabin refurbishment, Sabena Technics was responsible for performing aircraft maintenance and an in-flight entertainment AVOD upgrade, including obtaining necessary certification.

O'Hare said: "Both Edése Doret and Sabena Technics' experience in delivering world-class luxury interiors for different aircraft has been reflected in the A6-AIN and what has come back to us is virtually a brand new plane. I salute the professionalism and in-house capability of the Royal Jet team for delivering a product of outstanding quality in the luxury global private jet business."

The new interior has a modern look with a number of surprising material choices, including ostrich skin on the seatbacks and bulkheads and jet glass on longitudinal bulkheads.

Doret also used some new finishes, such as metals covered in a new smoked nickel coating, made possible by metal specialists Techno-coat.

The aircraft also saw a new complete cabin interior design concept that was implemented on the VIP areas as well as in the business/economy sections, incorporating combinations of exotic wood veneers, decorative polycarbonate mirrors, finished plated metallic corner protections and trims, pure marble stone and luxurious leather patterns. The lavatory and galley areas were refurbished with more or less the same material.

The upgrade fitted the A6-AIN with a custom concept control (CCC) in-flight entertainment and cabin management control system. This provides a wide range of audio/video source selections, including Airshow, as well as control of cabin lighting, passenger call, GSM and Wifi.

The system is configured with passenger graphical user interface (GUI) at each seat screen with a support of dual language (English and Arabic) and flight attendant graphics user interface at each flight attendant control station through the use of touch screen.

The A6-AIN BBJ was delivered to Sabena Technics on August 20, 2012 and was redelivered on June 18 this year.





Jeffrey Forsbrey: Proud to be selected for A350.

EADS Sogerma Celeste hits the heights with A350

With the A350 now in test-mode airlines are looking forward to cabin choices and EADS Sogerma is keen to show its latest seat offer as Steve Nichols discovered.

EADS Sogerma is celebrating the selection of its Celeste seat for the Airbus A350 catalogue. The company launched its new Celeste seating platform for both business and premium economy classes at Aircraft Interiors 2013 in Hamburg in April.

In its narrow-body business class form, the Celeste is pitched at a minimum of 40 inches, driven by either a single actuator or a G mechanism that allows it to rotate in a cradle-type relaxed position for passengers of up to 45 degrees.

In the wide-body premium economy configuration, the seat pitch ranges from 40-45 inches and the cradle rotation moves to a maximum 35 degrees.

Seat widths range from 18-22 inches in both classes. The lightweight design hits the scales at between 20-25kg per passenger, depending upon the configuration.

Both the premium economy and business class products are compatible with the Thales and Panasonic IFEC systems already selected for the A350 catalogue.

Jeffrey Forsbrey, Sogerma's vice president sales and marketing, said that the company was proud to be selected for the A350.

"We are also in discussion with Boeing," said Forsbrey. "We believe that the premium economy sector will continue to grow as business class moves ever upward in terms of the quality of the product offering.

"With the premium economy class growing, we were delighted to be able to unveil the Celeste to visitors at the Hamburg show."

EADS Sogerma joins Zodiac Seats (formerly Weber Aircraft Seats) in the A350 catalogue, which recently added its tailored '5810' Premium Economy seat. Zodiac says the seat offers optimised living space and ergonomics, low weight and comprehensive IFE capability.

Qatar Airways is the launch customer for the Airbus A350 XWB. It has a total of 80 A350s on order, with the first delivery expected next year. It is not known what seating the company has opted for.

The first variant, the A350-900, will seat 314 and is set to enter service by late 2014, with the debut flight planned for mid-2013. A smaller variant, the A350-800 will follow in 2016, with the largest, the A350-1000, slated for late 2017.

Although EADS Sogerma was celebrating the Airbus selection, it has also hedged its bets with a catalogue selection by Boeing, announced at the Aircraft Interiors Americas Show in Seattle last September.

Sogerma, which is a 100%-owned subsidiary of the EADS Group, announced then that it had signed a contract with Boeing to have its Equinox full-flat business class seat included in the 787 Dreamliner catalogue.

Jean Michel Leonard, president and CEO of EADS Sogerma, said: "This was a very big occasion for us and both Didier Guinot, SVP EADS Sogerma cabin interiors, and I are very excited at the prospects this important announcement can bring in the future.

"This development with the Boeing Company is part of our strategy to continue the development and growth of EADS Sogerma now and in the future."

The Equinox seat offers a fully-flat surface at 58/60-inch pitch. Key goals in developing the seat included achieving a weight less than 90kg per double seat (without IFE), a 22-inch seat width, and 78-inch bed length.

Configured in a traditional business-class layout, the reduction in height of the aisle seat is designed to allow an easy exit for the window passenger.

This made it the first EADS Sogerma product to be included in the 787 inventory.



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*Right: Paymen Sabiti on an export drive.
Inset: Paymen and Mahnoush.*

*From humble beginnings and difficulties in Iran to becoming one of the most successful aircraft and seat manufacturers in the world, this is the remarkable story of Sabeti Wain Aerospace. **Marcelle Nethersole** reports.*

WAIN'S WORLD

In 1983, a small clothing company in Buckinghamshire, England, swung open its factory doors in the hope of becoming a success.

Little did the owners know that, in years to come, it would be opening a bigger facility in the area, and expanding out to the Middle East.

“Our Dubai plant, which was expanded in 2009, has more than 80 staff and our UK workforce has over 200. These include cutters, machinists, design development, quality control and administration staff,” said Paymen Sabeti. “We have an ethnically diverse workforce with staff coming from all over the world such as Pakistan, India, Poland and China. All these different faiths and nationalities get on well together in our factories. It’s very gratifying when you set this against our family history in Iran and how we started over again in the UK, as well as having a strong and happy presence once again in the Middle East.”

The company is also set to open a US plant in November, likely to be sited in North Carolina. P&M Sabeti Ltd had humble beginnings. Operating out of a small rented industrial unit, there were just five sewing machines. The family-run company was made up of Mehrangiz and

Parviz Sabeti, their son Paymen and daughter Mahnoush. The four of them worked long, hard hours with the help of their first four or five employees to make the business work.

They were making children’s clothes – not something new to them as they had successfully produced children’s and women’s wear with their old company in Iran, until they were hounded out of their strife-torn homeland because of their religion.

The Sabetis are followers of the Bahá’í faith. Founded in Iran in 1863, it is one of the youngest religions in the world.

Unity and democracy

The main belief is that of unity and democracy – that people should work together for the common benefit of humanity.

But Iran’s then leader, the tyrannical Ayatollah Khomeini, was a Shiite Muslim and, in 1979, he made Iran the world’s first Islamic republic. Followers of other religions were persecuted and the Bahá’í faith found itself at odds with the new regime as pressure on the Bahá’í community increased.

For the Sabetis this meant closure of their clothes factory in Tehran, Iran’s capital.

“My parents employed many members of the Bahá’í community who were all interviewed by the revolutionary guards,” said Paymen Sabeti. “Basically my parents were accused of running a cell of Bahá’í activists plotting against the regime. This resulted in the guards ransacking the factory and offices and taking all the money they could find. The sewing machines were confiscated and my father was forced to clear all his money from his bank accounts and hand it over to the guards. Their house keys were also taken and the house sealed off so they could no longer live there.”

With everything lost but their lives, Parviz and Mehrangiz were forced into hiding and managed to get refuge in the UK, where their son and daughter were living.

No longer a clothing business, the company is now called Sabeti Wain Aerospace (SWA) and is one of the world’s leading designers and manufacturers of aircraft seat covers.

It now boasts a larger and more impressive factory, still in Buckinghamshire, and in 2007 it opened up a factory in Dubai.

“Although all orders and enquiries are handled in the UK, a production presence in the Middle East makes for better, more

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responsive local customer service,” said Paymen.

It is now a partnership of two families, with Paymen and his sister being directors, along with Nick Wain.

Paymen’s parents retired in 2007 but still remain on the board of directors. “The move into aircraft seating came about through chance encounters and business connections,” explained Paymen.

One such encounter was Mahnoush meeting her now husband, Nick Wain, who was studying for an MA in furniture design.

“Nick was a keen traveller and, through his travels, discovered there was considerable room for improvement in seating design, which he then made his specialty college subject,” said Paymen. “At the centre of his project was a revolutionary design for coach seating that was not only more compact than existing types, but used less foam and was considerably lighter and moulded for comfort. This design was later adopted by airlines and became known as the space generator seat.”

The space saving made it a major breakthrough in airline seating design. Where the standard pitch in economy class had been 32/34ins, the new design allowed this distance to be cut to 28/29ins without reducing leg room. Airlines could now install more seats and, in turn, carry more passengers.

“This was really the birth of SWA,” said Paymen.

Designs and innovations

The company prides itself on its seat cover designs and innovations. It pioneered the development of lamination technology.

“The lamination process enhances scope for styling in the seat, improves overall appearance, and increases durability and comfort,” explained Paymen.

“An integrated approach, in which the seat cover is designed at the same time as the back and bottom foam components, can result in a reduction in the amount of foam used, which can save weight and cost without compromising on comfort. Laminated covers are also more easily and quickly removable for cleaning and maintenance.”

As with all aircraft manufacturing companies, weight-saving is a big focus for SWA.

For one customer, the company designed seat covers that were 2kg lighter than the existing ones.

It also enabled customer Thomas Cook to maximise passenger payload and increase its overall efficiency as Paymen explained: “The airline was seeking to achieve a minimum possible 28-inch seat pitch on its passenger aircraft to allow for more seats in the space available. But the space saving couldn’t be achieved in the foam or seat covers of its existing seat profile without compromising safety and comfort specifications.

“What we did was build a one-inch recess into the foam in the seat front, where the pitch measurement is taken. This meant that when the



Teamwork: The Dubai facility staff and its cutting rooms.



measurement was taken from inside the recess, a nominal seat pitch of 28ins could be achieved.”

Paymen said SWA is always trying to think of savings for aircraft operators, which includes evolving seat covers.

“Apart from comfort and compliance with safety regulations, two important considerations for airline operators are that seat covers are quick and easy to change, as well as being as light as possible,” said Paymen. “Fabric seat covers are lighter, and normally consist of 95% wool, which is naturally fire retardant, and 5% man-made fibre. However, they do not offer the same durability as leather.”

Hybrid designs

The company designs its seat covers in fibre, leather and in combination or hybrid designs and Paymen said it readily adapts to changing materials technology so that airline operators can benefit immediately in advances of weight saving, durability and ease of maintenance.

Wain added: “One of the things that sets us apart is that we can work with operators towards a more integrated, holistic design solution that will make their interiors really stand out from other airlines and give them a head start in attracting passenger business.”

Sabeti Wain Aerospace’s impressive list of airline customers includes, Emirates, Etihad Airways, Qantas, and British Airways, as well as having numerous seat vendors such as Martin Baker, Recaro and Sogema on its roll.

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The complete

As Flying Colours plans to expand its facilities to meet the demands of its growing customer base, Kelly Green visits the completions house in Canada to find out more.

Canadian completions, refurbishment and maintenance specialist Flying Colours has had a busy year.

In September 2012, the company received approval from the General Authority of Civil Aviation (GACA) to carry out a full range of regular and line maintenance work on aircraft registered in Saudi Arabia.

The following month, it announced that its two facilities in Peterborough, Ontario, and St Louis, Missouri, had become a Bombardier authorised service facilities (ASF).

Such approvals, it is hoped, will bring in fresh business from the Middle East region. "The Middle East has been a target for a while. Our business from the region has slowed a bit from our standpoint during the global economic downturn. But it has come back over the last year," said Eric Gillespie, who is executive vice president of Flying Colours alongside twin brother Sean.

"We've been working in this area for about six years and it takes time to build relationships, but once established they tend to run for a long time," he explained. "The Middle East is an extremely important region for us and we anticipate a serious growth in business from this region following the recent Bombardier ASF approval."

The family-run business specialises in green completions, interior refurbishment, maintenance, component services, auxiliary fuel systems, exterior paint and avionics installation and upgrades. It has also established a niche in converting used Bombardier CRJs into its Execliner VIP configuration, with 12 CRJ Execliner conversions completed to date, and seven on-going.

"The idea is to be a one-stop service provider; we can do everything here. That is what the customer wants, obviously with downtime being key," explained Eric.

Overhaul work

Owners can request for line maintenance, heavy maintenance and overhaul work to be undertaken while interior upgrades, connectivity implementation, exterior paint jobs, and avionics are carried out simultaneously.

Now, following the general approval GACA AMO #353F, Flying Colours is able to undertake continuing airworthiness and maintenance work on a wide range of Saudi-registered aircraft at its Peterborough facility, including the full Bombardier Challenger range, Bombardier Global Express, and the Dassault Falcon family.

"The Kingdom of Saudi Arabia is an extremely

important executive aviation region and we see great potential from other Saudi-registered aircraft. Thanks to our attendance at shows like MEBA and our on-going activity in the kingdom we have already seen great interest and expect to develop our business from the region now that we have this approval," said Sean.

Sean and Eric's father, John Gillespie, established Flying Colours Corp in Peterborough in 1989, and remains CEO and president. In 2009, Flying Colours acquired JetCorp Technical Services, based in St Louis, from previous owner Jet Direct. The second location operates as a Flying Colours company under the new name JetCorp Technical Services.

"We have 310 employees between the two companies and are growing. We're kind of adding people as we go daily," said Eric.

In October 2012, Flying Colours announced that both companies had been appointed Bombardier authorised service facilities, covering the Learjet and Challenger business jets. "The Global we will be authorising here shortly," said Eric. "We're gearing up for that in 2013 for sure, hopefully in the next six months."

Flying Colours is also a Bombardier preferred completions centre, and has outfitted 10 Challenger 850s for Bombardier since 2008. Work on five others is currently continuing.

The company specialises in all mid-large sized business aircraft, including the Global Express series, Challenger, Dassault Falcon, Embraer, Hawker and Gulfstream models. As it gears up to work on bigger aircraft, the company plans to



Inside story: The company provides completions for all mid-large sized business aircraft, including the Global Express series, Challenger, Dassault Falcon, Embraer, Hawker and Gulfstream models.

package...

build a new hangar, its fifth, at its Peterborough Airport base.

“The plan is to build a new hangar here in the spring. We’ve been talking about this for a while now,” Eric explained. “It will add more capability size-wise, and will be big enough to handle VVIP, or Boeing Business Jets (BBJs) or CSeries – that option will be available. We hope to fill it with CRJs as well and Globals, depending on what’s coming in. We’re still designing, but the plan would be to start breaking ground in the spring.”

The expansion could bring in further business for Flying Colours, particularly now that the Peterborough Airport runway has been extended and strengthened so it can handle the weight of larger aircraft. “We don’t do any of the VVIP right now,” said Eric. “We’ve been asked to do them and a lot of our customers – especially our international customers – are buying Globals and growing into that and they want us to work on the next size up. We’re gearing up towards that.”

Eric predicts that there will be a need for VIP CSeries in the future, once the new Bombardier family enters service. “We certainly want to be ready for that,” he said. “We’ve already had customers asking about it.”

Flying Colours is also expanding internationally, following the growth of its overseas customer base. China, in particular, has become a major market for the company over the past few years and by the end of this year Flying Colours will have delivered a total of 15 Challenger 850s to China.

“We value this market as it is where our

principal growth has come from over the last three years,” said John Gillespie. “It’s a constantly changing landscape from a business perspective and in order to better serve our client base we have considered opening our own facility, as well as the option of working with a Chinese-based partner via a joint venture. We anticipate having a base and capability to carry out refurbishment work in the region by the end of 2013.”

Through its work with international customers, VP corporate development and interior design, Kate Gillespie Ahrens, has noticed patterns in the requests and trends according to region.

Underlying palette colour

In Asia, Eric said that vivid interiors are popular, with red frequently being the underlying palette colour. One completion for a Chinese customer featured a visually dramatic red interior with red leather upholstery, carpets and even cabinetry stained cherry red, while another included a midnight black interior.

Design influence can come from any number of places and the Flying Colours team is on hand to assist and work with clients throughout the design process to create an aircraft that reflects the customer’s vision and passion.

“We do see a little fashion influence. I personally like to start there,” said Ahrens. “A lot of inspiration comes from cars. Or hospitality and travel can offer inspiration. It’s very personal.”

Ahrens said that Flying Colours offers more

choice than going to an OEM and, in terms of design, “the sky is the limit, pardon the pun”.

Some requests see the Flying Colours design team adapt materials to ensure that they will pass the required safety certification. The company has, in the past, implemented technically challenging features, including a complete smoke extraction system to remove cigarette smoke during flight. Features such as stone flooring and wood veneer are also popular.

“With the new aircraft we’re getting higher-end demands for customisation,” she said. “They’re looking for perfection, which I can understand. We start off with a general idea and then go from there.”

While Flying Colours has customers situated all over the world, including Europe, Russia, Asia, and India, it still dedicates a lot of time to maintaining its business in the Middle East. The region’s airshows, in particular, enable the company to meet existing clients and form new relationships. “We’ve been at MEBA the past three shows since 2008, so we’ve heavily invested in going there with regular visits at the various shows,” said Eric.

He added that he has seen particular interest from the region in conversions to 18-19 seat corporate shuttles. “We had a good show at MEBA this year and are still following a couple of leads for CRJ conversions. We have worked hard to develop a customer base in the region on a variety of different aircraft types and we are looking to continue to promote ourselves as part of our global branding plan,” he concluded.

High fibre is the key ingredient for Lumexis challenge

Lumexis' innovative fibre to the screen (FTTS) in-flight entertainment system will, according to the company, be line-fit approved by the second half of this year.

Anthony James reports.

It takes a certain type of person and a certain type of customer to challenge the market position currently held by Panasonic and Thales in the IFE sector.

These two giants have enjoyed a virtual duopoly when it comes to winning new line-fit aircraft programmes, with both able to produce the necessary approvals from Airbus and Boeing that airlines, keen to reduce risk and speed delivery, demand.

Doug Cline, CEO of Lumexis, is quietly confident that 2013 will be the year that sees his company added to the very short list of current line-fit approved IFE suppliers.

Cline, a former US Navy pilot who saw active service during Vietnam, has the steely personality, technical expertise and calm confidence required to see the job through. An avionics and IFE veteran with more than 30 years' experience, Cline is well aware how slowly aircraft manufacturers move when it comes to updating their catalogues. However, he's willing to stick his neck out with a potentially market-shattering forecast: "My big prediction is that our FTTS will become line-offerable from Boeing in the second half of this year for the 737-800 and -900, with initial delivery to be determined by that OEM's management."

Long-haul offerability

Although both short-haul aircraft, Cline says long-haul offerability will follow: "I think that 2013 will also see us shift beyond narrow-body offerability to establish wide-body line-fit approval too – it will be 'the year' for Lumexis, with multiple customer announcements planned."

The company's first customer for its innovative fibre-optic-based IFE system should not be forgotten. Without launch customer Flydubai's initial vision and belief, Cline and Lumexis would still be



Doug Cline with the Lumexis FTTS system on board Flydubai's newest B737.

years away from such an important breakthrough.

Daniel Kerrison, in-flight product development & customer experience manager at Flydubai said: "I think it is quite unusual for a low-cost carrier to offer in-seat video in every seat. But that's the benefit of the Lumexis FTTS system being less than half the weight of traditional IFE systems and around half the cost. It really was the only way we could make a business case to cut the cost of the investment – not only in the hardware, but also the on-going investment in content, acquisition, and the technical cost to integrate the system, as well as the fuel burn to carry the weight of the system."

Despite the convincing numbers on paper, it still took a huge leap of faith for Flydubai to go with Lumexis; given the potential impact such a decision could have on its aircraft delivery schedules and on-board experience.

"As the launch customer, of course we knew there were some risks but the potential rewards were substantial enough to warrant taking that risk," said Kerrison. "And it was a calculated risk – we went through comprehensive process of risk



mitigation and assessment and we went for it. In keeping with the spirit of Dubai, innovation is at the forefront of everything we do."

As with any new product – just ask Boeing about the current 'teething problems' with the 787 – there were a few initial hiccups, but these were quickly fixed.

Amazing seat availability

"Of course, in the first two months back in 2010, the system wasn't performing as well as it is today, but the team at Lumexis were very quick to get on top of the issues we experienced, and we now have amazing seat availability," said Kerrison.

"I fly on all sorts of airlines and IFE is notoriously unreliable. However, we're very pleased with the reliability of the Lumexis system. There are far, far fewer parts and fewer boxes than a traditional IFE system. As the system name states, it's fibre to the screen, with just a fibre optic cable going from the head end to each seat in the plane. Fewer parts mean fewer problems. The system also offers complete redundancy – essentially there is two of everything, so if you



were to take a pair of scissors and cut a fibre cable on the aircraft, the passenger wouldn't notice. Similarly, if one of the server units fails, it simply switches to the second server without the customer noticing. We aim for 99.5% seat availability and we've had no difficulty in achieving that since launch."

And it is this reliability that makes Lumexis an attractive addition to the Boeing catalogue, argues Cline: "Both Boeing and Airbus need an extreme sense of confidence in any new vendor," he said. "They need to know a new supplier is not going to screw up their deliveries, particularly on their narrow-bodies where they're trying to move from 35 deliveries a month to 42 deliveries a month."

"Historically IFE has been just a terrible problem for the OEM, because when you're in the catalogue it means not only does everything have to be installed and so forth in time and not slow things down, but then when you come to the end of the production line, you have to turn it on – it has to work. That, in itself, has been a multi-day process, with the turn on and test for IFE being a major burden for the OEM."

Hence Lumexis has been working with Boeing to prove its reliability and ease of installation: "We

'There are far, far fewer parts and fewer boxes than a traditional IFE system...Fewer parts mean fewer problems.'

DANIEL KERRISON

actually completed the Phase 1 technical services agreement last year and have moved into the second and final phase," explained Cline. "Of course, the pace of implementation is entirely up to Boeing, but it is driven by customer request."

"For some two years now that has been Flydubai but, in the last six months or so, a significant number of well-known, major airlines have been adding their voices, assuring that first, the B737-800/900, and subsequently, Boeing wide-body products will follow, and rapidly, as feasible."

"Thus, I am completely confident in my prediction that a line-fit announcement will occur in the second half of 2013 but I have no authority

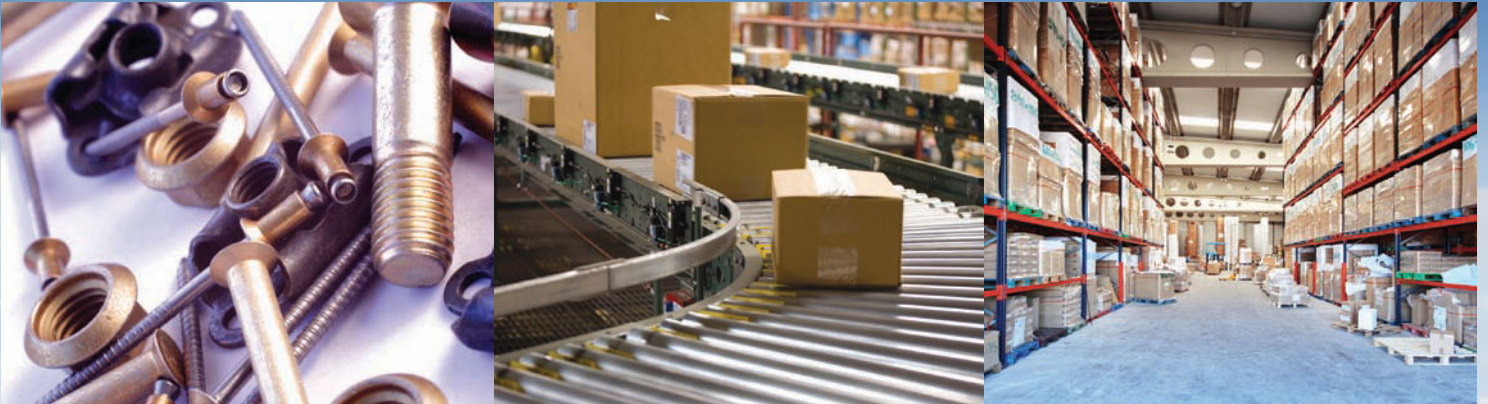
to represent the Boeing company, which will independently determine – in response to carriers' demands – when to cut this into production."

Should Boeing have any further concerns, it need only study the Lumexis retrofit record with Flydubai: "Historically, a post-delivery installation of an IFE system consumes a couple of weeks of downtime for the aircraft but we have now got more than 20 737-800s installed for Flydubai, with each one taking about two-and-half days to fit out," noted Cline.

Clearly, further customers are now in the pipeline to heap even more pressure on Boeing to give the green light to line-fit, but Cline refuses the opportunity to name them at this stage.

However, the final comment should probably belong to Flydubai, whose initial confidence helped bring FTTS to the market, and now it would seem, to an even wider airline customer base: "The full redundancy that the Lumexis system offers and the simplicity of its architecture with fewer parts, means we're fortunate to say that the risk we took has paid off," said Kerrison. "It's such a great system that the market will demand it eventually."

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Airbus A320 of Turkey's Freebird Airlines and a winglet-equipped Boeing 737NG of Belgium's JetAirfly undergo heavy maintenance in the new 5,000sqm, four-bay hangar.

Just seven years after it expanded from its original purpose of providing MRO services for Romania's air force, Aerostar is becoming an increasingly well-known name in the Middle East and North Africa.

Visiting the company's snow-covered base at Bacau Airport in late March, its activity in the MENA market was obvious.

Parked in one of its hangars was a Boeing 737-300 of Dubai-based Global Jet Airlines, while an Avro RJ 100 in the colours of Air Libya was about to depart after overhaul to its new owners in Benghazi.

Other MENA operators to use Aerostar's heavy maintenance services regularly include Royal Air Maroc (RAM) plus no fewer than six Turkish carriers. Since signing up with Aerostar in 2010, RAM has sent 15 Boeing 737s (both passenger and freight variants) to Romania for C- and D-checks.

As well as handling the Boeing 737 Classic and NG families, plus the BAe 146 and Avro RJ, Aerostar took a major step in expanding its business last year when it received the necessary approvals to work on the Airbus A320.

A combination of factors led to Aerostar management's decision to extend the company's portfolio to include the ubiquitous European single-aisle aircraft.

Firstly, although the BAe 146 / Avro RJ is currently enjoying a revival as a rugged fly-in, fly-out (FIFO) type, delivering personnel to remote mining or oil exploration sites – the Air Libya example is one of two that will be used to deliver oil workers to production wells deep in the Sahara

AEROSTAR IS RISING

Romanian MRO provider Aerostar is starting to make an impact in the MENA region – and seeking to expand further.

Alan Dron reports.

– the worldwide fleet is slowly contracting.

Secondly, one of Aerostar's other major MRO staples, handling the Romanian Air Force's MiG-21 Lancer fleet, will also start to shrink over coming years as the aircraft are eventually withdrawn.

It was obvious to Aerostar that it had to expand its portfolio. After careful research, it decided to widen its heavy maintenance expertise to include the A320.

It chose to focus on the A320 due to its popularity in Europe, the Middle East and North Africa. The latter two regions are just three to four hours' flying time from Romania.

The decision to start MRO work on the A320 coincided with the need for a new hangar. "At certain times of the year we were unable to satisfy demand using our existing hangar," said Grigore Filip, Aerostar's president and general director.

A further reason to construct the new hangar was that its predecessor could accommodate the 737 family, but not the A320. The new, 5,000sqm structure doubled Aerostar's capacity to eight narrow-bodied aircraft bays.

Filip hinted that a further expansion of the company's activities was planned, but declined to go into detail, saying that it wanted to settle in with the A320 before taking on another type.

Perhaps significantly, however, the new hangar can accommodate wide-bodied equipment. And Bacau's 2,500 metre runway is capable of

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handling empty Airbus A330s or Boeing 777s. Romania has a competitive cost base (wages are low compared to Western European MRO competitors, particularly on aircraft requiring a lot of man-hours), but this was not Aerostar's major selling point, insisted Filip.

However, lower manpower costs do help to offset the fact that, as Bacau is off the main airways, ferry flights to and from Aerostar's base are usually necessary.

"Cost is important, certainly, but I can't believe that the acquisition of such maintenance can be made based on cost [rather than] quality," he said.

Turnaround times

Quality and adherence to promised turnaround times were far more important, he added. "If we don't build a reputation in the market as a company that delivers quality, price, no matter how low, will not be sufficient."

The same was true for delivery times: "Nobody can send an aircraft for maintenance without knowing when it will return to service."

This was particularly so in the case of the smaller airlines that made up much of Aerostar's turnover, which tended not to have spare aircraft available to plug gaps if aircraft were late returning from MRO periods.

Flexibility is also important at Aerostar. In the new hangar was a Spanish Boeing 737-400 undergoing a C-check. A second from the same



Grigore Filip: Quality and delivery performance, rather than cost, are Aerostar's main selling points.

airline had been due to arrive for similar work a fortnight later. "I had a surprise this morning," executive director of Aerostar's aircraft maintenance facility Ioan Dan Velescu, remarked casually.

"The second aircraft is arriving this Saturday," [just 48 hours away]. "We'll handle it."

Turkey is a particularly fruitful market for Aerostar, with Corendon, Freebird, Tailwind and booming low-cost carrier Pegasus among those sending aircraft to Romania, rather than MRO providers within their own country – something that is particularly satisfying to Filip.

Contrary to popular belief, Turkey had higher overhead costs, he said. For that, among other reasons, Turkish MROs were not regarded as rivals to Aerostar. Rather, a major regional competitor for Middle East business was Jordan's JorAMCo.

Civil MRO work currently accounts for 16% of the group's turnover, a figure that Filip plans virtually to double to 30% in the next few years. The company is profitable, recording draft net profit figures for 2012 of 3.8 million Euros (\$4.9 million) up from 2.9 million Euros in 2011. Turnover also rose, from 36.9 million Euros in 2011 to 44.2 million Euros last year. (The latest figures had yet to be approved by shareholders at the time of writing.)

"We have a target to expand the business in general and this has happened year on year," said Filip.

Potential customers

He accepted that Aerostar, although now well-established as a regional MRO centre, had to do more to make itself and its new facilities more familiar to potential customers: "We need to develop the sales department so we can become better known." And, although it already had customers from the MENA region, more efforts were required.

With that in mind, the company is increasingly taking space at trade exhibitions in the Arabian Gulf and used its presence at the MRO Middle East exhibition and conference in Dubai in January to announce its first contract from Turkey's Freebird Airlines.

Aerostar executives anticipate that at least one further Middle Eastern airline will start sending aircraft to Bacau later in 2013.

"The Middle East will be a strong area for us in the next few years," predicted MRO business development manager Nicolae Diaconescu. "We hope to maintain our business in Turkey [and] RAM sends us an aircraft every two to three months."

Aerostar has around 120 civil MRO staff, with a further 40 under training; last year, they handled 41 airliners, with only two late in returning to their operators (with one of those delays caused by bad weather). Since beginning civil MRO operations in 2004, the company has handled more than 200 C- and D-checks.

Despite its complexities, the airline world is like a small village, said Filip. Airlines talked to each other and suppliers' reputations were made or broken by the quality of the services they provided.

That meant it was essential that every operator that passed through Bacau's hangars had a positive story to tell.

"That's why the two issues of quality and delivery times are not negotiable."

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UAS supports itself with new backing for students

Two students from the Ethiopian Aviation Academy are to get a valuable learning experience – thanks to support from a Dubai-based company United Aviation Services (UAS).

UAS is recognized worldwide for support of a different kind as it is one of the world's leading international trip support providers. But according to the company's executive president, Mohammed Husary, the company has been developing a grant and internship programme, which it hopes will help young people from developing countries get a better opportunity to work in the aviation industry.

"Africa is an important and fast-growing market," Husary said. "One of the biggest challenges will be getting the right number of people to match the growth. We felt we could do something to help."

The UAE flight support business which is keen member of MEBAA, will cover the cost of an

IATA airport commercial management course at the Emirates Aviation College, in Dubai. This programme, valued at more than \$12,000 per student, will be offered to two young people from the Ethiopian Aviation Academy as a means of bridging the gap in the aviation industry between the Middle East and Africa.

"UAS is committed to the promotion of education and training programmes that allow individuals to enhance their professionalism and knowledge of the aviation industry," Husary said.

Completed the course

After the two Ethiopian students have completed the course, they will be invited to carry out an internship at the company's headquarters in the Dubai Airport Free Zone.

"We think this will also prove valuable. We are fortunate that UAS has a great reputation and a strong customer base. By spending some time working with the company the two students will

get a great opportunity to experience the way the company works and get a broader understanding of the business. The overall objective of this partnership is to promote aviation education and allow candidates to experience and develop their skills globally as well acting as a means of learning and expanding their career in international operations," Husary said.

"They will get a real-life perspective of working in flight planning, ground operations, and flight operations," he said.

UAS is also covering all costs for the students' flights, accommodation and transportation.

The company already has operations in Mali and is looking at Ethiopia as a potential future operations centre.

It is also extending its educational reach and is also bringing two students from China to the Emirates Aviation College on a similar sponsorship programme.

The company has also established a

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Mohammed Husary:
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partnership with the National Business Aviation Association (NBAA) offering an international operators scholarship to benefit business aviation professionals engaged in international operations. The scholarship programme is administered by NBAA's International Operators Committee.

Husary also sees benefit for his own staff through the meeting of different nationalities on the support programmes.

"We believe that education is an ideal way to encourage exchange of ideas between professionals from different backgrounds while helping develop the next generation of leaders," he said.

"Dubai is a tremendous environment for people to visit," Husary said. "There is a large aviation community and a growing reputation for training. I am very pleased that our company is playing its part and I believe the benefits of this kind of sponsorship will be seen clearly in the future."



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As passenger numbers at Dubai International Airport rapidly rise, a meticulous plan is under way to resurface and modify its runways but, as Keith Mwanalushi discovered, the process is much easier said than done.



Runway resurfacing lands DXB with a logistics nightmare

The closure of a runway at an intensively used airport such as Dubai (DXB) represents a unique challenge.

In recent months DXB has become the second largest international airport in the world and, in order to support that growth, its operator has laid out plans to ensure that the facilities are kept in suitable condition.

Since the beginning of 2013 DXB has moved up two positions in the global rankings, as per Airports Council International (ACI) statistics. "It is a clear signal that more people are choosing Dubai as their preferred hub, not only for its extensive global network but the facilities on the ground too," commented Paul Griffiths, chief executive, Dubai Airports.

DXB has two close-parallel runways. The Dubai Airports Company recently announced a programme of runway rehabilitation works necessitating single runway operations during an 80-day period from May 1 to July 20 2014. Unlike some other airports, where operational restrictions are in place or where the airport has sufficient runways to cope with the reduced capacity with minimal disruption, it's clear that neither of these options exist at DXB.

A single runway capacity at DXB will be insufficient to maintain a full programme of operations, necessitating a temporary reduction in flights to fit within the lower capacity.

"Dubai International does not have a night curfew and is operational round the clock," said Helen Woodrow, VP for forecasting and

research, Dubai Airports. "Currently we close each runway for approximately five hours per week to conduct on-going maintenance. Due to the extensive nature of the work required, there will be continuous runway closures necessitating single runway operations during an 80-day period commencing in May 2014."

In any case, the northern runway (12L-30R) is nearing the end of its design life and requires attention in order to accommodate future traffic and fleets and volumes.

"While the runway is closed for resurfacing, it is an ideal opportunity to simultaneously perform additional required works, for example upgrading the lighting system and constructing new rapid exit taxiways to boost capacity on both runways," said Woodrow.

Rehabilitation project

The runway rehabilitation project will involve the placement of 180,000 tonnes of asphalt on the northern runway, 65,000 tonnes of asphalt and 70,000 cubic metres of concrete on the southern runway and taxiways, as well as the installation of 3,000 runway lights.

"The runway resurfacing is only one important part of a greater airfield development programme," pointed out Woodrow. "This will enable Dubai International to accommodate growth in demand and fleet characteristics under development.

"The airfield development programme includes construction of additional aircraft parking stands and aprons, both adjacent to

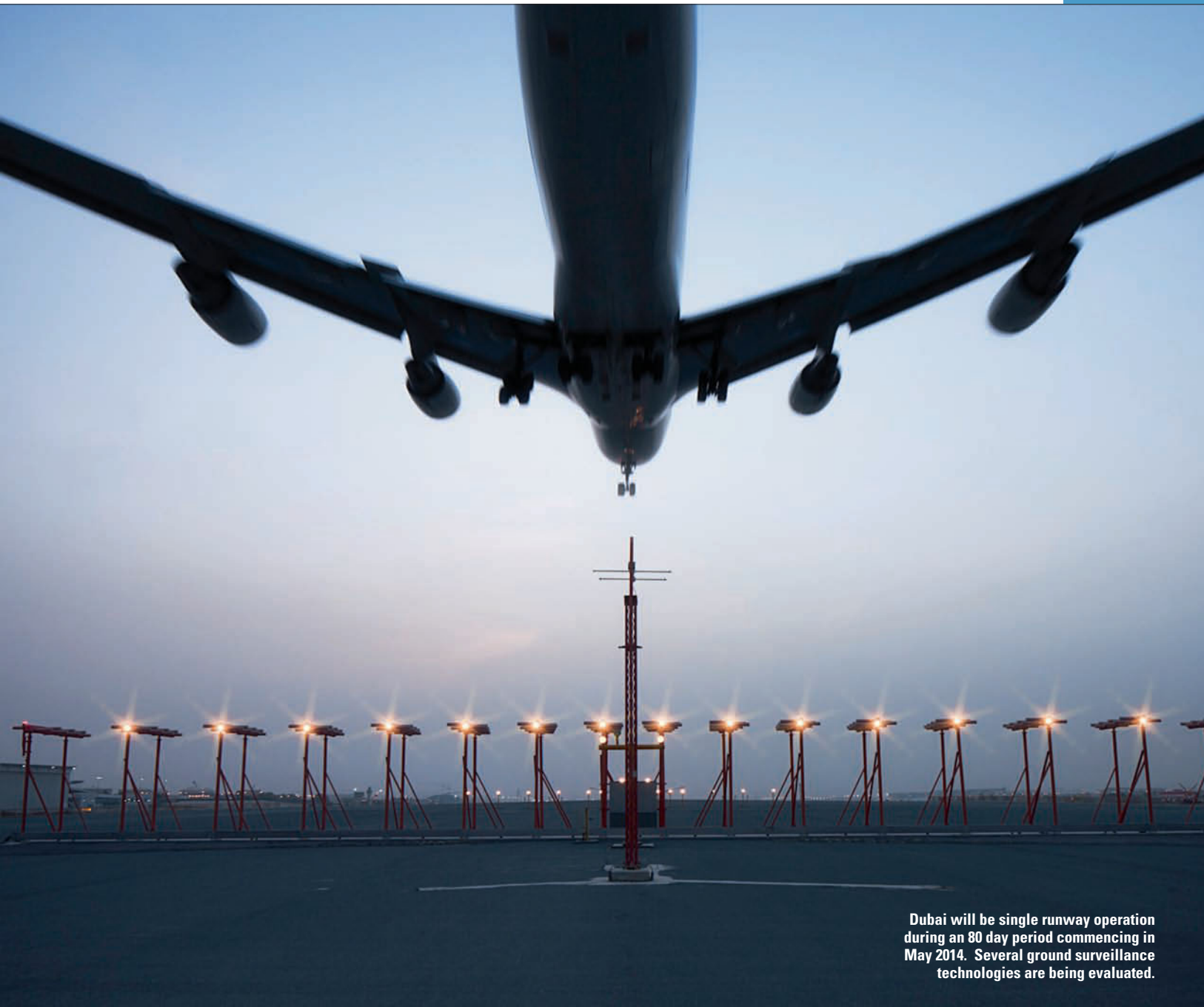
existing and future terminals, and modifications and upgrades of existing parking stands, construction of new taxiways and modification of existing taxiways."

Dubai's desert climate also poses unique challenges for runway maintenance. Large variations in daily temperature cause major expansion and contraction in rigid and flexible pavements. Higher temperatures also mean it takes longer for any new asphalt laid on the runway to become usable. Significant repairs or overlays need a longer runway closure to allow for curing.

Woodrow added that several ground surveillance technologies are also being evaluated as part of the plan to maintain and even enhance safety on the airport surface while the traffic grows. "The intention is to expand the existing network of ground movement radars and existing multilateration constellation. Furthermore, video augmentation technology is being considered," she said.

The main issue now rests with slot coordination that will allow optimised schedules and maximise the utilisation of the remaining capacity. Airlines operating into DXB offer various schedules from just a few flights a week to multiple daily frequencies. Managing the slot process fairly and transparently under such restricted circumstances must surely be a challenge.

To achieve the declared capacity, operators into DXB will be required to reduce the number of operations planned during the closure period. According to a written statement sent to airlines,



Dubai will be single runway operation during an 80 day period commencing in May 2014. Several ground surveillance technologies are being evaluated.

50% of the total required reduction will be sourced from base airlines (Emirates and Flydubai), which will equate to a reduction of approximately 22% of their combined total operations.

Referring to all other airlines, the statement further reads that airlines with multiple daily frequencies may be required to reduce their schedule by up to 50%. Airlines with a single daily operation would be “protected from reduction as much as possible, however this cannot be guaranteed at this stage”, the statement reads.

Additionally freight, general aviation and charter operations will be advised to use the Dubai World Central (DWC) as an alternative, as these

operations will not be allowed to use DXB during the period.

“In addition to hosting all cargo, charter and general aviation operations, Dubai World Central – Al Maktoum International, which opens for passenger operations on October 27 this year, will be an available alternative to absorb affected scheduled passenger flights for those carriers wishing to explore this option,” Woodrow confirmed.

In recent months, DXB has become the second largest international airport in the world. Measured by available seat kilometres (ASKs), London’s Heathrow still reigns supreme as the number one performer, although Dubai is closing

fast and analysts predict it could bump Heathrow off the top spot by 2015. So this begs the question as to whether the runway works will affect Dubai’s ambition to become the world’s busiest international airport.

“We remain confident Dubai International will surpass London Heathrow in terms of international passenger numbers in 2015,” Woodrow said. “Passenger traffic at Dubai International has seen double-digit growth since late 2012 and robust demand growth is forecast to continue for the foreseeable future. The 80-day runway maintenance period will undoubtedly, however, create an anomaly in 2014 to our long-term growth trend.”

Smart gadgets and systems are changing the way airports work and, as Keith Mwanalushi discovered from the Dubai Airports Show exhibitors, Middle East airports are spending big on clever new technologies.

Get smart! It's just the ticket

A survey of aviation industry professionals, carried out by the organisers of the recent Airport Show 2013, revealed that the Middle East emerged as having the “highest potential” for airport investment and expansion in the next five years.

An investment of \$90 billion is projected to go into the aviation industry in the Middle East by 2020. The region is also expected to handle 400 million air passengers by the same time frame, while air traffic is expected to grow by 5.2% annually until 2030.

Middle East airlines are expected to experience the highest growth in passenger traffic, at 5.8% per annum through 2025, compared to the world average of 4.6%.

Furthermore, by 2020, it might be possible for 80% of passengers travelling through the world's international airports to not interact with human beings at all as they pass through fully automated check-in and immigration counters, say aviation technology experts.

Revolutionise operations

Many of the technologies that will revolutionise airport operations were on show at this year's Airport Show in Dubai.

Bayanat Airports Engineering and Supplies (BAES) has been participating at the Airport Show for the past 13 years, exhibiting with its international partners to promote the latest technologies and capabilities.

Among those present in the Bayanat pavilion was Northrop Grumman, which displayed the latest in its VHF/UHF receivers, transmitters and transceivers on its stand. In addition, it showcased the airport real-time collaboration (ARC) suite, designed to improve efficiency, functionality and, most importantly, predictability.

Bayanat is currently involved in the supply and installation of Northrop Grumman's ground-to-



Georges Hannouche along with Sheikh Ahmed bin Saeed Al Maktoum, chairman of The Emirates Group at the 2013 Airport Show in Dubai.

air radio communication solutions for various military clients.

SAAB-Sensis, part of the SAAB Group, was also present to demonstrate its advanced-surface movement guidance and control system (A-SMGCS). In addition, SAAB demonstrated its security management system, SAFE, designed to provide enhanced situation awareness capabilities for critical infrastructure protection and emergency response. Bayanat Airports recently commissioned the SAAB-Sensis multilateration (MLAT) system at the New Doha International Airport.

Bayanat Airports Engineering & Supplies (BAES) also used the event as a platform to announce new projects, partnerships and the latest operational and regional developments.

“Partnering with Lockheed Martin, we been awarded the contract to supply and install the

Middle East's first ‘WindTracer’ light detection and ranging (LIDAR) system to collect wake vortex data arising from approaching and departing aircraft,” explained Georges Hannouche CEO at Bayanat Airports.

“The systems are currently being installed for Dubai International Airport as part of its ambitious plans to have a dual arrival stream on both runways.”

He said BAES had also begun work on its Al Ain International Airport contract for the design, supply and installation of instrument landing system (ILS) and distance measuring equipment (DME), with the fibre optics backbone and flight calibrations required for successful ICAO CAT I certification. The project is to be completed by the beginning of 2014.

Locally established

Hannouche said the Doha office, which was previously operating as a branch of BAES, was now locally established as Bayanat Engineering Qatar (BEQ).

“BEQ attends primarily to the needs of Qatar's civil and military airports and aviation authorities and is also reaching out to the railway and maritime sectors by offering its systems engineering and integration capabilities,” Hannouche explained.

“Furthermore, with the region's ambitious plans, we are currently establishing Transportation Engineering Limited, and Bayanat Engineering International, in Riyadh and Muscat, respectively. All three new establishments in Qatar, KSA and Oman will be integrating the various technologies and systems for airports and other transportation sectors under the centralised support of UAE-based Bayanat Airports.”

AOptix, a technology innovation company, showcased its advanced iris recognition technology InSight, which is already deployed at



some of the busiest airports and immigration sites in the world, including Dubai and all points of entry in Qatar.

“The AOptix InSight is very well positioned to facilitate the next generation of passenger processing through a unique combination of speed, ease-of-use and accuracy, even in challenging real-world environments,” said Joey Pritikin, director of product marketing.

“The key to this is the combination of a high degree of automation with the use of patented adaptive optics technology.

“InSight does all of the positioning, focusing, capturing, and quality checking work, so that passengers only need to stand in approximately the right location, look toward the system, and open their eyes.”

Pritikin noted that the resulting benefits for Middle Eastern airports are broad. “These benefits can already be seen in existing deployments of AOptix InSight at Doha International Airport and Dubai International. In Dubai Terminal 3, it’s facilitating faster and easier immigration, while forming the cornerstone of automated smart gates that will cut the average



Joey Pritikin: “We will see more systems at the automated smart gates and more passengers using these gates for a self-service immigration experience.”

immigration time from almost an hour per passenger to less than one minute.”

Pritikin said the Dubai Government was proactively managing challenges through a staged approach to deployment. “To date, most systems are deployed at manual counters, where trained officers can ensure a successful process. Meanwhile, significant portions of systems are also deployed at automated gates, which are being opened to more and more passengers as confidence in the process builds.”

He added: “Over time, we will see more systems at the automated smart gates and more passengers using these gates for a self-service immigration experience. We have a very strong partnership with emaratech, the system integrator for this project, and the vision and support of the Dubai government. We are well tracked for success.”

Smiths Detection also used the show to showcase new technologies in explosive detection systems (EDS), including the launch of the HI-SCAN 10080 XCT dual-energy X-ray line scanner with full 3D volumetric-computed tomography imaging and reconstruction.

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Hans Zirwes, VP of international sales, said the equipment provided a number of features that, in combination, delivered a unique quality of performance and cost-effectiveness. With a belt speed of 98.5 feet per minute, it is considered the fastest available automated explosives detection system.

"The XCT can process up to 1,800 bags per hour, which is a significantly high throughput than any other compliant EDS systems," said Zirwes.

Smiths Detection develops and manufactures Government-regulated technology products that identify explosives, chemical and biological agents, weapons and contraband. "The global aviation industry is highly regulated and, therefore, we strive to develop solutions which will fulfil the high security requirements from the Transportation Security Administration (TSA) and European Civil Aviation Conference (ECAC). The airports in the Middle East tend to lean on the security regulations being given by Europe and, or, the United States," Zirwes noted.

Cost efficiency

He added that the challenges in the aviation industry were to "optimise the throughput of luggage and hand baggage, to increase cost-efficiency and plan ahead to fulfil the increasing security requirements". Therefore, he said, features like footprint, throughput, picture quality and privacy play a leading role in product development.

"Other criteria that play an increasingly important role are the quality of service over the life cycle of the products and, also, integrity expertise and solutions, especially for new airport projects like in the Middle East. The decision-makers and planners rely on partners who can accompany them with the expertise as a full service provider from the planning to the installation of complex systems."

Francesco Violante, CEO of SITA, said optimising technology to create 'smart' terminals would reduce congestion in airports and dependence on labour and greatly improve the overall efficiency and time saving.

A concept he referred to as 'intelligent airports' will enable operators to track, manage and share real-time information. This will supposedly allow the intelligent airport to be proactive and predictive in optimising the passenger journey.

"There is plenty of evidence to show the need for intelligent airports," Violante stressed. He said congestion was an increasing problem, with passenger traffic continuing to grow in most regions, and particularly in the Middle East.



Hans Zirwes:
"Footprint, throughput, picture quality and privacy play a leading role in product development."



Francesco Violante:
"There is plenty of evidence to show the need for intelligent airports."

IATA estimates that, by 2020, almost 95 million passengers are expected to cross Dubai International Airport. About 50% of airport users prefer using machines rather than checking-in and passing security check conventionally, according to a recent study. Most people find processes at the airports to be the most troublesome part of their journey, the study revealed. "A critical factor is being able to mobilise airport workforces, keeping them constantly in touch through mobile devices and, therefore, optimising response times and operations," Violante said.

In addition, he said, airlines could leverage the same airport infrastructure to minimise disruptions by being more proactive in rebooking late arrivals. "Airlines can also use the passengers' mobile devices to keep them informed of delays, cancellations, gate changes, tracking of checked baggage, and offering solutions in case of mishandling, such as upgrades or lounge coupons. Roaming agents, with context-aware mobile devices (tablets), could communicate

directly with the airline departure control system to manage issues instantly."

There are also benefits to passengers of having access to real-time, accurate, personalised information from the intelligent airport. "It empowers them to make decisions during their journey. Mobile phones and devices are the primary tool by which passengers experience air travel – location-based technologies, such as indoor navigation maps and augmented reality, provide passengers with the shortest route possible to their gate, security, ATM, sports bar, duty-free shop, rest room, and so on."

With the view that fully automated check-in, security and immigration counters could replace human interaction at some point, some have voiced concern over whether these new technologies have adequate security safeguards.

"Security is, of course, a very important part of air travel," Violante said. "However, self-service has yet to fully affect security and customs. It is the main pain point for today's travellers, cited by 31% of passengers in the 2012 Passenger Self Service Survey, and these areas are calling out for radical improvement."

Airport systems integrator

Elsewhere Smartworld, an airport systems integrator in the Middle East in collaboration with Samsung, showcased a new flight information display system (FIDS).

South Korean electronics giant LG unveiled its portfolio of new digital signage products and solutions for the airports and airlines in the Middle East and Africa region.

Vaculex, a Swedish company, introduced a state-of-the-art baggage-handling technology, which will reduce the manpower requirement. The lifting equipment, based on vacuum, can move baggage from 0-200kg. Dale Hetherington, key account manager, said that the technology had been welcomed all over the world and was already in use at more than 70 airports, including Heathrow and Frankfurt.

Airport Show event director Daniyal Qureshi summed up: "We feel there is a positive sentiment across the aviation industry as several airport developments have been announced in the region in the past 18 months. Mega-projects that had slowed down are picking up pace again. International suppliers are looking to the region, so massive airport upgrades are necessary to meet the fleet and aircraft upgrades."



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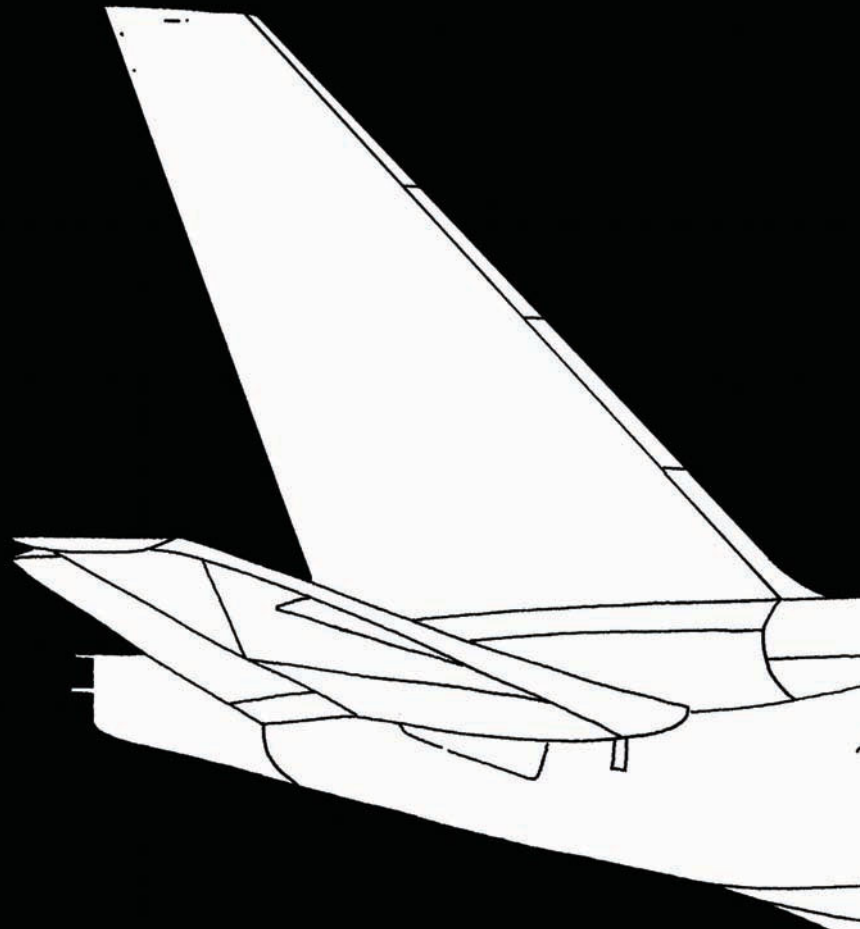
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Alan Peaford looks at how one Gulf carrier is embracing technology and pushing the barriers to improve efficiency.

Pioneering IT at the core of Etihad's global vision

Etihad Airways has signed two major technology agreements that will see the UAE national carrier lead the way in use of IT systems to improve operational efficiency and reduce cost.

The first deal was signed at the Paris Air Show, where the airline announced an agreement with Taleris, a joint venture company between GE and Accenture, which will implement new technology to predict aircraft maintenance faults and reduce flight delays.

The second was a far-reaching 10-year agreement signed with SITA, the airline-industry owned technology specialist, which will provide the carrier with the latest global infrastructure solutions, while reducing the cost and complexity of IT.

Both are pioneering moves.

Taleris's web-based prognostics service, a part of its intelligent operations offering, is a first for the commercial airline industry and will be used to monitor Etihad's fleet of Airbus and Boeing aircraft. The prognostics technology will leverage the industrial internet to increase the airline's overall operational efficiency.

It is expected to deliver significant financial savings for the airline and, at the same time, improve reliability for passengers and freight customers as the technology continuously analyses data from multiple sensors on aircraft

components and systems, and warns of imminent problems.

The expected benefits include a reduction of unscheduled maintenance, fewer delays and cancellations, increased aircraft availability, enhanced on-time performance, increased maintenance efficiency, reduction in maintenance costs and reduction in lost revenue costs.

The service also can reduce the requirement to store expensive spare parts, which are typically stocked in case of failure.

Norm Baker, president and CEO of Taleris, said: "Around the world, airlines are seeking ways to manage their maintenance and flight operations more efficiently. Significant benefits can be realised through our predictive analytics technologies, which leverage an aircraft's data within the context of the operations so one can address an issue before it occurs."

Meanwhile, SITA said that its multi-million dollar agreement will underpin Etihad's vision to be a truly 21st Century global airline, challenging and changing established conventions.

Up-to-date services

By making use of the air transport industry (ATI) cloud, Etihad will access up-to-date services from SITA and will be adopting new innovative services such as SITA's CrewTablet, which its cabin crew will use to access passenger and operational data via tablets.

In addition, SITA is working with the airline to establish new connectivity solutions at airport gates to enable the most efficient management of the fleet.

Speaking at the Air Transport IT Summit in Brussels, where the deal was signed, Etihad chief executive James Hogan, said: "Our pioneering business model, based on growth through partnership, has seen us invest in five other airlines and initiate discussions to invest in a sixth, making the SITA partnership even more important as we seek technology solutions that will meet our own requirements and increasingly those of our equity airline partners.

"SITA's extensive portfolio of infrastructure services can be tailored to our specific needs and, most importantly, can be deployed quickly across SITA's global network to support our continued international expansion."

SITA is providing IT services across Etihad's global network of 89 destinations, as well as its hub in Abu Dhabi. This includes computing solutions powered by the ATI cloud, including desktop-as-a-service (DaaS), which provides a flexible replacement for traditional PCs in remote office environments, and separate infrastructure-as-a-service (IaaS), which offers scalable, on-demand computing solutions.

SITA is also providing on-site support for Etihad's end-user IT equipment located at its global offices and outstations.

SITA at the table:
Francesco Violante, CEO,
SITA with Etihad chief
executive James Hogan.





Ziad El-Khoury, partner at Saudi Arabia-based Squire Sanders, looks at the factors affecting industry mergers and acquisitions around the world and what implications they might have for the Middle East.

A world of opportunities in a merging market

From a global perspective the aerospace and defence sectors appear to be on the cusp of a period of significant change.

Historically, the sectors have been dominated by US and, to a lesser extent, by a handful of western companies.

The Squire Sanders global briefing on merger and acquisition (M&A) activity in the aerospace, defence and Government services sector, showed that in 2012 and so far in 2013 North America accounted for 58% of deals in these sectors.

The report, produced in association with Mergermarket, said this figure was marginally up from the 55% in the period 2008-12.

However, this is not the whole picture, and the global M&A data also revealed the start of what may be a slow but profound and longer-term shift – with the Asia-Pacific region increasing its share of overall M&A in the aerospace industry.

In 2012-13 Asia-Pacific countries – chiefly China – accounted for 11% of global M&A, up from 7% in 2008-12, and now on a par with the United Kingdom.

In 2011 there were three acquisitions by Asia-Pacific companies; last year this increased to 10. Already in Q1 2013 we have seen six.

The majority of deals have involved Chinese aerospace companies. The rapid growth in China is being fuelled by an increasing appetite for air

travel (including a boom in the private jet sector driven by greater numbers of high-net-worth individuals) and by increasing investment in defence industries.

The emergence of China as an aerospace giant is a trend still very much in its infancy but it will be affected to some degree by other changes taking place in the US.

The US remains by far the world's biggest spender on defence. And M&A in North America is particularly bound to the US defence budget because of the importance of domestic procurement.

Global purchaser

While American defence budget cuts still leave the US as a dominant global purchaser, nevertheless the reduction in spending will have an impact on a wide array of aerospace and defence companies.

Defence spending cuts not just in the US, but also in the UK and western Europe, together with the wholesale removal of troops from Afghanistan, may suggest uncertainty for the industry in the short term.

However, there are likely to be several new opportunities.

The nature of US defence spending has undergone a subtle shift, too, with a greater emphasis on threat mitigation and relevant

technologies, away from the traditional focus on armament and associated hardware. The demand for services businesses may well rebound in the current climate.

Furthermore aerospace and, in particular, defence will be boosted by the changes in US export control laws, which are undergoing their most radical transformation in half a century. Various military items are, or will be, moving from the International Traffic in Arms Regulations (ITAR) to the Export Administration Regulations – beginning in October 2013 and continuing through 2014.

In the past decade or so, non-US customers have shown more interest in purchasing 'ITAR-free' components in their systems. With the proposed ITAR changes to focus on the more sensitive technologies, there should be both greater cooperation and cross-border trade and also increased competition among manufacturers and producers.

What does all this mean for the Middle East?

The region has, of course, been undergoing its own major transformations. The war in Syria and the recent unrest in several other countries in the wider region have increased the security concerns of states such as Saudi Arabia and those of the Gulf.

The role of Iran in the region and its



continuously developing nuclear programme are also creating increasing regional tensions and different forms of confrontation. The kingdom and neighbouring states have been increasing their defence budgets in recent years.

Defence spending accounted for 10.1% of Saudi GDP in 2012 and is expected to average at some 8.4% by 2017, making it one of the highest in the world.

This move comes in response to a variety of potential and perceived threats, and the increases in security spending have been designed to cover areas such as border control and oil field protection alongside traditional defence products and a greater emphasis on equipment upgrades and related maintenance and training work. Cyber defence is also increasingly gaining momentum.

Increased spending will generate multiple business opportunities for foreign aerospace and defence companies.

In the kingdom, growth is hampered by several factors, such as centralised monopolistic government purchases for the armed forces, lack of industrial opportunities and strict limitations on foreign investment in the sector.

The result is more opportunities for original equipment manufacturer (OEMs) in the

kingdom and the ME region generally as the Saudi market is not too dissimilar to other regional markets like Oman and Qatar.

This trend seems to be continuously fuelled by big and attractive government budgets. Another trend seems to be more opportunities in the MRO arena.

The most heated sectors for OEMs are probably homeland security (as this market is expected to grow significantly due to internal and external threats); the protection of vital oil infrastructure; and border fencing, which is a market that seems to be growing especially with internal unease and insurrections on the Yemen and Iraq borders of Saudi Arabia and similar tensions between other regional states.

Military sales

Foreign military sales, even if less apparent and harder to penetrate, are going to be interesting.

In response to these changes, it is clear the aerospace and defence players are refining their aim in the region by cutting unnecessary costs, restructuring sales chains and struggling to accelerate service levels.

This means that companies will be looking at filling the 'sales' and 'service levels' gaps in the region and, thus, more M&A activities affecting

sales and service channels are expected, especially among tier 2 and 3 suppliers. While foreign direct investments into Saudi Arabia, for instance, remain closed, the increase in defence spend will be likely to contribute to deal-making abroad, when companies that are incorporated elsewhere but are active in the country look to combine.

Some of the tier 1 suppliers will keep investing in new technologies and that will present a competition challenge to the smaller players. There are also likely to be several expanded opportunities in the areas of system upgrades, maintenance and maintenance training.

With US, European, and, on the horizon, Chinese suppliers all looking more to overseas markets and exports generally, together with the gradual phasing in of the ITAR changes, we may well see greater competition between suppliers, as well as additional interest among buyers in the components and systems freed up from ITAR and in increasingly more sophisticated technologies, including unmanned aerial vehicles.

Overall, the aerospace and defence sectors look set to enjoy further expansion, with strategic buyers seeking opportunities for consolidation or to acquire new technologies, while financial investors would continue to see it as a safe haven for growth.

A formation of five fighter jets flies across a clear blue sky, leaving colorful smoke trails in white, blue, purple, and pink. Below them, a desert landscape with orange sand dunes is visible. In the background, a control tower stands on a dune, and several other aircraft, including a large commercial jet and a helicopter, are parked on the ground.

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The 50th Paris Air Show took place in the heart of fierce thunderstorms that wracked the French capital and its biennial aerospace extravaganza. But, despite torrential rains, there was enough to cheer the hundreds of thousands that attended the world's largest airshow. Alan Peaford reports.

PARIS CONTINUES TO RAIN SUPREME



Embraer new family takes up the challenge

Embraer launched its second-generation E-Jet and set the stage for a showdown with Bombardier's CSeries and the SuperJet 100.

With more than 300 orders announced by the end of the show, the Brazilians are clearly in the driving seat.

The new E2 family includes three variants: an 80-seat E-175, 97-seat E-190 and 118-seat E-195. One row of seats will be added to the E-175 and three rows to the E-195.

The E-190 E2 will be the first to enter service, in the first half of 2018. The E-195 E2 will follow in 2019 and the E-175 E2 in 2020, Embraer's president Fred Corado said.

Embraer had said previously that the new E-Jet would offer "double digit" gains in fuel efficiency, maintenance costs and noise reduction, while Bombardier claims that the CSeries will offer a 20% fuel-burn improvement and a 15% cash operating cost advantage over existing in-production aircraft.

The E-175 E2 will be powered by the Pratt & Whitney PW1700G geared turbofan engine and the E-190/195 E2s by the higher-thrust PW1900G GTF.

The new E-Jet family will use Honeywell Primus Epic 2 avionics and include fourth-generation fly-by-wire controls and new wings.

Bahrain minister sees airport as show puller

Kamal bin Ahmed Mohamed, Bahrain's minister of transport and acting chief executive of the country's Economic Development Board, was at Paris to promote the Bahrain Air Show – the first of next year's events, which takes place from January 16-18.

"There is a lot happening right now," he said. "We are reviewing the fleet for Gulf Air. We are upgrading our airport with new terminals and there are lots of other infrastructure changes, too."

The minister was pushing Bahrain's close proximity to Saudi Arabia, the largest market

in the Middle East and just 20 minutes across a causeway. Some five million visitors each year come from the kingdom to Bahrain.

"When it comes to the air show, we have visitors from the Saudi companies as well as from the other GCC states," he said. "The Bahrain show is very different from big events like Paris. It is built around networking. We get the top VVIPs there and there are opportunities for meeting."

The new airport development will be a major interest at the Bahrain show as a special feature is being developed for companies interested in the project.



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DEFENCE

Russian Flanker steals the show

As far as flying performances were concerned, the star of this year's Le Bourget was undoubtedly Russia's Sukhoi Su-35 Flanker-E, which was making its Paris debut and is pictured below. It is the first Russian-built fighter to appear at the show since the 1999 crash of an older-model Flanker.

The powerful twin-engine fighter demonstrated a spectacular routine, showcasing the manoeuvrability afforded by its multi-axis thrust-vectoring Saturn 117S 14,500kg (31,900lb) afterburning engines.

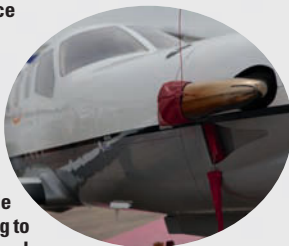
During a 12-minute routine, the Su-35 performed a series of seemingly impossible manoeuvres that demonstrated remarkable low-speed handling characteristics.

It has a range of 3,600km (1,940nm) – more with external tanks and in-flight refuelling – and can carry 8,000kg (17,600lb) on 12 hard points.

TBM 850 could be all-seeing

Daher-Socata is looking to MENA and sub-Saharan Africa for potential customers for a new multi-mission derivative of its high-speed TBM 850 turboprop. The aircraft was shown on the Le Bourget static park with a range of sensor options for intelligence, surveillance and reconnaissance (ISR) tasks.

It was fitted with an electro-optical/infrared sensor turret installed beneath its rear fuselage. Current options include the FLIR Systems Star Safire 380 HD and L-3 Wescam's MX-10 and MX-15 systems, while the company is also now offering to add the Thales I-Master sensor under the forward fuselage.



ENVIRONMENT

Hailing the green taxi

Safran and Honeywell demonstrated their new electric green taxiing system (EGTS) at the show each day – and picked up a partner for the new environmentally friendly technology. Air France signed a preliminary agreement to evaluate the benefits of the electric drive mechanism for the main landing gear and share its analyses with the two manufacturers for potential system refinements.

The manufacturers opted for a design with a single electric motor on each main landing gear. Both drive units are supplied with electricity from the auxiliary power unit (APU), while the two main engines can remain shut for taxi operations.

The equipment should reduce fuel burn and also cut engine maintenance costs – as the powerplants clock up less operating hours – and the risk of damage from foreign object debris on the ground.

Honeywell and Safran estimate that the EGTS can save up to 4% block fuel costs on an Airbus A320-sized aircraft travelling 500nm.

**Italy reveals new trainer**

Alenia Aermacchi is to press ahead with the development of a new-generation jet trainer – the M-345 HET.

The HET stands for a 'high-efficiency trainer', and Alenia said it could be available for service introduction between 2017 and 2020.

The design will be a further evolution of its previous M-311 design, with enhancements that chief executive Giuseppe Giordo claims will enable it to defeat turboprop-powered rivals.

Changes would include replacing the earlier electrical system, changing the cabin dimensions and also introducing a new landing gear, he added.

If advanced to the operational standard, the M-345 HET would occupy the training sector beneath Alenia Aermacchi's M-346 advanced jet trainer. For the Italian air force, this could see the type serve as a successor for its older Alenia Aermacchi MB-339s.

Embraer and Boeing in KC-390 deal

Boeing and Embraer are teaming up to market the Brazilian airframer's KC-390 tactical transport.

Boeing is to lead sales, sustainment and training for the type in the US, UK, and "select Middle East markets", the companies said in a joint statement.

They declined to name the Middle East markets in which Boeing will lead marketing efforts, nor the number of KC-390 aircraft they hope to sell in each country.

Embraer views the KC-390 as a potential replacement for the Lockheed Martin C-130 Hercules. Its maiden flight is scheduled for 2014.





Hammerhead nails the MALE sector

Piaggio Aero Industries – one-third owned by Abu Dhabi's Mubadala – unveiled the P.1HH Hammerhead unmanned aerial system (UAS), designed for intelligence, surveillance and reconnaissance (ISR) missions. It was rated by defence experts at the show as being at the top end of the medium-altitude, long-endurance (MALE) category.

Ahead of the show the platform, which integrates the state-of-the-art Selex ES SkyLSTAR mission management system, had already successfully completed low speed taxi tests.

Separately, UAE firm Adasi is working in partnership with Saab to produce a manned, maritime patrol version of the P.180, with the UAE as launch customer.

At the show Italy's defence procurement chief backed the new, unmanned variant as a candidate to replace Italy's Reapers. He said the Hammerhead should take on the role of Europe's long-delayed, MALE programme.

General Claudio Debortolis added that the US block on Italy arming its General Atomics Reapers had been "an incentive" in backing the Hammerhead.

The Hammerhead was seen as a pre-launch at IDEX in Abu Dhabi. Now the Italian-UAE-Indian joint venture company is preparing to aggressively market it to NATO and beyond.

The wings, which are larger than the manned P.180, are foldable, to allow the UAV to be inserted in transport aircraft.

COMMERCIAL



Boeing launches Dreamliner variant

Boeing launched the 787-10 Dreamliner, the third member of the 787 family at the show with commitments for 102 aircraft from five customers across Europe, Asia and North America.

The new 787-10 will fly up to 7,000nm (12,964km) – covering more than 90% of the world's twin-aisle routes – with seating for 300-330 passengers, depending on an airline's configuration choices.

"The 787-10 Dreamliner will be the most efficient jetliner in history. The aircraft's operating economics are unmatched and it has all the incredible passenger-pleasing features that set the 787 family apart as truly special," said Boeing Commercial Airplanes president and CEO Ray Conner.

"The 787-10 is 25% more efficient than planes of its size today and more than 10% better than anything being offered by the competition for the future."

Hercules in civilian clothing

Lockheed Martin said at Paris that it is examining the possibility of developing a civilian variant of its C-130J to replace the legacy L-100 civilian-model Hercules airlifters.

Jack Crisler, Lockheed's vice-president of new business for air mobility programmes, said there are about 70 L-100 aircraft remaining in service with various civilian operators of the type.

He said there was expectation of sales for at least 70 civilian versions of the C-130J.

While some of the avionics on board the C-130J, such as the instrument flight-rated head-up display, would be retained, many of the military avionics would have to be replaced, Crisler said.

ROTOR WING

Bell spring a surprise with SLS helicopter

Bell Helicopter surprised the pundits by using Paris to launch a new helicopter aimed at retaking the short light single (SLS) segment it once pioneered with the 206 Jet Ranger but which is now dominated by the Robinson R66.

The company unveiled the all-new SLS, which will be formally named at next year's Heli-Expo, as featuring a Garmin G1000 integrated flightdeck and powered by the 370shp (276kW) Turbomeca Arrius 2R, with a useful load of at least 680kg (1,500lb) and a maximum range of more than 360nm (667km).

The performance requirements were set based on input from an advisory panel made up of customers familiar with the performance of the R66 and Eurocopter EC120.

The latter had been the leader in the SLS segment until the arrival of the cheaper R66.

Bell said that the new SLS will be competitive in the segment, but has not publicised a specific price target.

Middle East a focus for Alenia Aermacchi MC-27J

Alenia Aermacchi and ATK could be debuting the MC-27J at Dubai Airshow later this year.

The gunship and multi-mission payload fit for the Spartan tactical point at Paris where a mock-up was on display.

The Middle East represents one current "focus area" for the MC-27J, the partners said.

Etihad appoints Mansour Al Marzouqi

Etihad Airways has appointed Mansour Al Marzouqi as its new general manager in Belarus.

Al Marzouqi joined Etihad Airways' graduate management programme in 2007, subsequently holding several key positions in sales and business development in the UAE before being appointed general manager of the Maldives in 2011.

Al Marzouqi will replace former general manager for Belarus, Paolo Greco, who is moving to Rome to take up the position of partnership alliance manager to Alitalia.

Raja Azmi succeeds Boutellier at Nasair

Raja Azmi, the former CFO of Air Asia, has been named as the new chief executive of Saudi Arabia's Nasair. The move follows the shock departure of Francois Boutellier, who is understood to have resigned.

Sultan swings into new Emirates role

Nabil Sultan has been appointed the new divisional senior vice president, cargo, succeeding Ram Menen, who retired from Emirates in June.

Prior to his new appointment, Sultan was divisional senior vice president for revenue optimisation and distribution.

He began his career with Emirates in 1990 in the IT department, and two years later joined the company's management training programme with subsequent appointments in various management and leadership roles both within and outside the UAE.



Joline Rukab with her family.

Rukab makes history with Earhart scholarship award

The Arabian Section of the Ninety Nines female pilot organisation has announced that Joline Rukab has become the first Arab female pilot to be awarded a scholarship from the Amelia Earhart Memorial Scholarships Fund (AEMSF).

Rukab, a Palestinian female pilot, graduated from Jordan as a commercial instrument rated pilot and became a flight instructor in Jordan.

Established in 1929 by 99 women pilots, the Ninety Nines created the Amelia Earhart Memorial Scholarship Fund in 1940 for licensed pilot members to advance in training and education in aviation and aerospace.

"I am so happy that the AEMSF will help fund my Bachelor degree in Aviation Administration at the Farmingdale State University of New York," said Rukab. "This degree is a step towards higher degrees, international relations, and will widen my career options in the aviation domain."

Alia Twal, governor of the Arabian section of the Ninety Nines, said: "This event inspires the rest of the women and gives them motivation to stay in the section and be an active member."

Currently the Arabian section of the Ninety Nines has 32 members. Four new joiners include Jordanian pilot Suha Abu Al Adas, Royal Jordanian Airlines first officer Saja Al Majali, ground and flight instructor Nawal Bilayachi from Algeria, and Nicole Pinto from India, who is based in Kuwait.

Abu Al Adas said: "It has been a great challenge for me to achieve what I've done so far, especially in the Middle East. Not many women pilots here obtain the title of captain. It is my goal to prove to people who don't approve of female pilots that they are wrong."

Bilayachi added: "I always had the feeling that I would do something special in my career. Thank goodness I had support from my family and friends to make my dream come true and prove women can have great careers in the aviation industry."

After the huge success of the first Arabian section meeting last year, Twal said a second meeting is planned for November this year in the UAE.

"The next meeting for the Arabian Section will take place November 21-23 2013.

For more details contact aliatwal@hotmail.com.



Jordanian pilot Saja Al Majali.

Gay takes R-R Middle East role

Rolls-Royce has announced the appointment of John Gay as regional director, Middle East. He will be based in Abu Dhabi.

He takes over from Dr Rob Watson, who will be moving to Bristol, UK, to become senior vice president customer business Asia-Pacific within the defence business.

Gay, who began his career with the company as a 16-year-old technician apprentice, moves to the Middle East after a two-year posting in India, where he served as Rolls-Royce's senior vice-president of defence aerospace in South Asia.

F&E changes to Middle East team

Organiser of the Dubai Airshow F&E has announced a number of new appointments following the departure of regional CEO Clive Richardson and aerospace managing director Alison Weller.

Gary Marshall, CEO Asia, will expand his responsibilities to include the Middle East in the role of CEO Asia and Middle East.

Lieutenant Colonel (retired) Sharief Fahmy has been appointed to succeed Richardson and has joined the Middle East team after recently completing a distinguished 23-year career in the United States Air Force (USAF).

Michele van Akelien, most recently the aerospace director at F&E Aerospace, has been promoted to managing director of F&E Aerospace.

1

■ Can you tell us your background?

I recently completed a 23-year career in the United States Air Force (USAF) retiring as a Lieutenant Colonel and joined F&E Aerospace as CEO in June 2013.

Before F&E, I served for five years at the US Embassy in Abu Dhabi as an international regional area strategist. In this role, I led the US Government in its successful participation in the last two editions of the Dubai Airshow and three editions of IDEX.

My service in the United States Government included USAF base-level tours, and joint strategic-level tours at the Pentagon, the White House, presidential airlift 'Air Force One', United States Central Command and, lastly, the US Embassy in Abu Dhabi.

Sharief Fahmy

Marcelle Nethersole *speaks to the CEO of F&E Aerospace.*



2

■ What can visitors to the 2013 Dubai Airshow expect?

There will be continuing growth with up to 60,000 attendees and more than 1,000 exhibitors.

One of the more surprising aspects of the new venue at Dubai World Central (DWC) is that it has been built in an environmentally-friendly way as possible. For example, some of the exhibition's structure, formerly located at Airport Expo, was actually taken down, moved and reconstructed at DWC. This is a green initiative that we at F&E Aerospace have set our efforts on supporting.

The airshow will highlight how aviation helps to provide humanitarian relief during a crisis. It is bringing the UN World Food Programme (WFP) and Care by Air together in a new humanitarian pavilion which, in turn, will showcase more than 15 charitable organisations, air operators and supporters in order to encourage more key players to join their efforts. Visitors will also be able to get involved as they will have an option to donate to three different charities when registering to attend: UN WFP, Red Crescent and a third to be confirmed by HH Sheikh Ahmed bin Saeed Al Maktoum, who will be choosing the final charity.

It will also see the return of the Middle East's dedicated training event, the Gulf Aviation Training Event (GATE), and Futures Day will return on the final day of the show.

Finally, we will be launching a separate public area called Skyview, taking place from November 18-21.

3

■ As the event has moved to a new venue, what difficulties has that entailed?

For the last five years we have been working very closely with Dubai Aviation Engineering Projects (DAEP) on the design and construction of the purpose-built venue. We are calling this the "ideal venue", as it includes larger freight access, the land side is in a better location, and there is one large exhibition hall rather than the three separate halls we had at the last venue.

The main challenge we face as organisers is educating attendees on the location of the new venue but we have always prided ourselves on our relationships with exhibitors, contractors, media and visitors and have been communicating regarding the move for some time now and offering support wherever needed. In addition, we will launch a campaign in the lead-up to the show detailing all the need-to-know show information, including transportation and details of our complimentary shuttle bus service from designated metro stations and hotels.

4

■ What does a typical working day entail for you?

Since joining F&E Aerospace I have been involved in running the company's day-to-day activities across the full portfolio of aerospace events, which include the Dubai Airshow, GATE, Middle East Business Aviation (MEBA), Aircraft Interiors Middle East (AIME) and the Maintenance, Repair and Overhaul (MRO ME) show. A huge part of my role is building on our corporate vision and supporting business development, as it is imperative we grow our portfolio of events to better support our customers.

5

■ How has it been for you making the transition from your previous role to this new post and what challenges do you face?

It has been a very smooth transition for me since I joined in June. As a former customer of F&E during the Dubai Airshow in both 2009 and 2011, I have experienced first-hand the quality that F&E Aerospace has to offer. I am truly honoured to join the team at such a critical juncture. Our biggest challenge is exceeding expectations. As a team we are always on the move, focused, with only one thing in mind... delivering the best Dubai Airshow ever!

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