



ARABIAN AEROSPACE

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

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Obituary:

Brendan Gallagher

Arabian Aerospace has lost a dear colleague and friend.

On May 29, barely a day after returning to his London home from an assignment in Istanbul, Brendan Gallagher died suddenly.

Brendan, 60, was one of the world's leading aviation journalists and technology editor for this magazine. He had given more than 38 years' service to our industry, having joined *Flight International* in 1975.

He was the launch editor of the successful *Flight Daily News* before working with Inmarsat, *Jane's*, *Aviation Week* and Shepherd Press.

His booming laugh and unmatched command of the English language was his trademark. Of his own appearance, marked by a dense full beard and aquiline nose, he would describe himself as looking: "Like a rat peering over a scrubbing brush."

Brendan was an inspiration for all those who worked with him and for those who met him in the course of his work. He was meticulous in his research and his note taking, and was genuinely fascinated by the activities of all of those people he interviewed – a fact that was always reflected in the fantastic work he produced.

He was also a great teacher and mentor.

But above all he was a great friend.

He leaves a wife, Veronica, and three children Meg, Ellie and Cieran.

He will be greatly missed by all those whose lives he touched and the skies of our aviation industry are just a little more grey without him.

- A P



Show Business increases daily presence

Arabian Aerospace is stepping up its portfolio of daily publications at the region's leading events. A deal was signed at EBACE between Mark Brown, managing director of Times Aerospace, publishers of *Arabian Aerospace* magazine, and Captain Al Gaoud, Bahrain's undersecretary for civil aviation, for *Arabian Aerospace* to produce daily copies of *Show Business* at the Bahrain Air Show next January.

"We were very pleased to have been asked to work with the Bahrain Civil Aviation Authority and the organisers, Farnborough International, to produce a daily newspaper for the Bahrain show," said Brown.

Arabian Aerospace will also be producing *Show Business* at the Dubai Airshow in November.

COVER: Turkish Airlines chief Temel Kotil.

PICTURE: IAN BILLINGHURST

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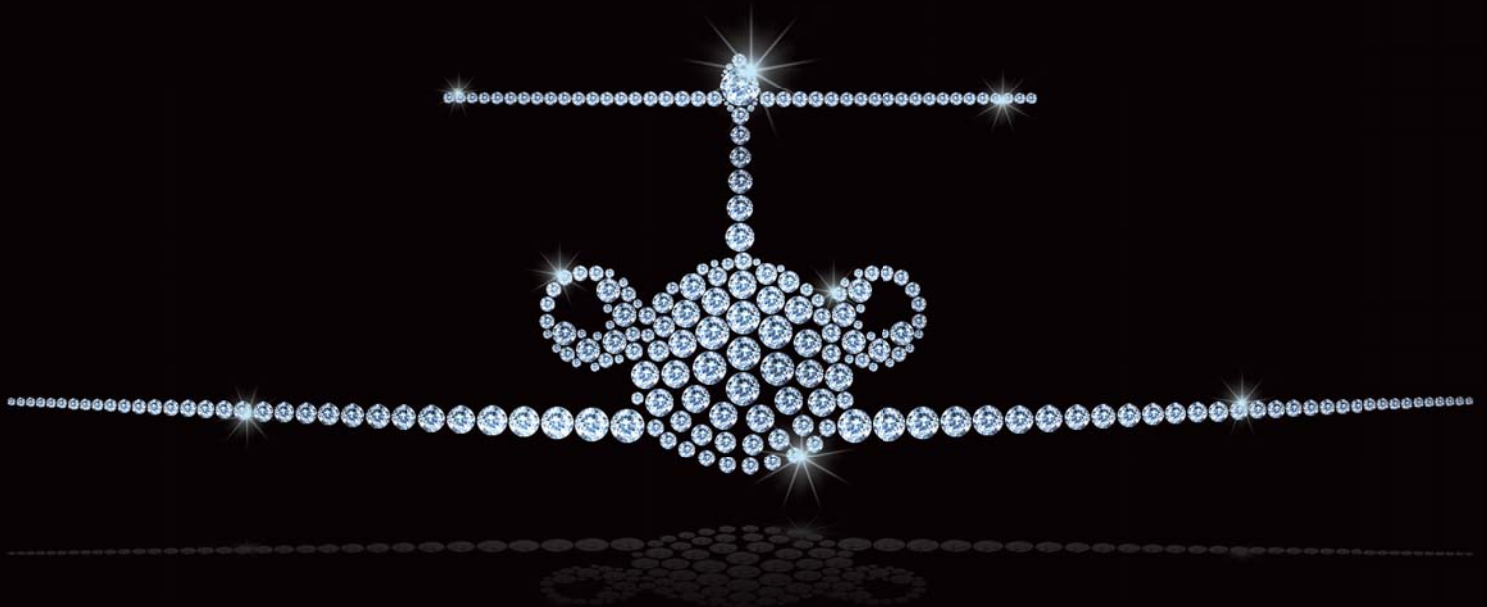
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With busier airports, can air traffic management systems really manage? We look at the need to change thinking if the good times are to stay.





VALERY GERGIEV

GLOBAL LEADERSHIP

Leadership knows many stages. For Valery Gergiev, the first as conductor of orchestras. Time and again he stands alone and leads symphonies and artists of great genius that stir the soul. He took to his second life's calling with equal dedication. To contribute to his vision of global harmony, he established the Valery Gergiev Foundation as a channel for international peace.

As a testament to his outstanding leadership, Bombardier is proud to support the Valery Gergiev Foundation.

Middle East sweeps up at World Awards

Qatar Airways, Etihad Airways, Emirates, Oman Air, and Turkish Airlines were all winners at the 2011 World Airline Awards held at the French Air and Space Museum.

Qatar Airways won the coveted title as the World's Best Airline. Etihad, Turkish and Emirates were all in the world's top ten overall best airlines.

The main award was received by Qatar Airways CEO, Akbar Al Baker, who praised the efforts of all Qatar Airways employees. "I am immensely proud of Qatar Airways and it is an honour on behalf of my workforce and my country to collect this prestigious award and for Qatar Airways to be named Airline of the Year," said Al Baker.

"Since I became the chief executive officer of Qatar Airways in 1997 at the time of our relaunch, my goal was simple – for Qatar Airways to reach the pinnacle of the airline industry.

"Most airlines invest heavily in developing their premium cabins and, while we continue to do this, Qatar Airways strives to innovate in economy class, ensuring our high standards are maintained and passenger expectations are exceeded worldwide."

Etihad Airways won the award for the World's Best First Class Airline and Peter Baumgartner, COO – Etihad Airways, said: "The World Airline Awards are known as 'the passenger's choice', underlining the fact that Etihad Airways is clearly satisfying its hardest critics."

Turkish Airlines was among the award winners in the premium economy and economy sections.

Emirates won the award for World's Best Airline



Morocco receives 12 T-6C military trainers

The Royal Moroccan Air Force (RMAF) has received the first 12 of 24 T-6C trainers from Hawker Beechcraft (HBC).

The RMAF is replacing its existing fleet of T-34 and T-37 jet trainers.

"We are pleased to have delivered the first 12 aircraft to the RMAF, our initial international customer for the T-6C," said Jim Maslowski, HBC president, US and International Government Business. "The new T-6Cs will greatly improve the level and effectiveness of the RMAF's training. They replicate systems and capabilities consistent with modern front-line strike fighter aircraft and are more economical to operate than the previous generation of trainers."

Inflight Entertainment; Turkish Airlines was named the Best Airline Europe and Oman Air won for World's Best Business Class Airline Seat and Staff Service Excellence Middle East.

Edward Plaisted, CEO Skytrax, said: "The Middle East is now one of the most competitive regions for

airlines and the award for Staff Service Excellence Middle East is a tribute to the steps Oman Air has taken to ensure passengers receive a world class experience. Oman Air joins a prestigious list of airlines that have received the award for Best Seat – Business Class. The Oman

Air Business Class product was a very popular choice for voters in this year's awards and in the final analysis, this seat was a clear winner by a considerable margin."

More than 18.8 million airline passengers from 100 different nationalities voted for the awards.

Jazeera sticks with Lufthansa Technik

Jazeera Airways and Lufthansa Technik have extended their existing 10-year total engine support contract from 2006 for a further two years. The agreement comprises 13 CFM56-5B engines of the six Airbus A320 airplanes of Jazeera Airways' fleet.

Jazeera Airways chairman Marwan Boodai said: "We've had a great working relationship with the Lufthansa Technik team since 2006. They have provided us with great support and service and we look forward to continue working with them for the years to come."

GACA rejects airport in Makkah

Saudi Arabia's civil aviation authority, GACA, has rejected proposals for an airport in Makkah.

GACA judged the idea as unfeasible because of the distance that airports are required to be from the city centre, as well as the difficulties posed by the mountainous geography of the area.

Saudia Cargo lease B747 freighters

Saudi Airlines Cargo has leased three additional Boeing 747 freighters to increase frequencies on its scheduled cargo services and create more capacity for the charter market.

JATS expands training library

Jordan Airline Training and Simulation (JATS), based in Amman, has contracted computer-based training specialist, CPaT, to provide the Queen Alia Airport facility with its entire library of flight training programmes for all aircraft types.

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TAI joins EADS for Talarion programme

Turkish Aerospace Industries (TAI) and EADS subsidiary Cassidian have signed a MoU to establish a close collaboration in the unmanned Talarion programme. The agreement was signed during an official ceremony at the 10th International Defence Industry Fair (IDEF) held in Istanbul.

Shannon gets pre-clearance boost

The stumbling block that has stopped the pre-clearance to the US for business jets flying from the Middle East to America via Shannon Airport in Ireland has been eased.

Changes to the rules regarding the radiation-screening procedure conducted by US Customs and Border Protection (CBP) agents for business aircraft flying into the United States has opened the way for more business aviation flights. Auxiliary power units.

Joe Buckley, business development manager at Shannon Airport (EINN), warmly received the decision. "This policy change essentially removes a very significant hurdle that was preventing Shannon from capitalising on business aviation opportunities arising from



Qatar Airways secures holding in Cargolux

Cargolux International Airlines has confirmed its strategic equity partnership with Qatar Airways, which sees the Doha-based airline taking a 35 per cent stake in the business.

Marc Hoffmann, Cargolux chairman said: "At the implementation of the restructuring plan in November 2009, I noted that Cargolux would benefit strongly from a strategic partner and that the shareholders had commenced discussions

with several parties. I am delighted that we have now found such an excellent strategic partner in Qatar Airways, a leading Middle East carrier and one of the fastest growing airlines in the world.

"I have no doubt that the co-operation with the new shareholder will support the business performance of Cargolux and strengthen its market position going forward."

being the first airport in the world to offer full US pre-clearance," he said.

The move was also applauded by Universal Weather and Aviation, which has a specialist unit dealing with operations through its Shannon base.

Freight expectations from Bahrain MENA

Bahrain's MENA Aerospace Enterprises airline division, MAE Aircraft Management, has

added a freighter to its AOC, making it the third aircraft in its fleet.

The company said it had completed the induction and registration of a Boeing 737-300F and that it intends doubling the number of aircraft over the next couple of years.

Turkey takes Skyhawks

Turkey's Türk Hava Kurumu (THK) has signed a deal to buy 10 Model 172

Skyhawk piston aircraft from Cessna following the successful introduction in 2010 of an initial cadre of six Skyhawks. Cessna will deliver all 10 in 2011.

Aviation Link adds two ACJs to fleet

Saudi Arabian company Aviation Link has purchased two Airbus ACJ319 aircraft, which will go to an as-yet undisclosed completion centre later this year.

SATS takes stake and chips in at AAFEC

Singaporean ground-handler SATS has, via wholly-owned subsidiary SATS Investments, bought a 40 per cent stake in Saudi Arabia's Adel Abuljadayel Flight Catering Company (AAFC) for US\$18.5 million.

Antonov off the agenda at Muscat

Complaints from residents near Muscat International Airport have led to the banning of Antonov aircraft from the Omani capital, according to the Times of Oman.

Fokker's Lufthansa Technik deal

Fokker Services and Lufthansa Technik have signed five-year agreements for the support of Boeing, Airbus and Bombardier components. The deals include the support on a wide range of pneumatic, hydraulics and avionics components.

EgyptAir receives its 50th aircraft from Boeing

EgyptAir's relationship with Boeing reached a major milestone when it received its 50th airplane – a Next-Generation 737-800 – from the American manufacturer.

The 737 is the 17th of 20 ordered by the Cairo-headquartered airline between 2005 and 2009. This delivery also marked a 45-year partnership between Boeing and EgyptAir.



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Dry move by flydubai

CTT Systems has received an order from Dubai-based low-cost carrier flydubai for 31 zonal drying systems for the airline's new B737-800 aircraft.

The systems, which eliminate condensation in the aircraft, will be installed on the production line by Boeing for aircraft to be delivered between 2011-2015.

Ghaith Al Ghaith, flydubai's chief executive, said: "The CTT system will give flydubai significant savings in emissions and fuel costs over the life of our fleet. For one aircraft in one year this system reduces carbon dioxide emissions by approximately 69 tons, nitrogen oxide emissions by 200kg, hydrocarbon emissions by 35kg and carbon monoxide emissions by 480kg. When the rest of our fleet is fitted with this system we will be saving 2,100 tons of carbon dioxide emissions each year."

Bombardier gets Global Vision OK

Bombardier Aerospace reports that its Rockwell Collins Global Vision flight deck has been granted certification from Transport Canada.

"This is an important milestone, as aircraft equipped with the Global Vision flight deck can now be granted a certificate of airworthiness," said Stephane Leblanc, vice president and general manager for Bombardier's Global programme.

"To date, we have completed more than 600 hours of flight testing and are progressing full throttle towards certification of specific advanced features, such as the incorporation of enhanced vision and synthetic vision on the head-up display."

Bombardier and



DubaiSat-1 relays images of Cape Town

DubaiSat-1, the UAE-owned and operated earth observation satellite, has relayed images of the South African city of Cape Town from the outer space.

DubaiSat-1 was a joint project between the UAE and South Korea, and during its development the focus was on knowledge transfer to the UAE team and its participation in building the satellite.

EIAST launched DubaiSat-1 in July 2009 and since then the

satellite has been transmitting images that are of great value in several areas.

EIAST's second project, DubaiSat-2, is a joint development programme between EIAST and Satrec Initiative of South Korea.

DubaiSat-2 will be launched on board a Dnepr Rocket through the Moscow-based International Space Company Kosmotras (ISCK) from Yasny Cosmodrome in Russia by the fourth quarter of 2012.

Rockwell Collins will be the first to certify synthetic vision on a head-up display (HUD) as part of the Pro Line Fusion avionics system on the Global Vision flight deck.

SR Technics cabin completions deal

Mubadala subsidiary SR Technics has made its first foray into cabin completions and signed its first VIP Airbus conversion contract with an undisclosed customer from the Middle East.

An Airbus A-300 series aircraft will be reconfigured into a modern aircraft interior with tailor-made VIP elements, such as a

VIP section with club seats, tables, custom-made design elements, latest VIP IFE system and a new power system.

Doha new terminal for foreign airlines

Doha International Airport has opened its brand new Terminal B as a dedicated departures facility for foreign airlines.

All passengers travelling on flights with more than 30 international airlines will now depart from Terminal B, while all Qatar Airways flight departures will continue to operate from the existing departures terminal – now renamed Terminal A.



Hawker 200 test aircraft makes first flight

The final pre-production Hawker 200 has completed its first flight and will now begin contributing to the certification flight test schedule.

The new Hawker 200 joins three other aircraft – the first Hawker 200 and two modified Premier aircraft – in the programme and will be used for systems certification, functional and reliability testing, and interiors certification.

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Selex Galileo has KACST on its radar

Saudi Arabia's King Abdulaziz City for Science and Technology (KACST) has signed two contracts with Selex Galileo.

These are for delivery of the company's PicoSAR and cutting edge ESCAN radar technologies for joint research, development and demonstration purposes, and a series of training and industrial participation modules centred around Selex Galileo's radar expertise.

The PicoSAR contract is the third over the last few months for the compact, high performance SAR/GMTI radar, which the Italian-owned manufacturer describes as the ideal solution for challenging UAS surveillance applications.

HBC renews Iraqi Air Force support

Iraq's Air Force has followed on a contract with Hawker Beechcraft (HBC) through the American Air Force Security Assistance Training command to support the force's fleet of King Air 250ER aircraft.

The deal is part of the on-going Operation Peace Dragon maintenance and support programme on the aircraft, which are used for intelligence, surveillance and reconnaissance (ISR) purposes.

Falcon 7X worldwide grounding is lifted

Saudi Private Aviation and other Middle Eastern owners of Dassault's flagship Falcon 7X business jet were grounded for more than three weeks after a control incident with a non-Middle East aircraft.

The whole worldwide Falcon 7X fleet was grounded from May 26 until rectification of the technical fault – which took until June 17 – to develop a fix approved by EASA.

A Falcon 7X experienced a pitch trim malfunction during descent on May 25. The crew successfully recovered the aircraft to a stable flight profile and landed safely but Dassault halted all flights, advising EASA and the FAA to issue an airworthiness directive and suspend flights.

All modifications are being carried out by Dassault and were expected to complete by the middle of July.

Under the terms of the contract, Hawker Beechcraft will send three additional technicians, along with two instructors, to the New Al-Muthana Air Base in Baghdad, to provide technical and logistical instruction to Iraqi Air Force maintenance personnel.

Etihad and Jettainer sign cargo deal

Etihad Airways has appointed Jettainer, the unit load device (ULD) management company, to supply, manage and maintain its ULD fleet at Etihad destinations across the world through to 2016.

Roy Kinnear, Etihad Airways' senior vice president cargo, said: "The ULD deal with Jettainer

will ensure Etihad's cargo services remain among the best in the world. Jettainer's experience, high calibre of staff and award-winning software will provide invaluable support for our operation. Together, we will offer our customers an unparalleled service wherever they are in the world."

RUAG advertising error

RUAG has asked us to make clear that it is not an official OEM partner and/or approved major service centre for Twin Otter, as it stated in an advertisement in the last issue of Arabian Aerospace.

RUAG holds an EASA part 145 base and line

maintenance approval with respect to Twin Otter DHC-6 Series.

The company regrets any confusion and inconvenience caused to its customers and partners.

Akzo Nobel clarification

Dutch company Akzo Nobel which, as outlined in the last issue of Arabian Aerospace, is successfully supplying top quality coatings across the Middle East, has asked us to point out that it is not the unnamed UK or European company alluded to in an article in the same issue of the magazine about Emirates paint shop.

Akzo does supply Emirates with coatings and its products meet or exceed

all requirements for hot and humid conditions.

We apologise if any reader felt there was an inference that the unnamed UK company was, in fact, Dutch firm Akzo Nobel. Any such inference was not intended by Emirates or by Arabian Aerospace and we apologise unreservedly to any reader who may have misconstrued this.

SITA and Orange combine for AT cloud

Air transport industry IT specialist SITA and integrated communications service provider for businesses Orange, have agreed to jointly build a global, high performance, managed cloud computing infrastructure for the aviation industry.



Crystal takes delivery of B777

Etihad Crystal Cargo has taken delivery of its first Boeing 777 Freighter.

The freighter is Etihad's first Boeing freighter and joins the airline's existing Boeing 777 fleet, which includes seven 777-300ERs.

The 777 Freighter is the world's longest-range, twin-engine freighter.



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EVENTS

It's the highlight of the global aerospace calendar. Thousands of exhibitors, hundreds of thousands of visitors and the leadership of the aerospace industry from around the world converge on the business aviation airport of Le Bourget just a few kilometres outside of Paris for the famed Paris Air Show. This year's 49th edition had its ups and downs and the Arabian Aerospace team of Alan Peaford, Jon Lake, Claire Apthorp and Liz Moscrop were there to pick the highlights.

Qatar boss Al Baker threatens order cancellation over Airbus delays

Airbus is to postpone entry into service of its A350-1000 until 2017 – the two-year delay being blamed on a decision to provide a thrust increase to 97,000lb from new Rolls-Royce engines.

But the decision was met with fury by Qatar Airways chief executive Akbar Al Baker, who said he would consider cancelling his order.

Qatar is the launch customer of all three variants of the A350XWB and also heard at Paris that the European manufacturer is also delaying introduction of the A350-800 by two years to mid-2016.

Airbus said at the show that it has been under pressure to bring the A350-1000's performance more into line with that of the Boeing 777-300ER. The extra power will give the aircraft 400nm of additional range and will feature an "optimised" wing.

But Al Baker, who has 20 of the type on order, was not happy. In an interview with the Paris show daily, *Flight Daily News*, he said: "I was expecting that Airbus would make a competitor to the 777-300ER, that we would have considerably lower seat-mile costs and at least 15 per cent more range, but that is not going to happen."

"What they are going to give us is fewer seats than the 777-300ER and marginally more range. Why should I go for a new aeroplane while I already have one that has more revenue generation and just a little less range? I'm investing in this aircraft with very little marginal benefit, range-wise, and negative benefit capacity-wise."

Al Baker added that the revised A350-1000 "is going to be 18 months late – and that is as of now – which means I will have to buy more Boeings to keep up with my fleet plan".

He continued: "And now we also don't have all the commonality benefits that they told us we would have. Airbus is not listening to us – I don't think they've achieved anything with this investment."

More worryingly for Airbus was Al Baker's warning that if Boeing can harvest a five per cent fuel burn improvement as part of its 777-300ER improvement effort, it would "defeat the -1000 programme".

Al Baker was a welcome visitor at the Boeing chalet earlier in the week, when he placed an order for six more Boeing 777-300ERs – adding to the 25 Boeing 777s, including 15 777-300ERs, already flying with the Doha fleet.



< Superjumbo's smash hit embarrassment

Hopes that Airbus Military would display the first of six A330-200-based MRTTs for the Royal Saudi Air Force were dashed when the manufacturer said tight parking conditions available in the static display area meant the new aircraft would not squeeze in.

Those words were quite prophetic as, on the eve of the show, the Airbus flagship A380 collided with a building which serves as the service centre for Embraer business jets at Le Bourget.

As a result, Airbus had to borrow a Korean Airlines A380 to take part in the daily flying display.

The damaged superjumbo was flown to Toulouse where the broken wing was repaired using the wing guard from another aircraft there for modification to test new engines.

The MSN004 aircraft was then flown back to Le Bourget, where it performed for the last four days of the show.



With defence budgets being cut back across much of the world and with aircraft in action over Libya, many of the world's military aerospace manufacturers had a lower key presence at Paris than is often the case.

There were still fighters putting on a show in the skies above Le Bourget but the Russians were absent, and perennial favourites like the F/A-18E/F Super Hornet and F-15 Eagle were not displayed.

The Dassault Rafale was a star of the flying display on its home turf. But, with a continued lack of export orders, some took this as being aimed as much at the French taxpayers, who have supported the programme, as at the handful of potential customers for the aircraft. The aircraft's operational maturity was highlighted by a striking paint scheme from Happy Design that focused on the type's recent 30,000 flying hour milestone.

The Rafale was joined in the display by Eurofighter's Typhoon (its rival in the potentially vital Indian MMRCA fighter competition), and by the Lockheed Martin F-16.

Lots of holes in this defence...

The C-130J Hercules and C-27J transports also flew impressive routines, as did trainers like Hawker Beechcraft's T-6 Texan and Aermacchi's M-346 Master.

The flying display also showcased Eurocopter's Tiger attack helicopter, and Schiebel's next-generation Camcopter UAV helicopter also made an appearance.

Those present in the period immediately before the show would have seen Airbus Military's impressive A400M Grizzly practicing its jaw-dropping display routine, but gearbox problems prevented it from strutting its stuff during the show itself.

The most notable military debutante at Paris was the Airbus Military C295 AEW, with the show used to stage the signing of an MoU with Israel's Elta to develop this new airborne early warning platform, which is intended to offer a cost-effective alternative

to Boeing's 737-based AEW&C, Northrop Grumman's E-2D Hawkeye and Saab's 340 and 2000-based Erieye-equipped AEW aircraft.

The aircraft did not take part in the flying display but was a star of the vast static display, which also saw Boeing's new CH-47F and Bell's AH-1Z (new and comprehensively upgraded variants of tried and trusted helicopter types) making their Paris debuts.

With the growing importance of unmanned platforms in a range of military roles, Paris also saw BAE Systems and Dassault highlighting the capabilities of the product of their planned joint programme to develop a next generation medium altitude long endurance (MALE) unmanned aircraft system. The new aircraft is clearly based on BAE's Mantis demonstrator, and is known as Telemos, named after the far-sighted son of Eurymos, who foresaw and warned Polyphemus of a forthcoming attack by Odysseus.

The EADS Talarion UAV was also shown in the static park, alongside an example of Saab's Skeldar V-200 VTOL UAV.



Filippo Bagnato:
Historic airshow.

ATR is top of the props...

Franco-Italian turboprop manufacturer ATR was one of the clear winners at Paris as it backed up its claim that the low-cost regional aircraft is gaining greater market penetration on the back of its value and environmental credentials.

ATR arrived at Paris with the first ATR 72-600 in the colours of Royal Air Maroc (RAM), taking a centre stage in the static park to the delight of the launch customer.

The new aircraft received EASA certification at the end of May. Flight-testing began in the summer 2009 and Paris Air Show was the backdrop to present the aircraft to Royal Air Maroc, which has ordered four ATR 72-600s and two ATR 42-600s for its domestic routes.

The RAM orders are just part of what is developing into a record breaking year for ATR. At Le Bourget the company brought its order book to 88 firm orders (plus 42 options) since the beginning of the year. The total

value, including the options, is estimated at \$2.8 billion.

During the show itself, ATR announced 60 new orders and 37 options, making it a record year and bringing ATR's backlog to 233 aircraft, which translates to more than three years of production.

Chief executive Filippo Bagnato, said: "This was a totally outstanding and historic air show for ATR. Our list of customers, both airlines and leasing companies, is dramatically increasing and our aircraft are today in almost 100 countries. This clearly underlines the ATR product as the optimal solution for regional transportation."

The company also expanded its environmental credentials, becoming the first regional aircraft manufacturer to obtain ISO 14001 certification covering the entire lifecycle of the aircraft.

Raytheon adjusts to new market landscape

Raytheon is looking increasingly toward the Middle East as European and US defence markets see increased budget austerity measures affecting the acquisition process.

Speaking at the show, James J Hvizd, vice president, Raytheon Space and Airborne Systems, said the US and European markets are becoming increasingly difficult. With international customers now accounting for around 25 per cent of Raytheon's business market, the company is looking elsewhere for market expansion.

"As part of this, the Middle East is a key growth area," he said. "It's not a new market but it is growing strongly and we expect to see that continue."

Raytheon is seeing an increase in paramilitary customers, such as customs and border patrol, as the line between military and civil applications blur in the face of asymmetric warfare.

"It's no longer so easy to see where the threat comes from in today's conflicts," he said. "And, as threats become difficult to determine, the solution

must be able to discriminate carefully in order to deliver."

The company is also seeing significantly increased demand for multi-mission capabilities from its customers, with a focus on collaboration, teaming and integration in order to provide maximum value for money.

"Overall the mood from our customers is 'money is tight so whatever solution I buy really has to work', so we are delivering total package solutions that have strong multi-mission capabilities," Hvizd said.

"We are also seeing stronger demand for mixed-fleet solutions so that our customers can balance their assets and get increased output for the best possible price."

This strengthened requirement for flexibility is also driving the demand for products that are designed from the ground up to be retrofitted. "In order to meet evolving challenges over time our customers need products that can be updated to meet expanding mission envelopes, rather than needing to invest in an entirely new solution every time," he concluded.

Honeywell's historic flight

US technology firm Honeywell earned a place in the record books as it successfully completed a transatlantic flight using biofuels.

The company's green jet fuel was a 50 per cent mix with standard jet fuel for the flight from Morristown in New Jersey to Le Bourget.

Jim Rekoske, vice president renewable energy and chemicals, who heads the Honeywell green fuel project, was on the flight and said it had saved more than five tonnes of carbon emissions by using the new fuel.

The flight was made on a Gulfstream G450.

Gulf Air announces live TV world-first

Gulf Air announced a major deal to step up its on-board connectivity and IFE offer. It has selected Panasonic's global communications suite for worldwide in-flight broadband connectivity, mobile phone service and a "world first" live television programming.

Panasonic will install its broadband Ku solution eXConnect, eXPhone and the eXTV live television network across the entire Gulf Air fleet.

The retrofitting will be implemented progressively across the fleet, beginning in September 2011, and will take two years to complete.



Super-duper biz-jet concept launched

A new supersonic business jet that could cut Dubai to New York flight time to just over three hours was launched as a concept at the show.

Richard Lugg – an avowed Concorde fan and the chairman of UK-firm HyperMach – gave the first details of SonicStar, which incorporates revolutionary aerodynamics and propulsion technology to overcome the environmental and economic challenges that have stopped the development of supersonic aircraft in the past.

HyperMach is said to be looking for investors to help take the new aircraft through certification and into production.

Lugg said SonicStar would achieve the speed of Mach 3.5, while meeting requirements for high thrust-to-weight ratio engine designs, reduced emissions and the dramatic reduction of sonic boom overland.

"You'll be able to fly supersonic from New York to Sydney in five hours with no sonic boom over land – changing the way in which the world does business

forever," he said.

The propulsion system for SonicStar is a new hybrid engine, S-MAGJET 4000X, designed by HyperMach's engine partner UK-based SonicBlue. It is more than 30 per cent more fuel-efficient than the Rolls-Royce 593 engine in Concorde – record-breaking technology for a supersonic engine design.

The company said the 54,700-thrust class S-MAGJET engine is optimised to fly the HyperMach SonicStar aircraft at 62,000ft, at specific fuel consumption below 1.05 at Mach 3.5, adding that the performance will be unprecedented and will welcome in a new era of the future of aerospace transport.

The first flight of SonicStar is set for 2021 and HyperMach Europe has a number of investment opportunities available for individuals who wish to play a personal part in aviation history. HyperMach said it is seeking private investors interested in sharing this adventure.



New multi-role copter unveiled

AgustaWestland unveiled its first production AW159 helicopter at the show.

Some 62 AW159s have been ordered by launch customer, the UK's Ministry of Defence, for the British Army and Royal Navy to fulfil both overland and maritime missions with a common platform.

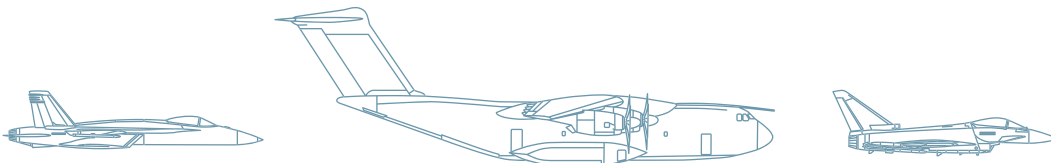
The AW159 builds on the pedigree of the current Lynx. It is a six-tonne multi-role military helicopter featuring a new marinised airframe, all new avionics, new mission sensors and new generation weapon systems.

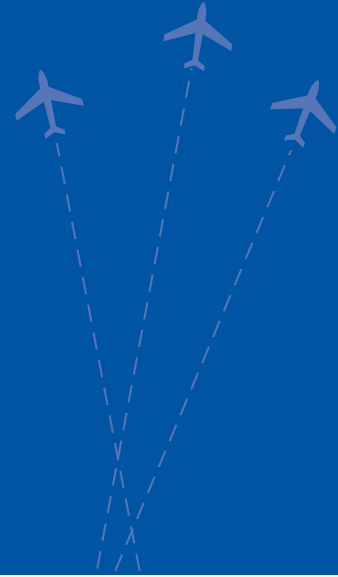


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REACH NEW HEIGHTS WITH GULF AVIATION ACADEMY

Gulf Aviation Academy, an IATA Regional Training Partner (RTP) and Authorised Training Centre (ATC), now provides a range of IATA approved training programmes for all categories of aviation personnel. Current courses include:

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Voicing concerns: Clockwise from top left, Baker, Bisignani, Clark, Majali.

Singapore slings and arrows...

Arab Spring sentiments stretched to Singapore as Gulf leaders challenge the IATA leadership.

The normally placid and well-orchestrated annual general meeting of IATA – the association that represents the world’s leading carriers – was thrown into chaos and controversy as a group of Middle East airline chiefs staged a protest about the way the organisation is being managed.

Qatar Airways chief executive Akbar Al Baker sparked off a tense debate about the structure of the airline industry body and its finances during the Singapore AGM.

In a dramatic open session, the IATA board came under fire for appearing to be “run for the few, by the few” and lacking full transparency.

Al Baker led a vocal onslaught by a number of international airlines over IATA’s failure to show clear transparency in its processes.

He questioned the auditing process for IATA’s 2010 financial statement and later queried the “surprise” nomination of Etihad chief executive James Hogan to fill the extra seat created to broaden the representation of carriers from the Middle East on IATA’s board.

Al Baker highlighted some of IATA’s expenditure, including US\$18 million on travel, US\$58 million on data processing and IT and US \$29 million on outsourcing and consultancy. He called on IATA to justify “such large sums spent on travel” and the processes by which consultant and outsourcing contracts were awarded.

He backed a motion for IATA to reconsider the appointment of its auditors, having been unconvinced about the industry body’s financial accounts and auditing process.

Regarding the nomination of Hogan, Al Baker told the AGM: “We believe such issues should not be surprises. Firstly, such decisions should be transparent and secondly, if geographical representation is the basis of the composition of the board, the regional airlines involved should be informed in advance of their regional allotments so that they can co-ordinate who should represent them.”

A review is now underway.

Gulf Air’s Samer Majali, who was later proposing a vote of thanks to outgoing director general Giovanni Bisignani, said: “The winds of change that have gone across the Arab world have now reached Singapore.”

Majali praised Bisignani for his outstanding leadership over the past decade. Tony Tyler, former chief executive of Cathay Pacific, was confirmed to succeed Bisignani, who will become director general emeritus.

The Middle East carriers were also the centre of attention at the CEO forum, where debate was once again dominated by blistering attacks on the Gulf carriers.

Airlines from Europe and North America used the open forum to criticise the Middle East airlines for protectionism with Air Canada chief, Robert Milton, describing the three main Gulf carriers of Emirates, Etihad and Qatar Airways as being “the most protected carriers in the world that cannot be allowed unfettered access to markets”.

Milton called on the major alliances to stand up to the challenge by the Gulf carriers and offer an alternative.

Emirates president Tim Clark responded by repeating that Dubai is an open economy with open skies. He described the arguments about government aid as being “like a cracked record”. He pointed a finger at Milton challenging: “Show me evidence of a non level playing field. Our books are open.”

Al Baker also opposed arguments that the Gulf airlines benefit from low labour costs by pointing out that Qatar pilots earn more than most American or European pilots do with the same experience. He added: “We are an efficient airline, run in a proper way with high utilisation.”

The AGM had originally been planned to take place in Cairo. It was moved to Singapore in the aftermath of the Egyptian revolution. EgyptAir chairman, Hussein Massoud, said the decision to move the 67th AGM was the right one.

Airbus believes that the environmental commitment and related economic advantages of the A320neo are vital to the MENA region's expanding LCCs and other operators. Ian Goold reports

FINDING NEO



Kuwait leasing company ALAFCO signed an agreement for 30 Airbus A320neo aircraft at the Paris Air Show to add to the 26 A320s it had previously ordered of which 25 have been delivered.

"The A320neo is proving to be a very popular aircraft due to its economics and low fuel burn," said Abulqasim Abdulhaffar Redha, ALAFCO executive vice president. "We anticipate strong demand from leasing customers and we look forward to helping them meet their requirements."

Airbus sees the A320neo, with its claimed 15 per cent fuel savings (from the use of Pratt & Whitney PW1100G geared turbofans (GTFs), which also power the C Series, and 'sharklet' wingtips) – as essential equipment for Arab operators, especially low-cost carriers (LCCs). It believes that the environmental commitment and related economic advantage are vital to the MENA region's expanding LCCs and other operators.

Qatar Airways is a long-established Airbus customer, having begun operations in 1994 with A300s. Today, the fleet includes A300, A300F, A320-series, A330, and A340 aircraft, and the airline has flown all Airbus models except the A310, with A320s, A350s, and A380s on order.

Earlier this year, while continuing C Series discussions, the carrier expressed a preference for an all-new Boeing 737-replacement over the A320neo in plans for a two-type single-aisle fleet. Chief executive Akbar Al Baker suggested that Airbus was "making the same mistake with the [A320] neo as with the [original, A330-based] A350", which he characterised as "an old lady dressed up in new clothes".

Acknowledging that the A320neo would permit longer sectors than the C Series, Al Baker said the Canadian design offered "far superior" seat-mile costs on flights of up to 3.5hr.

Fifteen months ago, the airline official had disclosed he was "waiting to hear what Airbus [will] do, as Qatar Airways wants to operate leading-edge technology to get the best seat-mile costs and lowest greenhouse emissions".

Pointing out that the new engines would increase the range of the A321, he said the carrier might opt for the C Series or the re-engined A320, or both, but would avoid being the first to operate C Series services. It would evaluate both the PW1100G and CFM International's proposed Leap-X engine.

In May this year Bombardier Aerospace president Guy Hachey confirmed continuing discussions with Qatar Airways. Simultaneously, French newspaper Les Echos described Qatari negotiations for 50 A320neos (and options on 50 more) as "advanced".

Service entry

Airbus has brought A320neo service-entry forward by six months to the fourth quarter of 2015, saying that suitable technologies for all-new designs would not be available before 2030. It confirms the GTF as the lead development engine for the A320neo, for which 330-plus orders and "commitments" had been taken by April, with "over 500 commitments" being predicted by the time of the Paris air show in June.

Chief operating officer (customers) John Leahy claims a 15 per cent improvement in fuel efficiency for the A320neo over current variants and that the new model is "the fastest-selling aircraft in history". In April, he predicted second-quarter deals with prospective customers in Asia/Pacific, Europe, and Latin America (but did not mention MENA operators).

Airbus expects the baseline A320neo to represent 50 per cent of demand, with the balance

shared evenly between the smaller and larger A319 and A321 models, although this three-way market split division might evolve as the programme matures. No immediate market is seen for an A318neo.

The new service-entry target date has effectively increased the A320neo's lead over any Boeing development in the market, which is increasingly seen as being to provide 130-220 seats – accommodating the Boeing 757-200 sector at the expense of the A318 and 737-600. Boeing has remained quiet, although it is expected to decide formally by year's end whether to offer a 737neo or move straight to a clean-sheet design.

The timing for any all-new aircraft has moved steadily to the right since industry discussions began more than five years ago. Then, the market requirement was seen as being in 2013-14, although engine manufacturers said more time was needed for prospective technologies to mature.

By early 2010, Airbus was talking about 2022 at the earliest for an A30X development with appropriate engine (especially open rotor), materials, and systems developments – a date that subsequently has progressed to the end of the next decade.

In April this year, Leahy was confidently predicting 2030 or even 2035 as the right time, which conveniently extended the period in which the European company can offer the interim A320neo as something of a stepping-stone to the future. That schedule also would endow the basic A320 design with a potential production 'life' of 40-plus years, dubbed by Leahy with characteristic modesty as "the longest continuous run in history".

He forecast in early 2010 that, if Airbus went ahead with the A320neo, Boeing would launch an all-new product for service entry in 2020. Were



John Leahy and Airbus CEO Tom Enders agree a Neo deal with Avianca at Paris.

Boeing to do that (Leahy implied) the result would be unsatisfactory for lack of sufficient new technology; similarly, Boeing can argue that the A320neo is a compromise between the current aircraft and a new design.

Whether or not the US company confirms plans this year, Leahy has predicted Boeing will postpone development and revert to a re-engined 737. He cites the 7J7 (proffered in 1985 for service “within 2,500 days”, but delayed “indefinitely” after 27 months) and the Sonic Cruiser (which survived for 21 months) as previous examples of projects Boeing had proclaimed loudly before postponing them.

Aerospace observers are unsure: New York investment bank Buckingham Research, reputedly a wise reader of Boeing tealeaves, changed its mind in April this year about a new Boeing revelation at Paris. “We do not believe

Boeing will announce a new airplane at the show.” The bank says Boeing will not authorise salesmen to offer a new design to airlines for perhaps another 18-24 months, but the manufacturer could still share design ideas at Paris in an effort to overshadow further A320neo orders.

Although Air Asia has deferred A320 deliveries and hopes to swap some existing orders to the re-engined twinjet, Airbus will not permit customers to change horses so easily. Such flexibility “creates too much confusion”, according to Leahy, who says that that would permit customers to take two slots – “and we’re not going to do that”.

Airbus will not allow the A320neo to “cannibalise backlog”, said executive vice-president (programmes) Tom Williams.

German carrier Lufthansa’s choice of the PW1100G for 25 A320neos and five A321NEOs

to enter service from 2016 has confirmed the GTF as the lead engine, with work on a Leap-X-engined model running about six months later.

Lufthansa is “very pleased with the [A320neo’s] improved fuel efficiency, noise reduction, and environmental benefits with the PW1100G”, said group fleet-management executive vice-president Nico Buchholz.

Next door to the Gulf, India’s Indigo Airlines became the first to select the PW1100G, choosing it to power up to 150 A320neos. Other A320neo customers (with unknown engine preferences in May) included TAM (22 aircraft), Virgin America (50) and International Lease Finance Corporation (40).

Qatar Airways has not been alone among MENA operators in considering acquisition of fuel-saving Airbus equipment. Earlier this year, Air Arabia selected ‘sharklet’ wingtips for 28 of its 44 ordered A320s that began to arrive in late 2010. Delivery of sharklet-equipped examples will start in the second quarter of 2013.

Sharklets are said to increase payload-range, improve take-off performance, and reduce long-sector fuel burn by about 3.5 per cent – equivalent to a claimed CO2 reduction of around 700 tonnes/aircraft/year.

If the Sharjah-based operator went further by buying the re-engined variant, it might trigger a trend in the region, according to FBE Aerospace chief analyst Saj Ahmad: “I wouldn’t be surprised to see Air Arabia slash costs by opting for the A320neo. If that happens, we can expect other players like Jazeera Airways, NAS Air, and Bahrain Air to follow suit, too.”

Of course, Leahy expresses little doubt about worldwide demand for re-engined narrow-bodies. “The market wants the A320neo – and probably a re-engined 737, as well.”

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Niche work if you can get it...



Jordan's national carrier still turns a profit but needs new equipment and allies. Alan Dron reports.

There are few tougher niches in the airline business these days than being a medium-sized national carrier. It's the category that industry watchers have been predicting for some time now will go to the wall, squeezed between the mega-players on one hand and low-cost carriers on the other. To survive, a second-tier airline needs to be as cost-effective as possible. So it doesn't help when your planned new fleet of fuel-efficient aircraft is almost four years late appearing on airport aprons.

That's the situation facing Royal Jordanian, which placed its initial order for the Boeing 787 in December 2006 and expected to receive them from 2010. Now, the first will not arrive until the first quarter of 2014, with deliveries of its 11 aircraft not being completed until Q1 2017.

Royal Jordanian is not alone in this situation – all Boeing's 787 customers are in the same boat. But RJ's president and CEO, Hussein Dabbas, is feeling the pain of being saddled with an ageing fleet.

Calculating the full extent of the financial cost resulting from the 787's late arrival is difficult, said Dabbas. Royal Jordanian was planning to use the aircraft to replace its Airbus A340-200s, which operate on the North American route and which he described as "gas-guzzlers". The new products from Seattle would carry virtually the same number of passengers but consume 20 per cent less fuel.

In its annual figures for 2010, the airline noted that fuel costs had jumped 25 per cent, to JD203 million (\$286 million) over 2009.

This was a major factor behind profits dropping from 2009's level of JD28.6 million to just JD9.6 million for 2010.

The delayed 787s had an added, knock-on cost, he explained. "The 340s we had were really starting to show wear and tear from the interior point of view. For us to maintain them in service until 2014-15, we had to upgrade them and completely change the interiors."

This included replacing the early-generation, drop-down in-flight entertainment monitors with seatback screens – a modification which, alone, came with a \$3.5 million price tag per aircraft. "It was a big cost," he admitted, "but in order to remain competitive we had to invest in those aircraft."

A further cost came in the form of finding temporary replacements for two elderly Airbus A310-300s, which

should have left the fleet around now. "We couldn't keep them in operation on our main trunk routes, so we have had to lease two Airbus A330s and are negotiating a third one. They're much better aircraft, but they're expensive."

The subject of compensation for the late delivery of the 787s had been raised with Boeing but, at present, no talks are under way and no solution reached, said Dabbas, although he added that the US manufacturer had been "very co-operative" and stepped in to help out with slots when the lessor, through which Royal Jordanian was taking three of the aircraft, cancelled its order.

Apart from equipment woes, the other major issue that has caused Royal Jordanian – and many other Middle East carriers – problems has been the wave of political unrest that has swept the region.

The Amman-based airline had put in place its 'Levant strategy', by which it planned to use nearby countries such as Iraq, Syria, Lebanon and Palestine, plus several others further afield, as a catchment area for its long-haul services.

Describing the political strife that has gripped the region as a "tsunami", Dabbas said Royal Jordanian had suffered from the perception among Western European and North American travellers that the Hashemite kingdom was similarly affected.

"This has scared off a huge amount of tourist traffic. There was a huge drop, especially from April onwards."

Having said all that, Royal Jordanian has turned a profit for the past six years. The figures have not been as vast as those of some Middle East operators, but many European and North American chief executives would have happily swapped their own ledgers, running with red ink, for the Amman-based carrier's modest 'in the black' figures.

Dabbas accepts that Royal Jordanian needs to find a strategic partner. Major players in the region such as Emirates, Qatar Airways and Etihad are "formidably competitive".

Nobody had yet approached his company with a partnership offer but he and his managers are convinced that linking up with another carrier is the only way forward. "It's time in this region for an exchange of capital between airlines, like Iberia and BA have, where you keep your brand and identity but combine your resources and utilise each other's routes," he said.



Hussein Dabbas: "In order to remain competitive we had to invest."

Can Bombardier

Bombardier executives at the Paris Air Show were buoyed by several order announcements for the slow-selling CSeries – but will they be enough to guarantee a strong future for the aircraft?

Alan Dron reports.

Was Le Bourget the moment when Bombardier's CSeries twinjet shook off its hesitant start and finally gathered the impetus that would ensure its success?

That was certainly the image the Canadian airframer wanted to give as it enjoyed a sequence of positive events immediately before and during the Paris Air Show.

The order for five CS100 and the same number of the larger CS300 (plus 10 options) for Swedish lessor Braathens three weeks before the aviation world descended on Paris must have been greeted with relief in the company's Montreal HQ.

To have had an order drought of 15 months before Braathens signed on the dotted line was becoming a concern, not only in itself, but also because of the fear that the lengthy gap since the last order was creating a perception in the industry and media that the Canadian programme had fatally stalled.

There was further relief at the announcement just days later of the sale of another three CS100 (plus three options) to an unidentified customer. Small numbers, but Bombardier stressed that they had been ordered by "a well-established airline".

Paris brought more good news, with a firm contract for 10 CS100s plus six options – although to another frustratingly unnamed carrier that Bombardier was at pains to point out was "a major network carrier". And the final day of the show brought a further firm 10 sales to "a European customer". Bombardier has some remarkably shy clients as this one, too, "wishes to remain unidentified at this time", said the manufacturer.

The icing on the cake during the Le Bourget show was undoubtedly the order for a potential 30 CS300s (10 firm, 10 options, 10 purchase rights) from Korean Air, a bona fide major – and identifiable – airline.

Even that came in the form of a letter of intent, rather than a firm signed contract, although the vast majority of such commitments do go on to be formalised.

The words that Bombardier executives were bandying around at Paris were significant:



'Tipping point'; 'traction'; 'momentum'. Doubtless they were considerably happier than they had been just weeks previously. But the feeling remained among observers that the programme had not quite reached the point at which success was secure.

The CSeries certainly shows promise; Bombardier gives projected performance figures for the 100- to 149-seat market contender that include a 15 per cent operating cost advantage and 20 per cent fuel burn advantage over current competitors. With fuel prices at their current level, the latter figure is of particular interest to potential customers.

Together with what the manufacturer describes as greatly reduced noise and emissions plus exceptional airfield performance, that should be enough to attract considerable interest in the 2,950nm (5,460km) range design.

The aircraft is being offered as the CS100 (typically carrying 110 passengers) and stretched CS300 (typically 130-seat) variants and, before June's batch of order announcements, had racked up firm orders from major operators such as

Lufthansa (30 CS100), Republic Airways Holdings (40 CS300) and Lease Corporation International Group (17 CS300 and three CS100).

Thereafter, however, the sales tally stayed stubbornly at that level for 15 months – a very long time in terms of an aircraft at that stage of its development.

And, despite the new orders, at the time of writing Bombardier still had just eight customers.

Of undoubted concern must have been Republic Airways Holdings' decision at Paris to become the launch customer for the Airbus A319neo, the re-engined version of the European single-aisle airliner. The decision to sign a letter of intent for 40 of the 124-seat derivative was seen by some as the start of a re-think of Frontier's fleet plans, given the similarities in capacity of the two aircraft, although the airline said its plans to take the CSeries for its Frontier subsidiary remained valid.

Bombardier investors were certainly spooked – shares in the company dropped 3.4 per cent on the news.

Cs the moment?

Taken as a whole, said Richard Aboulafia, vice-president, analysis, at the US aerospace consultancy Teal Group, the CSeries programme was “extremely fragile”.

Speaking at the Paris show, he said: “After three years the order numbers are astonishingly thin.

“They’ve poked a hornet’s nest by going after Airbus’s home market. This week’s Frontier A319neo order might well displace that carrier’s important CS300 commitment.”

Certainly, when Airbus launched the A320neo series last December, chief salesman John Leahy took deliberate aim at the Canadian aircraft, commenting that the revamped European design offered the same number of seats, similar fuel burn, a wider fuselage and 1,200nm (2,200km) more range, largely negating the CSeries business case.

Bombardier was quick to retort that its contender had certain advantages, too – notably

the benefits of being a clean-sheet design, including a 5,000kg weight advantage over the A319neo.

Aboulafia remained sceptical, however. “It’s hard to see how Bombardier can counter Airbus’s sheer output volume and financial power, to say nothing of a huge incumbent fleet and market position.”

A further concern to Bombardier must be the knowledge that Virgin America, the fast-expanding California-based operator, looked carefully at the CSeries before jettisoning it in favour of the A320neo when the latter aircraft appeared on the scene at the end of 2010. If other potential purchasers share Virgin’s evaluation, it could spell trouble for the Canadian manufacturer.

The one order that could turn everything around for the CSeries is the long-awaited deal with Qatar Airways. At last year’s Farnborough show Qatar Airways’ combative CEO, Akbar Al

Baker, made pointed comments over maintenance cost guarantees of the CSeries’ Pratt & Whitney PW1000G-geared turbofan. At Paris in June he said his company was deferring a CSeries order because its resources were currently strained in absorbing large numbers of new aircraft.

Challenged on whether Qatar Airways was going cool on the Canadian jet, Al Baker made the point that he had negotiated with Boeing for five years before finally placing an order for some of the Seattle company’s products and had some warm words for Bombardier.

In fact, as the chalets started to be dismantled at Le Bourget, reports were circulating that Qatar Airways had already put pen to paper.

Similarly, there were indications that the unnamed ‘major network carrier’ that placed an order for 10 CS100s during the show could be Gulf Air, while low-cost carrier Bahrain Air was also said to have signed for two.

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EgyptAir is a great fan of the B737 - but like many airlines of the region is waiting for news of the replacement.

Why neo news might be good news for Boeing

While Airbus and Bombardier go head-to-head for the updated narrowbody market, Boeing had stayed quiet.

Alan Dron looks at just why that may be.



Steven Udvar-Hazy: The time is right for a completely new design.

Probably the biggest disappointment of the Paris Air Show – at least for the travelling pack of journalists that habitually cover the major shows – came when Boeing Commercial Aircraft CEO Jim Albaugh stood up at his company's first press conference of the week and said he was not going to talk about the Seattle airframer's response to the re-engined Airbus A320neo.

Press and industry had all hoped that Boeing would use the biggest occasion of the aerospace year to give some indication of its plans for a 737 replacement.

Would it match Airbus's modernised A320 series with a revamped version of the 737, or push ahead with a clean-sheet design that would leapfrog the 15 per cent fuel burn savings offered by the modernised European design?

No such luck. Other than saying that it was studying the matter carefully and aimed to make a decision by the end of the year, little was forthcoming from the Boeing chalet.

Increasingly, however, the US giant is leaning towards a new design – even if that means leaving the field open to Airbus to rack up sales with the neo over the next few years. Designing what Boeing now refers to as the 'new small airplane' would mean that it would not enter service until 2019-20. The A320neo is due to enter service in 2016.

However, customers seem to be prepared to wait if it means getting an aircraft that can offer substantially improved operating costs over the current generation of airliners in the 150 to 200-seat category.

And customers are the ones who count – especially when they include people like Steven Udvar-Hazy, chairman and CEO of Air Lease Corporation and possibly the single most influential figure in the leasing business.

Talking to the Seattle Times immediately before Le Bourget, he said it would be a mistake for Boeing to rush into production with a simple re-engined version of the 737 as an immediate counter to the A320neo.

Noting that the first Boeing 737-100 for Lufthansa came off the production line in 1968 – more than 40 years ago – he indicated the time was right for a completely new design.

Airline chiefs such as Air Berlin's Joachim Hunold share that sentiment. Speaking at the International Aero Club of

Washington DC in June, he said that a new narrow-body design was badly needed by the airline industry.

Despite the time advantage that the A320neo would have over any new Boeing design, analyst Saj Ahmad from FBE Aerospace in London makes an important point: "As of yet, not a single 737 customer has opted for the A320neo to replace their fleets, so Boeing need not rush whatever decision it comes up with.

"For more than a year now, Boeing has looked at re-engining the 737 family and has consistently said that the economics would be at best, marginal improvements and that a solid business case for it is hard to justify.

"With more than 2,000 orders for 737s in the backlog yet to be delivered and three production rate increases to implement to placate customer demand, Boeing doesn't need to rush and launch something new right now. It can take another year at least – that would still give it a long seven/eight year window in which to deliver the first new single-aisle aircraft by 2019 or 2020.

"The critical factor here is that everyone thinks that Boeing will fall behind – the reality is it won't. Airlines are driving the decision making, not what Airbus does.

"The fact is, even if Boeing didn't sell another 737 after today, it still has several years-worth of production to complete. When you consider also that the 737 family will also be benefitting from a two per cent improved engine entering service next month, that eats into some of the fuel savings of the A320neo family.

"It's also important to realise that much of the A320neo orders will not yield Airbus any significant revenue until a big number of deliveries commence after 2016. Between now and then, Boeing has almost five years of being able to deliver 737s that have better fuel burn in contrast to the A320s in service today – that's revenue in the coffers that will ultimately fund a new airplane.

"The challenge for Boeing is delivery. The delays on the 787-8 have been an epic disaster – there's no other way of dressing that up. Equally, the 747-8F and 747-8 Intercontinental have been delayed as well. Boeing simply cannot afford it on the 737X replacement."



Fabrizio Morello, a triple whammy of customer success.

THE FAB THREE

MORELLO'S KEY STRATEGIES FOR A SUCCESSFUL CRM

The fight to gain and retain customers is on - but are airlines managing their relationships well.
Jill Stockbridge
meets a man who knows.

Mention customer relationship management (CRM) in aviation and most people think of loyalty programmes. Mention loyalty programmes to Fabrizio Morello, industry principal airlines & airports, SAP Middle East & North Africa, and he is quite dismissive. "CRM is a business strategy designed to optimise profitability, revenue and customer satisfaction. To achieve this, the integration of people, processes and technologies is required in a collective effort. There is so much more to it than loyalty programmes," he retorted with passion.

"There are three main parts to a good CRM - marketing, sales and customer service. While loyalty is a critical aspect, you have to do much more to satisfy your customers fully."

He continued: "There are around 125 million people signed up to airline frequent flyer programmes and many of those are not only with one programme, they work in an opportunistic way. The number of frequent flyers in the Continental/United Airlines programme is equivalent to the entire population of France - more than 60 million people earning miles. To make these customers loyal to your airline, you have to provide the right service and contact. Miles in circulation are a liability to each airline and so companies are now pushing clients to spend them in other ways.

"Another problem can be perception. Many of the airlines have tied up their frequent flyer programmes with banks and car rental companies. You can generate miles by using your bankcard to buy your groceries. However, with only three to six per cent of seats on any flight available for the FFP, it may be that

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the consumer cannot spend the miles whenever they want. Then where is their loyalty? It is with the bank, which gave them the miles, and not with the airline, which restricts their use. Well done they can be excellent, but you cannot rely on a loyalty programme to do all the work.”

So a good CRM system needs to do much more. The SAP CRM is a key element of the SAP business suite, a set of solutions that helps companies optimise and execute business and IT strategies in a world of accelerating change.

SAP CRM’s strength lies in its ability to tie customer service to other back-office processes, including manufacturing, distribution, finance and marketing. This synchronicity and integration is a basic tenet of the SAP ethos. “Our CRM is a process-driven application,” said Morello. “That is the big difference between us and our competitors. They talk about data, but we talk about processes. How you do the things you need to do.”

For SAP, CRM is widely focused, including marketing, sales, service, e-commerce and the contact centre, and offering features and functions to develop each area. But what is important is making the connections in between. Morello said: “We can streamline your marketing campaign but we also make the link between the sales activity and the revenue control. It is important to have that link between the CRM activity and the financial results, especially for airlines. Too often each is separate and not held responsible. Here our back office systems allow you to put all the information together.”

First step

Gathering information is the first step and analysing it is the second, but the organisation still needs to react to the information supplied.

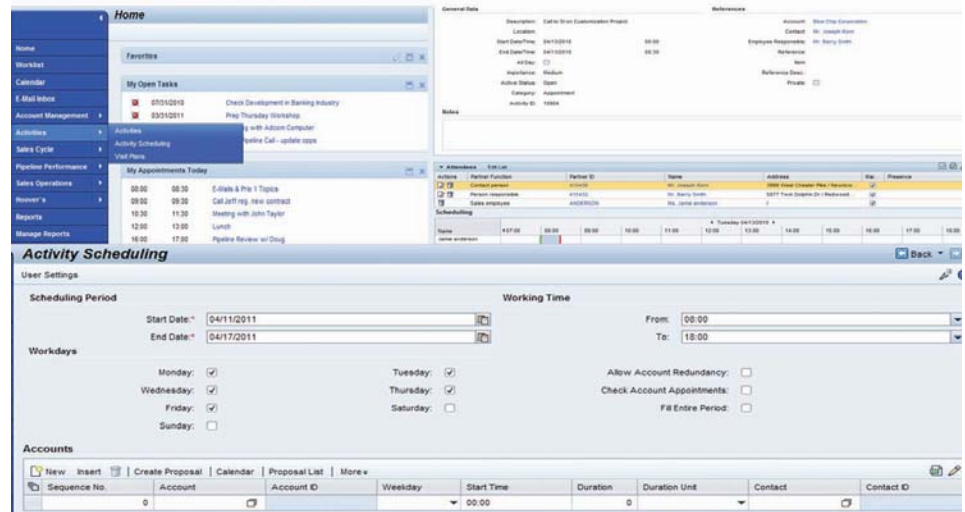
Morello is stoic: “The software solution can support you but the application cannot do it all. If you do not have the ability to change then you will only get 10 per cent of the expected result. SAP works with the change management concept, guiding organisations to create and change the roles of their staff and management. This has to start from the executive team down. If it is not embraced at the highest levels it will not work.”

This has been a challenge for the group in this region, where outdated attitudes can still be in place.

“We have been working with clients in the MENA region. They are keen to start a CRM system as they have been losing market share due to lack of customer sensitivity, but they are not collecting any information. They do not have any contact with the customer and don’t see it as important. That is what we have to change.”

“We have also talked to clients who have all the right departments within the organisation, dealing with travel agents and GDS; they have a website and their marketing is well planned, but the marketing does not have to meet a target for generation of revenue. There is no connection between the two.”

“The VP of sales deals with sales activity across the network but if there is a disconnect between



SAP CRM software ties customer service to other back office functions .

sales, marketing and the call centre it is a problem. Ten years ago CRM was not common in the aviation industry; now everyone wants to get close to their customer segments and the only way is to be proactive in the collection of information. The only way to get the customer to be loyal is to increase the customer experience but you have to talk to the customer to find out if you have achieved this.”

Morello talks about customer segmentation and points out that high-value customers want to feel special and that a good CRM system will allow you to do that. There are different customer value drivers for different customer types at the different touch points. The corporate traveller may value timing and on-time performance; the leisure traveller is more influenced by price; the corporate purchaser requires value for money; and the travel agent is driven by price and sales support.

“Today, if you want to tell your clients about a new route, you can send out a newsletter. This is part of CRM but it is not differentiated. Good CRM means approaching specific customers with specific information.”

Communication process

The contact centre is essential in this communication process alongside web-based self-service applications for frequent flyers and potential new customers. Both allow the company to establish a relationship with the customer, who should be addressed by someone who has all the information in front of them.

Morello said: “Advanced telecommunications infrastructures are there that recognise the telephone number and allow you to greet the caller by name, looking at his/her file with historical data, offer the preferred seat, ask if they require the special meal as usual. This attention to detail makes the difference. Any feedback that they give should be recorded and that data should be managed and analysed, creating a data structure we like to call customer master data or data hub.”

This gathering of business intelligence and the ability to analyse the operational data gathered is the next level of the CRM and where the integration of systems becomes vital.

Morello said: “This is not only important for CRM but for the core business, that you are able to pick information from across the whole IT landscape, both master data and operational data. Comparison and analysis should be possible from sales activity, passengers on board, landing on time – even getting input from the departure control systems (DCS). You are then able to look at the entire travel experience.”

“The CRM product is designed to handle high-volume global requirements working seamlessly with legacy systems in place,” Morello explained. “And that is possible thanks to SAP’s technology platform NetWeaver, which is a business-driven application platform, process centric, enabling integration with legacy systems like DCS, revenue accounting and other systems to be completely interconnected. It is complex but comprehensive.”

Although SAP provides strategic solutions for more than 25 industries, NetWeaver has the capability to incorporate the unique process areas and software for each specific user.

SAP currently has around 120 airlines using its enterprise software globally and 100 using its MRO system. Like any company with a good CRM, it uses the customer feedback to improve the product.

“We service airports and airlines across the planet,” said Morello. “Twice a year we meet with them in specific SAP user group events for airlines and airports, to discuss what to change and how to improve. The development of CRM is driven by suggestions from our clients, so it is designed for their needs. We are able to incorporate the best practices and experience of the top airlines in the world, among others.”

“The difference in a modern system is that it allows you to manage the process end-to-end and in real time. You can manage the process in sync and then there is no leakage. Imagine CRM as a set of processes, like a plumbing system, using many different sizes of pipe; at SAP we enable it to use one size of pipe only, no leaks, just real time analysis and real time activity. You are able to control the business 360 degrees, across all functionality and the CRM is a part of that whole.”



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TRAVELLING FURS CLASS...

Airlines may have their challenges with passengers but spare a thought for the regions cargo carriers which face the unknown every day. Jill Stockbridge reports.

Emirates SkyCargo regularly carries cats, dogs, racehorses and a variety of other animals but when a call came requesting a quote to airlift hundreds of dogs and cats from Beirut to Las Vegas, it was at first regarded as a joke. However, one full freighter later and the distressed, abandoned animals were relocated away from the war-torn city to an animal shelter in the States.

Hiran Perera, senior vice president cargo planning & freighters, acknowledges that the company has had its share of unusual requests. "One of the most challenging was a game relocation, moving giraffe, zebra and cheetahs from Windhoek in Namibia to Kano in Nigeria. To add to the complications, the operation had to take place at night, in order to reduce the stress on the animals."

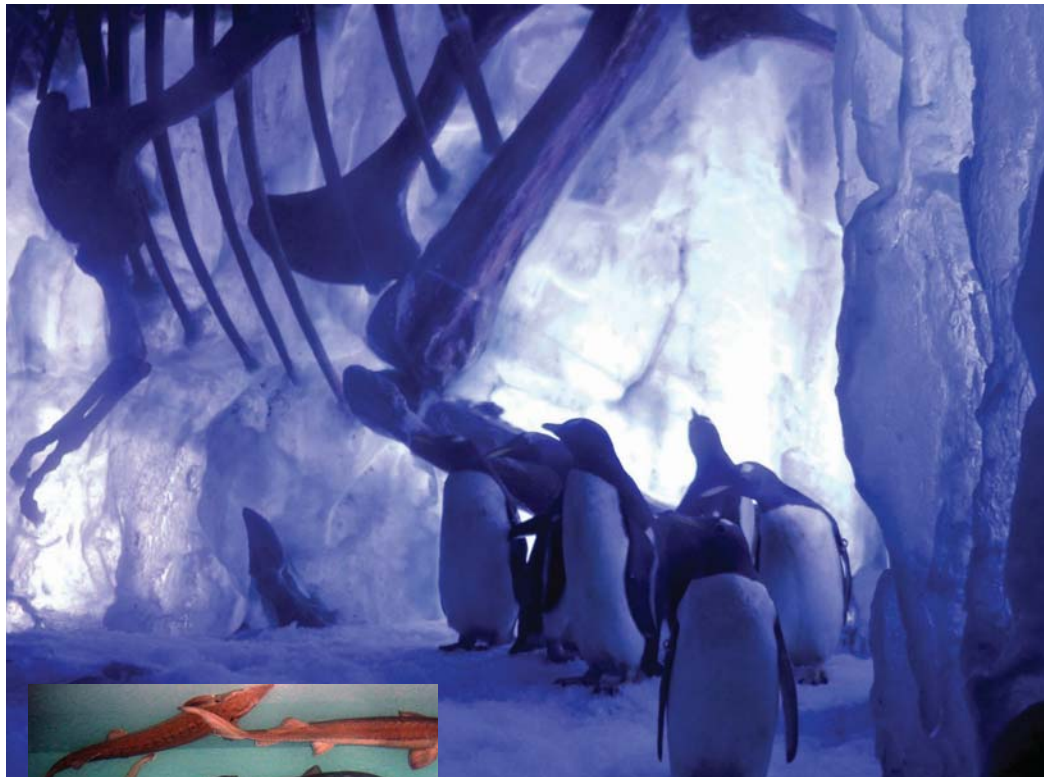
Temperature and humidity

There was extensive planning, with details of the temperature and humidity required, accommodating accompanying experts as well as all the paperwork for the transfer.

Perera added: "The load master and flight manager needed to pre-chill the hold, to balance the heat generation by the animals. We take advice on all these matters from experts in the field."

Another chilling experience was the movement of six Gentoo penguins from Glasgow to Dubai in the belly hold of a scheduled flight. The three males and three females travelled in two specially designed insulated boxes, with the hold temperature at just seven degrees centigrade. Staff wearing personal protection equipment regularly checked and replenished the crushed ice on which each penguin stood.

On arrival at Dubai International Airport the VIP treatment continued. Emirates SkyCargo had arranged for vets, customs, Dubai municipality and the police to meet the flight on



Something fishy...

Etihad's Crystal Cargo has also faced the challenges of unusual cargo, with the transportation of live-reared endangered sturgeon for the world's biggest caviar factory, which is being built in the emirate of Abu Dhabi.

The 22 adult sturgeon fish were flown from Frankfurt Hahn Airport to Abu Dhabi and then transported to a new 60,000sqm state-of-the-art farm recently commissioned for rearing sturgeons and production of caviar.

Each sturgeon was transported in a specially designed container in a temperature-controlled environment, which was always between 10 and 15 degrees centigrade. At each stage of the process the pallets were loaded and unloaded within minutes.

Etihad transported the endangered fish in one of its new A330-200 freighter aircraft, which provides state-of-the-art temperature control technology.

the tarmac to perform the formalities. The police then escorted the penguins to their destination in a refrigerated truck, having arranged for green lights all the way to avoid delays.

The company made headlines when moving 28 bottlenose dolphins from the Solomon Islands to Atlantis in Dubai. The move required two A310 freighters with 12 pilots plus engineers, loadmasters, vets, animal attendants, a representative from the Ministry of Environment & Water and six weeks of planning and co-ordination with every department in the group.

The logistical challenge was complicated by the remoteness of the islands, the number of passengers and the lack of facilities.

The dolphins travelled in custom-made carriers, where they remained floating in slings in temperature-controlled water, two or three to a tank. The water temperature was monitored and cooled with ice if it rose too high.

The flight crew had to observe the altitude at which they flew, being restricted to a cabin altitude of 5,000 feet for the comfort and health

Mane line transport

Flying animals might be the stuff of mythology but the increasing air traffic of animals into the Middle East proves that birds are not the only creatures that can wing their way into the region. Liz Moscrop reports.

What makes a horse hoarse? A long flight could do it. According to respected industry publication, *Horse and Hound*, colic is the most common equine ailment during flights and is difficult to deal with due to space constraints on board. Horses can suffer dreadfully on a trip unless properly cared for.

It takes a special kind of company to deal with the demands of transporting livestock – and horse transportation is a frequent request between the Gulf and Europe.

As the world's largest international shipper of thoroughbred horses, the UK's Janah Group transports more than 5,000 horses in a typical year to destinations in Europe, the Americas, the Middle East, Africa, Asia and Australasia.

In Arabic, Janah means "wings", and the choice of name reflects the fact that three out of every four horses it transports are carried by air.

Many of these belong to the Dubai ruling family and are moved either for breeding, or to take part in competitive events. The company also provides the official transportation service for international competitors heading for all races and other events being held in Dubai, including the famous Dubai World Cup, the world's richest horse race.

In the UK and Ireland (two countries that regularly send horses to the Middle East) it is common for horse transport grooms to be National Proficiency Test Council (NPTC) qualified, for which they have to demonstrate a high level of competence, as well as understand different types of aircraft and safety equipment.

The grooms fly with the horses, helping them to stretch and ensuring they drink and eat enough. Pilots transporting horses are also requested to take care with take-offs and braking after landing.

Airports, too, have to be equipped for horse transportation. Archie Garden, managing director of Cambridge Airport in the UK, said: "We transport a lot of horses because of our proximity to Newmarket. We historically worked with the Jockey Club, which is just around the corner."

Garden explained: "We get two to six horses and load them on to the aircraft via a special horse ramp. The entire process takes around 20 minutes, which causes less stress to the animals."

He pointed out that the average journey time before a horse becomes frustrated is around four

hours in the air, so it is important to make the loading process as pain free as possible. Horses generally travel in a converted Boeing B737 business jet in special containers.

Garden added: "We arrange horse passport papers, but we do not do longer distance as we are not authorised to offer Department for Environment, Food and Rural Affairs (DEFRA) clearance."

According to the British Racehorse Transporters' Association (RTA), anyone who moves horses as part of their business using a horsebox over 3.5 tonnes is required to have either a licence together with a DEFRA specific authorisation number. There are border inspection posts at larger UK airports, such as Manston and Heathrow.

At the other end of the journey, bringing any animal into the Middle East also requires a great deal of paperwork. For horse races, for example, all livestock must meet UAE conditions for the temporary import of horses applicable to their country of origin. This means that animals entering the UAE on temporary import health certificates must leave the country after they have finished competing.

On a smaller scale, pets brought into the UAE must be imported as cargo. To bring a pet in, owners must obtain an import permit. Requirements include a document from a veterinary surgeon (signed and stamped) showing a current vaccination against rabies. Each animal must also have a good health certificate from its government of origin and be microchipped.

For an export permit, a government vet at the cargo village of Dubai, Abu Dhabi or Sharjah International Airports, must examine the pet at least five days before travelling. Pets should have correct documentation, be microchipped and vaccinated

against rabies.

Animals brought into the UAE without proper documentation will be held until the papers are obtained. The importation of some dangerous breeds of dog, such as Pit Bulls and Neapolitan Mastiffs, is banned.

Companies such as Air Pets in the UK offer a specialised door-to-door pet relocation service to the UAE and Kuwait, supplying specially authorised airlines like British Airways Cargo and Qatar Cargo. Pets fly direct from Heathrow or Gatwick in IATA-approved air kennels in 24 sizes.



Bringing the world's leading thoroughbreds to race in Europe is a skilled handling job.

of the dolphins. Due to the differential of a pressurised cabin, this equated to a maximum flying altitude of 31,000 feet, which is highly inefficient and added to the fuel demands.

The flight deck had to adopt specific procedures on landing so that the water would not move forward in the tanks and drown the dolphins, whose noses rested out of the water. Air Traffic Control at both Singapore and Sharjah allowed each flight to use the length of the landing strip so that the pilots could put down without using the thrust reversers, as well as make a slow descent so that the pressure change would be gradual. All 28 dolphins arrived healthy and are settled into their new home in Dubai.

Some unusual demands have become commonplace, such as heavy and outsize freight, urgent items for the oil and gas industry, and regular work for relief agencies around the world flying into disaster-struck areas.

Perera said: "Over the years we have built up a bank of knowledge and expertise. We are less likely to regard even the most unusual request as a joke now."

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BEASTS OF BURDEN

For many years the air forces of the Middle East and Gulf states maintained a relatively narrow spectrum of capabilities, with the emphasis on air defence and limited ground attack and interdiction, and with little requirement for out-of-area operations or power projection of any kind.

Many nations expected any niche capabilities to be provided by allies and, thus, there was little investment in air-to-air refuelling (AAR) or intelligence, surveillance, target acquisition, and reconnaissance (ISTAR), and even air transport capabilities were frequently modest.

But, in recent years, the countries of the Gulf Cooperation Council have increasingly wanted to become more involved in multilateral humanitarian efforts and are routinely providing billions of dollars annually in aid to developing and conflict-affected countries.

Humanitarian disaster relief operations

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promise to give exposure on the world stage, as was demonstrated by the earthquakes in Pakistan, and military transport aircraft allow a nation to deploy heavy rescue equipment directly where it is needed, landing on rough runways in a way that chartered civilian aircraft often cannot.

Such aid was once focused on fellow Arab nations in the Middle East and North Africa but the Gulf states are increasingly funding projects further afield, particularly in sub-Saharan Africa.

The Arab world has also become more involved in international peace-keeping and peace enforcement operations, deploying and supporting land and air forces out of area. This has all placed greater emphasis on the need for robust long-range air transport capabilities and has helped to fuel an increased demand for military transport aircraft, and especially strategic transports, in the region.

Such demand has been further stimulated by the USA's policy of expecting greater 'burden-sharing' by its allies, which has prompted some nations to increase their transport capabilities. In some cases, those existing tactical air transport aircraft that are in service with Arab air forces are also in need of replacement, with many operators now flying older-model C-130 Hercules, which are now showing their age.

Though it was first designed in 1951, with a fuselage cross-section chosen when land forces used jeeps and Sheridan tanks rather than Humvees and M1s, and when helicopters meant Bell 47s rather than Apaches, Blackhawks or Chinooks, many believe that the best replacement for a Hercules is another (modernised) Hercules. The C-130J is designed to meet exactly this requirement.

Though it is similar to the 'heritage Hercules' in external appearance, the C-130J is in many respects an all-new design, with 21 per cent higher maximum speed than the previous model C-130H, and offering 40 per cent greater range and about 40 per cent less take-off distance. This is made possible by the use of new Rolls-Royce AE 2100 D3 turboprop engines driving Dowty R391 composite scimitar propellers, though the C-130J offers further efficiencies thanks to its two-man cockpit, advanced digital avionics and enhanced cargo handling system.

Since entering service with the UK Royal Air Force in 1999, the C-130J has overcome early problems and is now being energetically marketed to international customers.

The Middle East is already a vital export market for the C-130J, with firm orders for the aircraft from Iraq (which ordered six C-130J-30s in July 2008), Kuwait (which ordered three KC-130J air refuelling tankers in May 2010), Oman (which ordered a single C-130J-30 in 2009 and two more in August 2010), Qatar (which ordered four C-130Js in October 2008) and the UAE (which announced an order for 12 C-130J transports in early 2009). Israel has also ordered three C-130J-30s, of an eventual requirement for nine.

Jim Grant, Lockheed Martin's vice-president



received three of the four ordered.

The USA's other main transport aircraft offering in the region is Boeing's mighty C-17 Globemaster III.

The C-17's cavernous cargo compartment is 88ft (26.82m) long by 18ft (5.49m) wide by 12ft 4ins (3.76m) high, accommodating loads as big as an M1 Abrams tank or a Chinook helicopter. The C-17 can carry a maximum payload of 170,900lb (77,500kg), and has an unrefuelled range of about 2,800 nautical miles (5,200km) when carrying a 160,000lb payload.

Despite its considerable capabilities, the C-17 has struggled to find much export success. And, with domestic requirements virtually fulfilled, Boeing is desperate to find customers for the aircraft to keep its Long Beach production line busy. Despite orders for half-a-dozen aircraft from Qatar and the UAE, a significant C-17 export order has proved elusive, however, though there have been periodic reports of a potential RSAF requirement for a 'double digit' fleet of C-17s.

For the moment, though, the C-17's presence in the region is limited to detachments, deployments and visits by USAF, Canadian, NATO, RAF and RAAF aircraft, and to the handful of aircraft delivered to Qatar and the UAE.

The Qatar Emiri Air Force today operates two Boeing C-17s from Al Udeid Air Base, having taken delivery of the first on August 11 2009 and the second on September 10 2009. The second wears the same grey, maroon and white livery as is used by the state-owned Qatar Airways, chosen to

Continued
on Page 40

business development for the C-130J highlighted the type's suitability in the region due to its hot and high capabilities, and expressed optimism that there would be "a lot of demand from the Middle East and Pacific Rim in the coming years".

The big prize for Lockheed would be an order from the Royal Saudi Air Force, which has a four-squadron, 42-aircraft Hercules fleet due for replacement.

Lockheed Martin has also offered the C-27J Spartan in the region.

A jointly developed advanced derivative of Alenia's G.222, the C-27J uses the C-130J's glass cockpit and Rolls-Royce AE 2100 engine and six-blade propeller. It offers a 35 per cent increase in range and a 15 per cent faster cruise speed by comparison to the basic G.222.

So far, the only Arabian customer for the C-27J is the Royal Moroccan Air Force, which has



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build awareness of Qatar's participation when the aircraft is used during humanitarian operations around the world.

The United Arab Emirates signed a contract for six C-17s in January 2010, receiving the first of these on May 10 2011, and the second on June 10. Boeing is scheduled to deliver two more C-17s to the UAE this year and two in 2012.

The USA faces competition in the Middle East region, principally from Airbus Military, but also from Russia.

The Antonov An-26 has been used by Libya, Syria and Yemen, while the Antonov An-32 has been ordered by Iraq (six) and Jordan (two for Jordan's Special Operations forces).

From about 2004 for an unknown period, the UAE Air Force and Air Defence was the notional operator of an Antonov An-124 (probably leased from and crewed by Aviant), painted all white and registered UR-ZYD (for Sheikh Zayed, late ruler of Abu Dhabi and president of the UAE). More recently, the first of two Il-76MF military transport aircraft was delivered to the Kingdom of Jordan. The Il-76MF is a stretched derivative of the Il-76MD, with a 6.6m fuselage extension, and powered by more powerful and fuel-efficient PS-90A-76 engines.

Airbus Military offers products that 'straddle' the C-130J in size, price and capability. At the 'lower' end of the scale, the CN235 and stretched C295 represent a direct competitor to the C-27J, and an alternative to the original model Hercules in some roles. Despite carrying less than half of the payload of a 'heritage' Hercules, for example, the C295 can carry 71 passengers – only 21 fewer than a C-130E or a C-130H.

Originally developed as a joint venture between Spain's CASA (now part of Airbus Military) and the Indonesian manufacturer IPTN, the Airtech CN235 has enjoyed some success in the Middle East region. This was most notable in Turkey, where 59 were built under licence for the Air Force (50 transports), Navy (six CN235MPA aircraft with Thales airborne maritime situation & control mission (AMASCOS) systems, and Coast Guard (three similarly equipped CN235MSAs).

The type also serves with the Royal Moroccan Air Force (six), the Royal Oman Police (two), the

Royal Saudi Air Force (four) and the UAE Air Force and Air Defence (seven).

The Royal Jordanian Air Force operated two on lease from the Turkish Air Force for several years but these are no longer in service though, more recently, Jordan has acquired two further ex-Spanish aircraft for conversion as gunships.

The stretched and extensively modernised C295 was developed by CASA alone (not in partnership with IPTN), and has new PW127G turboprop engines and 50 per cent greater payload capability.

In the broader MENA region, the Algerian Air Force has received six C295s for transport and maritime patrol duties, while the Egyptian Air Force has ordered three as tactical transports for delivery from 2011. The Royal Jordanian Air Force has received two aircraft.

Airbus Military does offer a dedicated C295MPA (maritime patrol aircraft), known as the Persuader, with six under-wing hard points for weapons and with a fully integrated tactical system (FITS). This ASW/ASuW/MPA mission system includes a ventral 360-degree search radar, electro-optical/infrared sensors (EO/IR), a tail-mounted magnetic anomaly detector (MAD), acoustics systems, electronic support measures (ESM) systems and sea pollution detection systems, as well as advanced communications and datalink systems.

An order for four by the UAE, reportedly placed in 1998, came to nothing, and maritime versions of the DHC-8 will be used instead.

Today, the attention of Airbus Military is focused on selling the A400M into the region. With contract amendment negotiations between Airbus Military and the Organisation Conjointe de Coopération en matière d'Armement (OCCAR) and the seven A400M launch customer nations now signed (on April 7 2011), the way is now clear for export negotiations.

Airbus hopes to grab about half the replacement market for military airlifters over the next 30 years and estimates a global requirement for 400 of its A400M airlifters, with potential sales of 50 to 100 of its A400M military airlifter in the Middle East and North Africa.

Peter Scoffham, Airbus Military's head of

defence capability marketing once said: "One particular nation in that area (the Middle East) has said that once we have got four to six months into the flight test programme they want to start contract negotiations."

Airbus Military estimates the world market for military transports to total about 800 aircraft, which will replace a 1,800-aircraft current transport fleet.

Airbus hopes that the A400M will mop up the market for aircraft with payloads of 25-50tons, flying heavier armoured vehicles, humanitarian equipment and helicopters, while the CN235 and C295 will compete with the C-27J, the KC-390 and the Lockheed Martin C-130J to share the market for aircraft with a 12-25-ton payload.

The company also hopes that many operators will choose to procure larger aircraft, whose higher 'sticker price' is compensated for by superior capability.

The A400M can lift 37tonnes, for example, where the basic Hercules lifts just 19tonnes. The A400M can also fly twice as far as a C-130 with the same payload.

A Hercules can fly 1,600 nautical miles with a particular load, for example, while an A400M, carrying the same weight, could travel 3,450 miles.

And there are many loads that a Hercules simply can't carry due to weight or dimensions. A typical modern armoured personnel carrier now weighs 25tonnes – too heavy for a Hercules to lift, while the A400M can swallow even a Chinook helicopter in its capacious hold.

And the A400M can do this while retaining true tactical capabilities, landing on sand, dirt or a semi-prepared strip, in a way that the larger and more capable C-17 cannot emulate.

Airbus Military is also quietly hoping for further tanker sales in the region, following the orders it has already received from Middle Eastern states for its A330 MRTT air-to-air refuelling and strategic transport aircraft.

The UAE has already ordered three of the big Airbus tankers, with the first delivery planned for later this year, while Saudi Arabia has ordered six A330 MRTTs, the first of which is due to be delivered in 2012.





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Turkey strengthens its Sikorsky links following a huge order. Jon Lake reports.



BLACK TO THE FUTURE

Turkey, already a major operator of the Black Hawk, has selected the type to fulfil its \$3.5 billion utility helicopter programme (TUHP) requirement, after a competitive evaluation against the AgustaWestland AW149.

Turkey announced the selection of Sikorsky's T-70S as the preferred solution to the programme – also known as the Turkish general use helicopter project – on April 21 2011 and the agreement has now been finalised.

The T-70S is a derivative of Sikorsky's S-70i 'International Black Hawk' which is, in turn, the current export version of the tried and trusted S-70/UH-60 Black Hawk, and which is currently built at PZL Mielec in Poland.

Turkey's military and parapublic air arms are already a major operator of the Black Hawk, having received 12 S-70A-17s (equivalent to the US military UH-60A/L) and 95 S-70A-28s (UH-60Ls). These serve with the Turkish Ministry of the Interior (the S-70A-17s), and with the Turkish Army and Turkish Paramilitary Police. The Turkish Navy is receiving 26 S-70B-28s, equivalent to the US Navy's SH-60B Seahawk.

Turkey plans to acquire up to 115 of the new helicopters to meet the TUHP requirement, though the detailed requirement so far is for just 109.

The general use helicopter programme was drawn up with the intention of providing 60 new helicopters for a combination of Turkey's Gendarma (responsible for the maintenance of the public order in areas that fall outside the jurisdiction of the police), the police themselves and for use as fire-fighting aircraft by the Ministry of Environment and Forest.

The remaining 55 were for the military, with 20 expected to go to the Turkish Army, 11 to the Special Forces and six each to the air force, the navy and electronic systems command, totalling 109. The remaining six are, so far, without a defined user.

New agreement

The new agreement will allow for the direct sale of Turkish-assembled aircraft to future Sikorsky international customers and anticipates the production of up to 500-600 more helicopters in Turkey over a ten-year period, producing S-70i International Black Hawks for the export market and further T-70S helicopters to meet new Turkish domestic requirements.

The contract will include aftermarket support, including training and maintenance, and will allow Sikorsky's and Turkey's existing maintenance infrastructure to be used to provide support and maintenance services and training,

and to supply parts and components to customers worldwide.

Sikorsky has reportedly guaranteed that Turkey will get at least \$1 billion worth of MRO work on S-70i helicopters sold to third-party countries.

The new T-70S aircraft will be assembled in Turkey by Turkish Aerospace Industries (TAI) as the prime contractor (which will gain full access to – and will become part of – the Sikorsky global supply chain) and will incorporate components and sub-assemblies supplied by Turkish companies.

Since the first S-70A-17s were sold to Turkey more than 20 years ago, Sikorsky has built up what Stephen B Estill, Sikorsky vice president, strategic partnerships, called "significant business relationship" with Turkish industry, which today enjoys considerable industrial participation in the Black Hawk programme.

While TAI is already producing subsystems for the S-70, the use of locally-sourced subsystems for the T-70S will be dramatically expanded and is expected to include the landing gear, transmissions, engine components and major portions of the avionics system.

The new order has opened the door to greater Turkish participation in the wider S-70 industrial



programme and may lead to the co-development, with Sikorsky, of a new Turkish light helicopter.

Within the framework of the industrial co-operation protocol signed with Sikorsky in 1998, Turkish industry has collaborated on the production of aerostructures and dynamic component parts for the Black Hawk.

Since 2000, TAI has produced more than 1,600 empennage components for Sikorsky Black Hawk helicopters.

TAI has built some 629 horizontal stabilizers and 217 tail rotor pylons and tail cones for the S-70A and, since 2002, has been responsible for 109 sets of horizontal stabilizer wings, horizontal stabilizer centre boxes, tail rotor pylons and tail cones for the US Navy's MH-60 helicopter, and 80 sets of tails and tail cones for the UH-60M. In April 2009 Sikorsky and TAI celebrated the delivery of the first TAI-built tail cone for the S-70i International Black Hawk. TAI has also completed a digital cockpit upgrade for Turkey's existing S-70A-28 helicopters and is in the process of completing a two-phase Yarasa upgrade for four S-70A-28 Black Hawk helicopters in the inventory of Turkey's Special Forces Command.

TAI was responsible for the development of this modernisation and systems integration programme, with the first phase consisting of

auxiliary fuel tank integration (AFTI) and the second entailing an avionics integration (AVINT) programme that required some structural re-design and a redesign of the helicopter's electronic infrastructure.

This work has prepared TAI well for its role in the integration and final assembly of the new T-70S helicopters.

Turkish company Alp (50 per cent owned by Sikorsky), is already a supplier of transmission system parts for the S-70, but is being certified as a qualified supplier of International Black Hawk helicopter transmission systems.

Light helicopter programme

Under the new light helicopter programme, TAI and Sikorsky will work together to develop a new light twin helicopter in the 3.5-4.5 tonne class. Preliminary artist's impressions show an aircraft reminiscent of Sikorsky's X2 demonstrator in some respects, with a low-drag lightweight, composite airframe and a conventional but 'high efficiency' main rotor (with four-bladed tail rotor) and fly-by-wire flight controls.

It has been reported that TAI would take the lead on the design, engineering, flight testing and production of the new aircraft, with Sikorsky providing support and providing some assistance

in US and European certification of the helicopter, which would then be jointly marketed, sold and supported, and which would fill a gap in Sikorsky's current product range.

This may have been the key factor that swung the decision in Sikorsky's favour as AgustaWestland's TUH-149, a version of the new AW149 specifically designed to meet the Turkish requirement, promised "unprecedented level of co-operation", along with guaranteed technology transfer and design and manufacturing autonomy, according to Ugo Rossini, AgustaWestland's vice president of European activities.

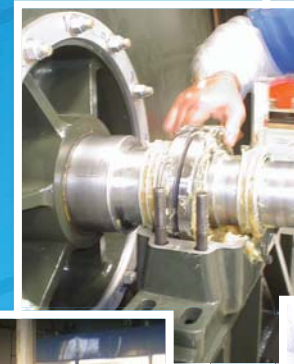
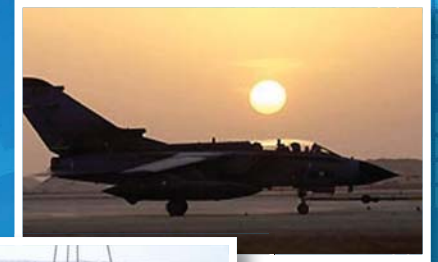
AgustaWestland remains committed to the development of the AW149 which, it says, has "significant market potential" with a need to replace more than 8,000 helicopters in the same class over the next 35 years.

But, while participation in the AW149 programme would have offered what Rossini called "a unique opportunity to become a major player in the helicopter industry through the co-development of a new-generation helicopter", the new TAI/Sikorsky light twin helicopter programme promises to give the Turks a similar opportunity, and one that could kick-start indigenous helicopter design capabilities in Turkey.

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UAE Air Force on the offensive in Libya

Jon Lake looks behind the headlines at the performance of the UAE Air Force in its deployment over Libya and its weapon success.

The UAE was the second Arab nation to contribute fast jet aircraft to the multi-national operations over Libya but is believed to have been the first to start flying bombing missions.

The operation had been known as Operation Odyssey Dawn while under US command but was known as Operation Unified Protector following NATO's formal assumption of command on March 31.

Though the deployment of 12 fighter jets (six Mirage 2000-9s drawn from Nos 71 and 76 Squadrons at Al Dhafra and six Block 60 F-16E/Fs from No1 Squadron) was officially stated to be merely "an extension of the UAE's humanitarian operations", both types are known to have started offensive operations against ground targets.

The fighters deployed to Decimomannu, near Cagliari, on the island of Sardinia, on March 27 2011 but repositioned to Sigonella, Sicily, on April 26 and 27 to reduce the transit time to the Libyan area of operations, cut response times and save fuel.

Unfortunately, on landing at Sigonella, one of the F-16s overran the runway and the pilot ejected. Until the wreckage could be cleared Sigonella's main runway was closed.

Soon after the move local photographers and aircraft spotters noted that the UAE's fighters were flying with air-to-ground weapons.

Laser-targeting pod

The UAE Air Force Mirage 2000-9s carried a Shehab laser-targeting pod under the starboard wing root and an MBDA Al Hakim rocket-boosted precision guided munition (PGM) with a 500lb warhead under the port wing root. The aircraft also carried a pair of 1,700 litre RP30 fuel tanks and a pair of IR-homing MICA air-to-air missiles.

The F-16E/Fs flew with two 500lb GBU-12 Paveway III laser guided bombs, four AIM-120 AMRAAM air-to-air missiles and a SNIPER targeting pod.

The Al Hakim is a short-range, solid propellant, air-launched stand-off air-to-surface weapon developed in the early 1980s by Ferranti (subsequently taken over by GEC-Marconi-Dynamics which, in turn, became part of MBDA), and was funded by the UAE. A new weapon was required because the USA was unwilling to integrate certain classes of weapon on aircraft that it supplied to certain Arab nations, to avoid upsetting particular regional sensitivities.

Al Hakim is totally modular and features a variety of guidance systems. It is available with two warhead weights and was once intended to use a variety of warhead types.

As delivered to the UAE Air Force and Air Defence, the weapon has three interchangeable seeker types. The PGM1 is a semi-active laser seeker, the PGM2 a television imaging seeker, and the PGM3 an imaging infra-red (IIR) seeker. These seekers ensure that the weapon is fully operational 24 hours a day, even in poor weather conditions. All three seekers use the same operator/control interface, which minimises the impact on pilot training requirements.

The laser seeker is compatible with all standard ground and airborne laser designators, while the TV and IIR seekers can send post-launch images back to an aircraft more than 100km away right up to the point of impact. Alternatively, images can be relayed to a third-party aircraft or ground control centre – useful if the PGM's mission is being managed remotely.

Portable loading module

The Al Hakim missile can be pre-programmed, using a portable loading module before flight, allowing it to be used against pre-planned targets by aircraft that do not have a suitable on-board data link and which, therefore, cannot control the weapon in flight. Usually, though, the weapon can be updated at any time, allowing it to be used against targets of opportunity.

The pilot or off-board mission controller can regain man-in-the-loop (MITL) control from the PGM's own automatic tracking system at any point in the mission to refine or optimise the aim point or even to attack alternative targets.

The weapon has blast fragmentation warheads of either 500lb or 2000lb. It has proven firing accuracies of less than 1m circle error probable (CEP) in service, and has selectable fusing options to allow it to detonate on impact or by proximity to the ground or the target.

At one time, it was thought that four warhead types were under development for the Al Hakim, including blast fragmentation, high-explosive, anti-tank, and area-denial (with minelets). The status of the other types is unknown.

The Al Hakim's solid fuel booster rocket (two rockets in the case of the 2,000lb weapon) give it a stand-off range of 15km from a low-altitude release, up to 30km from a medium-altitude release and up to 50km from a high-altitude release.

The Al Hakim has been integrated on the Mirage 2000-9 and also on the F-16E/F, though it has not been used by the Desert Falcons during the Libyan operation.

The UAE Mirages usually carry a Thales Shehab laser designation pod when using Al Hakim.



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MENA companies at the heart of a new EBACE high

Middle Eastern and North African companies were at the heart of the European Business Aviation Conference and Exhibition (EBACE) held in Geneva in May.

The 11th edition of the event ended its three-day show with records in the number of exhibitors and exhibit spaces and an increase in attendance amid welcome news that business aviation traffic is trending upward.

Event organisers pointed to positive signs, including 12,751 attendees from 108 countries – an increase from last year's 11,186 – and a record 511 exhibitors, exceeding the previous high mark of 445 companies.

Ali Al Naqbi, founding chairman of the Middle East Business Aviation Association (MEBAA) was a speaker at the event. "A lot of people are very

interested in what the Middle East is doing and we have a key part to play in the business aviation recovery," he said.

"There is a lot of close links between what happens in Europe and what happens in the Middle East and that was apparent by the huge support MENA companies gave to the EBACE event."

Brian Humphries, European Business Aviation Association (EBAA) president and CEO, welcomed the large numbers at the event. "They are certainly good news. They're a welcome reminder of the value the industry places on this show. But we also know that EBACE is a barometer for the industry and so we take these numbers as a welcome sign that the economic environment for business aviation is beginning to improve."



Mohammed Bulooki (centre) making FBO plans for Al Bateen.

Al Bateen takes the limelight with DhabiJet launch

Abu Dhabi's executive airport, Al Bateen, took centre stage at the EBACE show and stunned delegates with the introduction of a new FBO brand.

The move was seen as potentially being the first step in creating a brand that will compete with the world's best know FBO providers.

The Abu Dhabi Airport Company (ADAC) subsidiary also signed deals with two MRO providers, who will be offering different levels of support at the new business airport.

The launch of the FBO brand, DhabiJet, received global attention. Al Bateen's vice president, Mohammed Bulooki, said that while the initial idea was to make sure a high level of service was achieved to match the quality of service and innovation that had set the Gulf carriers apart from others in the world, there was no reason why the brand couldn't be rolled out elsewhere.

"We want to make it work at Abu Dhabi first," he said, "but after that, why not?"

DhabiJet will bring together all of the requirements for business aviation customers visiting Al Bateen under the management and co-ordination of a single highly trained DhabiJet customer service team headed by former Harrods Aviation and ExecuJet manager Pauline Smith.

Al Bateen manager Steve Jones said the new service would provide a "one-stop shop" contact point focused on delivering exceptional customer service using the existing executive terminal.

Work has begun at Al Bateen on a state-of-the-art crew and flight operations centre, adjacent to the executive terminal, which will provide a range of dedicated crew amenities such as a relaxation lounge, sleep rooms, showers and rest areas, along

with easy access to new flight planning facilities.

While at EBACE, Al Bateen also signed up two MRO providers – Switzerland's Jet Aviation and India's Air Works – to be part of the new business airport.

Air Works' maintenance capability has grown from the DC-3s it maintained in the early 1950s to approvals to maintain more than 100 business aircraft types in India across 14 locations. Air Works is now an authorised service centre (ASC) for Agusta Westland, Bell Helicopter, Bombardier, Embraer, Garmin, Gulfstream, Hawker Beechcraft, Honeywell, Rockwell Collins and SuperJet International.

Air Works managing director Vivek Gour said: "This partnership will be highly beneficial for both parties. It provides Air Works access to world-class infrastructure at the airport to provide high quality MRO services to business aircraft in the region."

Arab Wings lays down repairs Marka

Jordan's Arab Wings is entering the maintenance sector with a new hangar under construction at its base at Amman's Marka airport for repair operations.

The charter operator – which also has a sister company called Gulf Wings, operating out of Sharjah – has signed a deal with Canada's Bombardier to repair aircraft on ground (AOG) Challenger 600 series aircraft in the Middle East.

The company already operates Challenger aircraft and will next year take delivery of a Global 5000.

"These additions to Bombardier's rapidly expanding aftermarket network will provide our steadily growing customer base with even more options for high-quality maintenance services closer to home," said James Hoblyn, president, customer services & specialised and amphibious aircraft, Bombardier Aerospace at the Geneva show.

Arab Wings currently employs 21 full-time aircraft maintenance technicians at its 10,763 square foot hangar. The new hangar will effectively double that space.

Executive order!

Qatar Airways' corporate jet division, Qatar Executive, took delivery of its first ultra-long-haul Bombardier Global Express XRS during the EBACE show.

The new delivery follows the recent announcement by Qatar Executive to add three new Bombardier aircraft to its fleet, including another Challenger 605 in July and a Global 5000 in August.

Fly Aviation Quickens Uganda charity boost

Dubai-based worldwide trip support provider Fly Aviation Services donated \$6,000 to Ugandan charity Quicken Trust, as a direct result of its participation at the EBACE show.

Each business contact made during the show was given a token of appreciation and Fly Aviation Services donated money on their behalf.

General manager, George Kinj, said: "It was our pleasure to renew this initiative with Quicken Trust, knowing that through this donation we achieved our marketing targets while simultaneously helping those in need."

Fly Aviation Services was promoting its open approach to flight support at EBACE. The company adopts a policy of transparency and openness towards its customer operators, both in respect of operational procedures as well as when it comes to charging. When permits are issued, it is stated exactly how much they are valid for and any changes in schedule within the scope of that validity are allowed by the operator. This means that there would be no unnecessary permit revalidation charges.

Geoff Booker, Founder of Quicken Trust, said: "This is a tremendous gift that will make a significant difference to our work in the village of Kabubbu, Uganda through the 'special delivery' programme to reduce maternal and infant mortality there. This is to be part of a research project for Africa and, possibly, internationally."

Comlux bubbles over SPA deal

Comlux was delighted to announce at EBACE that it is strengthening its charter offering in the Middle East through an alliance with fellow VIP operator Saudia Private Aviation (SPA).

The duo plans to expand their share of this lucrative market by utilising one-another's aircraft.

Comlux, which has a base in Bahrain, will make its fleet of Airbus Corporate Jets available to SPA clients and Comlux customers will have access to SPA's fleet, which includes a Dassault Falcon 7X and a Hawker 400XP.

"This should cover most mission requirements," said Comlux president Richard Gaona.

Rockwell's vision for the future

Operators of aircraft equipped with Rockwell Collins' Pro Line 21 avionics will soon be able to realise the operational benefits of synthetic vision.

The upgrade, announced at EBACE and available in 2012, will be offered for forward fit and aftermarket installations of the integrated avionics system.

"Today, more than 4,000 aircraft are flying with Pro Line 21 and over 300 aircraft are delivered each year," said Greg Irmen, Rockwell Collins vice president and general manager.



ACJ's brand new naming policy

If you could never get to grips with the Airbus corporate jet nomenclatures of Elite, Prestige and so on, then life has just been made a bit easier.

At EBACE, the European manufacturer unveiled a new name and new look for its fleet of aircraft.

Each of the types will now have the letters ACJ before the airliner model from which it is derived. So, whereas previously the aircraft derived from the A318 jetliner was known as an 'Elite' it will now be the ACJ318.

The ACJs also now feature a new branding and colours along with the new names, which Dubai-based vice president Francois Chazelle said reflected aircraft improvements, the company's culture of innovation and family commonality.

The new colours comprise metallic-blue shading on most of the fuselage and tail, highlighted by flowing curves that echo the colour schemes often chosen by Airbus corporate jet customers, and are accompanied by a new 'Airbus Corporate Jets' logo.

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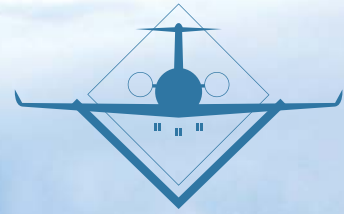
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New Falcon swoops to conquer

Dassault Falcon has returned to the super mid-size category with the launch at EBACE of a large cabin aircraft – the Falcon 2000S.

Dassault's entry-level jet was previously the Falcon 50 class and a replacement has been mooted for several years since production ended in 2007.

The new model will offer category-leading payload, range, performance and efficiency, said John Rosanvallon, president and chief executive of Dassault Falcon.

The 3,350nm-range Falcon 2000S will feature inboard slats, high-Mach blended winglets, a new generation PW308C engine that produces fewer emissions, an entirely new BMW Group DesignworksUSA interior and redesigned cockpit aesthetics, along with the next-generation EASy II flight deck.

It is expected to achieve certification by the end of 2012 with deliveries beginning in early 2013.

"After speaking with our customers and performing a thorough market study, our research confirmed that the ideal platform for a wide-body business jet in this range segment was, indeed, our very successful Falcon 2000," Rosanvallon said.

"We optimised the platform with a long list of standard options, cutting-edge technology and industry-leading features with the Falcon 2000S. Our proudest accomplishment, though, was designing an aircraft that burns 10 per cent less fuel than aircraft 20 per cent smaller while offering a very competitive price."

With full fuel, the Falcon 2000S will have the largest payload in its class at 1,850lbs; a maximum take-off weight (MTOW) of 41,000lbs with a balanced field length of 4,450ft, which is up to 500 feet less than

competing aircraft. It will manage city pairs such as Dubai to Geneva or New York to London.

At M.80, the Falcon 2000S will have a range of 3,350nm (standard aircraft, 6 pax, NBAA IFR reserves, 85 per cent Boeing Annual Winds). It will climb directly to 41,000ft in 19 minutes, reach a mid-cruise altitude of 45,000ft and offer a certified ceiling of 47,000ft. The aircraft will also be able to land at 95 per cent of its MTOW, or about 39,300lbs, enabling it to tanker more fuel.

Additionally, with an approach speed of only 108 knots and an advanced autobraking system, the Falcon 2000S will be capable of landing at airports with challenging and steep approaches and shorter runways such as London City.

At a typical end-of-flight profile, the Falcon 2000S will need just 2,600ft of runway, or the equivalent length needed for a typical turboprop aircraft.

Hawker with a genuine deal

Hawker Beechcraft Global Customer Support (GCS) announced an aftermarket retrofit kit for the installation of genuine Hawker winglets on the Hawker 750 – a modification that will provide an incremental performance improvement in time to climb, range and fuel consumption.

By effectively increasing the wing aspect ratio, it will also enhance stability at altitude, reduce lift-induced drag and generate more responsive handling in slow flight.

The enhancement offers Hawker 750 operators a five per cent improvement in time to climb and a four per cent range increase at long-range cruise settings.

Turks to take ten Skyhawks

Turkey's Türk Hava Kurumu (THK) has signed a deal to buy 10 Model 172 Skyhawk piston aircraft from Cessna, the American company revealed at EBACE.

This follows the successful introduction in 2010 of an initial cadre of six Skyhawks. Cessna will deliver all 10 this year.

THK is a non-profit organisation devoted to increasing public awareness and participation in aviation-related activities and is the national body governing air sports in Turkey. It was founded in 1925 by Mustafa Kemal Atatürk, regarded as the father of modern Turkey.



Rotana Jet's debut with a deal

New Dubai-based business aviation operator Rotana Jet made its formal debut at EBACE and also signed to become a base operator at Abu Dhabi's Al Bateen Executive Airport.

The new company began private jet operations at the beginning of April with a Gulfstream G450.

CEO Horm Irani – former ExecuJet Middle East managing director – said the firm has committed to leasing Hangar 27 at Al Bateen, where it will develop and expand its scope of services to offer line maintenance and other technical works.

It has offices in Dubai and will add four to five aircraft to its fleet each year. "We will be specialising in the large cabin, wide-bodied jets, which reflect the majority of requirements in the Gulf Region market," said Irani.

Qatar gets approvals nod from LBAS

Lufthansa Bombardier Aviation Services (LBAS) has extended its portfolio of various approvals to include Qatar.

This approval is a mandatory requirement to offer LBAS's wide range of maintenance services to Bombardier Challenger 604/605 aircraft flying under Qatar registration.

A number of Challenger aircraft are now in operation from Doha – led by Qatar Executive, part of Qatar Airlines group.

Lufthansa said at EBACE that a "first – undisclosed – customer from Qatar has already signed a maintenance agreement with LBAS and will use the company's services when flying to Europe".

Turbofan certified

The FAA certified Honeywell's HTF7250G turboprop engine, which will power the Gulfstream G250 super mid-size business jet, during the show.

The derivative of the HTF7000 engine provides 7,445lbs of thrust and delivers fuel efficiency, enabling the Gulfstream G250 to travel 3,400nm at 0.80 Mach with a maximum operation speed of 0.85 Mach.

Honeywell's engines can power the G-250 to FL410 in less than 20 minutes.

Why UAS can 'feel the difference' with its new branding

A dynamic giant booth in the centre of the Geneva Palexpo Hall 6 gave a clear indication of a new approach to business by Dubai-based flight support company United Aviation Services, which used the show to launch a new brand and tagline.

The company says the new brand and logo initiative – its first in 11 years – aims to showcase the luxury and premium services rendered by the company and experienced by its clients.

UAS has a new tagline 'feel the difference', which it said reflects the essence of the rebranding initiative and the company's vision: to be acknowledged as the leader in aviation services and known as the premium

service provider in the industry. The independent service provider is acknowledged for computerised flight planning and weather briefings, over-flight and landing clearances, ground handling, fuel, hotel accommodation and transportation, weather reports, charters and trip cost estimates.

"In an attempt to modernise, we are further adapting to new technologies available and we will follow the latest market trends enabling us to continuously meet up to clients' expectations," said Mohammed Husary, UAS general manager.

"A hands-on rebranding plan is supporting this initiative as we will have a new logo, website and the

fresh new tagline will certainly become eminent in the market.

"The new brand will not only look inspiring, however. The core of UAS's internal procedures will also adapt to ensure we continuously deliver the quality expected by our clients."

UAS is using the latest in interactive technology to enable clients to create their own unique crew briefing ID to download the flight plans and weather data from the system or even uplink flight plans directly into their own aircraft flight management system via ARINC, Honeywell or SATCOM Direct, Husary said.



Piaggio bids to sale down the Nile

Piaggio – the turboprop manufacturer jointly owned by Abu Dhabi's Mubadala, Ferrari and India's TATA group – is to push for sales in Egypt.

The Italian-headquartered company announced at EBACE that it has appointed Alkan Air, the Cairo-based charter operator and service centre, as the official Egyptian agent for the sale of Piaggio Aero P.180 Avanti II aircraft.

Alkan Air will focus on the promotion and sale of the Avanti aircraft throughout Egypt and will demonstrate it by adding an Avanti to its charter fleet.

Awad Dargham, general manager of Alkan Air, said: "I am pleased to announce this agreement between ourselves and Piaggio Aero.

"We have always been aware of the Avanti's suitability for our market and I am delighted that we now have the opportunity to, not only operate the aircraft but, also, to help other operators in the region to discover the many benefits of this excellent aircraft.

"As we continue to grow and stay at the forefront of aviation in our region I look forward to operating the aircraft as part of our fleet.

"I anticipate a long and successful partnership with Piaggio Aero."

Piaggio deputy general manager and chief commercial officer Giuliano Felten said: "We have chosen this company because it is the leader in air services in Egypt and we appreciate the way it

manages this business in its country. Thanks to the Alkan Air's knowledge and experience in the Egyptian market, Piaggio Aero will be able to effectively approach this emerging North African market and learn more about the opportunities and benefits to grow its business there."

The Avanti II is the world's fastest turboprop aircraft, offering outstanding performance and a comprehensive specification that meets the demands of the Egyptian market.

During the show, it was also widely reported that Piaggio is close to announcing details of its proposed jet, which many pundits believe could be manufactured at Mubadala's facility at Al Ain.

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SJ30 – To Be or Not To Be?



A dramatic tale by Liz Moscrop, worthy of a Shakespearean tragedy, that unfolded as an unfunny comedy of errors.

Prologue

Something is rotten in the state of Denmark. The famous quote from Marcellus to Hamlet could equally apply to the fiasco that wasted more than \$90m of investment money from government and private individuals, countless man-hours and stunted the development of a \$7.25 million business jet that had been set to revolutionise the light jet market.

There is plenty of drama in this modern tale, too.

Back in April, when the last company producing the SJ30 business jet programme, Dubai-based Emivest Aerospace Corporation, was on the brink of ruin, stalking horse creditors Utah-based Metalcraft Technologies (MT), paid the relatively paltry sum of \$3.5 million to acquire the company's sizeable assets. This included \$40 million worth of SJ30 parts inventory, but not the real estate assets, which were sold separately.

The acquisition saved the beleaguered aircraft at the 11th hour.

During the bankruptcy court proceedings to determine whether to accept the Metalcraft bid or liquidate the company, the judge deemed the bid of \$3.5m to be too small to satisfy basic bankruptcy liabilities and UAE-based Hamish Harding, owner of the largest SJ30 distributor, Action Aviation, had to step in at the last minute to provide an additional \$1.2 million of emergency funding to prevent liquidation and allow the bid to be approved.

Harding's lawyer asked the judge to stave off the judgement on the final day of the hearing, while the distributor worked overnight to raise and wire the necessary cash over to the court.

Since the acquisition, Metalcraft has moved the Martinsburg, West Virginia, assembly line to Utah and is continuing limited operations in San Antonio, Texas. This is good news for the programme but it is salutary to look at what went wrong.

Act 1

The SJ30 has been sorely knocked about since its inception in 1986, from which it had a long journey to market.

The first proof of concept aircraft, designed by Ed Swearingen, flew at the Paris Air Show in 1991, and the first conforming prototype flew in November 1996. The plane received its type certificate in 2005. In 1997, Senator Jay Rockefeller of West Virginia arranged a major investment deal between Swearingen's company and the government of Taiwan, creating the Sino Swearingen Aircraft Company (SSAC). The partnership was successful in completing the design and fully certifying the SJ30 but, due to Taiwanese party political issues, new investors were required for production ramp-up and, in 2008, new majority shareholders from Dubai came on board.

Continued
on Page 56

Act 2

The rot can be traced back to this point. Howard Leedham MBE, chief executive of Dubai's Burj Holdings, was approached to find a buyer when SSAC's previous takeover negotiations had started to founder.

He said that the Taiwanese had already pumped in \$600 million in design, development and certification, but failed to create the aircraft production line. He was asked to find a buyer for the company. He said: "There were three potentially interested groups; Dubai Aerospace Enterprise (DAE), Istithmar, and Emirates Investment & Development Company (EIDC – also known as Emivest)."

At the time DAE had just acquired the Landmark FBO chain for the second highest multiple ever paid in aviation. The SSAC deal proved to be too capital intensive for it.

It was also too time critical for Istithmar, so Emivest, in which there was an interest by the Dubai government, agreed to take on the entire company.

Leedham said: "I even asked Emivest at the time, 'are you sure you want to do this?'" He then worked closely with Emivest's then chief investment officer, Anthony Power, to structure a deal for it to acquire 70 per cent of SSAC for a \$150m investment. By June 2008 it had actually taken on 80 per cent of the company. Leedham said he was never paid any commission for this work and records show he has filed an ongoing petition for such with the Dubai court.

When Emivest bought SSAC, the backlog was said to be more than 300 orders. The Dubai investment house put \$90 million into the programme as part of a \$150 million contractual commitment and said that it intended to build between 40 and 50 aircraft per year by the end of 2010 on the back of a workforce of 300 employees.

There have only ever been four SJ30s delivered, two by Sino-Swearingen and two by Emivest; the last in December 2009 to actor Morgan Freeman.

Emivest Aerospace's new chief executive, Anthony Power, said in 2009: "Our entry into the aviation sector is a further demonstration of the ambition and vision of the chairman of the board and the board of directors for the next phase of our ambitious growth plans in different markets where attractive dynamics exist."

Two years later the programme was in tatters.

Leedham said: "The turn of events is very sad. I explained the obvious very early on to Anthony Power that the only way for an aircraft manufacturer to make money is to make aircraft." According to Leedham, Emivest responded with a plan to invest sufficient capital to double projected production. However, this simply never happened.

Leedham added that, shortly after Emivest's purchase, Power had asked him if he would sell off 25 per cent of the company at a premium of the purchase price. Leedham declined on the basis that no fees had been paid for the initial transaction. Then, that September (2008), world affairs played a part in the tragedy as investment bank Lehman Brothers collapsed, starting the chain of events that savaged world markets.

Leedham said he advised Emivest to sell off 25 per cent of the company.

One source close to the company, who asked not to be named, said there was "a massive problem getting parts. Suppliers were not sure they would get paid. There was a cash burn in the region of \$5 million per month."

The source said: "Emivest failed for a couple of reasons. It did not honour its commitment to put in \$150 million; it could not pay its suppliers and ramp up production, so the problems snowballed. It could not give the end user confidence that it would produce aircraft. The CEO was based in Dubai, heading a company run out of San Antonio."

To outsiders it appeared that the board did not properly monitor what was happening in the Texas facility and there was often a concern among industry commentators that Power had never before managed an aviation company, or even a manufacturing company. "The fact that he was based in Dubai rather than the US added to Emivest's problems," one source said: "It's a shame nobody spoke out at board level."

Arabian Aerospace talked with Mr Power, who chose not to comment.

It did not take long for financial problems to accrue. By November 2009, an arbitration award of \$4.2 million was entered against Emivest in favour of

Wells Fargo Securities. Emivest owed Wells Fargo an unpaid equity transaction fee. In June 2010, the companies entered into a forbearance agreement whereby Wells Fargo would not collect on the award so long as Emivest agreed to pay \$700,000 monthly. As of the date of filing for bankruptcy, Emivest had only paid Wells Fargo \$225,000.

As its debts spiralled, Emivest sought outside investors. In late 2010, Chinese investors offered it \$20 million to buy the company but the Emivest board turned that offer down and chose instead to file for bankruptcy, despite the fact the Chinese were reportedly offering an investment of a further \$100 million-plus to re-establish and improve the SJ30 production line.

The Final Curtain

Finally, with three jets in production and orders for an additional 200 aircraft, on October 20, 2010, Emivest filed a petition for bankruptcy in the United States Bankruptcy Court for the District of Delaware. Court papers state that the company suffered from "inherent production inefficiencies and low initial production volumes typically associated with transitioning a complex product from development to commercial production".

Harding was involved in the whole process and believes that the Chinese then withdrew their offer because of the bankruptcy proceedings. He said: "Chapter 11 is so fast moving that you need to grab what you can when you can still get it."

The company's problems did not stop with Chapter 11. On November 19, 2010, lawyers Outten & Golden filed suit against Emivest seeking to recover 60 days' wages and benefits for several of its former employees under the Worker Adjustment and Retraining Notification Act. According to the lawsuit, Emivest ordered mass lay-offs in June 2010 without providing the employees with advance written notice. The case is pending in the Delaware District Bankruptcy Court.

On January 17 this year an auction resolved the Chapter 11. At the time, Emivest's assets were valued at between \$50 and \$100 million with total liabilities of the same amount. The active order book had dwindled to 50 and serial numbers 9, 11 and 12 were in various stages of completion. There was also an FAA Part 145 repair station in San Antonio, and a mobile repair network. Many investors lost money.

Onlooker Leedham said: "What appears to have started as a stalking horse bid somehow turned into a real bid and MT did a fantastic job picking up the company for \$3.5 million."

MT actually paid \$3.5 million in cash for manufacturing equipment and facilities in West Virginia and Texas, and \$1.69 million in assumed liabilities. MT itself was owed \$468,848.54 by SSAC.

According to court papers Emivest spent its \$90 million investment over three years and ended up receiving nothing back from the bankruptcy. The source said: "With hindsight, the Emivest board must regret rejecting the \$20 million purchase offer from the Chinese, just before it filed for bankruptcy."

The Sequel

Former Emivest employee Mark Fairchild has stayed with the programme for 15 years and now works as general manager for the new owner. He said that the company would work at a "slow and steady" rate and gradually ramp up production.

This June MT announced it would operate as SyberJet Aircraft. Fairchild said: "I am excited to be part of the future success of SyberJet. As a pilot, the SJ30 is an exhilarating jet to fly. SyberJet has a solid operating plan to deliver new SJ30s to the world marketplace. I look forward to providing more people the unique opportunity to experience the high performance capability that SJ30 affords its owners and operators."

By the end of Hamlet nine people have died and the tragedy stops on a note of hope with Hamlet, himself, ordering the killing to stop and the tale to be told. The SJ30 has suffered enough and SyberJet may well just stage a happier story.



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FOCUS ON

TURKEY



Wings over



Istanbul...

*The Arabian Aerospace team – writers **Brendan Gallagher, Marcelle Nethersole, Alan Peaford** and photographer **Ian Billingham** – visited Istanbul and met the high flyers who really can talk Turkey.*

Not since the days of the Ottoman Empire, which spread from Persia across the Arabian Gulf and through much of North Africa, have the people in the MENA region studied carefully the moves and the thinking of the Turkish people.

Turkey – and in particular its most famous city Istanbul – is the gateway between Asia and Europe and the bridge that links the MENA economies with the central European states and beyond.

Bordering Syria, Iraq and Iran, the modern-day Turkey has proved a vital link between the Middle East and the former Soviet republics and Europe.

The government – the ruling Justice and Development Party (AKP) won another term in office in June – has become increasingly involved in the region, particularly during the Arab Spring.

At the same time it has been developing business opportunities for both its own people and for inward investment, following the initiative of its late president and prime minister former World Bank economist, Turgut Öza, who was first to relax the rules to make it easier for Turkish businessmen to trade and allow capital to move freely in and out of the country.

Successive leaders have driven it further to give way to

the birth of the Anatolian Tigers, a cluster of high-growth regions in central Turkey where entrepreneurship has flourished.

These fortunes, made largely from textile and furniture manufacturing, have propelled Turkey into the G20 and made it, according to the European Commission, the region's largest growing economy.

Aviation has a key part to play in the Turkish economic revolution. The government is encouraging tourism and has adopted a free market for civil air transport. Business aviation is flourishing, with new operators in action across the growing numbers of secondary airports. Maintenance and training for the aerospace industries are seen as key sectors for the Turkish government – as well as hands-on manufacturing deals – as part of its military development.

While the political and defence centre of Turkey is the capital Ankara, the real heart is Istanbul. With its 13 million population, more than an eighth of the entire country, it is rapidly becoming a global hub and a centre of aviation excellence.

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Istanbul is a thriving metropolis where continents and the ancient and new worlds collide.

Marcelle Nethersole reports.



Located along the Bosphorus strait, Istanbul is the only city in the world that sits astride two continents – Europe and Asia. Boasting the history of three influential ruling empires, the city is silhouetted by the sight of domes and minarets to modern architecture.

Istanbul has actually been on the tourist map for years. It was on the hippy trail in the 70s and today receives almost 7 million visitors a year.

“Istanbul has always been our key tourist city,” said Nihan Bekar, expert for the Turkish Ministry of Culture and Tourism. “For centuries it has been one of the most multicultural cities in Europe, where more than a dozen languages are spoken on its streets, from Italian and Persian, to Greek and Arabic.

“The fact that Istanbul is located on two continents makes it interesting. A visitor can be in Europe, then jump on the boat and be in Asia within half-an-hour. We say it is a bridge between the east and the west and a cradle of the civilisations. It is a meeting point of faiths.”

With a population of 13 million, the city is home to three universal empires – the Roman, Byzantine and the Ottoman.

“Istanbul holds treasures dating back to these civilisations, such as the Hagia Sophia from Roman times, the Topkapi Palace of the Ottoman Empire and the Basilica Cistern from the Byzantine era,” said Bekar.

The city where East meets West

The Hagia Sophia Museum is breath-taking. It was used as a church for 916 years and as a mosque for 481 but, today, the masterpiece belongs to the history of architecture and has been a museum since 1935. Visitors are spellbound by its architecture, which includes its stunning mosaics. The figured mosaics above the Emperor’s Gate, by the exit door, date back to the 9th and 12th Centuries.

The Basilica Cistern is the largest of the cisterns in the city. Its entrance is in a small building to the west of the Hagia Sophia. It was built during the reign of Justinianus the First (527-565) and used to provide water to the palaces located in the area. It has 336 pillars in 12 rows of 28 pillars.

The elaborately designed Topkapi Palace dates back to 1459 and had been the seat of the Government for the Ottoman Empire that ruled three continents for centuries. It was the luxurious home to the sultans and their families. The palace turned into a museum in 1924 and, today, holds a vast and rich collection of Ottoman artefacts, including jewelled weapons, miniatures and manuscripts, as well as a collection of sultan’s clothes.

Another of the city’s top draws is the Blue Mosque. It is one of the most famous monuments of the Turkish and Islamic world and the only mosque built with six minarets. It is actually called the I.Sultan Ahmet Mosque, but it is known as the ‘Blue Mosque’ for its blue glazed tiles that decorate the interior.

“Istanbul really is a culture vulture’s delight,” said Bekar. “But away from the monuments there are plenty of other things to see and do. A traditional Turkish spa treatment is a must. A hamam is all about cleansing the body and soul; it’s a wonderful experience. There are traditional

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FOCUS ON TURKEY



CONTINUED FROM PAGE 61

hamams dotted all over the city. You will also find modern spa facilities in the five-star hotels and most boutique hotels.

“Another attraction is taking a ferry over the Bosphorus from Europe to Asia or visa-versa. While doing this, you can enjoy a cup of Turkish tea as the sights pass by.”

If you’re looking to do a spot of shopping, the city has modern shopping centres but for something more authentic make sure you visit the Grand Bazaar, where you can haggle on a price for a Turkish carpet or traditional handicrafts.

“The Grand Bazaar is a traditional shopping mall with 500 years of history,” said Bekar. “We say it is the grandmother of all the shopping malls. You can find all different types of Turkish handicrafts, such as the famous glazed tiles and pottery, works of art, jewellery, and famous Turkish carpets here.”

He added: “Make sure you don’t get lost, there are over 58 streets and 4,000 shops and restaurants.”

The Grand Bazaar is on the UNESCO world heritage site list, as is the Spice Market.

Food is an important part of life for the Turkish and it’s not all about kebabs.

Bekar explained: “We have different types of climates in Turkey, so there are lots of different cuisines in the country. For instance, in the Black Sea region you will find fish and vegetable dishes, while on the Turquoise Coast there are olive oil, vegetable dishes, and soups.

“Istanbul caters to these areas, as well as specialist restaurants that can serve dishes from Ottoman recipes. And, of course we have international restaurants.

“Walk through the backstreets and you will come across narrow little streets with lively open air restaurants.

“Remember to try our pastries too, such as the baklava, and a cup of Turkish coffee or tea. The whole of Turkey has a great café culture. The locals like to relax with friends and play chess or draughts while sipping coffee or tea.”

More famous for its historical sites and carpets, visitors to Istanbul might expect the city to be dull once the sun goes down. However, it actually has one of the liveliest nightlife scenes in the eastern Mediterranean, offering something for everyone from thumping nightclubs and Western bars to cool lounge bars and local meyhanes, which serve alcohol (try a glass of the raki – it can be quite potent). And you will be sure to find somewhere with a good belly dance show.

Due to its history and location, Istanbul has always received a large number of visitors – both tourists and business travellers.

“We received 6.9 million tourists to Istanbul in 2010,” said Bekar. “Our top market is from Germany, followed by Russia, the UK, and France. But we also receive a lot of Gulf visitors, especially from Iran – 1.8 million Iranians visited in 2010. Many of these were for leisure as opposed to business. We have also seen a large increase in

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Main picture: Ferries cross the waterways between Europe and Asia with the Bosphorus Bridge in the background.

Top left: Freshly cooked Turkish delight can be found throughout the city; the modern day tram runs through old Istanbul; traditional ceramic bowls make great gifts

Above: Tea and backgammon can be seen everywhere - particularly in the area around the grand Bazaar (top right).





CONTINUED FROM PAGE 62

visitors from Syria, Jordan, Lebanon and the UAE. For example, between 2009 and 2010, the number of tourists from Syria increased from 390,000 to 748,000.”

The city has a variety of hotels from five-star to boutiques, with many of the boutique hotels in the old city offering fabulous panoramic views. There are plans to build more.

“Istanbul has 338 hotels,” said Bekar. “We currently have a lot of hotel chains investing here. In May, the Edition Hotel opened. It has the famous restaurant Cipriani and the exclusive Gold Bar. This hotel attracts a lot of business travellers as well as those coming for a special occasion. The Hilton Group is also planning to open 40 properties in Turkey, including Istanbul, in the next five years.”

Istanbul is ranked as the 15th city in Europe for international meetings, incentives, conferences and exhibitions (MICE).

Bekar said: “We have Congress Valley, which combines three convention centres, hotels and shopping centres, as well as other convention centres. The city is easy to get to for business travellers. We have two airports and each receives

a lot of flights. The Middle Eastern carriers all have direct flights into Istanbul. It is also easy for Europeans and Americans to travel here.”

Turkey’s capital, Ankara, is a business hub but Istanbul is the MICE destination of choice.

“Ankara is where the republic was established. It’s an interesting city and cultural with some wonderful museums. It is for the business traveller and I think it will grow in terms of MICE tourism. New convention centres are being built there and tourist figures are getting higher,” said Bekar.

Turkey has been enjoying an outstanding reputation as the most favourite travel destination of many people in the world during the last year. Surrounded by water on three sides – the Mediterranean Sea, Black Sea, and Aegean Sea – and protected by mountains along its eastern border, it all adds to its diversity and offers travellers’ choices.

“The population of Turkey is 73 million. It’s a big country and it’s the 15th biggest economy in the world, with 10,000 years of history,” said Bekar. “It’s an economically growing country in

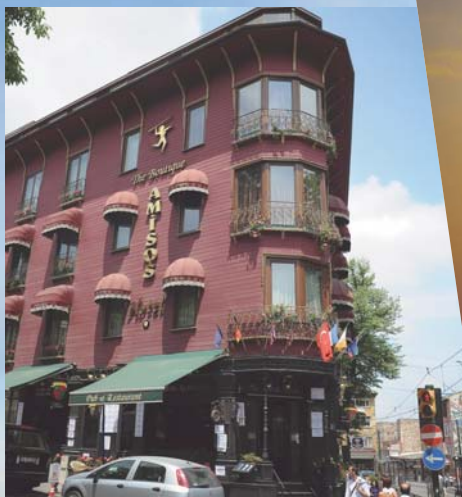
the region and tourism is an important sector in Turkey; a resilient sector.

“Despite the universal economic crises our tourism figures keep rising. In 2009 Turkey welcomed 27 million visitors and in 2010 it was 28 million. We are Balkans, we are Asian, we are European and we are Mediterranean. Our neighbours are Middle Eastern countries, so Turkey is special in the region. I think our international visitor numbers demonstrate our diversity.

“Of course, the coastal towns are extremely popular in the summer months but Istanbul is all-year-round, even though it can get quite cold during winter.”

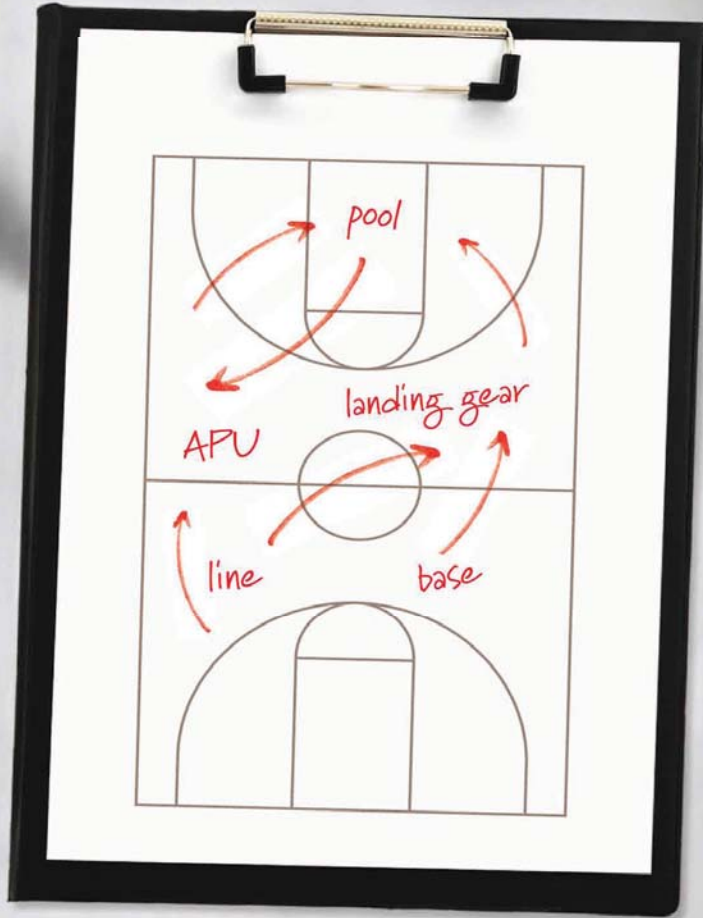
Istanbul has a good rail link to the whole of the country, as well as European destinations. The city also connects with the Orient Express to other European destinations, including Bucharest, Rome, Paris and London.

“In 2010 the New York Times ran a poll for its readers to name their favourite travel destination and Istanbul was top. This is not the first time Istanbul has come up trumps as a top travel destination. There is so much to see and do in Istanbul that it is like a country in itself,” said Bekar.



Top left: Turkish architecture.
Middle: Constantine's, Column or the burnt tower as it is better known.
Right: Church at Topkapi Palace.
Below: The famous Blue Mosque.





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In the past five years Turkish Airlines has burst on to the global scene. Alan Peaford meets the man who has led the airline from a government department to a successful example of a privatised national carrier.

Kotil: A study in success

Dr Temil Kotil has the air of an academic. He walks into his office in the Turkish Airlines management headquarters in Istanbul with copies of graphs in hand and the demeanour of a university lecturer as he presents them. And that is not surprising.

For until just eight years ago, the dusty halls of academia were where Dr Kotil served.

Born in 1959, he graduated from the aeronautical engineering department at Istanbul Technical University (ITU) in 1983 and received a Ph.D. from the University of Michigan in 1991. After founding and managing the aviation and advanced composite laboratories of ITU, he also served as chair and associate dean of faculty of aeronautics and astronautics engineering.

“Many of the senior managers in Turkish Airlines I have known for years,” he laughed. “Most of them were my students.”

Kotil was back in the US in 2001 as a guest professor at the University of Illinois and was committed to creating a bridge between the legacy of knowledge in the United States and the thirst for technical knowledge among his aerospace engineering hopefuls in Istanbul.

And that whole bridge concept works with Kotil today as he strives to create a role for the Turkish national carrier to act as a bridge for the world.

University role

In 2003 he was asked to leave his university role for a post within the emerging Turkish Technik; two years later he became the chief executive of the airline. At the time he pledged to take the privatised Turkish Airlines into the world's elite – many would say he has achieved it but Kotil still has ambitions.

“There are only a handful of true five-star airlines in the world. We are close to it. Quality is a mind-set and we are working this right the way through the organisation,” he said.

“Our opportunity is again by being a bridge as 66 per cent of the world's transfer passengers cross through Turkey – from Africa or Europe to Central

Asia, from across the Atlantic to the Middle East or Asia. Everything goes across Turkey.”

This is nothing new. Like many Turks, Kotil has a fascination with the Silk Routes – important trade paths for goods of all kinds between merchants, pilgrims, missionaries, soldiers, nomads and urban dwellers from ancient China, ancient India, ancient Tibet, the Persian Empire, Arabia and the Mediterranean countries. The Silk Routes operated for almost 3,000 years and got the name from the lucrative Chinese silk trade, which began during the Han Dynasty several millennia ago.

“Whichever of the Silk Roads you took, you passed through Turkey,” Kotil said.

Quality improvements

“We build our corporate philosophy on the same rules as the merchants who worked those caravans. They would sell to themselves, to the other merchants and families that were travelling with them. The quality had to be right. The prices had to be right. The trader had to have flexibility. And that is what we are trying to do now. We have 16,000 employees and they have to believe in what we are selling.”

The quality improvements brought about by Kotil and his team is already making a dramatic effect on the Turkish figures. Last year Skytrax rated the company as providing the best food in economy and this year as Europe's best airline, backing Kotil's assertion that the airline is focusing on all of its passengers and not just the premium ones.

This year it has introduced its premium economy ‘comfort’ class to attract the growing number of business people drawn to Turkish for its convenience as the bridge between the different continents.

Africa is high on the agenda for Kotil. “We love Africa,” he said. “The problem at the moment is not enough passengers but the numbers are growing. We have ordered new Boeing 737-900s, which we will use to open new thin routes into Africa.”

The aircraft will arrive in the autumn and will

connect African cities with Europe, Central Asia and across the Atlantic and to China.

“We are the gateway and offer greater convenience than the Gulf airports. Look, if you are travelling from Europe you are less than three hours, and then you are on a comfortable long-haul flight. We want to see Istanbul as a major hub. And that's where the quality comes in. We want the customer to feel good from the moment of check-in. We need to sell the tickets to ourselves like on the Silk Road by knowing how good the product is. I fly on our aircraft and fly economy sometimes. We need to know how it works. We need our staff to think the passengers could be theirs or their colleagues' wives, mothers, brothers, friends. That is the philosophy of selling the product to ourselves.”

Kotil backs his belief that Turkish Airlines still has space to grow into one of the world's top airlines with an overview of his country's economy and the airline's recent results. Turkey's GDP is growing at a rate of 5.2 per cent (2010 figures) compared with 4.5 per cent across the MENA region and 1 per cent in Europe.

Fastest growing

The airline is one of the fastest growing with Revenue passenger kilometres (RPKs) up by 12.47 per cent compared with a global average of 3.81 per cent. It is now the sixth most profit generating airline in the world and ranks 28th in the world in terms of operating income. It is eighth in terms of destinations and 22nd for number of passengers carried.

“We look closely at these figures to see what we can do,” said Kotil. “We are buying new, more fuel-efficient aircraft and introducing technology and practices that add to our social responsibilities.”

The fleet renewal is key to Kotil's strategy. “We are financing 90 additional aircraft through international funding with the banks. We have no real debt other than asset base, so we are strong.”

The plan is that the airline will have 200 aircraft in its fleet by 2015 (currently 164) consisting of



24 A330/A340 and 12 Boeing 777s, 159 narrow-bodies with 95 of the Boeing 737 family and 71 of the Airbus A319/320/321 family. The average age of the fleet is 6.5 years, making in the youngest fleet in Europe and matching those of its Middle East competitors.

Kotil is ready to take on the detractors who claim that the Turkish government's 49 per cent stake in the airline adds to government support.

"When I took over in 2005 the government guaranteed our borrowings but as we were going private we cleared the guarantees and, since 2006, we have had nothing from the Turkish government. We are 100 per cent financed by the airline operation and not the government," he said. "After restructuring we have \$2bn in cash. That's enough for the down-payment for our fleet plans and with that it is easier to finance aircraft at very favourable rates. We are a strong company with cash."

At the same time as increasing its revenues, Turkish has worked at controlling its cost. "We started cost cutting in 2002 and our staff are conscious of this. It works," he said.

Kotil recognises the impact of the low-cost carriers like Pegasus and even easyJet, as well as Turkish's own product, Anadolujet, which operates from Ankara.

Brand image

"We have seen Turkey's domestic growth go from five million to 15 million. That has been good for Turkish Airlines as well."

Turkish is pushing its brand image. In May the two football teams it sponsors – Barcelona and Manchester United – met in the European Champions League final (the Manchester players appear in Turkish's safety videos).

Americans are impressed that Kobe Bryant,

star of the Los Angeles Lakers basketball team, became a global brand ambassador to add weight to Turkish expansion in the USA. As well as sponsoring the European basketball league, Turkish made a major step across a political minefield by also signing a sponsorship agreement with Greek basketball club Maroussi.

"The emphasis is shifting and we have to work to make Istanbul, and Turkey, the great hub," Kotil said.

"The government has stopped the need for applying for visas in advance. We have made it easy to be a hub. Istanbul is a great tourist spot and we have created some Istanbul tours for passengers who have a lay-over for connecting flights."

As you would expect from an academic, the planning and the strategies are sound. The difference with Kotil and his airline is that he is steadily turning theory into practice.



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Fast-growing TAV is a Turkish delight

The history of TAV dates back to 1997, when the official call for tenders for the Istanbul Ataturk Airport International Terminal Building led to TAV Airports Holding being established as a joint venture between the Tepe and Akfen Groups.

Ataturk Airport is one of the first examples of 'build-operate-transfer' airport operation projects in the world and this has helped TAV turn it into a huge success.

In 2006 the company reorganised its structure, gathering all of its operations activities under the TAV Airports Holding (TAV Airports) division, and construction activities under the TAV Construction division.

Today, TAV Airports is the leading airport operator in Turkey.

"It was only fairly recently that we celebrated our tenth year of our operation, so we are a very young company. But we have grown rapidly over the last decade and now operate, manage and develop ten airports in a number of countries," said chief strategy officer, Waleed Youssef.

Istanbul, Turkey's gateway to the world, is the company's largest airport operation.

"We built the terminal at Ataturk according to the build-operate-transfer model in just 22 months and financed the investment," said Youssef.

"In 2006, the 25-year-old domestic terminal was modernised with new technological systems. Today we are responsible for the facilitation of passengers, basically operating and managing the facility making sure that there are no bottlenecks. In addition, we are also involved in ground handling, duty free, food and beverage, provide all the airport IT systems, the security and a host of other things."

Istanbul Ataturk Airport is the biggest in Turkey and serves between 700 and 750 airplanes and approximately 90,000 passengers every day, with these figures growing.

"We have experienced a huge amount of growth in Istanbul, both origin and destination, as well as transfer passengers. We were not affected at all by the financial and economic crises experienced two years ago," said Youssef. "First of all, Turkish Airlines has been growing at a fast rate and, since Istanbul Ataturk is its hub, we have clearly benefitted from that growth."

When it comes to airport operations, Istanbul-based TAV Airports Holding could be described as nothing other than a Turkish success story. Marcelle Nethersole reports.



Waleed Youssef: We are already looking at expansion plans.

TAV Airports Holding also operates the Turkish airports of Ankara, Izmir, and Gazipasa as well as Tbilisi and Batumi airports in Georgia, Monastir and Enfidha airports in Tunisia, and Skopje and Ohrid airports in Macedonia.

Youssef said: "Like at Ataturk, TAV Airports also handles all the other areas of airport operations at these airports, from duty free and food and beverage services to the ground services, IT, and security and operations services."

The company, together with its subsidiaries, provides services to approximately 420 thousand flights and 48 million passengers a year.

Its sister company, TAV Construction, is also a big-name player in the aviation industry. Headquartered in Istanbul it has regional centres in Cairo, Doha, Dubai, Tunisia, Bahrain, Abu Dhabi, Macedonia, Muscat and Tripoli.

Besides offering airport construction services, it specialises in technical maintenance and repairs.

"TAV Construction is currently involved in the building of Oman Airport, as well as Qatar Airport," said Youssef. "It also built terminal 3 in Cairo and it was involved in the construction of the Libyan airports of Tripoli and Sabha."

TAV Construction also offers consulting services in airport infrastructure, another growing need worldwide.

The majority – 55 per cent – of the consolidated revenues of TAV Airports is, in fact, non-aviation related. The largest revenue contributor is ATU, the duty free operator, where TAV Airports has a 50 per cent share. According to financial statements prepared in accordance with IFRS, TAV generated a turnover of 785 million Euros in 2010. The company shares have been listed on the Istanbul Stock Exchange as "TAVHL" since February 2007.

"We are already looking at expansion plans, particularly here in Istanbul," said Youssef. "We are always looking at the future and trying to compare it to the growth rate currently. Certainly, we are looking at new investments in terms of additional runway capacity, additional terminal capacity and, last year, we expanded the capacity of the international terminal.

Youssef added: "Ataturk has three runways – two parallel but dependant and one cross-wind. We use the latter when certain metrological



Istanbul's Ataturk Airport is the international hub for Star Alliance carriers.

conditions are taking place in Istanbul. We believe there is still a lot of capacity here. We are operating today for slots and co-ordination purposes of 40 movements an hour and we believe that number can and should increase.

“In fact, the government here is working with EuroControl in order to improve the capacity of the runway system. Gatwick in London handles about 56 movements from a single runway. So we believe there is a huge amount of improvement that is possible in the runway system.

“In addition, we believe that it is possible to build a fourth runway at Istanbul and we are in discussions with the government with that.

“In terms of the terminal capacity, there is quite a bit left, but this depends on the time of day and the airline schedules as to when they will use the airport. But the capacity of our terminals is about 40 million and we’re nowhere near that yet.”

Ataturk Airport is on the European side of Turkey, so does Youssef feel competition with Sabiha Gokcen Airport on the Asian side?

“Turkey is a huge market,” said Youssef. “Sabiha Gokcen is run by a private consortium. Geographically we are much better located; this is the main airport. They tend to attract domestic traffic as well as point-to-point low-cost traffic, as it’s much further to the city centre. In a sense, that airport acts as an alternative airport for certain types of traffic as Istanbul Ataturk may be inconvenient for them. Let’s just say, we work well doing our own thing, so I’m not too worried.”

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THE OTTOMAN LEGACY

A long standing member of the NATO forces, the Turkish Airforce is one of the oldest in the world. Jon Lake reports.

Though located primarily in Asia (just three per cent of its territory in Europe), Turkey looks both East and West, and the nation itself is a proud member of the Council of Europe, the Organisation for Economic Co-operation and Development (OECD) and the Western European Union.

The Turkish Air Force is also very much a European air arm – the second largest air force in NATO (after the USA, with 1,049 aircraft on charge in April 2011), and a regular and valued participant in NATO exercises and operations.

Today's Türk Hava Kuvvetleri (THK – Turkish Air Force) can trace its roots back to 1911, when it was formed as the Ottoman Air Force. This makes it one of the world's oldest air arms.

Turkey was neutral for most of the Second World War, finally joining the allied side in February 1945, though encircled by the Axis powers from 1941.

The Turkish Air Force was already the largest in the Balkans and Middle East and the Government embarked on an ambitious programme of modernisation and re-equipment of its forces, and especially of its air force. This helped deter attack by Germany, Italy and Bulgaria.

The air force became independent from Army Command on January 31 1944.

Turkey acquired Morane Saulnier MS-406 fighters from France and turned to the UK for the supply of Fairey Battles, Avro Ansons, Bristol Blenheims and Beauforts, Westland Lysanders and Hawker Hurricanes, and, later Bristol Beaufighters, Supermarine Spitfires and de Havilland Mosquitos.

Increasingly, Turkey turned to the USA for

aircraft, receiving Curtiss CW-22R/B Falcons, P-40 Tomahawks and Kittyhawks, Consolidated B-24D Liberators, Douglas B-26B/C Invaders and C-47A/B Dakotas, Martin Baltimores and Republic P-47D Thunderbolts.

Unusually, Turkey even received 72 examples of the Focke Wulf FW-190-A3, in return for supplies of iron ore and chromium.

After the war, Turkey fought on the UN side in Korea, and joined NATO in 1952. A close and vital US ally, Turkey thereafter organised and equipped its air force along US lines.

Small numbers

For many years Turkey carefully managed to modernise its air force by buying relatively small numbers of the latest aircraft, while simultaneously maintaining force structure by taking delivery of larger numbers of previous generation fighters retired by other NATO nations. Thus Turkey obtained 54 new-build F-104G/CF-104G/TF-104G Starfighters from 1963, but augmented these with surplus F-100 Super Sabres, and later received 275 more second-hand Starfighters from Germany, Belgium and the Netherlands.

Despite long-standing tension with fellow NATO member Greece, over the Aegean, and Cyprus (which has frequently descended into military skirmishing and, indeed, to the full-scale invasion to liberate Northern Cyprus in 1974), Turkey has continued to play a vital part in the Alliance. It has participated in NATO operations in the Balkans and in the Baltic states and, more recently, in Afghanistan.

The nation has also provided a vital

springboard and base for Allied operations in and over Iraq. But Turkey has 'gone its own way', too, flying missions against Kurdish PKK positions in Northern Iraq.

The Turkish Air Force has remained one of the most important in NATO – as well as one of the largest – and, with the air forces of Germany, Italy, Belgium and the Netherlands, is one of five NATO air arms entrusted with the delivery of US B61 free-fall nuclear weapons.

An estimated 90 B61 bombs are held under so-called 'dual key' arrangements and stored at Incirlik Air Base. Fifty of these are reportedly assigned for delivery by USAF aircraft with 40 for delivery by the Turkish Air Force.

In fact, because Turkish defence expenditure has remained at close to Cold War levels while other nations have rapidly reduced their spending, the relative importance of the Turkish Air Force within NATO has increased in relative terms.

The closeness and importance of the Turkish relationship with the US and NATO has meant that the Turkish Air Force has continued to receive modern equipment, principally from the USA, but also cascaded from other NATO nations. This has allowed the retirement of older aircraft types, though Turkey has frequently been among the last operators of particular fighters.

All THK's century series fighters are now long gone, though the air arm does still operate about 48 ex- RNLAf, RNorAF, USAF and RoCAF F-5B, NF-5A, F-5B and NF-5B Freedom Fighters (primarily in the lead-in fighter training role), as well as six squadrons of F-4 Phantoms.

But the fighter force today is built up around a



nucleus of 12 squadrons of F-16 Fighting Falcons, of 270 delivered – 262 of these built by local industry in the shape of Turkish Aerospace Industries (TAI). Some 217 of these (38 of 43 Block 30s originally delivered, 104 of 117 Block 40s, and 76 of the 80 Block 50s upgraded under Peace Onyx II and III) are being upgraded to a common standard under the Common Configuration Implementation Program (CCIP), bringing them to the same standard as the latest 30 F-16s.

Turkish F-16s were the first outside the USAF to receive LANTIRN (AN/AAQ-13 navigation and AN/AAQ-14 targeting) pods (from February 1994) and the aircraft have AGM-65A/B Maverick TV-guided missiles, AGM-88 HARM anti-radiation missiles and AIM-120 AMRAAM missiles. Post upgrade, they will add compatibility with AGM-84H (SLAM-ER), AGM-154A/B, AIM-9X Sidewinder and CBU-103/105 cluster bombs.

The aircraft are compatible with European IRIS-T and Israeli Python 5 and Derby air-to-air missiles, as well as the Norwegian Penguin anti-ship missiles and the Israeli Rafael Popeye air-to-surface missile.

Turkey has also or is upgrading many of its older aircraft types. The T-38 advanced trainers are being upgraded by TAI under the so-called 'Ari' upgrade.

On June 21 2007, TAI was awarded a contract to upgrade five aircraft at Akinci and to support the upgrade of the remaining 50 aircraft at THK's first air supply and maintenance centre at Eski ehir. The T-38 upgrade sees 13 new systems integrated, including a locally-developed central



Top: A pair of F-16s fly in close formation. Above: US and Turkish cooperation is high with the Turk's role in NATO.

control computer with embedded operational flight program (OFP) and no-drop bomb scoring system (NDBS).

The other systems include a new head-up display (HUD), hands on throttle and stick (HOTAS) controls, multi-function colour displays (MFCD), and a digital video data recorder/data transfer system (DVDR/DTS). The aircraft emerge in a smart new grey colour scheme with glossy black top surfaces.

THK has also commissioned a \$75 million upgrade for 48 of its 87 Northrop F-5/F-5Bs, with a consortium of IAI/Elbit and Singapore Technologies Aerospace designing the upgrade. The modernisation is being undertaken in-country, with IAI modifying the first four aircraft and the rest being completed at Eski ehir.

The F-5/2000 modernisation programme

aims to upgrade 48 aircraft, comprising 20 F-5As, 14 NF-5As, eight F-5Bs, and six NF-5Bs, to serve as lead-in trainers for the F-16 force. The upgrade covers two areas – with a structural upgrade as well as an avionics modernisation. The first upgraded F-5 made its first flight on April 17, 2001.

Turkey is also undertaking a \$630 million upgrade of 54 of the 197 or so McDonnell Douglas F-4E Phantoms delivered between 1973 and 1994, following the award of a contract to IAI in August 1995.

The F-4E 2020 Terminators are receiving a structural upgrade and an improved avionics system with 26 worked on by IAI at Lahav in Israel and the remaining 28 undergoing the essentially similar Turkish aircraft modernisation phase (TAMP) upgrade at Eskisehir. The first of the Israeli-upgraded Phantoms was redelivered on July 3, 2002.

The Turkish Air Force Phantom fighter bombers were augmented by about 40 RF-4E reconnaissance variants, about 26 of which remained in service by 2009, – 18 of them modernised to RF-4ETM 'Isik' standards in 2010.

The upgraded aircraft have a new GPS/INS navigation system including modern radios, a new flight control system, a modernised defensive EW suite (with RWR and chaff/flare dispensers) as well as structural upgrades. After the completion of the Isik modernisation programme, all the RF-4Es will be concentrated within 113 filo (squadron), and 173 filo will disband. The RF-4ETM will carry a variety of long-range oblique

Continued
on Page 74



CONTINUED FROM PAGE 73

photography (LOROP) and search and rescue (SARS) pods.

In the longer term, Turkey joined the system development and demonstration phase of the Lockheed Martin F-35 Joint Strike Fighter programme on July 11 2002, becoming a level 3 partner at a cost of \$175 million.

Turkey has a requirement for about 150 F-35s to replace Phantoms and F-16Cs from 2013. A letter of intent (LOI) was signed between TAI and Northrop Grumman ISS (NGISS) International on February 6 2007, under which TAI will become the second source for the F-35 centre fuselage. Though the number of centre fuselages to be produced by TAI will be determined according to the number of F-35s procured by Turkey, TAI was selected on the basis of best value and industrial capability.

Upgrade programmes

This industrial capability has been honed through a succession of production and upgrade programmes for the Turkish Air Force, which go far beyond the various fighter modernisation programmes already described and which, in some cases, pre-date the massive industrial effort to produce the F-16 locally.

Perhaps unsurprisingly, TAI's first licence manufacturing programmes were relatively modest, exemplified by the sub-contract with Agusta under which TAI produced 34 SF-260D primary trainers for the Turkish Air Force between 1991-1993.

Interestingly, and despite the more complex and more 'difficult' F-16, 737 AEW&C, F-35 production and upgrade programmes which now occupy TAI, the company retains its core, basic competencies and, following the KT-1 Basic Trainer Aircraft Procurement Agreement in 2007, TAI has manufactured, assembled, flight tested and delivered 40 KT-1 Basic Trainer Aircraft, which are now replacing the THK's ageing T-37



Top: Turkey's F-16s are built under licence by TAI. Above: Turkish Navy AB212 is multi role from search and rescue to anti-submarine operations. Below: Hercules is the mainstay of the THK's transporter fleet.

trainers with the flying school at Izmir.

THK's transport fleet today owes just as much to local industry, with older types having been extensively modernised and upgraded and with TAI manufacturing later types under licence.

The ageing Lockheed C-130B and C-130E Hercules and C-160D Transall each equip single squadrons, and are augmented by four main squadrons of CN235M-100s.

Fifty CN235 light transport aircraft were produced by TAI and delivered to the Turkish Air Force between 1991-1998 and nine more for the coast guard and navy followed from June 1999. TAI's work share in the CN235 airframe amounted to 92 per cent in the first programme and 95 per cent on the last nine aircraft.

Night vision goggles

Under the C-130 avionics modernisation (Erciyes) programme, TAI is upgrading seven C-130Es and six C-130Bs with a new night vision goggles- (NVG-) compatible glass cockpit, global air traffic management (GATM), reduced vertical separation minima- (RVSM-) ready avionics, a new mission computer and a new mission planning system.

The Turkish Air Force expects to receive ten Airbus A400Ms (though the original requirement was for 20), and TAI will take responsibility for the design and production of the forward centre fuselage, the rear fuselage upper shell, parachute doors, emergency exit doors, the tail cone, lighting and water/waste systems and the aileron and spoiler.

While the Turkish Air Force was once a primarily tactical, 'teeth' air arm, the force has expanded and developed new capabilities during the latest 'rounds' of modernisation. Thus, today's THK includes air-to-air refuelling tankers, AEW aircraft and dedicated SAR helicopters as well as fighters, fighter-bombers and various transports. It is also about to start operating ISTAR UAVs.



The Turkish Air Force brought its first KC-135R tanker into service in October 1997, though Turkey had already been leasing two KC-135s prior to the purchase of seven surplus KC-135Rs, which today equip a single filo at Incirlik.

The Turkish KC-135Rs have received the Pacer compass, radar and global positioning system (CRAG) upgrade, gaining a number of new (mostly Rockwell Collins) avionics systems.

These include an FMS-800 integrated flight management system with embedded traffic alert and collision avoidance (TCAS) and an enhanced ground proximity warning (EGPWS), new Collins WXR-700X forward-looking predictive wind shear weather radar and FDS-255 flat-panel LCD multi-function flight displays.

The Turkish Air Force signed a contract for the supply of four Boeing 737-700 airborne early warning & control (EWAC) aircraft (with options on two more) on June 4 2002 under the Peace Eagle programme. The first was modified and tested by Boeing at Seattle but the remainder are being modified and tested by TAI at Ankara. The first Turkish-converted aircraft was completed on June 4 2008.

The aircraft use an advanced Northrop Grumman multi-role electronically scanned array

(MESA) radar with integrated identification friend or foe (IFF) capabilities and have a Turkish-built electronic support measures (ESM) system.

Service entry is expected during 2011 and major maintenance is expected to be undertaken by Turkish Airlines.

Under the Phoenix II programme, beginning in 1997, the EuroTAI consortium was formed (by Eurocopter and TAI) to co-produce 30 AS 532 Cougars for the Turkish Armed Forces (TAF).

Small numbers

The aircraft were manufactured between 1997-2003 with the first two helicopters being built by Eurocopter in France, but with the remaining 28 almost entirely manufactured by TAI, except for the engine, gear box and a few other critical components, making this the first rotary wing aircraft production programme by TAI.

The aircraft comprised six AS-532 utility helicopters and four AS-532 SAR helicopters for the Turkish Land Forces, and 14 AS-532 SAR helicopters and six AS-532 CSAR helicopters for the Turkish Air Force.

Since the Cougar programme, TAI has completed a 'digital cockpit modification' of 20

S-70A-28 helicopters for the Turkish Land Forces, re-delivering the last aircraft in February 2002. The company has also carried out the ambitious YARASA upgrade of four S70 Black Hawk Helicopters for the Special Forces Command.

THK consists of four Air Force Commands (Hava Kuvvet Komutanligi). Two of these are primarily geographic, and two are functionally based.

The first Air Force Command (1nci HKK) is headquartered at Eskisehir and controls five major air bases or Ana Jet Üs (AJÜ), in the western part of Turkey.

The second Air Force Command (2nci HKK) is headquartered at Diyarbakir and controls four major air bases in eastern Turkey.

Air Training Command (Hava Egitim Komutanligi) is headquartered at Izmir and consists of three major bases.

Air Logistics Command (Hava Lojistik Komutanligi) controls three Air Force maintenance centres (Hava İkmal Bakim Merkezi Komutanligi).

Military aircraft are also operated by the Turkish Army, the Turkish Navy, the Turkish Coast Guard and the Ministry of the Interior.

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*Turkish Technic is developing a global reputation for excellence - and as **Brendan Gallagher and Geoff Thomas** report, investment is pushing it to aim even higher.*

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If Turkish Technic's growth plans come to fruition over the coming 12 years, Turkish Airlines' wholly-owned MRO subsidiary will have an annual turnover approaching US\$7 billion.

And what's more, it will have expanded from its traditional maintenance and overhaul activities for the domestic and regional markets into manufacturing aircraft cabin interiors, seats and galleys, to name but some of the areas this ambitious company is already involved with.

What's more, the company has ambitious intentions regarding expansion outside its home country with four strong possibilities already under discussion at Board level – some involving JVs while others are straight acquisitions.

Double-digit growth, year-on-year, is something that many global companies would have relished over the past few years – but Turkish Technic's deputy chairman and maintenance GM, Dr Ismail Demir, said annual growth has been between 15 and 20 per cent since the worldwide recession began to bite.

He puts this down to a combination of good management and the fact that Turkey experienced its "difficult financial times" in the early days of the new millennium rather than over the past few years.

Based at Istanbul's Atatürk Airport, Turkish Technic sets out its stall as one of the leading aircraft MRO operations in the region. Certified through EASA 145, JAA 145, the FAA and also the Turkish DGCA for the performance of



Turkish Technic's deputy chairman and maintenance GM, Dr Ismail Demir believes success is part due to Turkey's early climb from recession.

maintenance services, the company offers a variety of maintenance services through its diversified shops, including airframe heavy maintenance, engine repair and servicing and both landing gear and APU overhaul.

It claims to be the only 'one-stop shop' in the region and with its wide range of back shops certified for more than 4,000 Boeing and 4,000 Airbus aircraft components, Turkish Technic says that it offers its customers a full A to Z range of maintenance.

Turkish Technic provides maintenance services to its customers 11 fully-serviced bays including two wide and two narrow-body hangars (one of which, following rebuilding in 2014/2015 will be capable of handling all wide-body airframes including the Airbus A380), a VIP and light aircraft hangar in Istanbul, and another narrow-body unit in Ankara, where some further expansion is possible,

The company is also looking at the possibility of building new hangars at Turkey's Antalya airport on the Mediterranean coast which, although international in status and with a theoretical capacity of up to 35 million passengers a year, has no existing MRO facility.

But it's at the Sabiha Gökçen International Airport, around 70km away from Istanbul and on an area reserved for the creation of an international MRO centre, that the major expansion required is possible. The location will enable the centre to reach out towards European, Asian, North African and Middle Eastern MRO markets, as well as being ideal for the domestic market.

The new international MRO project and all the investments by Turkish Technic within Sabiha Gökçen International Airport are named as the HABOM Project (Havacılık Bakım Onarım ve Modifikasyon Merkezi), which translates simply into English as the Aviation Maintenance, Repair and Overhaul Centre.

With more than 77 years of experience and more than 3,000 qualified employees, the company is determined to make its mark on the MRO world and its ambitious plans will certainly make some of the current major global players consider how they're going to deal with the Turkish threat.

Since its incorporation as a separate – albeit wholly-owned by Turkish Airlines – entity in May 2006, Turkish Technic has been quietly expanding and making handsome profits for its owners. In 2008 the company's turnover was US\$480 million and two years later this had risen to US\$650 million, although this would have been at least US\$100 million greater had it not spun off its profitable CFM56 and IAE 2500 narrow-body engine maintenance activities in a JV with Pratt & Whitney.

Dr Demir said: "Traditionally, our MRO operations in Turkey have been based on 'as-and-when' customers rather than long-term contracts. So our first priority has been to secure full deals with all our domestic customers before we started to develop the international business. Within the next six years our plan is for Turkish Technic to be known as one of the top five MRO operations in the

Continued
on Page 78

TEC has high growth hopes

Although it's still a relatively young company, Turkish Engine Centre (TEC) is growing fast and has the ambition to become a dominant force in engine overhaul and maintenance – both in Turkey and much further afield.

A JV between US-based engine OEM Pratt & Whitney and Turkish Airlines' domestic MRO Turkish Technic, the company was only a gleam in the eyes of the partners in mid-2008, although they had been discussing the formation of an engine overhaul company to join P&W's existing network of six worldwide.

TEC is well-placed to expand on its domestic business that includes Turkish Airlines, Sun Express, Sky Airlines and Corendon Airlines.

Already, TEC has overhauled engines for airlines in Ukraine, Yemen, Sharjah, Bosnia-Herzegovina and Italy, and it's seeking to expand its current capacity to around 100 engines annually over the next four or five years. It currently has up to 14 powerplants being overhauled at any one time, with each taking an average of up to 60 days to complete, depending on the level of maintenance required.

Specialising in CFM56 (-3, -5C, -7B and soon the -5B) and IAE V2500-A5 engines for mainly single-aisle airliners, the new TEC facility has been designed with expansion in mind. And, although there is currently no test cell on site, this is an area that management intends to rectify over the next couple of years. In the meantime, TEC uses Turkish Technic's existing facilities in the capital if necessary.

TEC's director of sales, marketing and customer support, Mehmet Aykut Tutucu, explained that while the JV has inherited some people and equipment from Turkish Technic, the majority of the customers – and engineering kit – are brand new. He said: "Because we have the ability to be faster and cheaper than many of our competitors, thanks to the fact that we have a state-of-the-art facility with the specialist engineers and equipment to undertake around 40 to 45 per cent of repairs in-house, we are attracting customers and enquires from as far away as South Africa."

The new TEC facility (it began engine overhauls early in 2010) comprises a purpose-built unit of around 25,000sqm of engineering and administration space. It has been built as an integral part of the government-sponsored aviation technical park that's relatively close to Istanbul at Sabiha Gokcen International Airport.



CONTINUED FROM PAGE 77

world and we all believe that this can be achieved.”

With its parent airline now flying an enhanced fleet of more than 170 modern single-aisle and wide-body airliners (compared with 60 as recently as 2004) it could be expected that Turkish Technic’s proportion of third-party MRO work would have decreased. In fact, its third-party work has increased from 15 per cent seven years ago to today’s total of more than a quarter. And the projection is for this proportion to increase again despite Turkish Airlines’ planned expansion to more than 210 airframes by the end of next year allied with the fact that Turkish Technic is also performing ‘heavy’ checks now rather than the lighter maintenance work that comprised its past role.

But it’s not only MRO operations that are targeted for future growth. Dr Demir explained: “Over the past years we have had considerable difficulties with some of the internationally renowned suppliers of aircraft interiors, galleys and seating, to the extent that, in May 2011, we signed a JV with Turkish Aircraft Industries (TAI) to set-up a new company to design and manufacture – initially – galleys and then potentially full interiors for Turkish Airlines’ new Boeing and Airbus airliners.

“The problems we encountered with previous suppliers included the non-availability of spare parts, long lead-times and general shoddy workmanship so, with our parent company’s blessing, we have decided to go it alone.

“Around 25 of our engineers and designers have been working with TAI’s people for some months now and we are already buying materials and setting up the various supply chains that we’ll need. We hope to be able to have this equipment certified before the end of this year.”

During its MRO work with business jets, Dr Demir says Turkish Technic discovered many of the interiors had seen better days while being correspondingly difficult and expensive to maintain. The company decided to see whether owners would be interested in Turkish Technic making new interiors for them. “The level of interest encouraged us to enter this market too, although this will be purely our operation and not part of the JV,” said Dr Demir.

Seats are another area where Turkish Technic has experienced maintenance issues and so here, too, is a potential new avenue for the company to explore. There’s considerable experience of making seats for road vehicles in Turkey, explained Dr Demir, so we intend to use that expertise and set up our own manufacturing facility. The first seat – designed for economy cabins – will be prototyped by the end of this year and we hope to have it flying in revenue service as soon as physically and administratively possible.

In all, Turkish Technic intends to enjoy a 10 per cent market share of the lucrative international aircraft interiors and seats business – but it will clearly be some years before that goal is achieved. In the meantime, Dr Demir admits that there will be challenges and pitfalls. However, he says: “We’re prepared for a fight in order to prove ourselves.”

Volkan Eser, New hangar investment takes MNG to a new level.



Brave decision on new hangar pays dividends with revenues set to rise

Being a part of one of the largest companies in Turkey made all the difference for Istanbul-based MNG Technic, as it enabled sufficient capital expenditure during the recession to build a massive new maintenance hangar that has transformed the company’s prospects.

When the MRO was created towards the end of 2002, it was operating from a 5,000sqm hangar on the edge of Istanbul’s Ataturk airport. Now the company has a huge new 25,000sqm asset and a 5,000sqm paint-shop that is booked out until January 2012.

As a direct result, its annual revenues are set to rise from US\$45 million in 2010 to a projected US\$120 million in 2012/13.

Today, MNG Technic offers MRO services for 16 narrow-body – or four wide-body and eight narrow-body aircraft – simultaneously and it is providing base maintenance services to operators in more than 28 countries across four continents.

Marketing manager and executive VP, Volkan Eser, said: “We are a private company located at the crossroads of Europe and Asia and within around four hours flying time of just about everywhere other than the Americas and the Far East. Thankfully, our parent organisation (which has interests in construction, tourism, communications and transportation) took the brave decision to invest in our fantastic facility during the recession.

“The fact that we are currently operating at 82 per cent capacity means this decision is paying off. We now have space to do ‘D’ checks on up to eight wide-body airliners simultaneously and we also have concrete plans to double that capacity by 2018 at the same location.”

In 2010 MNG Technic employed around 590 people – a figure that has now increased to 900 and the plans are for it to be 1,200 by the end of this year.

Although the group includes a freight/charter operation called MNG Airlines, the decision was taken some years ago that MNG Technic would operate purely as an MRO for third-party organisations and it has followed this path since inception. The airline’s fleet is serviced elsewhere, allowing MNG Technic a free hand to sell its services on the open, global market.

As well as its JAR 145 approval, MNG Technic has now been awarded FAR-145, EASA Part-145, EASA Part-147, JAR-145 and JAR-147 certifications and approvals from Ukraine CAA, Egyptian CAA, Turkmenistan CAA, Russian CAA, Saudi GACA, Bahrain CAA, Nigerian CAA, UAE GCAA and Bermuda DCA for an extensive list of aircraft types including Airbus A300; Airbus A330; Airbus A300-600; Airbus A310; Airbus A320 family; Boeing B727; Boeing B737-300/400/500; Boeing B737NG/600/700/800/900; Boeing B757-200/300; Boeing B767; Boeing MD-80 series; and Boeing DC-9 series.

As well as the main servicing hangars, MNG Technic has extensive workshops capable of handling wheels/brakes; avionics; hydraulics; composites; cabin interiors; and electrical/electronic equipment/components.



The new facility is work in progress.



Hands on the key to growth at MNG

Uger Kalkan: first hand experience has changed the drive for quality by MNG Jet.

When your parent company owns a major airline and its own MRO business then you know what you need when it comes to getting maintenance.

But Uger Kalkan found things just a little different when it came to the world of business aviation.

Ugur's boss, Mehmet Nazif Günel, is the founder of the MNG Group, which has activities across a number of industries including construction, tourism, energy, finance, media and aviation. He also owned a Bombardier Challenger that operated under his MNG Airlines AOC but needed maintenance to be provided in Europe.

"Of course we know there is a reputation for quality – but what always surprised us was the billing. We would have a price but there would be so many extras mounting up. Lots of additional costs, and the turnaround time was slow," said Uger – now general manager of MNG Jet, a new subsidiary focused on the business aviation market.

The result of that frustrating experience led to MNG creating the new business and developing skills and experience that has positioned it to become a major player in the region's business aviation MRO scene.

Massive investment is under way in Turkey with a new headquarters being built at Ataturk Airport with maintenance hangars for 12 aircraft and further hangars for aircraft operating under the company's new AOC, which was granted in May.

The \$10 million project should be complete in December.

MNG Jet already has a four-aircraft heavy maintenance facility at Esenboga Airport in Ankara and has a line maintenance and repair

The business aviation maintenance arm of the MNG group is developing an international reputation. Alan Peaford finds out why.

facility in Ras Al Khaimah in the UAE, where it works with DanaJet.

Its success has been rapid.

Already it has achieved EASA part 145, JAR part 145, UAE GCAA, Jordan CARC and Cayman OTAR line and base maintenance approvals for Hawker, 750, 800, 800XP, 850XP and 900XP; Bombardier Challenger 601, 604, 605; Fokker F27 and certification as a Honeywell-authorized service centre for TFE731 engines and GTCP36 APUs.

As *Arabian Aerospace* went to press, MNG Jet was waiting for approvals for its electrical/wheel shop and was also expecting a third OEM to make it an approved service centre.

"We are positioning ourselves for the new facility to be open and it gives us a lot more scope," said Uger.

Mehmet Günel has just taken delivery of a new Bombardier Global 5000 and Uger sees a lot of potential for the maintenance of the type as Bombardier completes a sales push into the former CIS states and the Middle East.

"We are ideally positioned for the business jet owners to get to us. We are a short flight away and the costs are significantly lower."

MNG is hoping to receive its Part 147 that will enable it to develop its own training centre. "There are a lot of good engineers here but we will

need more. As we develop the number of aircraft we manage or maintain, we need to get the training for our people on type," said Uger. "It is sometimes difficult to schedule different engineers to attend training elsewhere so we realised it made sense for us to do it ourselves.

The UAE and Gulf region is one of the areas where Uger sees additional growth potential. "We are working with DanaJet in Ras Al Khaimah and that works very well," he said. "We are ideally placed there to bring in more third-party work. We also work with Turkish Technik engineers in the UAE for work on Gulfstream."

The word is spreading.

Already MNGJet has won customers from Portugal, France, Switzerland and even Greece, as well as from across the Middle East – particularly Jordan and Lebanon.

MNGJet is using its experience in the market to help owners purchase new or used aircraft and is able to carry out all of the checks.

"The market in Turkey is particularly good at the moment," Uger said. "Every one or two weeks there is another business jet coming on the Turkish register. The doors in Ankara are open for civil aviation.

"People know we are in the business for the long-term and they trust us. Because of our group connections we have a good reputation in the Middle East and the CIS.

"Everybody throughout the company knows our focus on safety, customer and employee satisfaction – you don't get a satisfied customer if you don't have a satisfied employee – and finally profit. If you get the first two right you get the third. We watch our costs and we don't shock our customer. We learned as a customer – now we are making it work for us."

Alan Peaford meets the company whose name literally means 'General Aviation' and finds out just why it is always ahead of the game.

Ali maintains his thirst to be first



The first Grand New helicopter from Agusta Westland to be delivered in Turkey is proudly sitting on the ramp outside the wing-shaped hangar of Genel Havacilik, at the GA park at the corner of Istanbul's Ataturk Airport.

But being first is nothing unexpected for the Turkish company, whose very name means 'general aviation'. The name was selected as the company became the first private aviation business in Turkey to receive its AOC and operate as a business.

The business was created by Nadim Sulyak, who returned to Turkey from the USA and, in 1983, imported a Piper Navaho to begin air taxi operations.

His young son, Ali, who is now chief executive of the company, was caught up in the excitement of it all – and created another first, which brought him national recognition.

“I loved the idea of flying and I was introduced to the Cessna 172 and began learning. I soloed at 12-years-old and am still the youngest person to have achieved that,” he said.

A national newspaper cutting of the momentous achievement is framed on the wall of Ali's office overlooking the GA ramp. “It was good but, to be honest, I was more interested then

in being able to drive a car but was too young. After all, nobody really believed you as a teenager when you said you could fly an airplane.”

No-one would doubt that now. Sulyak has his commercial pilot ratings and flies both fixed-wing and rotary aircraft for the expanded Genel Havacilik, piloting both the single and twin-engined Bell helicopters on the company books, and the vintage JetStar II.

The four-engined JetStar was initially designed as a private venture but was also selected to fulfil a US Air Force requirement for a multi-engined light transport and crew trainer. The first civil-configured JetStar was delivered in early 1961 and became the first business jet to enter service. Its successor, the JetStar II, first flew in 1976 and remained in production until owners Lockheed (now Lockheed Martin) decided to close the line in 1979.

The Genel Havacilik aircraft is one of the last and is in immaculate condition. Its new refurbished interior is a tribute to the capabilities of the company's in-house interiors team.

Sulyak also flies the company's Hawker 400 and is now ready to take on the Agusta Westland Grand New.

“We ordered the helicopter at the EBACE show

in May. Barely a week later it was ready to deliver. By June the aircraft was with us and working on VIP charter,” Sulyak said.

The Grand New features the most modern developments in avionics while retaining its predecessor, the Grand's, outstanding performance and features. It is the first type certified light twin (CS/JAR/FAR 27) to enter service with a new electronic flight information system (EFIS) featuring synthetic vision and the first helicopter in this class on the market fully compliant with the latest advanced global positioning system-based navigation requirements for all-weather operations.

“The Grand New really does satisfy our requirements to operate in the most demanding hot and high conditions of Turkey and cover the long distances across the country with extended range and high cruise speed,” Sulyak said.

“Because of the shortage of airports around some towns where industry is growing, helicopters are ideal. We take people to the factories or to construction projects where access by road can take a long time and there are no nearby airports to use a business jet.”

Genel Havacilik is looking at another first – a fully equipped heliport in central Istanbul. “More

Ali Sulyak has a panoramic view of the airport and an eye for opportunities in Turkey's helicopter market. Opposite: The company's hangars feature the latest Eclipse business jet and refurbishment is underway on a customer helicopter.



and more people are realising the benefit of helicopters for access and it is easier when VIPs come to the airport to have them transferred to the city by helicopter. A good heliport is one thing that is missing.”

But while the charter business with the Bell 206 and 407 helicopters and the two business jets is succeeding, Sulyak has turned his attention to other services – MRO.

“We really have a strong focus on the maintenance business now. It is the mainstay of what we do. We have avionics repair and are the authorised Garmin repair shop.

“We are EASA part 145 approved for the Hawker 125 and 400 series, for Bell helicopters and also we do modifications and maintenance on the Eclipse 500 very light jets. We hope to be soon working on Embraer and Cessna Citation aircraft,” he said.

The company has also been developing its skills in the aircraft interiors sector and has refurbished aircraft from its own fleet and from owners across the Middle East.

“We have business interests in Dubai,” Sulyak said. “Several owners have seen our work and have had their cabins refurbished. Over the last couple of years there has been a slow down in

Talking Turkey for many years

AgustaWestland has a long-standing presence in Turkey through both its commercial and military products, as well as industrial relationships with Turkish companies.

More than 30 AgustaWestland commercial helicopters have now been ordered in Turkey by various customers, mainly for executive transport, air tours and emergency medical service missions.

The Finmeccanica subsidiary said it is committed to ever-improving levels of customer support for its expanding business in Turkey and sees significant future business opportunities for a number of applications, including VIP/corporate transport, EMS and passenger shuttle services.

buying new aircraft but by coming in and having new carpets, upholstery and even new avionics, the aircraft has a new life and the owners are happy.”

As Genel Havacilik grows its MRO capabilities it is attracting more and more customers from the Gulf and North Africa.

“We are ideally located here. There is no visa application process needed. It can be issued on

arrival. We are close to the very vibrant and wonderful city of Istanbul, and are at the crossroads of Asia, Africa and Europe, so there is saving on flying time.

“Istanbul does not close and so crew can eat any time; it is not expensive and we can beat many other MRO providers on price and well as quality,” Sulyak said.

The company employs 60 people with 35 engineers and technicians. “They train in Europe and are highly skilled. People come here and are impressed at what we can do for the price and the quality of work,” he said.

Genel Havacilik continues as a family business with father Nadim and brother Omer still involved. Like Ali, Omer is a commercial pilot and sibling rivalry is apparent as Ali jokes: “He was 15 before he soloed and still doesn’t fly helicopters.”

The love of aviation runs through the blood of all of the Sulyaks.

“It is more than a passion for aviation; it is a sickness. We operated as an airline for a time and learned how true it was that the only way to make a small fortune from aviation is to start with a bigger one. But we carry on with the industry because of this sickness. But, it’s a very nice sickness to have.”



Business model that gave the Eclipse a new dawn

A 'revolutionary' aircraft divided opinion in the aviation world and went from winning the Collier Trophy to bankruptcy in just a couple of years. Now Turkish investors hold the key to the resurgence of the world's first real VLJ. Alan Peaford meets the man bringing Eclipse to the region.

I'm supposed to be a genius not a model, laughed Turkish entrepreneur Ekim Alptekin as he sat on the steps of an Eclipse 500 very light jet (VLJ) for our photographic session. Yet he had looked every bit a model as he glided effortlessly through the cabin doorway of the VLJ – undergoing modification in a hangar on Istanbul's Ataturk airport – with ease and confidence.

There were many who questioned whether that natural confidence was misplaced two years ago when Alptekin, who had led a group of investors to buy 120 of the VLJs, met fellow creditor American Mason Holland on the steps of an Albuquerque bankruptcy court and agreed to join forces to take over the assets.

It was a sorry story. The concept of the six-

seater jet had split the business aviation world. It was tipped to do to aviation what Henry Ford had done for the automotive industry with a business plan to produce up to a record-breaking six aircraft a day.

Its main customer was a US air taxi service, with its own ambitious plan to operate aircraft all over southeast USA. When this failed, debt-ridden Eclipse failed with it. Certification from EASA was suspended and a period in Chapter 11 failed to allow survival for the Eclipse team. The factory closed and bankruptcy began.

So, step in Alptekin and Holland with other creditors to create Eclipse Aerospace.

"We had made the investment already. We were the biggest creditors but we had also believed

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Ekim Alptekin: the game-changing revolution is back on track.

what was possible,” said Alptekin. “I have a huge amount of admiration for Vern Rayburn [founder of Eclipse] he had a great vision. What he didn’t have was good financial management.

“We had experience of start-ups and this was effectively what we needed – a feasible business plan in place and a will to make it work.”

Two years on and Eclipse Aerospace is on track. “We now have a strong balance sheet with zero debt, and we have been delivering what we promised to customers,” Alptekin said. “This has meant a lot of modifications in areas like the avionics and flight into known icing conditions. We are now able to supply parts and the newly FAA-certified integrated flight management system (IFMS) is the final piece in the jigsaw. We are close to reinstating the EASA certification without restrictions and then we will build from there.”

Alptekin is executive vice president of the company and chairman of EA Aerospace, which has the distribution rights to the Eclipse 500.

The aircraft’s performance statistics are impressive. It can fly at 41,000 feet above the traffic and the weather with a range of 1,125nm, with direct operating costs lower than leading turboprops and a fraction of other jets.

And, at just over \$2million for a factory-modified Total Eclipse aircraft, it is almost half the price of a King Air.

But that is now. There is no production of new

aircraft and the light end of the business aviation market is still in the doldrums. These facts presented to Alptekin produce nothing other than a slightly raised eyebrow.

“The Eclipse is a personalised aircraft. It is what the cell phone is to communications; what the laptop is to computers and what TV is to entertainment. It wasn’t that many years ago that the idea of ordinary people having mobile phones was considered madness or that there would ever be a demand of anything more than six mainframe computers in the world.

“Eclipse is revolutionary and the direct operating costs will mean private point-to-point aviation from airfields with runways of not much more than 700 metres becomes practical. Personal travel and fast effective business travel is not the preserve of the super rich.

“I am confident there will be greater demand for aircraft than we are able to produce.”

So does Alptekin see the six-a-day delivery promise from the Rayburn plan returning?

“That was never practical,” he said. “But look, there were 260 aircraft produced in around 18 months. Cessna, which had certified their Mustang before us, which didn’t have to deal with the issues we had or a bankruptcy, has barely produced 300 aircraft now. If it could have done it would. Eclipse 260 aircraft in one-and-a-half years has never been done before.

“There will be a decision made on beginning

production again and I would expect an announcement to be made by the end of the year. There are 30 aircraft in various stages of production that would allow the line to speed up. I think we would be aiming at two a day rather than six.”

Albuquerque would be the obvious place as tooling is already there but Alptekin sees no reason why there would not be a second production facility outside of the Americas.

“We have been looking,” Alptekin admitted. “We would want to diversify the risk and increase capacity. The US could produce 100 aircraft a year, so a second site will be needed. We are looking for a country that has an aerospace industry, has good logistics, a skilled workforce and a beneficial tax infrastructure.”

MENA countries are on the list. “We are also looking at Turkey, too,” he said with a smile.

A key element of Eclipse getting back into production rests with the supply chain. The new owners have met with previous vendors and the latest major investor is also helping.

Sikorsky – part of United Technologies – bought a stake in Eclipse Aerospace in October last year. The helicopter-maker’s president, Jeff Pino, had his own Eclipse before the bankruptcy and was a great fan of the aircraft’s capabilities.

“People like Sikorsky don’t get involved unless they are confident that the company is in good shape,” Alptekin said. “Having them on board is a great asset. They have great experience with supply chain management. It puts us in a better position in discussions with vendors and particularly now when the market is down.”

Alptekin is confident that sales will outstrip supply and sees it important that initially Eclipse will be selecting customers – rather than the other way round – and hopes these customers will prove the business model.

Getting the infrastructure in place is also vital. “If not it would be like selling a fax machine to people without a telecoms service,” Alptekin said. “We are working with SimCom for training and will open a training centre here in Istanbul where we already have a platinum-factory-level service centre. Remember within three hours flying we are in reach of one-and-a-half billion people. That’s a lot of people who could fly and who could make use of secondary airfields.

“For example in the US there are 500 airfields that can take a Gulfstream – there are 10,000 that can take Eclipse. Markets and public opinion will change as it becomes possible and legislation follows market demand.”

Business booming for IFTC

Business is positively booming for International Flight Training Centre (IFTC), part of the Istanbul-based Gözen Group.

As well as training pilots for Turkish airlines, IFTC also operates in conjunction with a number of external type rating training organisations (TRTOs) from as far afield as northern, central and south eastern Europe.

Indeed, Europe's largest flight training school, Holland's Stella Aviation Academy, has recently formed a JV with IFTC to train pilots straight from university with no previous flying experience. There will be guaranteed jobs after two years' training with Turkey's SunExpress charter airline, which operates a fleet of around 20 Boeing 737NG airliners in Europe.

And, in case you're wondering where students can gain actual flight-deck experience on Airbus aircraft, enter Turkey's Freebird Airlines, which has a fleet of eminently suitable Airbus A320 (x6) and A321 (x2) narrow-bodies. The Gözen Group also owns this airline!

IFTC's commercial co-ordinator, Saliha Yüksel, said the company operates primarily with Turkish-based operators, although it is also building a solid business relationship with airlines (both scheduled and charter) in Eurasia and south eastern Europe. In the future, it is looking to expand its training activities in the Balkans, India, Russia/CIS, North Africa and the Middle East.

She continued: "The spacious facilities also offer fully convertible classrooms adaptable for class size and also for flight deck and cabin training sessions.

"As well as the full simulators, we also offer a range of virtual touch-panel training devices that allow students to view and operate all panels, controls, indicators and displays found on a modern flight deck."

Pegasus spreads its wings as low-cost carriers grow

It's unusual for a low-cost carrier (LCC) to establish its own flight academy, but then Turkey's Pegasus Airlines is no ordinary carrier.

"Low-cost carriers have experienced exponential growth in Turkey over the last few years," said Captain Cahit Tasbas, general manager and CEO of Pegasus Flight Training Academy. "A lot of people don't realise just how big Turkey actually is – it can take two hours just to fly from Istanbul to the eastern party of the country. And, as ticket prices have come down, interest in flying has gone up.

"All this has meant an increase in the amount of flying training that Pegasus Airlines needs to complete, plus we are seeing more training opportunities from other airlines too."

Established in 1989 as a joint venture between Aer Lingus, Silkar Yatirim and Net Holding, with its head office in Istanbul, Pegasus now employs 177 captains and 180 first officers.

Since its first commercial flight in May 1990, it has grown from having a fleet of two aircraft to 32, including 22 of the very latest new generation Boeing 737-800s, two Boeing 737-400s and one Boeing 737-500.

It plans to expand this to 40 aircraft by the end of 2011 and 60 by the end of 2015.

The airline now flies to more than 100 destinations in 17 countries. In addition, it provides wet leasing services to other airlines when they need extra capacity besides their charter operations.

In 1993 control of the company was transferred to the Turkish bank Yapi Kredi and, in 2005, ESAS Holding took over Pegasus.

The new owner adopted a dynamic approach and what it called "a self-vitalisation process" was initiated. As a result, Pegasus Airlines started to schedule flights on domestic routes from November 2005 and on international routes from late December of the same year.

"At that time only Turkish Airlines was offering scheduled flights in the country and ticket prices were very high. We brought prices down dramatically and the rest is history," said Captain Tasbas.

Pegasus has provided either basic or refresher training for pilots flying for its fleet since 1994, but a move to a new training centre near Ataturk Airport, Istanbul, in January this year, and a joint venture with Sim-Industries of the Netherlands, reflects the rise in training's importance.

The new centre currently has one Sim-Industries Boeing 737-800W level-D flight simulator and more purchases are planned.

"During the first four months since the opening of the simulator, 95 per cent of the training has been for our own crew," said Captain Tasbas.

"In other words, there hasn't been a lot of opportunity to provide training for other companies due to our rapid growth, combined with the purchase of two new Boeing 737-NG aircraft that our sister company IZAIR has just started operating.

"However, we are providing training to various foreign companies. In the second half of this year our goal is to provide more training to external companies, both foreign and domestic – once we meet our own training demands.



Capt Cahit Tasbas: changing approach for LCC training.

"The addition of a second or even a third simulator in 2012 will allow us to open up our training opportunities to even more companies."

Captain Tasbas is an ex NATO pilot who flew AWACS in Bosnia and in the Gulf War. He entered Turkish civil aviation in 1999, joining Pegasus Airlines as a first officer, becoming a captain two years later. He then became an instructor in 2005 and an examiner in 2007.

Captain Tasbas was appointed Pegasus crew training director in 2006 and became joint CEO of the new training centre in January 2011.

Pegasus has already completed training first officers for various airlines, including some Dutch student pilots who graduated from their own academies in the Netherlands, before continuing their career in Indonesia.

It typically runs one type rating course each month, comprising 12 pilots.

"We have only the third simulator centre in the Turkish civil aviation industry. Turkish Airlines still owns and operates the largest number of simulators but they are barely meeting their own training demands and so are unable to provide training to other companies," he said.

Captain Tasbas is full of praise for the Sim-Industries simulator. "The stunning graphics and realistic handling characteristics have been a joy to fly and train with," he said.

"One example is the superiority of our simulator in reflecting realistic aircraft behaviour and flight dynamics in upset recovery situations, which is vital in training."

The full range of courses on offer from Pegasus includes Boeing 737 NG + CL type rating; line training; company conversion training programme, combined optionally with or without type rating training (TRT) courses; crew resource management (CRM); multi-crew co-operation (MCC) and dangerous goods regulations (DGR) training.

Cabin training has been also provided since the airline's inception in 1990.



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General Manager Murat Intepe shares his boss's passion for scaled aircraft models.

FlyService scaling the heights....

It is a fact of life in the aerospace industry that when you visit a company headquarters you will find a scale size aircraft model on a desk or credenza bearing the logo of the national carrier or some other key customer.

Entering the offices of FlyService Turkey by the perimeter of Istanbul's Ataturk Airport, you could be forgiven for thinking you had entered a manufacturing plant for the models – in fact, every model manufacturing plant in the world rolled into one building.

From reception, to the accounts department and even in the corridors, an amazing array of aircraft from Gulf Air Tri-stars through to the latest Emirates A380 is featured.

"We have here what we call our museum with some really rare aircraft," said Burak Numanoglu, FlyService marketing director as he stepped cautiously around a metre-long model of a Turkish Airlines A330.

The models are part of what, by the end of the year, could become a world famous collection.

The collection is the personal property of FlyService's founder and chief executive Gokhan Sarigol, an absolute aviation enthusiast. It is valued in excess of \$3.5million and with just a couple of hundred more aircraft will become the world's biggest collection of model aircraft and will earn Gokhan a place in the Guinness Book of Records.

"He has more than 5,200 aircraft in the collection. The previous record was 5600 but the owner of that collection died a few years back so, with this year's purchases, Mr Gokhan will be the number one," Burak said.

And the passion is catching. FlyService general manager Murat Intepe has 1,200 rare metal scale models himself.

Serving more than 80 airlines in Turkey, FlyService Turkey could be said to have a successful business model. But, as Alan Peaford found out, that would be just one model among thousands at the Istanbul company's headquarters.

The son of a dentist, in the 1980s Gokhan lived close to the relatively under-utilised runways of Ataturk and remembers as a 10-year-old being mesmerised by the daily arrival of the Pan-Am 001/002 round-the-world flights and getting his first model of that Boeing 747.

As Ataturk grew, so did Gokhan's passion for aviation and his collections of models, airline safety cards, and his own photographs. He launched and ran for some years a Turkish aviation magazine but, in 1996, he started FlyService Turkey with four people to offer handling and representation for the growing number of airlines.

When the Turkish Airlines monopoly ended a whole series of airline start-ups began and FlyService realised it was able to provide essential services like ticketing, excess baggage, dispatching and fuelling to meet the demands of the new arrivals.

"We are now at the 32 airports throughout the country," said Gokhan. "We man the ticket desks

at the airport and have 24-hour support for our airline customers. Tourism is increasing all the time and more airlines come to the airports. We have developed a reputation for quality service and, with 15 years of experience, the airlines know we can deliver.

"They also know we deliver for a good price."

With 170 employees and permanent staff at 23 airports, FlyService has become the number one airline representative firm in Turkey.

Airlines include famous names such as Asiana, Bahrain Air, Swiss, EasyJet, Aer Lingus and Norwegian.

"The numbers grow every year," said Burak.

The company was hit hard by the failure of Kuwaiti airline Wataniya earlier this year. "We were left being owed a lot of money," said Gokhan. "The trouble is it makes you look at the way you deal with certain airlines when that happens."

FlyService has been opening downtown centres to add to its airline representation service.

"Some airlines open branch offices here but to operate they have to set up a Turkish company and then pay taxes. Increasingly they see the advantages of being represented and knowing that their operations are being handled and supervised by experienced staff when it comes to fuelling or last-minute changes," Gokhan said.

"We have continued to grow because we don't lose customers. All of our staff understand our goal – work hard and price competitively."

Meanwhile, Gokhan is scouring e-Bay for another model bargain. "People love this collection," he said. "There is history here and a passion for aviation, our customers and all the visitors like to see all the different types and aircraft."

HIGH CUISINE

Aircraft food has never really been to everyone's taste but one global gourmet company has put a stop to that. Marcelle Nethersole speaks to the chairman of Turkish Do&Co.

Next time you're flying and you're surprised to discover you've been served a fresh crispy baguette, a juicy steak with fresh vegetables, or a fresh sole straight from the grill – it could well be the work of caterers Turkish Do&Co.

For the company decided a long time ago that passengers deserve only fresh ingredients and top quality food.

"We deliver everything from first class gourmet meals at restaurant standards to quality sandwiches and baguettes, from buy-on-board products to complete lounge concepts," said company chairman Attila Do udan. "Whatever we serve, it is always of the highest quality and standard.

"For our chefs and production staff, life in the kitchen starts from scratch every day. Nothing is from the day before. Our secret ingredient is freshness, with everything being washed, peeled and cut every morning."

Do&Co was founded in Vienna, Austria, 29 years ago. Back then it was a small company but today it employs 5,000 people.

"Do&Co is an international company focusing on premium quality in terms of hospitality and catering," explained Do udan.

"We have three divisions – restaurant, hotel and lounges; event catering (we do all the Formula 1 events as well as the European Football Championships, Americas Cup, golf, and tennis); and airline catering in partnership with Turkish Airlines."

Gourmet kitchens

Since 2007, Turkish Do&Co has operated in nine gourmet kitchens all over Turkey – Istanbul (Atatürk and Sabiha Gökçen), Ankara, Antalya, Izmir, Bodrum, Trabzon, Dalaman and Adana. More than 60 national and international airlines are catered for from these locations.

It is also located at London Heathrow Airport, New York's JFK, Frankfurt, Munich and other European airports.

"The Istanbul kitchen produces 100,000 fresh meals a day, making it the largest fresh production kitchen in Europe," said Do udan. "It produces 1.5 tonnes of hummus every day. That's a lot of hummus but, believe me, it's the best," he laughed.

"There's nothing frozen in our kitchens. Even the red peppers are roasted fresh one by one. If



you process fresh produce intelligently, it won't die. But if you start with ingredients that are past their prime, it doesn't matter what you do. Not a single ingredient is processed. All we do is add a little olive oil, a little salt and pepper, a little seasoning, then cook it without killing it.

"We have our own chilling vans that transport the freshly cooked dishes to the aircraft within six hours, so it remains fresh. Passengers receive the best food in the world."

The company also provides crew training in its mock-up cabins and lounges. "It's not just the food that is important but also how it is served," explained Do udan.

"Hygiene is paramount, so all staff are properly trained and we also have doctors based at the locations as well as hygiene departments."

At the SkyTrax awards in June, Turkish Airlines was named the "Best Airline in Europe". It has also won awards for the world's best economy class food.

Chefs on board

Do udan is also the brains behind the 'chefs on board' concept.

"Turkish Airlines started this programme two years ago and, by the end of 2011, we will have more than 200 chefs on board, which will make it the biggest flying chef fleet in the world," said Do udan.

Airlines that use Turkish Do&Co include British Airways, Cathay Pacific, Emirates, Oman Air, Royal Air Maroc and Royal Jordanian.

"An increasing number of airlines are relying on the world's only gourmet brand product for the airline industry to provide their customers with an incomparable on-board experience," said Do udan.

"We will expand wherever the clients ask us to go. A focus is the Middle East though. Airlines such as Emirates and Etihad really focus on quality and add quality to the client, which is exactly what we do.

"Of course, we have competitors and we don't underestimate the market. Customer satisfaction on Turkish Airlines was 49 per cent when we first partnered with them but it is now up to 98 per cent.

"We discovered through surveys that 98 out of every 100 passengers are happy with the food and the service we offer. It's time now to satisfy those remaining two."



Tolga Asan:
business
aviation is
growing.

*Diversity is the key for one Turkish
handler as **Brendan Gallagher** finds out.*

Bilen plans its growth step by step

Although Istanbul-based aviation company Bilen Air Services (BAS) has existed in Turkey since 1995 it wasn't, according to its senior team, until a management buy-out in 2007 that the company began to provide the level of service demanded by the international marketplace.

Bilen MD, Tolga Asan, said the company has now expanded substantially and offers services at 14 of Turkey's largest airports – and has ambitions to include a further six over the next couple of years.

However, he said that BAS wouldn't be expanding its specialist team of 48 people unless any new employees bring genuine 'added value' to the operation. "We're trying to be competitive," he said, "so I'd rather have five additional aviation experts than 15 generalists who don't understand our business partners."

Specialising in supervising and representing airlines, biz-jet owners/operators and charter companies, BAS, based at the GA terminal of Istanbul's Ataturk Airport, relies on the senior management's aviation industry experience to offer customers an unique understanding of the frequently changing and evolving needs of airport/aircraft operations.

Asan said: "Since 2007 this has led us into offering a more diverse range of services and has made us into the dynamic, forward-thinking company you see today."

BAS's main business is looking after the needs of biz-jets, both based in Turkey and visiting. Of an annual total of around 4,000 biz-jet flights into the country, BAS deals with approximately a quarter of them, along with holding a market share of around 80 per cent of the 60 domestically-based aircraft.

Asan said the increase of domestically-based

biz-jets – from 40 to 60 in the past couple of years – was the first indication that the Turkish economy was picking up and that BAS could, once again, consider investing for the future.

Most airlines BAS looks after are from the eastern Mediterranean/south eastern Europe regions, with carriers from Armenia, Kazakhstan, Egypt and north Africa predominant. The majority expect BAS to provide ground handling, landing rights advice, fuel, catering and assistance with flight operations, including flight planning.

Off-shore locations

BAS is now seeking to expand into off-shore locations, including possibly Dubai and London during 2012/2013. The company already has considerable dealings with aviation business contacts in Dubai but the possibility of operating out of the UK – although a bold move – would open up much of north west Europe to the company.

BAS handles an average of three or four biz-jet flights each day and these may be operating from any of the 14 Turkish airports where the company has representation on the ground. Local companies operating executive and utility aircraft looked after by BAS include Nural Air (Dassault Falcon 2000EX and Beechcraft 200); Cagdas Air (Cessna Citation XLS); Skyline (Beechcraft 400 plus 18 medevac helicopters); and Hayat Air (Beechcraft 200). BAS also has access to a Bombardier Challenger 605 with ten seats and a brand new Dassault Falcon 2000LX to charter for operations worldwide.

There is also ready access to an extensive range of other executive aircraft, including: Hawker 900; Hawker 850XP; Bombardier Learjet 60; Hawker 400; Bombardier Challenger 300; and Dassault Falcon 900B.

■ *Additional reporting by Geoff Thomas*



Why GAS is on a high burner

One of the largest aviation holding companies in Turkey is the Istanbul-based Gözen Group and two of its key players – full service FBO outfit Gözen Air Services (GAS) and flight training and flight simulator organisation International Flight Training Centre (IFTC) – are not only weathering the global economic downturn – they're both positively booming.

Both companies have audacious plans for expansion as Turkey continues on its chosen path of becoming a key player in business and commercial aviation throughout its own region... and further afield.

According to GAS assistant sales & marketing manager, Osman Kinali, the company already handles more than 90 per cent of business aviation traffic in Turkey and is also responsible for providing IATA-licensed services for airlines at all eight of the country's major international airports.

Founded in 1979 as the first aviation organisation of its type in Turkey, GAS subsequently evolved into The Gözen Group, which now has more than 800 employees.

Kinali explained: "Our combined aviation industry experience has given us an unique understanding of the frequently changing and evolving needs of airport/aircraft operations. This has ultimately made GAS a centre for a wide variety of types of aviation service."

Handling airport services for around 80 Turkish, European and US airlines and more than 20 airlines from Russia and the CIS – together with freight operators like Atlas and Polar – means that GAS is well versed in handling all types of commercial aircraft. And, through its offices in Adana (also known as Incirlik NATO air force base), it's licensed to provide services to foreign airlines performing military support flights.

"It is from our permanent offices in Adana that we provide handling arrangements, discounted aviation fuel and low-cost hotel accommodation, crew transportation, cleaning services and catering arrangements for military support flights passing through Incirlik," said Kinali.

"As members of IATA's ground handling council, we perform all our services according to IATA specifications. Our cargo department monitors freight and provides security for the shipments and also ground transportation if required. Providing supervision and representation to our customers has been at the core of our business since 1979.

"Our high levels of service are one reason why we have been chosen by business jet operators associated with major events like the annual Turkish F1 Grand Prix and Red Bull air races, along with the Breitling Jet Team display that's scheduled for September this year."

GAS services include:

- Slot co-ordination;
- Obtaining/monitoring ground slots;
- Passenger check-in;
- Obtaining and monitoring traffic rights (both landing and over-flight);
- Co-ordination of third parties (handling, fuel, cargo and catering companies);
- Cost control and third-party payment on behalf of airlines;
- Flight arrival and departure monitoring;
- Passenger welfare services; and
- Fuel arrangement at all Turkish airports.

Business charter trips are a particular speciality and GAS claims to be able to "get you anywhere, anytime and often with very little notice".

The old Silk Route takes to the skies

The recent Boeing report on cargo sees the Middle East and North Africa growing at a rate much higher than anywhere else in the world – but as the boom times come back it is Turkish airlines that could be providing the support. Alan Peaford reports.

The signs of recovery for the freight sector of the aviation industry are already being seen across the region.

Qatar Airways has invested in Luxemburg operator Cargolux, while other airlines are converting their former passenger aircraft to freighters in order to support the need for more aircraft.

Others are turning to companies like Turkey's ULS Airlines Cargo to ease the pressure.

ULS has only been painted on the fuselage for the past two years with the airline having previously been known as Baron Air and Kuzu Air.

"We are part of the Kuzu construction group and had the Kuzu aircraft, but were working with Universal Logistic System – then in 2009 we bought that company and decided to change the whole name and brand to ULS," explained vice president commercial, Michael Asher,

ULS is based at Istanbul Ataturk Airport and currently operates a fleet of three A300-B4 and three A310-300 freighters.

"We are slowly phasing out the A300s and will be looking at getting more A310-300 and -600 aircraft," Asher said. "We looked at the MD11 but decided against it and don't see us getting the Boeing B777 or the A350s either. We are a niche."

ULS's activities consist of full charter, wet lease and scheduled operations but it also provides aircraft, crew, maintenance and insurance (ACMI) services to airlines that

require a reliable business partner/operator in any part of the world, with experienced crews and well maintained aircraft for on-time operations with smooth levels of service.

Turkish Airlines and Saudi Arabian Airlines are leasing ULS aircraft (Turkish is in ULS colours, while Saudia's is in its own livery) and two aircraft are based at the new Al Maktoum Airport at Dubai World Central on lease to National Air Cargo of the UAE.

Full charter flights are operated to provide a fast, reliable and flexible service to customers worldwide for any type of goods. ULS Airlines Cargo has the expertise and is licensed to carry dangerous goods, live animals, perishables and any type of cargo that needs to be handled with special care during transportation.

ULS operates its own aircraft for in-house duties, which involve supporting the construction projects of the parent company – but it also has a wide presence across the CIS states where hundreds of trailers and trucks provide a regular package service.

While Asher sees a reduction in demand from the Far East, this has been more than compensated for by a growth from Africa.

"There is a lot of business coming from Africa to the Middle East – a lot of trade going on. We have also seen a lot of work for the British Government with military cargo for Afghanistan.

Air rather than camels

Asher sees Istanbul as an ideal cargo hub. "You will hear a lot about the old Silk Route when you talk to people here. Even today it still is the Silk Route it is just the traffic is now carried by air rather than camels."

ULS continues to serve a number of Chinese businesses and supports airlines there. "We have had a number of contracts extended," explained Asher.

The company believes that with delays to programmes like the Boeing Dreamliner, many airlines will not be able to undertake the conversions of their passenger aircraft to freighters that they originally planned.

"Demand will continue to outstrip the supply," Asher predicted.

ULS sees the relationship with China and the use of Istanbul as a hub between China and its growing customer base in the CIS countries and Africa as a key to its future success. "Our vision is to be one of the leading operators in the air cargo transport sector connecting our region with the Far East," Asher said.

ULS Airlines Cargo maintenance centre is also at IST Ataturk Airport. "Our technical department personnel are able to do A checks and perform line maintenance on our aircraft according to our JAR145 authorisation," Asher said. Other work is done in conjunction with ADAT in Abu Dhabi.

"We average about 250 hours per month per aircraft. We are busy but we see the need for more aircraft to meet what we expect from the future."



Michael Asher: demand for freighters will continue to outpace supply.



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The Global Space and Satellite Forum 2011 (GSSF), at ADNEC, Abu Dhabi, in May focused heavily on education and training and the part that space can play in advancing the region's technological development. Steve Nichols reports.

A SPACE FOR ALL

The benefits of worldwide investment in space technology are woven integrally into our daily lives, impacting all segments of society, His Excellency Sheikh Nahayan Mubarak Al Nahayan, Minister of Higher Education and Scientific Research, United Arab Emirates, said as he officially opened GSSF.

HE Sheikh Nahayan highlighted the importance of education in developing the sector and the economy in general.

“The leadership of the UAE sees technology and education as central in equipping the next generation with the necessary skills to compete in this information age,” he said.

“Education is essential for the development our goods and services. We must prepare ourselves to compete in the global economy.”

The three-day event also focused on organisations involved in the

military and commercial space sectors. It gathered senior industry figures and government officials from around the globe to explore the numerous commercial opportunities the sector represents.

Talks included the use of satellites for Earth observation in environment, security and disaster management, connectivity in the oil and gas sectors, the challenges of insuring space hardware, small satellites and how they are shaping the future of the industry and more.

Day three featured a number of dedicated seminars related to earth observation and disaster management, plus sessions devoted to education, compete with a live link-up with NASA in the USA.

With the recent successful launch of Yahsat-1A, and DubaiSat-2 now scheduled for launch towards the end of 2012, the UAE's embryonic space industry is growing fast.

DubaiSat-1 proves its worth – here comes DubaiSat-2

The first panel session of GSSF2011 saw Mohammed Al Mansoori, director general of the Emirates Institution for Advanced Science & Technology (EIAST) join international industry experts addressing the impact of satellite applications on our daily lives.

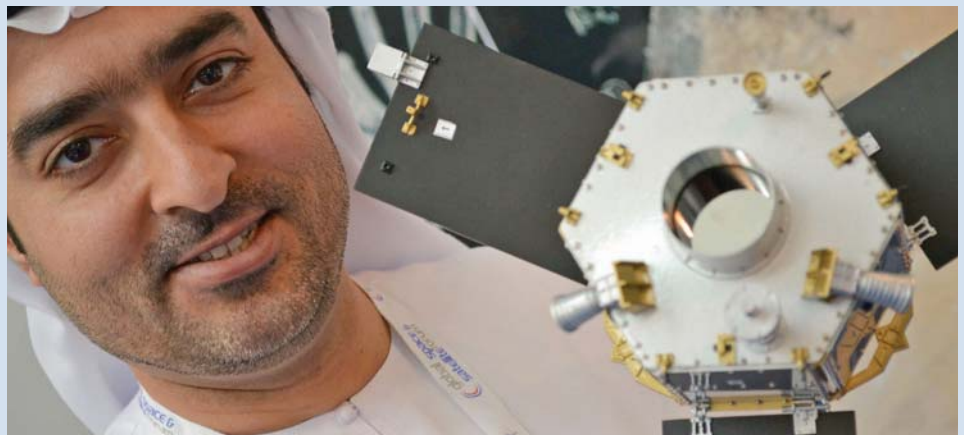
The session looked at key challenges in planning satellite services and innovative business models along with the role of local governments, end-users and industry partnerships.

“Though space is a frontier for advanced science and technology, it needs to be an everyday affair,” said Mansoori. “Our challenge was to harness the benefits of DubaiSat-1 (the UAE's first Earth observation satellite launched in mid-2009) for the entire community of the UAE, as a common ground for as many users – environmental, educational, communications, urban planning – as possible.”

Mansoori focused on space technology as a new common ground for organisations, governments and individuals in the region and globally.

Outlining the numerous applications of DubaiSat-1 within the UAE and also further abroad, Mansoori referred to its use within urban planning by Al Ain Municipality, for site surveying and monitoring in Abu Dhabi and in planning Dubai's on-going programme of road infrastructure expansion.

Looking further afield, he discussed the international



Mohammed Al Mansoori: Space technology is a common ground for organisations and governments.

disaster management applications of DubaiSat-1, most recently in transmitting images from tsunami-stricken areas of Japan, alongside the UN-Spider programme.

Mansoori also addressed DubaiSat-1's use within other international disaster zones, having provided visuals from flood-affected Pakistan in September 2010 and a video link-up between trapped miners and the Chilean Space Agency in August 2010.

He also covered the role satellite technology plays in environmental planning, with specific reference to the use of DubaiSat-1 images in environmental projects in Spain, Brazil and South America.

Addressing the regional prospects for the future of the space industry, Mansoori echoed earlier comments about

the key role education plays. “We want to see our satellite images as a source of information, being part of our knowledge-based economy,” he said.

He looked at the use of DubaiSat-1 in supporting scientific education across the UAE, with its images becoming part of scientific curriculums at various educational institutions.

EIAST has now announced that DubaiSat-2 is due to be launched into orbit by the end of 2012 on board a Dnepr rocket from Yasnnyy Cosmodrome in Russia by the Moscow-based International Space Company Kosmotras (ISCK).

The satellite will weigh 300kg, be two metres high and 1.5metres wide and will orbit at 600km above the Earth's surface, compared with DubaiSat-1's 690km.



< China bids for MENA launch services

China is looking to provide satellite launch services to the MENA region, saying it can offer a proven service at competitive prices.

He Xing (left), vice president, China Great Wall Industry Corporation, told GSSF that his company was established in 1980 and is authorised exclusively to provide China's satellite in-orbit deliveries.

He added: "We have had 30 international commercial launches and 36 satellites have been placed into orbit. We aim to increase that to more than 100 by 2015.

"Our international customers so far include Nigeria, Venezuela and Pakistan. We are now focusing on new emerging satellite providers and providing packaged solutions."

The company's Long March launcher can lift a 5.5tonne payload into geostationary transfer orbit (GTO) or 9.5tonnes to low-earth orbit (LEO), although it is prohibited from launching US satellites under US trade regulations.

Its new LM-5 launch vehicle, due to come online in 2014, will boost this to 14tonnes for GTO and 25tonnes for LEO. Great Wall also boasts that its propellants are non toxic and environmentally friendly.

A new launch facility is being built on Hainan Island in southern China. It is the closest Chinese launch centre to the equator and will feature hotels and golf courses to make visiting rocket scientists feel at home.

Etisalat ponders blimps for flying broadband coverage

UAE-based telecommunications provider Etisalat is considering the use of high-flying aircraft or balloons to provide data services over remote areas of the MENA region.

The high altitude platform (HAP) idea is not new, and has been set aside by companies like Lockheed Martin. But Abdul Aziz Abdul Razaq Al Mutawa, Etisalat's group senior vice president, told GSSF that he is seriously considering the idea.

Al Mutawa said: "A high-flying platform, positioned at an altitude of 18-27km, could provide broadband and telecommunications coverage over an incredibly wide area.

"The platform would be above controlled airspace in the stratosphere, well above the jet stream and so in stable air. It would have to be a long-endurance vehicle, possible solar-powered, but it could give good urban coverage at up to 25km, suburban coverage up to 90km and rural coverage up to 234km."

He argues that the benefits could be huge. There would be no need for a complex ground infrastructure and there would be higher transmission quality because signals would be line of sight.

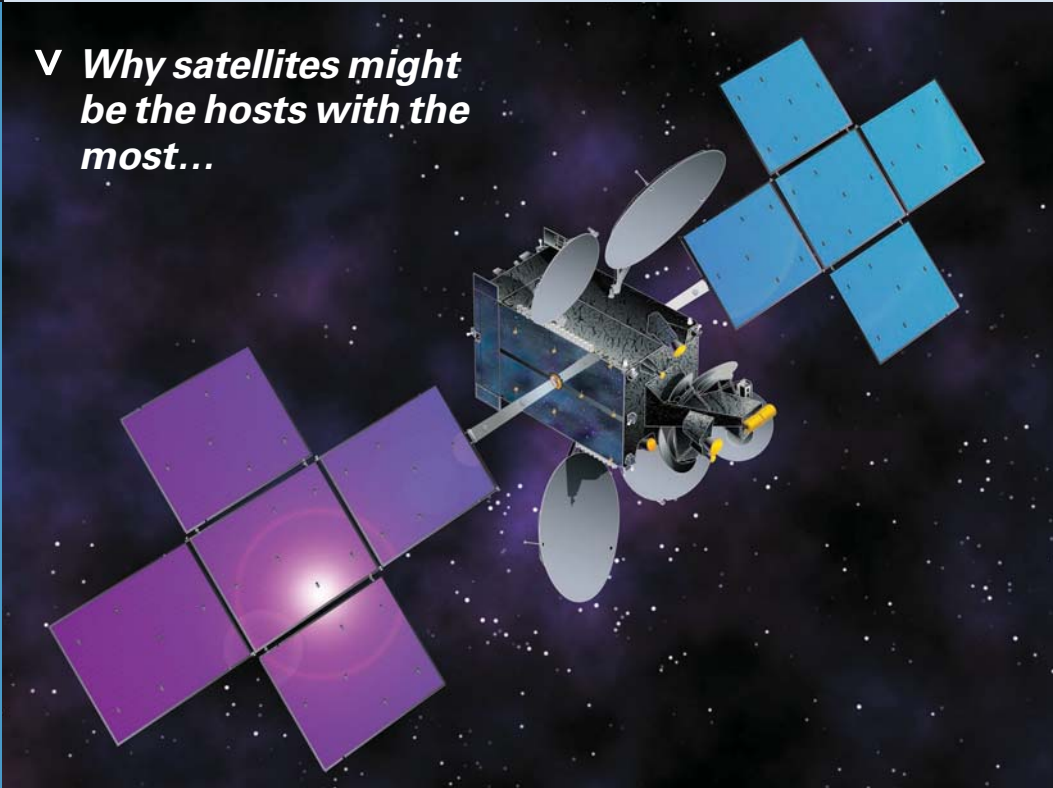
"Consider that it costs around \$200,000 to erect a single cellular tower. To get the same level of coverage as a HAP system we would need to erect around 500 towers at a massive cost," he said.

The idea of a HAP system was first mooted in 1980. The UK-based Capanina project was set up in 2003 to look at the feasibility of such a system. It promised to deliver low-cost broadband communications services to small office and home users at data rates of up to 120Mbit/s, but the project stalled in 2006.

Al Mutawa, who is still fond of the idea, said: "I would be happy to partner a new study."

But it is not clear if Etisalat intends to proceed with the idea.

▽ Why satellites might be the hosts with the most...



Putting two or more payloads on a single satellite could be an economical way for countries in the region to get a foothold in space, according to a panel discussion at GSSF.

So called "hosted payloads" allow governments, institutions or other public organisations the opportunity to place their own transponder, sensor or other communications technology, on a commercial satellite that is already scheduled for launch.

The technique is already in place and will be used by Qatar when Space Systems/Loral launches the combined Eutelsat Communications and ictQATAR EB2A/Es'Hail satellite in 2013. The new geostationary spacecraft will be placed at 25.5 degrees East and offer both Ku and Ka band capabilities.

Intelsat 14, which carried the IRIS "internet router in space", is another example of a hosted payload.

Anthony Collucci, vice president, Space Systems/Loral, said having different sizes of payloads does not create problems. "We have had systems where one payload was only one per cent of the size of the other," he said. "And on others they have been

roughly equal. Mixing government and commercial payloads together is generally not a problem either."

But Collucci did have a warning: "If you are considering a hosted payload, don't have more than two parties to the contract," he said. "The timescales get very complicated and you run the risk of a delayed launch if you have more."

Andrew Nelson, COO of Xcor Aerospace, felt that hosted payloads were a solution to a "dysfunctional marketplace", where there was insufficient launch supply. Xcor's approach, with its Lynx spaceplane, aims to provide more launch opportunities for very small satellites by carrying them into the near-earth domain.

"Under our system the cost for launch could drop to less than £1,000 per kilogram," Nelson said.

Christophe Bauer, vice president commercial sales at SpaceX, was happy with the concept of hosted payloads. "The only problem is that you may have to wait a while to find a suitable partner," he said.

The benefits of a hosted payload can include lower costs and faster access to space if a suitable partner can be found.

< Lynx springs into space tour picture

A rival to Richard Branson's Virgin Galactic space tourism venture is wooing potential buyers who might wish to bring space travel to the UAE.

Andrew Nelson, COO of US-based XCOR Aerospace, was at GSSF to persuade Emiratis that its Lynx spaceplane could offer a viable alternative to Virgin Galactic.

The Lynx is XCOR's entry into the commercial reusable launch vehicle (RLV) market. The two-seat, piloted space transport vehicle will take humans and payloads on a half-hour sub-orbital flight to 100km (330,000 feet) and then return safely to a landing at the take-off runway – which doesn't have to be specially prepared. This means that it could quite easily operate



out of airports in Dubai, Abu Dhabi or anywhere else in the region.

Like an aircraft, Lynx is a horizontal take-off and landing vehicle, but uses its own fully reusable rocket propulsion system. This approach differs from that of Virgin Galactic, where its craft has to be "dropped" at altitude from a jet-powered mothership.

The Lynx and its aircraft-like capabilities will allow up to four flights per day, with fast turnaround between flights and low-cost operations and maintenance (O&M).

The Lynx has an all-composite airframe with an added thermal protection system on the nose and leading edges to handle the heat of re-entry from the edge of space.

It is about 9 meters (30 feet) in length with a double-delta wing that spans about 7.5 metres (24 feet).

Nelson said: "The satellite and space industry has not followed the dramatic growth seen in the computer industry. This is due to availability, pure and simple.

"A reusable space plane, that lands and takes off conventionally, would be a big boon, not only to the space tourism industry, but also for research and space science."

XCOR is planning to provide Lynx under "wet lease" agreements, whereby it provides the complete system. This avoids technology transfer problems associated with selling rocket technology.

It has already signed an agreement with a company in Curacao, which will provide a space tourism business from around 2014.

Nelson hopes that Middle East companies will jump at the chance to buy into the Lynx project and is also looking for technology partners, especially in advanced composites.

"We use a liquid rocket propulsion system, which is safer and cleaner than solid rocket technology, and Lynx is ideal for science missions and carrying nano-sats to low-earth orbit using a Lynx-mounted expendable launcher," he said.



Focus on education boosts UAE science

Day three of GSSF, which focused on education and training, including a live satellite link-up with NASA's Ames Research Center in the USA.

Appearing live in the video presentation from the NASA Lunar Simulation Center in California were Doris Daou, director for education and public outreach, NASA Lunar Science Institute, NASA deputy director Greg Schmidt and senior scientist Brad Bailey.

They demonstrated the advanced robotic technology of the field science rovers used in inter-planetary exploration and the Center's simulated lunar environment. The presentation also gave attendees the chance to participate in an interactive Q&A session.

Dr Omar Al Emam, voluntary space technology advisor, Arab Science and Technology Foundation (ASTF), delivered the introductory address. He spoke about the work of the NASA Lunar Science Institute in California and the importance of hands-on space technology for the youth of the region.

"Education in this field is important because it helps build national capability. Rather than simply outsourcing the expertise for such projects, this creates the ability to build local knowledge and boosts regional space technology capability," said Al Emam.

"Increasingly, we are seeing local universities within the UAE introducing space technology into their curricula and already Emirati students are becoming actively involved in the industry. We have seen UAE students already learning and applying knowledge about the use of space observation data."



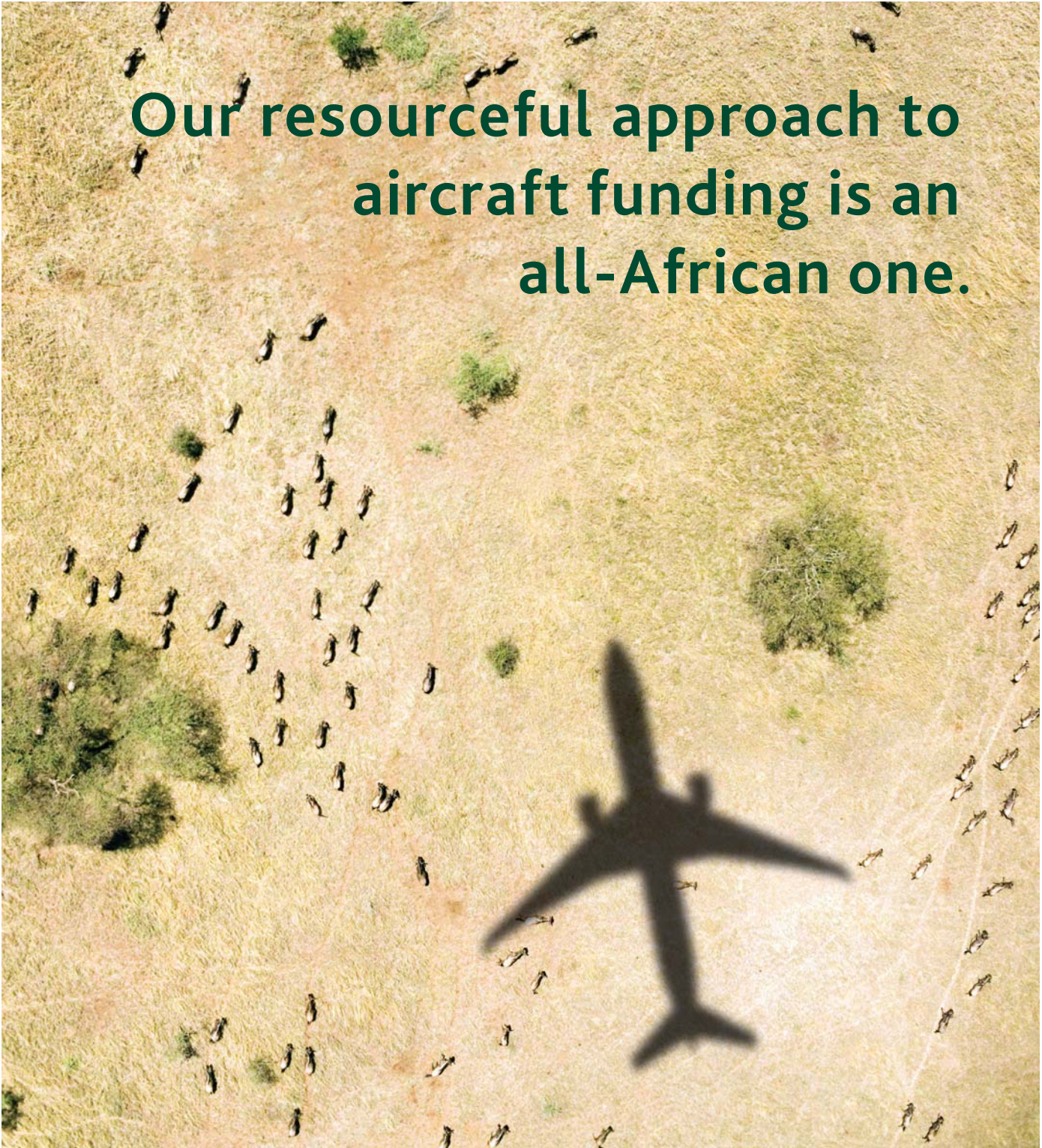
^ Yahsat 1A tunes in to ME, Africa, and Asia

The Yahsat 1A satellite, launched to provide high definition television (HDTV) to audiences across the Middle East, Africa and South West Asia, successfully reached its orbital slot at 52.5 degrees East, two weeks after launch.

The geostationary Yahsat Y1A, part of a 4.4 billion UAE Dirham investment from Mubadala Development, Abu Dhabi Government's investment arm, was launched into space from Kourou, French Guiana, by Arianespace on April 22 2011.

The satellite will deliver both commercial and civil broadband internet and voice communication services, as well as HD broadcast capability to TV stations.

A second satellite, Yahsat Y1B, which will feature broadband Ka-band capabilities, is set to be launched later this year. The satellite is set to deliver the YahClick broadband internet service when fully operational.



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All-African deal on two Boeing 777-200ER aircraft for Emirates Airlines.

Nedbank Capital has concluded a further all-African aircraft finance deal by successfully funding a sale and leaseback transaction for two Boeing 777-200ER aircraft between Emirates Airlines and Veling Ltd. For expertise in the structuring, arranging and execution of high-value transactions, including customised and full-spectrum solutions in aircraft finance call our specialist team on +27 (0)11 295 8313 or visit www.nedbankcapital.co.za.

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Global financial markets have been impressed with airlines' new ideas to raise cash.



Treasure hunt...

Boeing has reconsidered its conservative forecasts and announced that airlines in the Middle East will require an estimated 2,340 aircraft worth \$390 billion by 2029. But where do the big spenders, such as Emirates and Etihad which lead the league table in record orders, find the cash? Jill Stockbridge reports.

Emirates has won renown for its innovative finance solutions. Last year the treasury team won *Jane's Transport Finance* magazine's aircraft capital markets deal of the year and *Airfinance Journal's* overall deal of the year for creating a new structure for financing aircraft with its \$413 million Ex-Im bond, guaranteed by the Export Import Bank of the United States – the first offering directly into the global public capital markets.

Ex-Im was the first bond to be backed by corporate investors rather than traditional banks. The deal created a new investor base for the airline and the industry – corporates who want to invest in bonds guaranteed by the US government.

This year, the same team has picked up *Airfinance Journal's* most innovative deal of the year for the Doric Nimrod Air One (DNA), launched in December 2010.

DNA was the first special purpose aircraft investment company for UK institutional investors. Under the deal, investors are projected to earn a nine per cent yield paid quarterly on their initial investment.

The innovative DNA structure not only provides Emirates and other airlines with a completely new market to tap for funds and an opportunity to diversify their funding, but also gives investors opportunities for high yields on their investment.

The issuing of bonds is a normal part of the Emirates operating procedures. The latest funding news came in June, when Emirates

Continued
on Page 98

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announced the successful close of a US dollar 'Reg S' bond issue, which topped out at \$1 billion. The bond will have a five-year maturity and will be listed on the London Stock Exchange.

"This latest issue from Emirates has received an overwhelmingly positive response from a very wide range of investors, which is indicative of our financial strength," said His Highness Sheikh Ahmed bin Saeed Al Maktoum, chairman and chief executive, Emirates Airline and Group.

Emirates was able to obtain attractive pricing from a wide geographical spread of investors including banks, fund managers and insurance companies, following fixed income investor meetings in Hong Kong, Singapore, Abu Dhabi, Dubai, London, Geneva and Zurich.

Market confidence was no doubt boosted by both the on-time repayment of US \$500 million bond in full on its maturity date in March, as well as the return of record financial results for 2010-2011.

Brian Jeffery, Emirates senior vice president corporate treasury, said: "Most major international banks have aviation finance/leasing specialists who regularly visit us to determine our future financing requirements and general strategies in terms of off/on balance sheet finance.

"Emirates does not send out requests for proposals to a long list of banks. Instead we identify a small group of banks that would be most suited to our preferred structure for each delivery. Our strategy is to diversify as much as possible in terms of structure and lenders so that we are not over-reliant on any single one."

ETIHAD

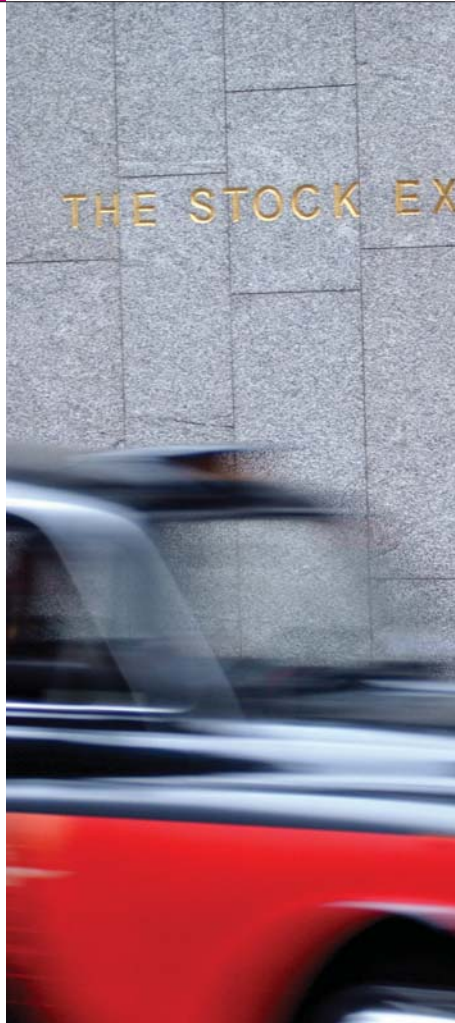
Ethihad likes to develop relationships with potential supporters well ahead of time using international roadshows.

Ricky Thirion, vice president – treasury, said: "Our focus has always been on developing the markets and the appetite for investing in Etihad ahead of our requirements. We also focus on diversification of our funding sources in order to ensure we do not saturate any one market and broaden the possible investor pool.

"We have been conducting financial roadshows to Europe, the US, Australia, China and the GCC since 2007 and we have close relationships and on-going engagement with many market players. The bottom line is that we continue to ensure that we are viewed as preferred destination for investors, that we always have access to a diversified range of funding sources and that we, therefore, continue to attract demand for our debt beyond our requirements.

"As a young airline, we are continually working to diversify and access new markets. Our funding last year came from US, European and Asian institutions. I think we will continue to see a good spread of investors from all geographies interested in the Gulf carriers."

These relationships stood the airline in good stead when it went to the markets to raise



"I think we will continue to see a good spread of investors from all geographies interested in the Gulf carriers."
Ricky Thirion, Etihad.

US\$780 million to finance seven aircraft due for delivery this year. The team opted for a mixture of US export credit, European export credit and commercial finance leases for the 2011 aircraft deliveries, but has not yet approached the market for the \$600 million required for the 2012 delivery of the next four aircraft.

Thirion said: "We again expect these aircraft to be supported by a similar mix of funding, unless there is a dramatic improvement in the commercial lending markets. When we go to the market we balance a number of objectives including commercial terms, flexibility, risk and portfolio diversification. Our overall portfolio

today consists of a balanced mixture of commercial debt, Islamic debt, operating leases and export credit financing."

FLYDUBAI

Dubai-based low-cost airline flydubai has also been to the markets and has successfully covered payments for all aircraft due to be delivered this year

It secured financing worth US \$80 million, at list prices, with aircraft leasing company MC Aviation Partners (MCAP), for the company's 10th new B737-800NG.

Ghaith Al Ghaith, CEO of flydubai, said: "We are pleased to add MCAP to our existing group of leasing companies, both local and international. Like flydubai, MCAP is a young, ambitious and dynamic company and we look forward to developing a long and mutually beneficial relationship with them."

The financing tops up the US\$750 million the airline secured in deals with General Electric Capital Aviation Services (GECAS) and BBAM at the end of last year, which took care of the nine aircraft delivered in the first half of this year. Both deals are eight-year sale and leaseback agreements; six aircraft from GECAS and the remaining three from BBAM.

EXPORT CREDIT FINANCING

Heated discussions about Export Credit continue, with changes due to affect orders made after 2012. Certainly, the burgeoning Middle Eastern airlines do not want to lose the option of Export Credit financing and Etihad and Emirates, as part of Aviation Alliance, will lobby for its continuance.

Thirion said: "We are all key stakeholders in the aviation financing markets and key customers for European and US manufacturers of aircraft and related equipment. It is important we continue to work together to communicate our perspective and also play a more active role in the on-going discussions on export credit financing.

"There is no doubt that the change in terms is significant. It is not yet clear whether this will be a factor that adversely impacts on the overall ability to access competitive funding since we have no idea today what this cost will be in 2013 in the other markets. We are already focussing on mitigating this risk in 2013 onwards. We expect that the other markets will recover further by 2013 and that, overall, we will be able to manage the changes and potential impact on the availability and cost if funding."

Jeffery is stoic, perhaps because export credit accounts for less than a quarter of the airline's finance. He said: "Of course losing it would make a difference, as would the disappearance of any of our other sources of financing. It is, however, important to note that Export Credits has represented only approximately 24 per cent of our total financing sources over the last 14 years and we are continually investigating new sources as per the above innovative structures."

*Altair Aero Projects is a specialist in aviation finance that has been successfully experiencing and promoting partnerships with banks, law firms and family offices for its clients across MENA. The company's founder, **Christian Castang**, believes that such partnerships can help protect the unwary buyer of business aircraft. He explains why.*

BUYER BEWARE

Purchasing an aircraft can become a nightmare



Christian Castang.

Statistics indicate that, today, 20 per cent of business jets purchasers are first-time buyers. Some banks have shown a sustained interest in the financing of large aircraft converted to VVIP bizliners, notably Credit Cuisse (Switzerland), BNP Paribas and Credit Agricole (France), Barclays (UK) CITI and Bank of America (USA).

In most cases, this particular business segment represents (in term of numbers) a fraction of their aviation financing activity, let alone their overall business. Yet these banks are highly motivated because their ultimate goal in this "small and niche" business sector is to consolidate and strengthen their overall relationship with wealthy individuals or heads of state.

There is far more at stake in these financing deals than the VVIP aircraft acquisition alone.

And, in fact, these banks have a non-aviation approach to such aircraft financing. Not only do they not rely on the financed asset as a security, (the finance is purely credit based), but they make sure that the repayment capacity of their wealthy client stems from existing estates or businesses that are not related to aviation. In this way they can hedge their risk.

The client's perspective is also rather unusual. Although he is buying a large aircraft (sometimes even a wide-body), he does not have (as an airline does), the professional human resources and skills to undertake such a purchase with expert knowledge. Even more, he does not have the experience in outfitting the airliner to become a bizliner.

The issues he needs to address are numerous and extremely complex with significant and costly pitfalls for the unwary buyer.

■ Defining the right aircraft type to fulfil the client's needs:

Buyers must be wary of making a purely emotional decision. The intelligent choice is based on a careful factual analysis, evaluating the entire spectrum of aircraft types, finance options and legal implications. The client needs to consider where he is likely to go regularly and how many people will accompany him? Will he make mostly short trips or long trips – once a week or once a month? Will he take trips that he has never considered before once he owns his VVIP jet aircraft?

Part of the decision process is determining the right range, the right seating capacity and the right performance for the runways and airports that he plans to access. It is in everyone's best interest to guide him accordingly and this also means looking to the future.

Buying and outfitting a business jet is not a quick or easy purchase – the needs for the next 3-5 years must be considered as a minimum. Experience



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shows that the numerous personal and business benefits delivered by a VVIP aircraft often warrant a much greater investment at the outset than originally envisaged.

■ Choice between new and used aircraft:

The waiting time for a new aircraft – in particular in this category – can be years, so buyers in a hurry sometimes have no choice but to acquire a pre-owned model to speed the process. A well-maintained used aircraft can be converted or configured to new standards with the latest flight-deck avionics and cabin amenities. This may be quicker but it is not necessarily much less expensive and can be fraught with complicated aviation rules regarding airworthiness certifications that can catch out the inexperienced buyer.

■ Research and selection of the required aircraft (if previously used) in the market:

The phrase ‘buyer beware’ comes to mind.

■ Aircraft appraisal (if previously used), definition of delivery conditions and purchase negotiation:

Current aircraft values are dictated by ‘the market’. If backlogs are healthy and used aircraft are rare, then it’s a seller’s market and values are on the high side. Also, the delivery slot of new aircraft can be a real challenge, so customers are likely to pay a premium one way or the other. That said, buyers should bear in mind that, beside the price, there may be room for negotiation on the cost of the interior completion package, warranty coverage, crew and maintenance staff training, spare parts etc. It always pays to bring in an expert adviser at this stage.

In the case of pre-owned aircraft due diligence, in particular the pre-purchase inspection of the aircraft and technical records, is vital. These inspections reveal which maintenance or upgrades are to be factored in, to what extent the cabin needs to be refurbished or replaced, and other information that can be leveraged against the asking price. Expert due diligence will also tell if the aircraft has been properly maintained and if it is airworthy.

Ultimately, due diligence can save the buyer millions, as it can also give sufficient reason to walk away from a bad deal. Needless to say, it is vital to have highly proficient people doing it.

■ Designer selection:

Pragmatism, realism and practicality should always prevail at the design stage and it goes without saying that designers need to be sensitive, flexible and have a great capacity to listen.

Indeed, when it comes to the technical and regulatory constraints – which are stronger and more numerous in the aviation industry than in many others – understanding them is essential.

For instance, not realising from the outset that the aircraft will fall into the ‘commercial aviation’ category rather than ‘private aviation’ from a certification perspective, will generate endless delays and astronomic costs.

Similarly, as any completion project is governed



Selecting an interior is a vital part of the process - and not something you should consider doing yourself.

by an agreement where the cabin interior specifications are a vital component, any omission in the specification can eventually translate into significant additional costs, risks or liabilities.

Applicable regulatory requirements, ease of maintenance, ergonomics, finishes, sound proofing, carpeting, placards and markings, and emergency equipment, are typical matters to be addressed. Such complex detail requires phenomenal hands-on effort and co-ordination by proficient designers.

■ Outfitting centre selection and contract negotiation:

With a limited number of outfitting centres, only a handful of which attain the pinnacle of craftsmanship and quality, and waiting lists that can extend to four years, demand exceeds supply and prices are exceptionally high.

It can be tempting to opt for an immediate slot with a second or third league provider where the risks of failure to meet delivery times and desired quality standards are prevalent. This is an area where enormous and expensive mistakes can be made if the entire process is not managed properly.

■ Supervision of the completion process:

New technology adds to the value of the aircraft. But it’s expensive and needs to be properly specified and expertly fitted to avoid technical nightmares. The latest communication technology includes safety features and utility enhancements that greatly extend the capability of the aircraft, particularly in areas of the world that lack the sophisticated infrastructures found in Europe, the US and parts of the Middle East and Asia.

The latest cabin technology is also essential because these aircraft are flown globally. Satellite communications; high-speed internet; 24-hour news, weather, sports and financial market updates – and, in some parts of the world, live TV coverage – all enhance business aircraft utility and private enjoyment.

Professional supervision of the completion process to time, and to budget, pleases both customer and financier.

Because he is unaware of these complex issues, an inexperienced client often considers he’s merely buying a Bentley and all he needs to do is choose the colour of the leather seats.

This, rather surprisingly, leads to a tendency to ‘do it himself’, imagining he’s saving a few thousand dollars, while what’s really at stake is an overall project cost potentially reaching several hundred million dollars.

The same do-it-yourself approach can also apply to more experienced clients who have been through this process before and feel that ‘now they know’. But each project is very different.

By failing to install a proper project management team, the acquisition and outfitting of a bizliner may well become a nightmare where unachieved objectives, poor performances and delivery delays combine to create huge frustrations and conflict.

Today’s buyer needs plenty of expert help. A team of legal, financial, insurance and operational experts who can guide them on performance, price, contract terms, finance options, tax implications and legal issues is essential. It seems obvious that a partnership between a bank willing to finance a VVIP bizliner acquisition and completion, and a professional project management organisation is a win-win situation.

The bank can introduce these expert management services to its prospective client and, by doing so, achieve at least two goals – differentiate itself from the competition and ensure that the project is kept, as much as possible, under control.

The client gets professional management that will hold his hand throughout a complex process and the completion centre is happy to benefit from a knowledgeable interface/buffer between themselves and the sometimes capricious and unpredictable client.

Altair independently manages all stages of large business jet acquisition and outfitting for private owners and operators, including Middle Eastern heads of state.

The services include all technical, financial, regulatory and legal stakes.

On a smaller scale, the company provides aircraft procurement and disposal services, including guidance on dry and wet lease solutions.

The firm also works with banks, as well as private equity and investment holding companies, to ensure that transactions and aircraft transition periods are managed smoothly.

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How to ensure funding always has a happy landing

Getting finance might look simple – but potential disaster lurks.

Geoff Thomas *meets two companies that are working to make sure Middle Eastern buyers get an easier ride.*

One of the fastest-growing global marketplaces for new and used commercial aircraft and glitzy biz-jets is The Gulf and parts of the Middle East.

This has prompted international finance organisations and legal practices to concentrate on the region like never before – simply because that's where the business is.

From the outside, the world of international aviation finance may seem complex – but in reality it's extremely simple. It's all about drawing up watertight legal documentation to transfer large sums of money from one place to another and to specify how it's paid back. Straightforward?

If you're the finance director of an airline (or a mega-corporation or maybe even a global celebrity) and you and/or your company is

sufficiently mega-cash-rich – and has a stable balance sheet with predictable results year-on-year – to go out and buy the latest all-singing, all-dancing, super-duper passenger airliner or biz-jet, straight from the makers, without any advice or guidance, then the world of global aviation finance isn't necessarily for you.

If, however, your company's balance sheet is affected by seasonal fluctuations, government/regulator interventions, interest rates, natural disasters, the global recession and a raft of issues that are nothing whatsoever to do with you or your business, then you'll undoubtedly want to talk to specialist financiers and lawyers who are totally au fait both with your business and the industry.

Why? Because the world of international aviation finance may appear pretty simple in

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essence – but it's far too easy to make catastrophic mistakes that could adversely impact both balance sheets and even future solvency.

International South African-based banker Nedbank has been involved in financing aviation deals for years and the head of aviation finance at Nedbank Capital is James Geldenhuys, who's based in Johannesburg. He explained that although his company serves a global market, there is a specific focus on Africa and the Middle East, where it has been a part of a number of major deals.

Recently, he said, Nedbank Capital acted as security and facility agent for the sale and leaseback (a particular speciality) of two Boeing 777-200ER airliners between Mauritius-based lessor Veling and Dubai's Emirates Airlines. "This is our second transaction with both parties," he continued, "and it's therefore a testament to the very positive relationship we have built with both companies."

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"Each set of clients is unique and so we tailor our advice specifically depending on all the circumstances. We tailor-make pricing and structuring, taking into account the risk profile and specific aircraft type being financed, through to secured lending, operating leasing, finance leasing and, if required, any large aircraft sector understanding (LASU) for export credit finance."

But, of course, any major finance deal needs a well-informed specialist legal practice to ensure that everything's in order for lenders and borrowers and even third-parties.

One such company is the internationally renowned legal firm Clyde & Co, which has a specialist aviation and aerospace group.

Based in the practice's Dubai office since earlier this year, although with the firm since 2009, Oliver Tebbit focuses primarily on the biz-jet market, where he works mainly for business jet financiers, but also some owners and operators, advising on a range of loan and lease financing structures.

Tebbit also provides advice regarding wider business jet-related matters, including those relating to sale and purchase transactions, aircraft

Conference with an air of confidence

Euromoney Seminars and Airfinance Journal are presenting the 9th Annual Middle East and Africa Airfinance Conference at the Jumeirah Beach Hotel, Dubai, on September 28 and 29.

The event will focus on the resilience of the Middle East aviation sector's recovery, which has taken the industry by surprise.

Despite the political upheaval in the Middle East, the region remains upbeat with Emirates Airlines recently closing its first capital markets issuance, Qatar Airways acquiring stakes in Cargolux, and Ethiopian airlines securing a \$765 million package deal to finance aircraft. Meanwhile, Air Arabia, the region's third largest carrier, has established itself as the world's most profitable low-cost carrier.

Now regarded as the most established aircraft finance event in the Middle East and Africa, the Dubai Airfinance conference will bring together CEOs, CFOs and treasurers of all the major airlines in the region with the heads of aircraft finance at the world's largest banks, leasing companies, manufacturers, law firms, consultancies, export credit agencies and many other firms involved in aircraft financing.

Key speakers at the event include:

James Rigney, chief financial officer, Etihad Airways; Adel Ali, group chief executive officer, Air Arabia; Mukesh Sodani, chief financial officer, flydubai; Kassim Geresu, chief financial officer, Ethiopian Airlines; Don Hubbard, chief financial officer, Jazeera Airways and Brian Jeffery, senior vice president – corporate treasury, Emirates Airlines.

To register see: www.euromoneyseminars.com

management and operating agreements, charter agreements and outfitting contracts. He also has experience of working for clients in the commercial aviation and engine leasing sectors.

Tebbit was recently named in Airfinance Journal's legal supplement as a 'rising star'.

He explained that there are some potentially huge legal pitfalls to trap the unwary and said that he has frequently been responsible for saving clients many millions of dollars – as well as potential embarrassment. It's all about

partnerships, he said, as most agreements are between an owner, an operator and a lending institution.

Tebbit continued: "Since the global financial crisis, many major banks are trying to minimise or even completely divest themselves of their biz-jet finance portfolios. Some owners, who have borrowed large sums based on an aircraft operator business plan formulated before the global financial crisis, have found to their dismay that making alterations to these agreements is very difficult, especially if the part that specifies management and operation of the aircraft isn't rock solid and with a company that didn't expect to obtain disproportionate revenue from chartering.

Huge charter revenues

"Some agreements were mistakenly based on the receipt of huge charter revenues rather than taking cognisance of maintenance, hangarage and insurance costs. And it's in that situation that the owner needs our advice – urgently – on which way to turn and how to appease an unhappy lender."

Since joining Clyde & Co, Tebbit has advised several international banks in connection with biz-jet financing transactions to a value in excess of US\$1 billion, while he and his team have also acted for a regional airline (a subsidiary of Air France) in connection with the sale of four Embraer 190 regional jets to a South African operator. He has also advised the owner of a Boeing BBJ about financing and delivery issues.

Other aspects of the legal role include acting for biz-jet owners regarding pre- and post-delivery loans of aircraft; advising biz-jet operators about management and operating agreements; and – specifically – liaising on behalf of a buyer regarding the purchase and VIP outfitting of a new Airbus A340-600 aircraft.

So whether you are a newbie biz-jet owner/operator or a major internationally-renowned airline like Emirates Airlines, there's a need for expert financial and legal advice and woe betide the unwary who jumps into an agreement without ensuring that all the loose ends are secured.

The Airport Show in Dubai is the major annual event for the region's airports and supply chain. Jill Stockbridge was there for the 2011 event.

SHOW SOARS TO A NEW LEVEL

The Airport Show 2011 got off to a flying start as, within minutes of the official opening, global engineering group and airport systems integrator Cavotec announced a breakthrough order to supply advanced ground support equipment for Dubai International Airport's Concourse 3, the dedicated Emirates A380 terminal.

HH Sheikh Ahmed bin Saeed Al Maktoum, president of the Dubai Civil Aviation Authority, chairman of Dubai Airports and chairman & chief executive of Emirates Airline & Group, had hardly finished the official opening tour and stepped off the Cavotec stand, when the good news broke.

The engineering company has been awarded a multi-million-dirham contract by leading construction contractor ALEC to supply, supervise installation and commission 58 Cavotec pre-conditioned air (PCAir) and 400Hz power Pop-Up pit systems.

Delivery is due to start in the third quarter of this year, with commissioning planned for 2012.

Ed Christie, aviation sales manager Middle East, said: "Our systems take the utilities underground, away from the aircraft. The average number of mobile units required around an aircraft is 15; we can reduce that number by seven. This improves security, reduces traffic on the apron, simplifies logistics, gives greater operational efficiency and improves the airport's bottom line, giving a greater net profit."

Eighteen of Concourse 3's 20 stands will be built for the Airbus A380 superjumbo, making it the world's largest A380 terminal.

Christie said: "Cavotec PCAir compressed air technology is the only technology worldwide that can cool a Code F aircraft in the extreme ambient temperatures of the Gulf region. Cooling the A380 is a significant challenge, as Airbus has reduced the permissible mass flow into the aircraft. Therefore we provide subfreezing air, which is 98.9 per cent dry. The reduction in humidity ensures the greater passenger comfort, even at slightly higher temperatures."

Although near neighbour and fellow regular exhibitor Crawford Megadoors had no immediate orders, Derek Salmons, area sales manager Middle East and India, was optimistic. "This is the 11th time we have been at the show, having been part of it since its inception. It has always been a very successful venue for us, meeting old customers and potential new ones.

"We can now show future customers the work we have done at the Strata Complex and the aerospace cluster in Al Ain with our high-speed doors and docking systems, as well as our work on the Emirates Engineering hangars. We design bespoke doors and have sold many to Airbus and Boeing, as well as supplying the first hangar door in Singapore. Ours are long-term contracts and this potentially is where we can begin negotiations."

Salmons commented that it is not the numbers passing by at the show, but the quality of the visitor that makes the event worthwhile as an exhibitor.

Physical presence

NAFFCO was a major physical presence at the show, celebrating the launch of its new Fire Falcon 6 airport rescue and fire fighting vehicle, as well as exhibiting a wide range of fire protection and rescue equipment. The Jebel Ali-based company, the largest fire-fighting manufacturing company in the Middle East, was busy demonstrating to potential customers the small part of the range it had brought along. A representative on the stand said the company had been busy, not only with customers from the region, but also from their target markets of Latin America and the CIS.

On the Munich Airport stand in the German Pavilion, Michael Roth, senior vice president corporate services, was promoting the airport's training products in aviation security, ground handling and personnel management. While he had met with airport representatives from Abu Dhabi and Dubai, Roth was delighted to also make contact with several Asian airports.

He said: "We are working locally at Dubai international airport and Doha, as well as Durban, Vienna, Berlin and a major project in Bangkok. We train staff for operational readiness and transfer for the opening of new terminals, as well as offering IT consultancy. There is great potential in this region."

In the UK pavilion, representatives of CEM Systems were also upbeat. The company, part of Tyco International, supplies access control and security management systems to more than 80 per cent of the airports in the UK and is now looking to spread its market. Philip Verner, sales & marketing manager, said: "We have been working in the Middle East for the last four years and are actively looking to grow the business here. Many of the airports were not sufficiently developed previously, but products such as the AC2000 AE would be perfect for the many new airport projects coming on line. Our systems are not just about monitoring entry and exit; they can monitor and control the use of equipment. We offer solutions beyond security to ensure effective operations."

The show was well supported by the regional airports.

Dr Khalid Al Mazroui, director general of Fujairah International Airport, who was a moderator for several of the conference sessions, said: "The Airport Show is an excellent networking platform, especially to showcase the achievements of the local aviation industry. We are proud to showcase Fujairah at this platform. The Arab states today lead the development opportunities within this sector at a global level and we see the region's airports among the leading consumers to adopt and embrace state-of-the-art equipment and sophisticated technology being developed for the aviation industry."

He spoke in the wake of Fujairah International Airport's allocation of Dhs50 million towards the expansion and development of the airport this year. It is expected that an additional Dhs100 million will be allocated for further expansion in 2012.

During the show, the airport also announced the selection of ALES for the supply of air traffic



control system and ERA for the wide area multilateration radar. The Dhs10 million deals will include a full automation of the air control centre and an advanced surveillance solution based on the proven multilateration and ADS-B technology.

Dubai Airports was among those using the show as a platform for exceptional announcements, declaring plans to invest Dhs22 billion towards expansion of Dubai and Al Maktoum Airports by 2020. Khalifa Al Zaffin, executive chairman of Dubai World Central had mentioned on the sidelines of the exhibition that the new expansion plans would increase the capacity of the Dubai Airport to 90 million passengers annually. The number will increase from the current 60 million upon the completion of all expansion designs, including the construction of the Concourse 4, the expansion of Terminal 2, and the improvement of services at Dubai Airport.

Aviation city

Zaffin also mentioned that Dhs4 billion will be invested in the development of the aviation city and the residential city at Al Maktoum Airport at the Dubai World Central. The King Abdulaziz International Airport project in Jeddah is already in Phase 1. The three-phase development, with a total investment cost of approximately Dhs27 billion, will see ultimate capacity reach up to 80 million passengers annually by its completion in 2035. Engineer Mohamed Ahmed Abed, director general of King Abdulaziz International Airport and general supervisor of the new airport project said: "Our participation at the Airport Show 2011 as a sponsor provided great business opportunities. This year's event saw participants from across the world and this indicates the establishment of this exhibition as an international event. The event brings together large number of veterans in the airport industry around the world and, undoubtedly, this platform provides great opportunity for all participants to exchange ideas and keep abreast to latest developments in modern airports."



A good level of visitor made the show a success. Above: Sheikh Ahmed opens the 2011 show. Middle: NAFFCO Fire Falcon was a big draw. Bottom: Dr Khalid Al Mazroui, taking Fujairah to new levels.

Vikram Sodha, project director at the Civil Aviation Authority of Pakistan, was also a show enthusiast. "This is our fourth consecutive participation at the Airport Show," he explained. "This year, the Civil Aviation Authority of Pakistan utilised this platform to meet with suppliers who offer energy-efficient, environment and user-friendly equipment. On-going discussions have been taken place with other exhibitors, such as Siemens, Cavotec, DBA and ADPi, on possibilities for expanding co-operation in projects to develop the Benazir Bhutto Airport in Pakistan."

Development plan

Jacob Avis, electronic engineer and IT manager at Ras Al Khaimah International Airport said: "We have already announced a 10-year development plan at Ras Al Khaimah worth Dhs2.5 billion. We have benefited from our participation at the Airport Show 2011 greatly by conducting numerous discussions and conversations with the participating exhibitors and especially suppliers of baggage handling material, automated weather observation systems, and general IT solutions for airport operations."

Mohamad Bader-Eddin, show director, Reed Exhibitions-Middle East, organiser of the event, said: "A large number of exhibitors launched new and innovative technological solutions on a par with the developments in the global aviation sector, thus contributing to the region's industry, which has maintained a consistent rate of growth in spite of the challenges surrounding economic sectors in different regions of the world."

"In addition, several exhibitors have inked deals worth millions of dirhams in areas related to technology for aviation, security services and control of airport operations and passenger traffic, as well as technology for handling and shipping, or other areas relating to airports. This only reinforces our conviction about the event providing a genuine platform for the industry and justifies the effort spent on organising this exhibition."

Dubai gets go-ahead for 90million target

Dubai International Airport is to get \$7.8bn funding to enable the airport to reach its target of 90m passengers a year – which would make it the world's busiest international hub by 2018.

The Dubai Airports company announced early in July that Dubai ruler Sheikh Mohammed bin Rashid Al Maktoum, had endorsed the plan for the airport and airspace expansion programme which will boost capacity from its current 60 million passenger plan.

Chief executive Paul Griffiths said the plan is designed to deliver aviation infrastructure which will support the continuation of the sector's impressive growth, facilitate Dubai's economic expansion and generate 22 percent of total employment and 32 percent of the emirate's GDP by 2020.

Sheikh Ahmed Bin Saeed Al Maktoum, chairman of Dubai Airports and president of Dubai Civil Aviation Authority said: "The combination of rallying tourism, Dubai's proximity to the emerging economies of India and China, and the emirates' established role as a trading hub, is together expected to drive traffic growth and further elevate Dubai's status as a global centre for aviation."

"By 2020, 98.5 million passengers and over four million tonnes of air freight will pass through our



airports. The fleets and networks of Emirates and flydubai will grow considerably to accommodate traffic and capture market share. Similarly, our infrastructure must expand to enable this growth and facilitate the trade, tourism and commerce that in turn will support the prosperity of Dubai."

Beyond the vicinity of the airport itself, Dubai Airports is engaging national and regional civil aviation authorities and air navigation service providers to ensure that air routes are decongested, bottlenecks are reduced and latent airspace capacity is unlocked. Next generation technology such as performance based navigation and dynamic airspace

management will be deployed over the coming years to harness the capabilities of modern fleets and increase airspace capacity.

As airspace opens up, additional aircraft movements will be accommodated on the ground with the addition of a new taxiway and a 60% increase in the number of stands needed to park and service aircraft. Beyond Concourse 3, which will boost capacity to 75 million passengers when it is completed at the end of 2012, Dubai Airports will commission the construction of additional terminal space and concourse areas comprising an extra 675,000sqm of

floor space – twice the footprint of London Heathrow Terminal 5. This includes the expansion of Terminal 2 and the construction of a new concourse - Concourse 4 – which will be connected to Terminal 1 to facilitate check-in and baggage servicing.

Additionally, Dubai Airports will upgrade baggage systems across the airport to accommodate demand over the life of the project. Plans include the construction of a remote baggage facility and a high-speed baggage link that will support efficient and timely connections. Cargo capacity will also be augmented with a 30,000sqm expansion of the cargo mega terminal.

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Are the airports in the Middle East ready to cope with a crisis?

Tim Risbridger, head of transportation at leading international built asset consultancy EC Harris Middle East, takes a look at the situation.

How to cope with any airport in a storm

For some time now question marks have been placed against airports and their levels of resilience.

Last spring we saw the global chaos caused by the volcanic ash cloud – something that has happened again this year – while in winter 2010 we witnessed some of Europe's leading airports struggle to maintain operational readiness during periods of heavy snowfall. If we go back a little further there are other striking examples, all of which add to the pervading view that airports cannot cope effectively when placed under duress.

In the middle of all of this uncertainty, the customer is often stuck in a terminal waiting for updates from either the airline or the operator, all the while growing increasingly frustrated about the level of mixed messages they receive, depending on who they speak to inside or outside the airport.

Airport operators, airlines and air traffic controllers all spend copious amounts of time planning the design, development and delivery of their airport. On that basis, why are there still so many instances of inefficient operations when the

going gets tough? In reality, some of the shortcomings may have existed and gone unnoticed for years, as it is only at a moment when an airport is truly tested or put under extreme operational conditions that these underlying issues come to light.

With the number of passengers travelling through the Middle East region estimated to grow significantly over the coming years – according to official figures released by the Airport Councils International (ACI) 2011 will see 200 million people travel through airports across the region but this figure will rise to 300 million in 2019 and by 2029 it could reach 440 million – airport operators across the GCC need to start considering whether their facilities are resilient enough to cope with this increased volume of traffic.

Similarly, if a proposed change to EU legislation that would see airlines taxed on their carbon emissions comes into force, GCC countries could quickly emerge as a strategic stop-off point for airlines flying into Europe from long-haul destinations. If that was the case,

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the volume of air traffic passing through the region could be set to increase even further.

While this growing demand will bring welcome economic benefits to the region, the reality is that airports across the Middle East will be facing situations they have never seen before and which may not have been envisaged when the facilities were initially built.

There will be a real onus on airport operators to plan ahead and ensure that their assets are equipped to cope with potential crisis and non-operational scenarios, the likelihood of which increase as an airport grows in both size and importance.

Crisis scenarios can develop overnight and by their very nature can be impossible to predict. However, in some other cases, an airport can anticipate increased levels of demand and it is remiss of them not to plan and focus on how to best manage this additional strain on their services.

One such situation would be a global sporting event and, as Qatar begins to develop its strategy on how to successfully host the 2022 FIFA World Cup, it will be imperative to ensure that its airports have the necessary operational capacity to cope with the influx of fans and tourists travelling to the country to attend the event. Similarly, all airport staff will need to go through simulation exercises to ensure they have the training and experience to cope with the additional pressure that such an event can entail.

Five steps that airports all across the Middle East region will want to consider to ensure they are well placed to cope with a possible crisis situation include the following:

PLAN FOR THE WORST:

■ It is essential that airports and airline operators develop contingencies for non-standard situations. They should also consider operational testing and simulation exercises, which could provide insight on how their asset is equipped to deal with increased strain, and to identify areas where improvements need to be made

ENSURE ALL STAKEHOLDERS ARE ALIGNED IN ADVANCE:

■ In extreme situations it is essential that all parties – airlines, operators, ground handlers and air traffic controllers – are closely integrated and clear on each-other's roles and responsibilities. Without this co-ordinated response, cracks can quickly start to appear and the management of a non-routine situation can quickly descend into chaos

GET THE RIGHT PEOPLE IN CHARGE:

■ Airports also need to ensure that they have experienced management in charge during a crisis situation and that their wider staff base is well aware of the procedures to follow once the contingency plans are put in place. Knowledge alone is not enough, however, as staff also need to be suitably trained in advance to deal with a range of potential scenarios

TACKLE THE COMMUNICATION CHALLENGE:

■ In a crisis situation it is crucial that there is an open stream of communication between airport officials, airline operators and the customer on the ground. For communication channels to be effective however, all parties need to have the appropriate equipment including two-way radio communications. Using mobile phones to try and communicate with an overloaded operations centre is totally inadequate in an emergency environment, as recognised by the inquiries into the 9/11 attack and July 7 bombings in London. Furthermore, other resources within the terminal need to be exploited to their full potential. The dynamic advertising boards could be used to display flight information and contact numbers, while the existing PA system can also help to relay on important information.

PRIORITISE THE FLIGHT SCHEDULE:

■ At those high-intensity moments when staff are required to adapt to very specialist and non-routine operations, quickly linking the available capacity with a flight schedule is absolutely fundamental. This allows airlines and operators

to prioritise, match their capacity to the weather or operational constraints and avoid congestion and unnecessary flight cancellations.

There are multiple reasons why airports need to adopt a more rigorous approach when it comes to being better prepared for non-standard periods of operation. However, in simple terms, if they choose not to invest time and resource here, the best they can realistically hope for is a short period of chaos. In the worst-case scenario this lack of attention could cost stakeholders multi-million dollars in reactive planning and momentous reputation damage.

It also raises the old question on the value of considering airport resilience levels alongside things like airport charges and safety regulation. The challenge lies in helping airports to become more effective during extreme operations, while at the same time ensuring that the passenger is offered a reliable service. A passenger charter and a regulatory regime that offers greater freedom to the operators and airlines to set charges can go some way to achieving these objectives.

With two billion people now located within two-and-a-half hours of the Middle East by air and 80 per cent of the world's population within eight hours, the Middle East has quickly emerged as a strategic gateway for air travel. Forward-thinking airport operators need to ensure their asset is fit for purpose and able to cope with the pressure created by this rising passenger demand. If they can successfully meet this challenge, confidence will continue to grow, bringing with it further economic benefits for the region as a whole.

■ *Tim Risbridger is a partner at EC Harris based at the Abu Dhabi office. He is head of transportation in the Middle East covering aviation, rail, highways and port sectors. He is an experienced consultant and has a proven track record of delivering value to clients internationally. He has worked in the UK, Hong Kong, Singapore and Malaysia as well as the Middle East.*



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Field of Dreams: The case for a Mid-East ‘GulfControl’

Captain Ed Davidson *former senior vice president-fleet for Emirates Airline in Dubai and the chairman of the GATE conference – the training event that will run alongside this year’s Dubai Air Show – offers a view on ATM.*

In a 1989 sports drama filmed in a small town in the central US, actor Kevin Costner, portraying the lead character, hears a voice tell him to “build it and they will come”. The “it” refers to a baseball field that requires him to plough under his cash crop of corn and await the ostensibly more profitable baseball fans who will supposedly come to watch the, unfortunately imaginary, players.

At one point in the film, one of Costner’s co-stars describes the potential fans with the words “... it’s money they have but peace they lack”.

Fast forward 21 years, substitute the Iowa cornfields with Arabian Gulf airspace and we are now discussing air traffic management issues in the GCC – in particular, the desperately needed rationalisation and re-design of what is presently a complicated and costly mix of maladjusted airspace.

In essence, the quote from *Field Of Dreams* can be applied to this same situation; the money is there but, at least on the part of airspace users, the peace of mind is missing.

The continuing delay in regional ATM progress over such a long span of time is admittedly not due to a shortage of good intent, since a number of diverse ATM and government organisations, as well as various local air carriers, all with a desire fuelled by the need to reduce delays and attendant costs, have been participating in regional meetings and conferences on the subject of modernisation.

Unfortunately, most of the outcome seems more directed at the development of White Papers than the creation of concrete action.

Unlike the characters in the film, the need for action is not a point in debate in the minds of those in senior air transport management in the Gulf States. If we believe the Boeing, Airbus and IATA economic and aircraft delivery forecasts for the region, the Gulf will shortly see serious operational and economic constraints imposed not by the usually cited world-wide shortage of pilots or the unavailability of aircraft financing, but rather through an even less widely known but equally disastrous shortage of usable airspace.

With estimates of anywhere from 10-15 more runways being planned in the next few years for the Gulf’s land-constrained nations, continuing delay in solving these

airspace constraints will be the proverbial straw that breaks the camel’s back, if you pardon the regional analogy.

It would be truly unfortunate, and economically untenable for the Gulf’s economies, if the expansion of the air links now widely credited for the region’s financial recovery is short-circuited by a failure of the Gulf States to develop a rational plan to utilise a resource that is in even shorter supply than water – available flight levels.

However, there is a credible and historically workable solution. The creation of EuroControl provides ample evidence of the economic and financial benefits of regionally-based air navigation service providers (ANSPs), as well as the blueprint for the regulatory changes necessary to see a companion “GulfControl” implemented in the mid-East – an area, much like the EU, with similarly disparate political and social demands.

Notwithstanding the current angst from some in the European Parliament with an axe to grind against the concept of regionally-based ATM operations, there is really no other serious alternative that can hold a candle to the operational improvements and delay-reductions that can be obtained by such an organisation were it to gain wide support from local government regulators.

The only questions are who pays, who runs it and where is it located. Again, those with the background in the creation of past regional ANSPs as well as how to design and structure workable airspace are the ones to turn to in the creation of a plan for economic salvation from the threat of imminent airspace starvation.

In the film, Costner’s character eventually comes to recognise that the creation of the “Field of Dreams” is more about his legacy than the building of the field itself. Many insiders in the airline industry in the region hope that those in power and influence in the Gulf States will soon come to that same realisation.

■ *Captain Ed Davidson is the former senior vice president-fleet for Emirates Airline in Dubai and is now program manager for International Aviation at Tetra Tech AMT based in Arlington, Virginia. TetraTech AMT is an air transport consulting firm.*



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If staff at Mercator, the IT services business of Emirates Group, seem a little smug at the moment it might just be justified. Jill Stockbridge explains why.

How SkyChain unlocked the e-freight market

As the high point of a good year so far, the team at Mercator won the world's best cargo IT solution award at the 2011 Air Cargo Week World Air Cargo Awards. The prize is the latest in a number of accolades for the in-house-developed cargo solution SkyChain.

"SkyChain is a huge industry success story," said Duncan Alexander, vice president Mercator.

Alexander feels that the cargo industry had long been neglected in terms of IT, as systems were developed for passenger handling and passenger sales. Driven by new laws regarding the global distribution system (GDS) and the financial possibilities offered by internet sales, airlines have poured huge amounts of time and money into IT development, but cargo systems continued to flounder in a sea of paper and manual processes, despite IATA's push for e-freight development.

"Cargo had been neglected, woefully bound in paper and lack of investment. That can now change," said Alexander. "SkyChain is completely e-freight enabled. It has been a massive success, not just because of the lack of paper but also because of the process efficiency. It drives out telecoms costs through the use of a more efficient system and platform."

SkyChain manages every aspect of an air cargo business, from sales and reservations, pricing, capacity management and cargo operations, through to shipment handling, tracking and tracing, and supply chain management. The change from manual tasks to efficient automated processes promises lowered costs and heightened productivity.

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Mercator worked closely with Emirates Sky Cargo to make sure the SkyChain system was able to recognise an airline's needs.

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It seems to be working as, last year, Mercator expanded from eight to 17 customers using the system and is experiencing growing demand.

“We do have competition,” said Alexander, “but SkyChain is different because it was created by an airline for airlines.

“From the beginning we worked very closely with Emirates SkyCargo to develop the product. Now we also incorporate the feedback from other clients, including Swiss World Cargo and Grupo TACA in South America. We systematically incorporate the customer’s voice into product development. Each new customer augments and adds to the product.”

One of the recent customers is Continental/United, which sees Mercator moving into the North American e-freight and customs field.

“What we learn from this will benefit any of our customers who fly into the United States, including Virgin Atlantic and Emirates,” said Alexander.

Another reason for corporate glee is the successful launch of Avantik, a low-cost distribution and reservation system designed to serve hybrid, regional and low-cost airlines.

Point-to-point aircraft

Avantik can be used by low-cost point-to-point airlines wishing to operate in a ticketless environment, or by regional feeder carriers joining IATA and electing for travel agency and GDS distribution.

The system allows a wide range of alternative ticket distribution options such as vouchers, ATM issuance and travel agency credit banks, and can be adapted to enable the creation of additional revenue streams, such as seat assignments, excess baggage and other branding options of fares.

Alexander said: “It all started when we were asked to be IT advisor to flydubai. We evaluated a number of suppliers for commercial and ticket sales systems and came across tikaERO in Bangkok. The company had an excellent product but it was a small business without much financial backing, so not able to promote itself to a bigger market.

“We looked at the market and the product and realised that this could be an excellent acquisition. There is a very large market of small, community airlines – somewhere between 400-500 – which fly fewer than three million passengers per year. We decided that with our brand and investment behind it, tikaERO could really do well.”

In June 2010 the first international office of Mercator – Mercator Asia – opened in Bangkok, with Roland Heller, the founder of TikSystems, as the CEO. The renamed product Avantik was launched at the low-cost airline conference.

Alexander said: “We have had five new customers since and seven implementations, including a start-up in Japan. We have had lots of interest. We found that other potential customers had appreciated the product but were nervous that Roland did not have enough financial



SkyChain is different because it was created by an airline for airlines. We systematically incorporate the customer’s voice into product development. Each new customer augments and adds to the product.

Duncan Alexander

support or reference customers. It has now gained credibility.”

It was an ‘arms-length’ integration that saw Emirates take on all 40 tikaERO staff, as well as the head. Alexander said: “We did not want to change the entrepreneurial and innovative spirit of the team but we gave them the sales and marketing reach, which has been very effective.”

The benefits go both ways, as Avantik’s clientele have expanded Mercator’s global footprint, with the company’s first agreement in Japan – A&F Aviation, Japan’s first dedicated low-cost carrier.

Distributor in Russia

Alexander is also excited about a major distributor in Russia, handling around 30 airlines, who is about to sign with the group.

Mercator Asia has now added to the base product offering a frequent flier programme and the possibility to integrate other systems as the airlines grow.

Through the headquarters, Mercator can also offer to host the operations packages of community airlines that have the bandwidth for IT support, enabling them to use the technology they need to run the airline.

While Mercator has an eye open for potential acquisitions, the company is only interested in products that have a serious impact on the industry.

“We may open up other lines of business but we

are looking for areas where we can make and shake a market. We do not want to buy into something that just sees us fighting for market share; we want to invest in something that changes what is in the market, the way SkyChain is transforming the industry,” explained Alexander.

The next area Mercator is looking to shake up is safety and work is already afoot on reengineering the safety applications available.

“There is more and more focus on safety from governments and regulators, not just on aircraft but across the board in the workplace. We aim to develop the ability for anyone, anywhere to create a safety hazard statement, which will go into a database and can be audited and assessed, enabling the companies to study the cause and effect of all incidents or near misses,” said Alexander.

“We have kicked off a group-wide project, as well as working with our 40 safety customers worldwide. We want to take the industry to another level in safety and are aiming for a fantastic common standard. Once we get the fleet managers involved then the manufacturers become interested, and we are able to spread throughout the industry.

“There are suppliers who provide safety systems but we feel we have the complete industry insight and input and can create something very special for the community,” he added. “We want to make and shake in this market too.”

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Making complex wire bundles for Boeing airplanes is not unlike creating a work of art. We look at how it is all put together.

Hard wired for success

Think of it as the circulatory system of a commercial airplane. More than 130 miles (210 kilometres) of electrical wiring for a 747-8 Freighter travels all over the airplane tucked away behind panels in electrical shelves and racks overhead and underfoot, from the cockpit to the wheel wells and tail. That wiring provides power and control for systems that do everything from navigating the airplane to entertaining the passengers.

Boeing Fabrication's electrical systems responsibility centre team in Everett, near Seattle in the USA, builds the incredibly complex wire bundles that are vital to every aspect of the airplane's operation.

The centre provides wire harnesses, power panels and electrical shelf assemblies to Boeing 737, 747, 767 and 777 commercial jetliners, as well as military derivatives of commercial airplanes and out-of-production models. Its employees also support the 787 programme with needed changes to electrical wire bundles, and build bundles for warranty repairs, modifications and post-delivery support to meet spares and airplane-on-ground requirements for all Boeing airplanes.

Because of options and cabin configuration, wiring design is specific to each individual airplane configuration, adding complexity to an already complex job.

Building a wire bundle starts in the coding area. Big spools of many different kinds of electrical wire sheathed in various colours are placed in stacked rows inside a big glass box – part of a Spectrum Technologies laser device. Nearby, an operator programs a machine that positions the correct spool, unreels and cuts the wire, then codes it, imprinting a number, either on its sheathing or on an attached tag.

The lengths of coded wire are brought together with kitted

parts – splices and hundreds of connectors. Each wire end is stripped, crimped and placed in the correct miniscule connector hole, some so small that workers need to use magnifying glasses. Next, the bundles are created on formboards, marked with the pathways the wires must take. The formboards vary in size depending on the bundle that's being built.

To the casual observer, all those wires look like a maze of ultra-thin spaghetti but every one has just the right place to go. Pegs in the boards help employees route the wire to shape the bundles. Ties, sometimes hand-knotted, hold groups of wires together. For extremely complicated bundles, pyramid-shaped formboards called tepees are used. Once correctly configured, terminating connectors are added to the assembly and the wire bundle is complete.

The bundles are then stuffed into the metal frameworks – shelves and panels – that will house them on the airplane. But before they are delivered, bundles are attached to an electrical testing device. A current is run through them to make sure there are no crossed wires and that no electricity is leaking.

The responsibility center puts together what it calls “family groupings” – long wires that might run along the length of the cabin or from the flight deck to an area much farther away. These long-haul wires don't travel alone. To make assembly easier, they are sorted into groups.

Family groupings are assembled at facilities in countries all around the world. They come together at the responsibility centre. Long, straight bundles are assembled on tables that can be 100 feet (30 meters) long. They are wound up on to round, dinner-table-sized spools that are unrolled by final assembly electricians.

These guys really are wired.

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Simulation: the reality is it's become big business

Simulation is big business in the Middle East with two companies adding to their growth plans.

Mohammed Ali Alia reports.

An Agusta Westland AW 139 begins its descent on to a helipad in the heart of the Qatari desert with the sand, whipped up by a shamal, obscuring the 'H' of the landing pad.

The helicopters are a vital lifeline between the remote oil and gas production fields in the desert or offshore and the cities like Abu Dhabi and Doha, where the company headquarters and operations bases are located.

The pilot is momentarily confused by a wind change. Everything stops – and he does it all over again.

Several hundred miles further north a trainee air traffic controller deals with a conflict calmly and by the book. This is the value of simulation.

And, because it makes economic sense for companies not to have to send their staff to Europe or the USA, more and more training operations are moving into the region and there is now more investment in simulators.

For Agusta Westland helicopter operators, the good news is that Qatar is now home to its first Agusta Westland AW139 full-motion flight simulator, compliments of Doha-based Gulf Helicopters.

The simulator was commissioned in June and incorporates the latest technical advancements in flight simulation as well as state-of-the-art graphic displays. The Doha facility was officially certified by the UK's Civil Aviation Authority to JAR-FSTD H to Level B.

Gulf Helicopters is the first helicopter operator of its size to commission its own flight simulator for the AW 139. The company said it will greatly enhance the quality of its in-house training as well as allowing it to offer opportunities for other third-party helicopter operators to meet their training requirements, either through wet or dry lease arrangements.

The simulator is located in a newly-constructed purpose-built training facility at Doha International Airport.

It is not just the operators or trainers for rotor craft and fixed-wing aircraft that are seeing the growth in demand. Maintenance companies, air traffic management and airports are all turning to simulators to improve training – and as direct result, safety.

Rate of travel

Abu Dhabi-based Bayanat Airports Engineering said in May that it has been appointed exclusive UAE sales representative for UK company Adacel.

"The rate of travel is increasing almost as fast as the rate of technology today," said Alain Bourjeily, general manager of Bayanat. "The industry must meet the demands of these increased rates by constantly improving airport and aviation technologies. With the Middle East's regional airport network expanding at a considerable rate, this new agreement will support and promote this growth through the provision of innovative technology."

Adacel is already known in the region with its ATM simulators being used at the Emirates Training College in Dubai.

According to the UAE General Civil Aviation Authority a growth of nearly nine per cent in air traffic was observed across UAE airspace in the first quarter of 2011 alone, indicating a need to continue innovation in technology solutions for civil and defence aviation in support of this growth.

"This agreement will bring advanced simulation technology to the region for air traffic controller training in both civil and defence settings, resulting in increased research, planning and modelling of air traffic procedures within the Gulf and the Middle East," Bourjeily said.



The challenges of landing on a drilling rig become fewer after hours of practice in the Gulf Helicopters' simulator.

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Bringing you the
Middle East market





Above: Capt. Alia Twal is joined by her brother Omar who was inspired to fly as a result of his sister's success. She is now governor of the women's pilot network in the Middle East.

Left: The latest members of the ninety-niners in Jordan clockwise from top left: Capt Adelie Nahas, Capt Alia Twal, Captain Mavis Uzaizi Captain Carol Rabadi.

Female pilots are living the dream

Women in the Middle East are flying high as more and more female pilots earn their wings. Liz Moscrop reports.

Alia Twal is feisty. At 24 she has earned her seat with Royal Jordanian Airlines after flying with Mideast Aviation Academy as a flight instructor. She said: "We had a careers day at school and I knew then that I wanted to be a pilot. I finished my training in Jordan to become a chief flying instructor and became the youngest female pilot in the Middle East. I had students my age and older than me."

Although some students were "a bit nervous" the first time they went up with her, they soon came to trust her. She explained: "Even if you are female it has nothing to do with your job. Aviation is not a male world. If we have the skills we can fly a plane. By the time students came for the second time they felt comfortable."

Twal has just taken over the governorship of the Middle East branch of female pilots' networking group, the 99s, from veteran pilot Yvonne Trueman. Twal said: "Living in the Middle East we are engulfed in a fast-moving culture that is yearning for change. There is an environment that is full of people who are open to change and are seeking to experience life; more so now, than ever before."

Continued
on Page 124

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Trueman agreed: “Women in this region are totally serious about aviation when they enter it. They go in to be professional pilots and they succeed. They are determined and feisty.”

Twal added: “This culture is rich in issues of politics, religion, gender and so much more. These issues have caused a wave of generations that are hungry to make a difference and influence this world.”

“I am a part of that wave and that is why I wanted to play a key role in the 99s. All of these issues directly affect aviation.”

Her role as governor means that she is helping female aviators in the Middle East get exposure to ways they can grow and develop.

Twal believes that the networking gives them a voice, “to unify with those who can help them learn about who they can become”.

She continued: “Since I have become governor, I have brought eight members to the 99s and, in the process, have unified these women and empowered them in their own community. They are developing relationships and interacting for advice and assistance. We are all looking forward to a bright future of Arabian pilots and we are all hoping to open doors for the women to come.”

There are 27 members of the Arabian section of the 99s, stretching from Egypt down to Oman. The region now has more members than Austria, Brazil, UK, Far East, Finland, France, India, Nepal, New Zealand, Norway and Russia.

The new members include Captain Adelle Nahas and Deema Saber, a first officer in Royal Jordanian Airlines.

Flight instructor

There’s also Captain Mavis Uzzaizia, the third rated female pilot in Jordan who started flying in 1993, as well as Captain Bassmah Bani Ahmad, the first female glider pilot in the Middle East who started her flying in 2005.

She was only the second flight instructor in Jordan and is chief pilot for the Royal Aero Sports Club of Jordan.

Captain Carol Rabadi is also one of the new recruits. She is the second rated airline captain in Jordan and started in 1999 with Royal Jordanian Airlines.

Samar Oran, the second rated female pilot in Jordan is also now a member. She has been flying since 1976, joined Royal Jordanian in 1978 and was the first Muslim Arab pilot to cross the Atlantic.

Bahrain-based Trueman said: “As past governor, I took the mantle with just seven female pilots from Saudi, who worked with their husbands within Aramco.

“When they left and went back to the States, they stayed loyal to the section and, to this day, still remain members.”

Trueman recalled her earlier flying days in Bahrain. She said: “When I first arrived in the 1970s, general flying was very small and I used to hire an aircraft out of Dubai, file an international



Salma Al Baloushi became the first Emirati woman to earn her commercial wings with the national carrier and is now first officer with Etihad.

flight plan and manage to do a lot of flying, including an epic trip to Dhahran – probably one of the first for a lady pilot at that time.”

Airlines in the Middle East will no doubt eye the 99s with interest as they are hiring women in droves.

This June Etihad Airways celebrated the success of its first Emirati female to graduate from the airline’s cadet programme as a co-pilot. Salma Al Baloushi operated her first flight as a first officer on Thursday, June 9, on flight EY 091 from Abu Dhabi to Athens.

Captain Richard Hill, chief operations officer said: “Salma is a leader in our expanding female Emirati community and will be an example for her colleagues to follow.”

Back in 2007 Al Baloushi joined Etihad as part of the airline’s second group of cadet pilots. She completed her initial studies at the Horizon International Flight Academy in Al Ain, followed by a further two years of training.

She and Aisha Al Mansoori were Etihad’s first two female pilots.

First officer

Al Baloushi said: “I am just stunned to be living my dream. It was such an honour to be awarded the rank of first officer. We all worked extremely hard to reach this point and my family, who have fully supported me from day one, are extremely proud of me. I can only hope my accomplishment encourages many of my Emirati sisters and brothers to push the boundaries and reach their goals.”

Etihad has five UAE national female pilots training to fly for the airline as well as a strong track record in promoting women. Last October it hired its first female captain, Sophie Blanchard from France.

She joined Etihad in 2007 as a first officer, after flying for Etihad Crystal Cargo with Air Atlanta. She said: “It is a great privilege to be the first woman to take full command of a commercial flight. The company has been very supportive in my aim to become a captain.”

Two other women keen to promote female aviation in the Middle East are Kinda Sarrage, business development director for Ayla Aviation Academy in Jordan, and Carol Ronan-Heath, who established a regional branch of the International Aviation Women’s Association (IAWA) in Dubai. The branch now boasts more than 100 local members.

Sarrage is looking to promote women working in the aviation industry while, as part of the team that buys engines for Emirates, Ronan-Heath believes a local branch of IAWA will encourage other women to enter the industry and develop their careers. She said: “I started in IAWA as a junior lawyer many years ago. I was invited to one of its conferences and was blown away by the motivational effect.”

■ For more information on the 99s contact Aliatwal@hotmail.com

IATA announces new leadership

The International Air Transport Association (IATA) has announced leadership changes.

Tony Tyler, former chief executive of Cathay Pacific, has been confirmed to succeed Giovanni Bisignani as IATA's director general and CEO while Peter Hartman, president and CEO of KLM Royal Dutch Airlines, succeeds David Bronczek, CEO of FedEx Express, as chairman of the IATA Board of Governors following the completion of Bronczek's one-year term.

Alice lands Oman Air UK role

Oman Air has appointed Rohan Alice as the airline's new country manager for the United Kingdom and Ireland. He replaces Abdullah Zantout, who moves to Beirut to take on a new role with Oman Air.

Alice began his career with British Caledonian, moved on to Virgin, and has since held senior management positions with Qatar Airways, Gulf Air and, most recently, Etihad, where he was based in the USA.

Jet Professionals AI Bateen base

Recruitment and staffing for the aviation industry in the Middle East has been given a boost with a new base being set up in Abu Dhabi by Jet Aviation subsidiary Jet Professionals

The global staffing company has signed a lease agreement for offices at the Al Bateen business airport in Abu Dhabi. This will enable the Jet Professionals to provide aviation staffing services from the airport as soon as the necessary trade license is obtained from the Abu Dhabi Transport Authority.

MAKHLOUF NAMED AS CCO OF GULF AIR



Gulf Air has appointed Karim Makhlof as chief commercial officer. He joined Gulf Air in October 2010 as director commercial planning and was leading one of the airline's business-critical departments ensuring the company's business strategies are delivered.

Makhlof has more than 14 years' experience in key commercial and strategic planning areas of the airline business, along with a good operational understanding.

Makhlof was the CCO and deputy CEO of Malev Hungarian Airlines before joining Gulf Air.

NEW AFRICA BUSINESS DIRECTOR FOR JSSI



Jet Support Services (JSSI), the largest independent provider of hourly cost maintenance programmes for the business aviation industry, has appointed Haydee Ramirez as director, business development for Africa.

Ramirez joined the JSSI global sales team three years ago as an international sales assistant. In her new position, she now leads business development activities for the continent of Africa and reports to Greg Martin, the recently appointed vice president of business development for Europe, Middle East, Asia and Africa.

"Haydee is a great addition to our team," said Martin. "We are excited about JSSI's opportunities for growth in Africa and confident that Haydee's drive and determination will make her successful in this region."

Ernest move by Cessna

US aerospace and defence giant Textron has appointed Scott Ernest as president and chief executive officer of Cessna Aircraft Company. He will report to Textron chairman Scott Donnelly and succeeds Jack Pelton, who retired earlier this month.

"Scott is a talented global business leader who has strong expertise in the aviation industry," said Donnelly. "Accelerating Cessna's new product and service development, strengthening its manufacturing and sourcing operations, and intensifying its global expansion efforts are key to moving Cessna forward. Scott brings an extensive track record of success in these areas, along with a reputation as an outstanding leader."

Höhener steps down from RUAG

Beat Höhener, vice president of RUAG Business Aviation since 2009 and a member of the RUAG Aviation board of management, stepped down from his position and handed over the reins to Michael Sattler, former senior vice president of maintenance at Jet Aviation in Basel.

Philipp Berner, CEO of RUAG Aviation, said: "Beat has demonstrated exceptional commitment in his role as turnaround manager by succeeding in stabilising and repositioning business aviation in a challenging environment. The job is now to strengthen its position in the international marketplace and further leverage its growth potential. To achieve that, we have secured the services of Michael Sattler of Jet Aviation, a worthy successor."

MENA region responsibilities for Mastan

Hawker Beechcraft has appointed Usman Mastan as regional sales director for the MENA region.

Based in Dubai, Mastan will be responsible for Hawker jet sales within the United Arab Emirates, Oman, Qatar, Bahrain, Kuwait, Yemen, Kingdom of Saudi Arabia, Egypt, Iraq, Turkey, Pakistan, Lebanon, Jordan, Syria, Algeria, Libya, Tunisia, and Morocco.



SAUDI ROLE FOR BUTSCHI



Jet Aviation has appointed Hardy Butschi as vice president and general manager of the company's Saudi Arabian FBO and line maintenance operations in Jeddah and Riyadh.

Butschi is based in Jeddah and succeeds interim general manager Frank Kusserow, director FBO services for EMEA & Asia.

As general manager in Saudi Arabia, Butschi is responsible for overseeing the company's two FBO and line maintenance operations and will report directly to Christof Späth, senior vice president MRO and FBO services for EMEA & Asia.

Thamri on top after Tunisair shuffle

Hamadi Thamri has been named as the new head of state-owned Tunisian airline Tunisair.

In a management reshuffle, Thamri replaces Nabil Chettaoui as president and chief executive, while Cheikhrouhou Ridha becomes the carrier's director general.

Thamri is well known within the airline, having previously been chief executive of subsidiary Tunisair Technics.

Pearce leads Innotech ME push

Innotech-Execaire Aviation Group has appointed Andrew P Pearce as regional director, aircraft sales for the UK, Europe and the Middle East.

Based in London, Pearce reports to Innotech vice-president, aircraft sales,

Ray Kuliavas. "Andrew's background has earned him a highly respected reputation across Europe and the Middle East. His experience in corporate aircraft acquisition and aircraft management positions him well in the regions' fast-growing markets," said Kuliavas.

Knovel approach to recruiting for EMEA

Knovel, the web-based application provider which integrates technical information with analytical and search tools, has expanded its sales and business development team to address global growth and product demand.

The new EMEA team is led by IHS veteran Gary Kearns, who joins as Knovel's business development director EMEA.

The company expects to increase staff by more than 25% in 2011 as a result of

its sustained year-over-year growth.

Kearns brings more than 20 years of international experience in direct sales, marketing, new business development and channel management.

NAS-Tech partners with HCI

NAS-Tech, the MRO subsidiary of Saudi Arabia's NAS Holdings, has partnered with Human Capital International (HCI) to supply technical aircraft maintenance specialists as part of its on-going growth and expansion in the region.

Dubai-based HCI has a specialist team focusing on recruitment within the aerospace and defence industry across the MENA region.

"HCI has delivered a very fast and effective solution to meet our requirements at all levels," said NAS-Tech chief executive Hani Kalakattawi.

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Bursary boost for North African airline engineers

A J Walter has launched its 2011 MSc Aircraft Maintenance Management bursary award in association with City University, London.

In the past the award has seen recipients coming from Ethiopian Airlines, Emirates Airline and Royal Air Maroc.

Visiting lecturers from leading airlines support the MSc programme.

This year the bursary opportunity is open to applicants from any airline based on the African continent or from Europe.

Details are on the AJ Walter website.

Safi appoints new senior management

Safi Airways has appointed Zaidan Khalifat as director of quality and safety and Miguel Serra as director of ground operations & operation control centre (OCC). Khalifat will work closely with local and international regulators to ensure the crew and airline meets international quality standards.

Serra will be responsible for overall aircraft operations and flight dispatchers, including maintenance of all department manuals in keeping with the local CAA regulations.

"The appointment of these industry experts underscores Safi Airways' growth strategy and commitment to quality," said Michael McTighe, COO Safi Airways.



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Mario Vodicka
Account Manager - Airside Services

My team works at all three terminals at Dubai International Airport and includes porters, loaders, baggage handlers, ramp loaders, tractor drivers and administrative support staff. We pride ourselves on our strong working relationships with our clients and our flexible approach to service delivery.

Transguard Group is an Emirates Group company



Daniel Hulme

Marcelle Nethersole speaks to the director of in-flight services at Alison Price On Air.

1

■ What is the history of Alison Price?

Alison and Terry Shaw started Alison Price & Co more than 30 years ago, doing parties for the likes of Elton John and Sting from Alison's flat and from her Mini Cooper. The idea was to change the face of private and corporate entertaining, and that they did. Since then Alison Price & Co has been at the forefront of the events world in the UK, catering to royalty, blue chip companies and the world's rich and famous. The company is widely considered the best event caterer in London and has kept the reputation through rescissions and challenges. Alison Price & Co sets the bar when it comes to fine dining for events.

2

■ Alison Price now caters for private aviation (Alison Price On Air). How did you get into this market and why?

After a project in Valencia, we did extensive market research and realised there is a need for a company that could provide catering at a level that really reflected the super elite, sophisticated and elegant world of business jets. It looked like a very exciting industry to get in to and we decided it was worth the challenge. Even though London is considered a saturated market for in-flight catering, we felt our USP to revolutionise the food service side of the industry was strong and fit well with the Alison Price & Co brand.

3

■ What does Alison Price offer to this sector that its competitors don't?

We spent months working with flight attendants from some of Europe's top BizAv companies understanding the problems and frustrations that needed to be overcome. From this we designed a unique system and a series of packaging combined with Michelin star-level cuisine that allowed flight attendants to recreate our award-winning food aboard the aircraft.

4

■ Who are your current clients?

We cater for all airports in London and the South East. Currently we cater for a number of large companies based in the UK and Europe. A number of those have Middle Eastern clients. I think this is a very important region and will become more so over the next few years.

5

■ How are your menus put together?

We have our own menus, designed by our chefs. Each menu takes months of planning; each dish has to be carefully considered for what works on an aircraft. We look at each dish considering how it travels, how it will be reheated and its presentation. We have a team of very talented chefs from around the world, who can recreate just about any dish from the very best ingredients and specialist products. We sometimes have unusual requests but being based in central London give us an advantage with product and supply.

6

■ What other services do you provide this sector?

We only use tried and tested suppliers. For instance, our florist is one of the best in London and, because of our corporate client base, we have access to some of the most exclusive wine cellars in London. We can source just about any bottle, including champagne and vintage cases reserved for auction. We also use an Arabic and sushi supplier. We believe that to provide the best you need to work with companies that are specialists in what they do.



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