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AFRICAN AEROSPACE

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN AFRICA

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African aviation has lost a great friend

On February 5 this year John Miller, one of the driving forces behind the launch of this magazine, died suddenly from a heart attack while on his morning walk around Northcliff Hill, outside of Johannesburg.

John's reputation as an aviation writer was unmatched in South Africa and his incredible skill as an aviation photographer had seen him take the front covers of the top general aviation magazines in both Europe and the USA.

When we first looked at launching this magazine for the whole of Africa and across all industry sectors, John was one of the first people we discussed it with to see whether the idea was viable.

His advice was superb and his commitment to help and guide us, right up until his untimely death, was beyond compare.

John knew how tough the magazine world is. He founded *Aero Africa* magazine in 1993, and was the editor of *SA Flyer* and *Mid East flyer*. He was always ready to help others, guiding new entrants to the industry and bringing people together who shared his love for aviation.

He was just 56 years old and leaves behind his partner, Denise, and his daughter Isabelle. Like all in the African aviation world, we will miss him.

There are also changes at *African Aerospace* as Ian



John Miller: unmatched reputation.

Sheppard takes over the controls of the magazine with effect from this issue.

Having spent his childhood in Zambia and with family still living in southern Africa, Ian has great experience and love of the African aviation scene. He has developed an excellent reputation in aviation journalism in Europe that has seen him work for magazines such as *Flight International* and, more recently, edit *Aviation International News* (AIN) at some of the world's major airshows.

I am looking forward to working with Ian and seeing him take the magazine to the next level.

In this edition – with the missing Malaysian aircraft and the events surrounding the Mozambique passenger plane crash in Namibia still hot in the press – we focus on some of the issues surrounding pilot assessment that could affect safety. As ever, safety is an on-going challenge that deserves our attention.

Finally, we all look forward to meeting our readers who visit Morocco this month for the Marrakech Airshow.

It promises to be a great event for the industry – especially with its new co-location with AfBAA for a business aviation focus.

Safe landings,

Alan Peaford
Editor-in-Chief

COVER: Souad Elmallem, Bombardier head of strategy and international business development for Africa.

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African Aerospace magazine is published with the support of AfBAA

The A340 can be considered an efficient long-haul solution in today's market.



A340 Providing efficient lift for the long-haul

Could the A340 be a solution for airlines looking to make headway in an expanding market?

When it first entered service, the A340 opened true long-haul operations, expanding the Airbus wide-body family. The A330 and A340 have since become the best-selling wide-body family of all time.

In an ever-changing world some flag carriers like to keep their fleet age very low, it's natural that a proportion of their aircraft will move to the used aircraft market, the A340 is no exception.

The A340 Family of three variants, the A340-300, -500 and -600, is now available at very competitive lease rates which makes them economically affordable prospects for carriers looking at long-haul opportunities, especially as they await delivery of new-generation aircraft, such as the A350 XWB.

A340 appeal

The A340 appeal is based on its availability, commonality with other Airbus types, its performance as well as its excellent payload accommodation.

Now that older B747-400s are well into their retirement phase, the availability of significantly younger A340-600s equipped with modern avionics, make them the smart interim upgrade.

The four-engined A340 is not subject to "Extended-range Twin-engine Operations" (ETOPS). Operators can fly the most direct routes and operate efficiently from 'hot and high' airports, potentially off-limits to other aircraft. Furthermore, the A340 fits seamlessly alongside other Airbus aircraft, especially the twin-engined A330, with which it shares the same modern technology, such as the cockpit, fly-by-wire architecture and systems.

The A340 cabin can comfortably accommodate from 280 to 440 passengers depending on the model. Most A340s available in the market today are fitted with full Audio-Video-On-Demand (AVOD) IFE system in all classes, which is today's standard. Moreover, when it comes to making the most of cargo revenue opportunities, the A340 can carry as much cargo as direct competitors if not more, with 18 to 25 tonnes of revenue earning cargo capacity.

The bottom line

So, has the A340 performed as intended by its designers? The answer is definitely 'yes' because today's A340 is a mature product delivering high reliability.

With its very competitive ownership costs, its passenger and cargo revenues, its availability and its comfortable cabin, the A340 can be considered an efficient long-haul solution in today's market.

More information on www.airbus.com



07 **business brief**

News from around the region as we look at what has been making the headlines.

AIR TRANSPORT

12 Pilot terrors

Incidents where pilots have committed suicide by crashing their aircraft have focused attention on the psychological aspects of the job.

17 All's fare in love and war

The South African low-cost airline market is becoming quite a battleground, with SAA and Comair facing competition from four ambitious carriers.

24 Asky helps Ethiopian go west

Picking up the mantle left by Air Afrique, Lomé, Togo-based Asky (African Sky) has ambitions to grow its route network around Africa and beyond.

«Reprenant le flambeau d'Air Afrique, la compagnie aérienne Asky a pour ambition de développer son réseau en Afrique et à l'international.»

29 The plan from uncle

Fast-growing Aircraft Leasing Services started with a Cessna 150 in 1985 but it now has a burgeoning fleet of business aircraft in various countries.

31 Connecting Kenya

Nairobi-based Safarilink operates to 22 airfields around the east African country, with 11 aircraft – from Cessna Caravans to a Twin Otter.

32 Sudan Airways struggles on

Sudan Airways' general manager explains how it is carrying on with leased aircraft although its own fleet remains grounded.

34 Stout of Africa

The BAe146 and the Avro RJ that came after it are finding new roles in Africa as they are retired from the European regional fleet.

38 Tassili's desert ambitions

Algeria is not the easiest place to operate but Tassili is making it look easy, although still playing second fiddle to Air Algérie.

«Même s'il n'est pas facile d'opérer en Algérie, Tassili Airlines poursuit son chemin et entend jouer la carte de la complémentarité avec Air Algérie.»

40 Africa looks forward to Airbus' A350

Few could argue that Airbus has done a fine job with the A350, an aircraft that is ideal for African airlines – with several having already been ordered.

«Plusieurs observateurs avancent qu'Airbus a fait un bon travail avec son Airbus A350, un avion idéal pour les compagnies aériennes africaines avec déjà plusieurs commandes enregistrées.»

SPECIAL REPORT



67 MARRAKESH AIR SHOW

Morocco will move centre stage when it hosts the Marrakech Airshow, April 23-26.

«Le Maroc sous les projecteurs avec le salon de Marrakech (23 au 26 avril 2014).»

69 BOMBARDIER LOVES MOROCCO

Canadian manufacturer Bombardier started manufacturing in Casablanca more than a year ago and is bullish about regional aviation's prospects in Africa.

«L'avionneur Canadien Bombardier a ouvert son usine au Maroc il y a plus d'un an et se montre optimiste sur les perspectives de l'aviation régionale en Afrique.»

76-78 FORMIDABLE TECHNOLOGY KEEPS MOROCCO ON TRACK

After significant upgrades, the Royal Moroccan Air Force (RMAF) is now one to be reckoned with.

72 SAFRAN FIRST IN

Safran was one of the first companies to start building a Morocco presence, seeing it as the gateway to Africa.

«Safran a été l'un des premiers groupes à s'implanter au Maroc en voyant ce pays comme une véritable porte d'entrée sur l'Afrique.»

74 TAXING TAKE-OFFS

A new passenger tax introduced in April – aimed at funding tourism promotion – is not popular with airlines such as Royal Air Maroc.

«Dès ce mois d'avril, une nouvelle taxe (pour financer la promotion du tourisme) est mal accueillie par les compagnies aériennes et en particulier Royal Air Maroc.»

Après d'importantes améliorations, la Force aérienne royale marocaine (CGRR) est aujourd'hui une force sur laquelle on doit compter.



DEFENCE

44 Kenyan Air Force renaissance?

Kenya's air force lives somewhat in the shadow of its army and navy but is attempting to adapt and modernise its fleet.

«L'armée de l'air du Kenya vit un peu l'ombre de sa marine nationale mais elle tente d'adapter et de moderniser sa flotte d'avions.»

50 African airlifters

Airlifters like the C-27 are ideal for African forces, and US Air Force defleeting is bringing relatively new, capable examples on to the market.

54 Mozambique loves Migs

Russian Migs are all the rage in Africa, it seems, as they continue to sell in countries like Mozambique.

AIRPORTS



81 St Helena's new airport

The tiny island off the African west coast is preparing to accept air traffic for the first time as its airport takes shape.

«La petite île au large de la côte ouest africaine prépare sa connectivité aérienne alors que son aéroport prend forme.»

85 Modernising African airports

A range of technologies are being installed at African airports to bring them up to scratch; it's what airlines need and expect.

MAINTENANCE

89 Turkish sees opportunity south

Turkish Technic is not now part of Turkish Airlines, but it still sees the carrier's route network as the key to growth in MRO.

REGULATION

92 Winter of discontent

FastJet has been frustrated by the traditional African red tape but is not giving up, according to CEO Ed Winter.

«FastJet a été contrariée par certains fonctionnements en Afrique mais elle ne renonce pas,» selon son PDG, Ed Winter.

106 Mauritius goes for APEX

Mauritius Airport CEO Serge Petit explains why the ACI APEX programme will help it to improve in many ways.

«Serge Petit, directeur général d'Airports de Mauritiu, nous explique pourquoi le programme APEX de l'ACI aidera l'aéroport à s'améliorer.»

PEOPLE

108 All in a day...

Chamsou Andjorin, Boeing director of safety for Middle East & Africa.

BUSINESS & FINANCE



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Taking place in Geneva every May, EBACE is a must-attend event for African business aviation professionals.

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Learn how one daring lady pilot has flown in the slipstream of a long-gone lady explorer to conquer Cape Town to Cairo in a historic biplane.

64 ELECTRONIC TICKET TIME

Adopting modern technology is a must for African air transport as it plays catch up with the rest of the world. But not everyone is sold on GDSs.

CARGO

95 FREIGHT EXPECTATIONS

Predicted economic growth in Africa, together with soaring demand for produce, is driving activity and egging-on ambitious air-freighters.

«La prévision de croissance économique en Afrique et l'exportation de marchandises restent le moteur de l'activité du fret et aiguisent l'appétit de ses opérateurs.»

99 LOAD ON HIS MIND

Kenya Airways Cargo boss Dick Murianki tells *African Aerospace* the secret formula for a happy, productive workforce.

102 HOLD ON TO THE FREIGHT

IAG, parent of British Airways and Iberia, is moving to a new cargo philosophy as it retires old freighters and utilizes belly-hold space more.

104 ETHIOPIAN SHARPENS ITS VISION

Ethiopian Airlines' CEO Tewolde Gebremariam outlines his vision of cargo growth.





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Market share key for African airlines

The CEO of Ethiopian Airlines, Tewolde Gebremariam, has warned that Gulf carriers could “eat us for their lunch” unless there is a concerted effort by African airlines to get increased market share from the fast-growing continent.

Speaking at the Aviation Club in London, Gebremariam said: “We have tremendous competition coming from the Gulf carriers. Dubai is only three-and-a-half hours away from Addis Ababa; Abu Dhabi and Doha the same. They have been doing very well and now Africa is also in their centre of strategy.”

He said that Europe’s failure to respond to the threat by the Gulf carriers had led to this change: “Inadvertently, European governments and politicians are helping them move the centre of gravity to the hubs in the Middle East by making it very difficult for airlines to operate in Europe. Gebremariam said that the Gulf countries are treating aviation as a strategic national asset. “The



Captain Chrispine Onyango and First Officer Iyadi Omurembe in a Kenya Airways ERJ 190.

Course success for Kenya’s magnificent seven

Seven Kenya Airways cadets have graduated from the first integrated professional pilot course delivered to the Nairobi-based airline by South Africa’s Progress Flight Academy.

The seven achieved their type rating on the Embraer Regional Jet 170/190 aircraft at the Flight Safety International Academy in Amsterdam following

completion of the course at Progress Flight Academy.

The integrated, premium course achieves the superior operational capability necessary for the steep learning curve in the transition from a multi-engine piston aeroplane to a medium jet airliner.

All seven cadets have completed the

operational training and been appointed as first officers.

Concurrent with this achievement, the first Kenya Airways graduates from a Progress ‘class of 2006’ are training for command on the Embraer Regional Jet 190. Captain Chrispine Onyango is the first to qualify, and three other first officers from the same course are in training.

contribution of aviation to social economic development is recognised and it is the pride of governments, but other governments, and even in Africa, are not recognising this unfortunately.

“We are growing very fast but we have a serious challenge when considering

that 80% of traffic between Africa and the rest of the world is controlled by non-African carriers. All of us – Kenya Airways, Ethiopian, South African, EgyptAir, Air Morocco, TAG Angola, CAM Air, RwandAir, Arik Air and so on – put together only have 20% of the market. This is a big, big

challenge if we don’t do something to at least maintain 50% of the market. Otherwise we are going to be swallowed and they are going to have us for their lunch.”

■ **Shipshape for the future:**
Page 104

Support extended

The Namibian flag-carrier, Air Namibia, and Lufthansa Technik have extended their total technical support contract, valid through 2018. It has been running since the African airline launched in 2006.

SAA plan for cadets

South African Airways (SAA) is looking at utilising the in-flight relief pilot programme as a direct and meaningful contribution towards the development of future pilots for the airline industry.

“We are investigating the possibility of putting together a programme that will assist entrants to the airline’s cadet pilot training programme, who have successfully completed the

initial training.

“This will enable them to receive more training in-house and acquire much-needed experience in their journey towards becoming fully fledged airline pilots,” said acting chief pilot, Captain Sandy Bayne. “Nothing about the minimum requirements to become a first officer with SAA changes.”

Big screen initiative

FlightPath International has introduced 60-inch flat screen monitors at its training centre.

Each of its state-of-the-art classrooms is now fitted with a pair of high-definition flat screen displays coupled with wireless iPad technology, for the projection of flight deck panels and aircraft schematics.

The rotary club

The helicopter community in the Middle East and Africa is to get a single voice following the launch of MEAHA, the Middle East and Africa Helicopter Association.

A King Air B200 is set to supply the Northern Cape with a reliable and safe air service.



Service boost for Northern Cape

The South African Northern Cape Provincial Government and Phakalane Airways have launched a new joint venture air service to connect regional towns and provide safe and reliable connections for the public, businesses and state personnel.

Services started in February after Northern Cape Premier, Sylvia Lucas, said her department had identified a need for a small airline and had worked with commercial

stakeholders to prepare bids to operate a sustainable transport system.

She said: “These new flights will give people more options of travelling between the towns. Air transport is a critically important industry with a significant impact on our economy.”

Flights will initially provide scheduled services to Kimberley, Upington and Springbok.

Algerian crash kills 103

An Algerian Hercules C130 military transporter crashed in the mountainous area of Oum al-Bouaghi close to the Tunisian border on February 11. All 103 people on board were killed. The Hercules was en route to Constantine from Ouargla in bad weather and was carrying military personnel and family members from the southern Saharan city of Tamanrasset. It had made a technical stop in Ouargla.

RAM's ATR deal

Royal Air Maroc (RAM) has signed a global maintenance agreement (GMA) with aircraft manufacturer ATR for the airline's new fleet of ATR-600 aircraft.

Signed for an initial four years, the contract covers the four ATR 72-600s already owned by the airline.

ATR will manage all aspects of maintenance and repair for some equipment for the airline's ATR-600 fleet.

This equipment includes line-replaceable unit (LRUs) and propeller blades. By signing this contract, ATR guarantees Royal Air Maroc the permanent availability of these spare parts.

African cargo drop

While the International Air Transport Association (IATA) statistics showed a 6.1% growth in demand (measured in freight tonne kilometres or FTK) for airfreight at the end of 2013, Africa experienced a contraction of 1.2%.

After a solid start to the year, growth in airfreight carried by African airlines weakened from the middle of 2013. Although the region's trade volumes continue to increase and local economies are



Project engineering director Fatima Abdullatif signs the contract with Zhang Wenfeng, from China Harbour Engineering.

Khartoum aims at major hub status

Khartoum Airport has outlined its aspiration to become a major hub for Africa following the signing of a major development contract with a Chinese contractor.

The contract, signed at the Bahrain Airshow in January, was for phase two of the \$1.38 billion project to develop a brand new airport called Khartoum New International Airport (KNIA) 45km outside the Sudanese capital.

The new airport will replace the existing two million passenger-capacity facility with a 4.5 million capacity terminal and a 4,000-metre runway.

Construction on the 102sqkm site will begin in May with China Harbour Engineering as the main contractor. It will be complete in July

2015. Phase two of the project will see the capacity grow to 12 million with a second 3,200-metre runway.

"Khartoum is the centre of Africa," said consultant Mohamed Hassan Elmugamer. "It used to be a main transit point but we lost the opportunity. Now is the chance to get back. The roads and highways are already in place."

The \$700 million first phase is being financed by the Chinese National Bank through a loan to the Sudan Government. Arrangements for the second phase are under negotiation.

"We want the private sector to get involved in the project in areas such as cargo and MRO. Now is the time to be talking," said project engineering director Fatima Abdullatif.

experiencing fast growth, competition from airlines outside the region is intense and the lack of adequate infrastructure and political stability continue to hinder growth potential.

Angola FANS

The Luanda flight information region (FIR) over Angola is set to support aircraft using future air navigation system (FANS) data link avionics with the deployment of the SITA FANS system communicating via the SITA Aircom data link service.

This marks a new era of air traffic management in

the region in line with ICAO recommendations for improving communication, navigation, and surveillance in the Luanda oceanic FIR.

Aircraft using FANS controller-pilot datalink communications will provide a more accurate way for air traffic controllers and pilots in this region to communicate during flight.

Freight boost

Ethiopian Airlines has taken over its new cargo terminal and apron at Addis Ababa following the completion of a turnkey contract by Unitechnik Systems of

Germany, and Varnero Construction.

The total cost of the cargo terminal project was \$148 million.

Ethiopian Airlines Group chief executive, Tewolde Gebremariam, said: "In line with our vision 2025, this massive investment in construction of the two cargo terminals shows our unwavering commitment to support the Ethiopian fast growing export of agricultural products and high-value imports to the continent, which are critically important for economic development of many African countries."

Q400 for Malawian

Malawian Airlines of Lilongwe, Malawi, has become a Bombardier operator following the introduction to service of a Q400 NextGen turboprop in January.

As the 15th operator of the type in Africa, Malawian Airlines has launched domestic and international flights with a dual-class Q400 NextGen aircraft acquired from co-owner Ethiopian Airlines.

Proflight record

Proflight Zambia flew the equivalent distance of travelling around the world every week last year, the airline said.

The airline flew a total of 2,275,204 kilometres during 2013, enough to fly the 40,075 kilometres circumference of the globe 56 times, or more than once round the Earth every week.

"For the first time in Proflight Zambia's 23-year history, we broke through the two million kilometre mark last year, demonstrating that our strategy of slow, steady growth is starting to pay off," said Proflight director of government and industry affairs, Captain Philip Lemba.

Algérie's 737-800s

Air Algérie has confirmed its commitment for eight 737-800 aircraft from Boeing. When finalised, the order will be worth \$724 million at list prices.

"The 737-800 continues to be the backbone of Air Algérie's fleet.

"So far, we are pleased with these aircraft, and anticipate receiving all eight of these new units before the end of 2016," said airline CEO Mohamed Salah Boultif.

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RwandAir receives first Q400

RwandAir's transition from the Bombardier Dash 8-200 to new Q400 aircraft has begun with the delivery of a dual-class Q400 NextGen turboprop.

Jean Paul Nyirubutama, deputy chief executive officer said: "By offering similar cabin amenities on the Q400 NextGen aircraft and on our recently acquired dual-class Bombardier CRJ900 NextGen regional jets, the two complementary aircraft types will provide seamless passenger service, permitting us to align our total fleet strategy towards a unified passenger experience."

Bell rings twice

Egypt's Petroleum Air Services (PAS) has taken delivery of two Bell 412EP helicopters, configured and fully equipped to meet oil and gas producers' requirements recommended by the leading international oil companies working in Egypt.

"We value the customer support and services we've received from Bell Helicopter over these 32 years and wanted to make sure we continued to invest in Bell products," said PAS chairman and managing director, General Yehia Hussein. "We look forward to continuing this relationship in the years to come."

Nova's bright move

Eritrea's Minister of Tourism, Askalu Menkerios, has inaugurated the launching of direct flights by Sudan's Nova Airways to and from Asmara-Khartoum-Juba, as well as Kassala.

Training triumph

Ethiopian Airlines' training team ended 2013 on a high with the graduation of 52 aviation maintenance



The first of the IATA training courses will bring new employees from Africa up to international ground handling standards for VIP service. Below: Wynand Meyer, joining UAS from Jeppesen to drive the business growth from the new African headquarters.

UAS opens African headquarters

International trip support company UAS has opened a new African headquarters in Johannesburg, South Africa.

As part of its broad programme of investment across Africa, the company is building new facilities, opening offices, implementing training programmes, recruiting staff, developing sales and marketing initiatives, and engaging in corporate citizenship.

Speaking at the opening event, Wynand Meyer, business development director for Africa, said: "The regional staff will aim to leverage local experience and knowledge along with UAS's global resources to provide a full range of international trip management solutions."

Meyer joins UAS from Jeppesen, a Boeing

company, where he oversaw the organisation's Africa, Middle East, and India ground-handling network.

To overcome emerging market hurdles and deliver the VIP experience clients expect from UAS, the firm is initiating an aggressive training and development programme for its African employees, providing intensive workshops on safety to ensure standards are recognised and maintained.

The training also includes an IATA certification course on station ground-handling management. Recipients of the UAS Africa scholarship programme from the Ethiopian Aviation Academy will also participate in the training.



technicians, 47 marketing and 25 finance trainees.

Ethiopian Aviation Academy now has an annual intake capacity of 1,000 trainees in all critical areas of the industry, including: pilots, cabin crew, and aircraft technicians. Group CEO Tewolde Gebremariam said: "In line with our Vision 2025 strategic roadmap, Ethiopian Aviation Academy aims to quadruple its intake capacity by training 4,000 aviation professionals annually with a view to support the African aviation industry."

Fast-moving deals

Low-cost carrier FastJet has signed two agreements to allow travel agents worldwide to access and sell its flights.

The first agreement was with Skyscanner, which enables consumers to compare FastJet's flight schedules and prices against those of other African carriers via www.skyscanner.net. Visitors to the site will then be able to link directly to FastJet's website and book their flights.

FastJet has also signed an agreement with Hahn Air Systems, a sister company and client of Hahn Air.

Astral plane relief

Following the humanitarian crisis in South Sudan, Kenya's Astral Aviation has uplifted more than 1,000 tonnes of relief and humanitarian shipments into Juba.

CEO Sanjeev Gadhia said: "The crisis took us by surprise, considering that Astral has been operating

into South Sudan for more than eight years and operates a dedicated ground-handling and warehouse service at the airport."

Astral responded to the crisis by arranging evacuation flights using DC9 and Embraer 120 passenger aircraft, and was among the first to land in Juba. Astral evacuated in excess of 500 people safely into the Kenyan capital, Nairobi.

Kuuchi IATA role

Raphael Kuuchi has become the International Air Transport Association (IATA) vice president for Africa. He was previously the director of commercial, corporate and industry affairs with the African Airlines Association (AFRAA) in Nairobi, Kenya.

Airkenya twin boost

Airkenya has boosted its fleet with two additional aircraft aimed at domestic tourism routes. It received its seventh new Cessna Grand Caravan and its second 50-seater Dash 7 STOL regional turboprop.

Airkenya said that these additions give the airline the biggest capacity tourist aircraft in the east African region.

Embraer new boss

Embraer's business aviation sales and marketing team in Africa has new leadership.

Peter Griffith was appointed as vice president sales & marketing, Europe and Africa, to lead sales efforts in the region following the resignation of vice president EMEA, Colin Steven.

Suspensions that a commercial pilot deliberately downed his scheduled flight in southern Africa and that an unqualified flyer may have been at the controls of a crashed Russian airliner have focused attention on the medical and professional checks carried out on flight-deck crew. As Alan Dron discovered, this is a worrying trend.

PILOT TERRORS

On November 19 last year, a Linhas Aereas de Moçambique (LAM) Embraer E-190 regional jet crashed in a remote area of northern Namibia with no survivors.

Just 48 hours earlier, a Boeing 737-500, operated by Tatarstan Airlines on behalf of Ak Bars Aero, stalled on go-around at Kazan International Airport on arrival from Moscow Domodedovo, resulting in the deaths of 44 passengers and six crew.

The two incidents have led investigating authorities to look carefully at personal and professional facets of the airliners' respective captains.

Some weeks after the Kazan crash, Russian investigators said they were investigating whether the aircraft commander, a former navigator who had re-trained as a pilot, may have had a fake licence from a small Russian training centre that had been closed down some time ago due to shortcomings.

Investigators said they were checking the licences of all pilots who had graduated from the former training school. The inquiry into the crash is continuing.

The LAM incident, which killed all 22 passengers and six crew, is also still being investigated and no definite conclusions can yet be drawn. However, in a carefully worded

preliminary report three weeks after the crash, Namibia's Directorate of Aircraft Accident Investigation revealed that the flight data recorder, or 'black box', revealed several actions by the captain in the moments before impact that appear to indicate an intent to deliberately crash the year-old jet.

The report said that the aircraft, en route from the Mozambican capital of Maputo to Luanda in Angola, had been cruising at FL380 (flight level 380 is 38,000ft in standard atmospheric conditions) with no apparent problems when the first officer left the cockpit to visit the toilet.



In his absence, the aircraft entered a rapid descent and the captain three times manually selected new, lower altitude settings – the last one just 592ft, below ground level of the terrain under the flight path.

"Auto-throttle was manually re-engaged and throttle level automatically retarded and set to idle. The airspeed was manually selected several times until the end of the recording, which remained close to the V_{mo} [maximum operating limit speed]," said the preliminary report.

During the descent, warning chimes could be heard on the recording, together with banging on

the cockpit door, apparently from the first officer trying to regain entry.

While the report is careful to say that the reasons for the captain's actions are unknown, it notes the sequence of actions "displays a clear intent".

Although a final determination on the captain's actions is still awaited, it would not be the first time that the crash of a commercial aircraft has been ascribed to the pilot's deliberate actions.

When recruiting, airlines obviously seek certain psychological qualities in their pilots, such as a calm demeanour and good problem-solving skills but, in general, they do not conduct specific psychological evaluations of flightdeck personnel, according to André Droog, secretary general of the European Association for Aviation Psychology (EAAP).

Formed in 1956, EAAP has around 400 members working in aviation as psychologists or human factors experts.

Major carriers carry out 'psychological' tests on trainees to determine aptitude for flying and to uncover personality traits, such as their ability to work closely with colleagues and how they cope with stress levels, said Droog. However, detailed psychological evaluations would generally not be conducted during a pilot's career unless a potential problem was flagged up by medical staff or by a pilot's colleagues.

"It would happen only if there is some serious



Fake pilot who flew for a decade

As the investigation into Thomas Salme unfolded, it was discovered that, incredibly, he had flown for several European airlines for more than a decade on the basis of forged documents, amassing 10,000 hours in his logbook.

Salme, who at one time had been a maintenance engineer with SAS, had held a commercial pilot's licence, but this had expired and in any case it had never qualified him to fly passengers. He had learned

to fly Boeing 737s after a friend allowed him to use an SAS simulator late at night.

He was quoted in the German magazine *Focus* as saying that it had been simple to get away with his fraud: "It was surprisingly easy. The documents look different everywhere in Europe. An Italian airline doesn't know what a Swedish licence looks like. And you can forge all the IDs you need."

A Dutch court fined him €2,000 (\$2,600).

In 2013, a UK court jailed a former US military pilot, Michael Fay, for three years and one month after he had forged his licence and medical certificates to fly Airbus A320s with Libyan carrier Afriqiyah Airways, taking advantage of the chaos in the North African nation following the overthrow of Muammar Gaddafi.

Ironically, several pilots who had flown with him over the years testified to his flying skills and knowledge of the aircraft he flew.

doubt about their state of mind and behaviour; it may be that they talk to a psychologist or psychiatrist. In European law, a psychological evaluation may be carried out if a medical person undertaking a check has some serious doubts about their mental fitness."

This, he said, was a rare occurrence.

Despite the stresses involved in their employment, such as being away from home regularly or operating over wide time zones or around the clock, pilots are not more prone to psychological problems than the general population, said Droog. Compensations included duty rosters that allowed them to be at home when most of the workforce was labouring during the day.

"They have the stress and fatigue of the job, of course, but there's no special vulnerability to psychological disorders."

There is some use of medication, drugs and alcohol in the pilot population, he admitted, but airlines monitor such risk factors very carefully.

"In general, they are fitter than the general population because, of course, they have these medical assessments every year, so they are well-monitored. That means that if [psychological] problems are there, they are soon discovered. Something can then be done about it or they can leave the job. But I don't think there are many medical drop-outs."



Pilots are generally resilient and not much affected by psychological pressures, says André Droog, secretary-general of the European Association for Aviation Psychology.

The fact that there had been so few examples of commercial pilots deliberately crashing their aircraft over the past 20 years showed that pilots were more than usually resilient, said Droog. "Problems tend to be noticed by colleagues. For example, if pilots are under stress because of relationship or financial troubles they can get help – at least in well-organised, large airlines."

He added: "In many countries, pilots' unions have the means to offer help to all pilots, not just those in the big airlines."



Pilots are aware that help is available if they require it. "In general, pilots are not very prone to anxiety," he concluded.

The International Federation of Airline Pilots' Associations (IFALPA) believes that psychological evaluation or testing is "unacceptable" for routine licence renewal/revalidation purposes. "However, IFALPA supports flexibility regarding mental disorders of a temporary and/or treatable nature."

Individual pilots can obviously undertake psychological assessments voluntarily, IFALPA added, but it believes this should only be done following consultation between the national pilots' association and the appropriate medical authorities.

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A rare case of pilot suicide is suspected as the cause of the crash of a Linhas Aereas de Moçambique (LAM) Embraer E-190 in Namibia late last year.

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It sees situations where further assessments can be justified as, for example, “where the individual has exhibited long-term problems in the course of line operations, or when undergoing normal recurrent or training checks that, in the judgement of the local pilot advisory group, could have an adverse effect on flight safety; or where the individual is known to be under serious stress because of life-crisis type phenomena, such as divorce or financial problems.”

“In many cases,” added IFALPA, “it will be possible for the pilot to receive behavioural assistance while maintaining a regular schedule.”



The possibility that the captain of the Tatarstan Airlines aircraft may not have had the appropriate qualifications for his position reawakened memories of previous incidents where unqualified pilots have taken the controls of commercial aircraft.

Such incidents are rare, but not unknown. Probably the most notorious of recent times came to light in 2010 when Swede Thomas Salme was arrested in the cockpit of a Corendon Airlines Boeing 737 that he was about to fly from Amsterdam Schiphol to Ankara. There have been other incidents – thankfully infrequent.

The rapidly growing airlines of the Middle East, particularly in the Gulf, require large numbers of new pilots as their fleets expand by the month.

Does this make them vulnerable to pilots with inadequate qualifications trying to ride on the coat-tails of their expansion?

No, according to a senior training pilot in the region, who has discussed the issue with his peers.



Suicidal pilots are rare

Instances of airline pilots deliberately crashing their aircraft are, thankfully, extremely rare.

However, the crashes of a Royal Air Maroc ATR 42 in the Atlas Mountains in 1994, a Silk Air Boeing 737 en route from Djakarta to Singapore in 1997, and an EgyptAir Boeing 767 off the east coast of the USA in 1999, were all attributed to deliberate pilot actions.

It should be noted that, in all three cases, these findings were strongly disputed – by relatives, the airline and/or pilot unions.

Another incident, in Africa in 1999, was indisputably a case of suicide, and involved an Air Botswana pilot – who had been grounded for medical reasons – commandeering one of the airline’s ATR 42 turboprops.

He circled Sir Seretse Khama International Airport in the capital, Gaborone, for two hours, telling air traffic controllers he intended to kill himself in revenge for the airline’s decision to ground him. When his fuel ran out, he deliberately crashed into the carrier’s other two ATR 42s, destroying all three aircraft in the resulting fireball.



The pilot, who asked to remain anonymous, said there have been instances of pilots from certain areas – notably Asia – turning up at Gulf carriers for job interviews, with apparently legitimate qualifications that, on closer examination, were not what they seemed.

So many such pilots had appeared that recruitment departments in the region began to recognise patterns of certain flight schools, and tail numbers of individual aircraft on which the pilots said they had undertaken their training.

This led to the realisation that if all the pilots had undertaken the training they claimed: “Some of those aircraft would have been flying for more than 24 hours a day,” he noted.

The airlines were now aware of the problem and will not accept pilots claiming to have undergone training at those schools.

The pilot added that he had seen others who were supposedly possessors of commercial multi-engine licences with an appropriate number of hours in their logbooks, but who did not have “any of the skills you would expect them to have” given their qualifications.

He said he had seen this phenomenon all over the world, not only in the Middle East. Instructors/examiners such as him had then to make a judgement: “Was it fraud, or was the guy just a lousy pilot?”

While not wishing to label any particular nation, the Philippines did seem to suffer from this problem more than most, to the point where it became a concern. “People need to know that if they are going to engage in that activity, there are some smart people at the other end who can probably see through them.”

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MORE TO BELIEVE IN



Boeing 737NG operators Mango and Kululu (which means "It's easy") are two of four low-cost carriers pushing in on a market long dominated by BA Comair and SAA.



*The battle for South African aviation is heating up, with four market entrants looking to break the duopoly enjoyed by SAA and Comair. **Martin Rivers** reports from Johannesburg.*

ALL'S FARE IN LOVE AND WAR

South Africa may have the continent's largest domestic aviation market, but it is far from the most competitive one. Just two operators – state-owned flag-carrier South African Airways (SAA) and privately owned Comair – provide domestic capacity in the country.

SAA operates as a full-service mainline unit, while also running low-cost services with its Mango brand. It further provides regional links through subsidiary SA Express and franchise partner Airlink.

Comair offers full-service flights under a British Airways franchise, plus no-frills flights through its Kululu brand.

But with the flag-carrier's restructuring making little progress and Comair steadily growing its margins, South Africans are clamouring for more choice. Responding to their calls, four new operators are poised to enter the domestic

market. They may not all succeed, but 2014 will, nonetheless, bring a welcome shake-up to the competitive landscape.

The failure of 1time Airline in November 2012 ushered in the current duopoly, with the cheapest airfares rising 34% that year and another 20% in 2013.

Comair blames the depreciating rand for the trend, but its competitors think otherwise. "At the moment consumers are paying more, and it doesn't need to be this way," said Javed Malik, director of Pak Africa, the company now working to revive 1time. "Consumers could be paying half the price they are paying at the moment. Since 1time closed, a lot of people started to travel by road because they cannot afford air travel. We will attract those people back again."

Pak Africa is a group of high-net-worth individuals based in Dubai and Pakistan. It has offices located across Africa, including Nigeria,

Angola, Uganda, South Africa, Zimbabwe, Malawi and Sudan. Although the company's focus has historically been on the manufacturing and textiles industries, Tabassum Qadir, managing director, said an airline venture has long been in the crosshairs.

"The group always wanted to start something in the aviation sector, and this is the best chance to do so," she explained. "Our aim is to connect Africa, whether it's trade or air transport. And we have an advantage because we have infrastructure in all parts of the continent. We are already rooted in Africa – we know the culture, the business environment."

Malik said Pak Africa's investors have followed 1time since its founding in 2004. The group had considered buying the airline when it entered provisional liquidation two years ago, but with debts of 450 million rand a bailout was

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considered too risky. Instead, Pak Africa will pay 21 million rand to acquire solely the 1time brand through a takeover of 1time Holdings, the parent company.

Shareholders have accepted the offer and, at the time of writing, Pak Africa was expecting an announcement from the Johannesburg Stock Exchange (JSE) confirming the transaction. Once the JSE notice is issued, flights should begin within 60 days.

The branding partnership follows Pak Africa's already-consummated 62% acquisition of Global Airways, a local charter carrier with an air operator's certificate (AOC) that will be used to get 1time airborne again.

Rather than deploying Global's fleet of ageing McDonnell Douglas aircraft, however, 1time will benefit from a new order by Pak Africa for four Airbus A320s. The first unit arrived in January, Qadir said, with the second expected in March. "The new type will be more competitive [than 1time's previous MD-80s]," she noted.

The 1time brand has always been popular in South Africa, hence the media's broadly positive reception to news of its resurrection. But Malik and Qadir will have their work cut out if they are to gain market share rapidly.



Three other carriers are also staking a claim on the market. FlySafair came tantalisingly close to being the country's third domestic carrier last year, selling about 2,000 tickets before a legal challenge by Comair forced management to suspend its October launch.

Comair's objection was backed by Skywise, another upcoming market entrant headed by two former 1time CEOs.

And then there is FastJet, the pan-African low-cost carrier supported by Stelios Haji-Ioannou, the founder of EasyJet. FastJet's two attempts to enter the domestic market have both unravelled, but the airline insists South Africa remains integral to its business plan.

FlySafair's aircraft and hangar are clearly visible to passengers landing at Johannesburg's OR Tambo International Airport, in an ever-present reminder of the company's eagerness to launch services. It is planning to operate up to 10 daily flights between Johannesburg and Cape Town with a fleet of Boeing 737-400s. Parent company Safair, a well-established local charter operator, provides its AOC.

However, Safair chief executive Dave Andrew was forced to put his plans on ice at the 11th-hour, when Comair and Skywise convinced the North Gauteng High Court in Pretoria that FlySafair's corporate structure violated South Africa's foreign ownership laws. Those laws prohibit foreigners from controlling more than 25% of a domestic airline.

Even though 75% of FlySafair was held by three local executives, the court determined that



1time will benefit from a new order by Pak Africa for four Airbus A320s. (Pictured in background: MD-83.)

ASL Aviation Group, Safair's Dublin-based owner, might be pulling the strings from behind the scenes. "This order effectively prohibits us from starting our operation until such time that the Air Services Licensing Council's (ASLC) decision to grant Safair the scheduled licence has been reviewed by the court," Andrew said after the ruling. A court update was expected as *African Aerospace* was going to press.

FlySafair has since restructured through a black economic empowerment (BEE) deal, transferring most of the company's shares to employees and local investors. The departure of Hugh Flynn, ASL group chief executive, as a major shareholder should resolve the ownership complaint, as Flynn's residence in Ireland was cited as a key reason for the interdict. But, in a further legal twist, Comair has also now objected to FlySafair's renewed application for an operating licence, shrouding its launch plans in more uncertainty.



Supporting Comair in its legal challenge is Skywise, the third operator hoping to inject competition into the domestic marketplace. It, too, had originally planned to launch flights last year, but encountered delays first with its ASLC licence and then its AOC. A revised launch date had not been disclosed by the time of writing, and the airline declined to confirm that flights would get under way in 2014.

But, assuming Skywise can overcome its regulatory hurdles and secure financing, it expects to launch with a pair of 737-300s.

Much like FlySafair, Skywise will deploy older,

less fuel-efficient aircraft than Mango or Kulula, but aims to cut costs through lower lease rates and a rigid application of the no-frills business model. That strategy, both carriers contend, will reduce fares across the market, thus opening up air travel to more South Africans.

Skywise expects to launch services between Johannesburg and Cape Town, before branching out to add Durban, East London and Port Elizabeth to the route network. Its management team is led by Rodney James and Glenn Orsmond, both former CEOs of 1time.



That just leaves FastJet, the bruised but determined airline that launched in Tanzania in November 2012. It aims to become Africa's first pan-continental low-cost carrier, but efforts to reach a fleet of 15 aircraft within a year quickly unravelled. The management team underestimated the depths of regulatory intransigence and protectionism for flag-carriers in Africa, and, to date, FastJet still only operates three aircraft. It has just two international routes, linking Dar es Salaam with Johannesburg and Lusaka, Zambia.

Despite its difficulties, FastJet is adamant that equity partnerships hold the key to expansion across the continent. It has signed memorandums of understanding (MoU) with local operators in Nigeria and Kenya, and already owns multiple AOCs through its subsidiary Fly540.

But efforts to break into the South African domestic market have proven exceptionally tricky. An attempted takeover of 1time failed due to its unmanageable debt pile, and a subsequent deal with

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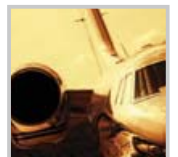
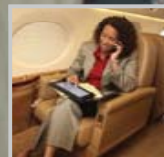
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charter operator Federal Air – backed by a consortium of local investors, including Edward Zuma, the son of South Africa’s president – also came unstuck.

While domestic South African flights remain high on the priority list for FastJet, it appears that a joint venture in the smaller Zambian market will take precedence.

Indeed, given the regulatory and legislative climate in South Africa, continental links may be critical to the health of future operators.

Mango is slowly but surely looking beyond South Africa’s borders, starting with flights to Zanzibar, Tanzania; FastJet will already have international routes when it gains a domestic licence; and 1time, formerly an international carrier, has equally grand aspirations. “It’s going to be 1time across Africa, so our slogan will be, ‘Connecting Africa’,” said Pak Africa’s Malik. “We are negotiating franchises with four to five countries at the moment.”



Qadir singled out Malawi and the Democratic Republic of Congo as possible future bases for a larger, continent-wide 1time. “Once we get the 1time brand, there are companies in Africa sitting with AOCs who want to start a low-cost airline,” she explained. “We would be franchising the brand and also assist them in setting up the whole airline. We are experts in bringing things together.”

Pak Africa’s plans are dauntingly ambitious – it also wants to launch intercontinental flights to Europe and India – but the company has made



Fastjet: Efforts to break into the South African domestic market have proven exceptionally tricky.

steady progress in advancing its goals. Last year, Oscar Madombwe, Zimbabwe’s best-known pilot, agreed to sell 49% of his charter airline, Central Air Transport Services, to Pak Africa. The re-branded subsidiary will deploy a mixed fleet of ATRs and A320s. It will launch with domestic Zimbabwean routes, before Johannesburg and other regional cities are added to the network.

“We took over the company because they have everything ready – all facilities and expertise,” Qadir said. “Captain Oscar was previously the CEO of Air Zimbabwe, and he will stay on as CEO [of the new airline]. Everything is ready except the brand.”

With plans to reach a fleet size of “at least 15 to 18” aircraft in its first four years, Pak Africa intends to make 1time a truly pan-continental company. To that extent, domestic South African operations are just one piece of the puzzle. But they will be a crucial catalyst, exporting brand awareness while testing the water for unseen obstacles.

Noting the difficulties facing FlySafair, Malik said he is positioning the company defensively for any legal action by Comair.

“Court challenges have become part of the game now,” he sighed. “We are ready for that if it comes – our team will keep an eye on every action they’re taking against other groups. And if the challenge comes, we will handle it.”

For his part, Comair chief executive Erik Venter believes that talk of renewed competition is overblown. Domestic seat capacity has risen by 15% since late 2012, he notes, with Comair and SAA more than compensating for the withdrawal of 1time’s 12% market share. “There’s too much capacity in the marketplace at the moment,” Venter said. “They [the new market entrants] can try, but they’re going to have a tough time.”

Ten of the 11 private South African carriers launched since deregulation in 1991 have collapsed, and future operators know they will face tough conditions.

Existing players will not hesitate to slash fares and mount legal challenges.

But, if just one start-up succeeds, South Africa will move a step closer to the fully liberalised, price-competitive, healthy airline sector that its people desire.



Mixed fortunes for South Africa’s civil rivals

Civil aviation in today’s South Africa is a tale of two halves. On the one side, long-suffering flag-carrier South African Airways (SAA) appears to be backing away from the tough decisions needed to get its financial house in order. On the other, Comair is aggressively taking start-up rivals to court even as its 2013 profits balloon.

The crisis at SAA lies at the heart of the underperforming aviation sector. When interim CEO Nico Bezuidenhout spoke to *African Aerospace* at the IATA AGM in Cape Town last year, he said the flag-carrier was on the cusp of renewing its wide-body aircraft fleet, optimising its long-haul network and exploring partnerships.

But, just a few months into the tenure of Monwabisi

Kalawe, the airline’s fifth CEO in as many years, the roadmap seems to be unravelling.

In January, Public Enterprises Minister Malusi Gigaba ordered Kalawe to withdraw his tender for new long-haul aircraft – which are urgently needed to stem losses on the fuel-guzzling A340 fleet – because it did not meet unspecified “localisation” requirements. The flag-carrier also seems unwilling to retrench staff or cut heavily loss-making routes, notably its Beijing service. Codeshare partner Etihad would happily take over that route, but Kalawe says direct flights bring “strategic” benefits.

South Africa’s irreverent media notes that Kalawe’s turnaround plan is the ninth sanctioned by the government in 13 years. Expectations are not high that it will surpass any of the previous efforts.

But Kalawe insists that the flag-carrier – which cut operating losses to 991 million rand in 2013 – will re-enter the black in about five years.

At Comair, the contrast could not be greater. The British Airways franchisee has been in the black for 67 consecutive years, and its net profit per passenger of 45 rand is now double the global average. Against a backdrop of legal challenges targeting new market entrants, Comair’s upbeat earnings seem unsettling. But CEO Erik Venter rejects suggestions that he is stamping out competition. He blames the depreciating rand for higher airfares, estimating that Comair’s costs rose about 25% over the past year.

As soon as new competitors get the green light, his claims will be put to the test.



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TAALKS with Peter Belobaba, MIT Professor

Turkish Aviation Academy has commenced a series of conferences under the name "Towards Knowledge / Turkish Aviation Academy Leading Knowledge Series" (TAALKS). TAALKS conferences have been launched to deliver lecture-like speeches which aim to broaden horizons by bringing acknowledged academics, scientists, managers and experts in the fields of science, technical, management etc. from different countries of the world together with the professionals from Turkish Airlines. The guest speaker of the first TAALKS Program, which was held on March 12, was Prof. Peter Belobaba from Massachusetts Institute of Technology (MIT). Prof. Peter Belobaba, one of the doyens of the aviation management, works as a senior research specialist and scientist at Massachusetts

Institute of Technology's International Center for Air Transportation and continues to give lectures for a post-graduate program, jointly run by Istanbul Technical University and Turkish Airlines. In his speech titled "Overview of Global Airline Industry and Strategies: Current Trends and Future Outlook", Prof. Belobaba shared his various statistical predictions for the future by analyzing the recent past of the industry and the current trends on the basis of main concepts, especially those regarding revenue management. Both our managers and participants from different universities showed great interest in this speech.

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ASKY: THE

«Askycreuse l'écart» – Page 26

Askyc Airlines, the ambitious Lomé-based private carrier, was founded in 2010. It now serves 22 destinations in west and central Africa with seven passenger and one cargo aircraft, in cooperation with strategic partner Ethiopian Airlines.

*Ethiopia correspondent **Kaleyesus Bekele** reports from Lomé.*

With the demise of Air Afrique (a defunct west African airline) in 1980, a serious air transport gap was created in west and central Africa.

To fly a scheduled service from one west African destination to another required people to transit via Paris, Casablanca or Addis Ababa, so it was expensive and time-consuming.

In 1998, leaders of the Economic Community of West African States (ECOWAS) got together and decided to establish a regional airline to facilitate air travel within the regions.

A commission was formed, led by Gervais Koffi Djondo, a former minister from Togo, who was instrumental in the establishment of the now famous ECO Bank. The commission hired consultants, who worked on the establishment

of the new airline, and as part of this the need for a strategic partner was identified. After several attempts, they went to Addis Ababa to present their vision and discuss a possible partnership with Ethiopian Airlines.

The discussions were fruitful. In partnership with Ethiopian Airlines, Askyc Airlines (Askyc stands for African sky) was established in 2009 and the first flight took off to Ouagadougou, Burkina Faso, on January 15 2010.

The founding shareholders were the ECOWAS Bank of Investment and Development (EBID), the West Africa Development Bank (Banque Ouest Africaine de

Développement – BOAD) and the ECO Bank.

Initially Ethiopian Airlines owned a 25% stake in the private airline but, due to unpaid capital, its share increased to 40%.

Ethiopian has a five-year management contract that enables it to manage Askyc, and it also has a technical support agreement. In addition, following its investment in Askyc, Ethiopian established its second hub in Lomé and Askyc is now a feeder airline to Ethiopian.

Currently, Askyc serves 22 destinations in west and central Africa with seven passenger aircraft (four Bombardier Q400s and three Boeing B737-700s). The airline has also deployed a dedicated Boeing 737-400 cargo aircraft in the region.

Askyc was established with the view of serving the market in west and central Africa. However, securing flight permits has been a challenging task for the airline's management.

Askyc CEO Yissehak Zewoldi said initially the airline had some bilateral issues and was unable to secure operating permits

from a number of countries. "That was a real challenge. Still, we have some bilateral issues. The Yamoussoukro Decision (the declaration that allows African countries to open their skies for African airlines) is not yet fully implemented," he said.

"We serve Africa and the company is wholly run by the sons and daughters of Africa."

YISSEHAK ZEWOLDI



FAMILY

Asky's cabin crew boarding; Lomé airport; and Asky CEO Yisihak Zewoldi.

African leaders often speak about pan-Africanism and economic integration. However, the sad truth is that African countries are too far from forging regional integration. This is evident in the challenges African carriers are facing in securing flight permits in Africa. "The reason is very simple. It is because they want to protect the interest of their own carriers," said Zewoldi.

The CEO claimed that Asky is totally different from the other airlines in the region. "First, it is a 100% privately owned airline; second, it is a community airline.

"If you look at the composition of our staff we come from 35 different African countries. This is unique. So that is why we claim that we are a pan-African airline. We serve Africa and the company is owned by Africans. It is wholly run by the sons and daughters of Africa."

However, he said, the sad truth is that an African airline cannot fly to an African country without having an operating licence, which is often difficult to secure. "You cannot fly to Angola or Nigeria, even if you are an African carrier," Zewoldi lamented.

The management of Asky recently prepared a five-year development plan, which the board of directors is expected to approve soon. According to the plan, the airline will add four more new aircraft in the coming few years. The management is eyeing Boeing 737-800 aircraft.

According to the five-year business plan, the

airline will open 11 new routes by giving priority to some niche markets. "In the next five years we will venture out to east and southern Africa and we will go transcontinental by flying to Beirut. We are also exploring the possibilities of serving a couple of European markets in partnership with Ethiopian Airlines," said Zewoldi.

The airline is planning to launch flights to Johannesburg and Luanda and a destination in east Africa. "We have not decided yet as we are still exploring the market situation in east Africa in general. We are conducting a thorough market study to identify which destination easily fits into our network," he said.



Asky has a number of competitors in west and central Africa. Air Senegal, Air Cote d'Ivoire, Camecor (a new Cameroonian airline), Arik Air (Nigeria), and Air Burkina are some of the competitors.

"The market in west Africa is growing but, unfortunately, some markets are highly seasonal. However, we have a solid network that covers the ECOWAS and Economic and Monetary Community of Central Africa (CEMAC) countries and beyond," said Zewoldi.

He claimed that Asky has already established a good brand name in its territories. "The

feedback we are receiving from our customers is very encouraging. We are the most dependable carrier in west and central Africa with a highly reliable schedule and over 90% on-time performance.

"Business people, government officials and international organisations are our top customers. We are an airline of choice for these customers. We have the highest number of frequencies into major markets and that is also an advantage. We give additional choice and flexibility to business travellers. We can say, very proudly, that we are a businessman's airline and that is why we have a very high load factor in business class."

He further noted that the passenger traffic between some cities in the region was not enough to support point-to-point operations. "So what we do is we tag cities. For example, to fly from Lomé to Kinshasa we need to fly to another point in order to gather more passengers... some routes are thin [so] we deploy the ideal and most suitable aircraft, the Bombardier Q400, to serve these routes."

Speaking of the company's financial performance, Zewoldi said usually a start-up airline does not make a profit in the first few years of operation. However, he said, his airline reached break-even last year as projected in the initial plan. "Now we are marginally making a profit.

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For a start-up airline the financial performance is very encouraging, despite the high operating cost in the region.”

Asked if Asky was a low-cost carrier the CEO said: “We are a hybrid airline between low-cost and network carrier. Despite the high operational cost in the region, our traffic and financial performance are very encouraging.”

However, he declined to give specific figures, saying that the financial statements were not yet audited.

The management of Asky is giving due attention to the cargo business. There are landlocked countries in the region that need to transport some goods by air. “We also have many traders in the region. We are giving more focus to our cargo business now that we have one dedicated cargo aircraft, a Boeing 737-400. We recently hired a highly experienced cargo manager and we have increased our market reach by working with many cargo agents and forwarders.”

Despite all this, the start-up airline has faced a number of serious challenges.

A higher fuel cost is an unavoidable problem and the CEO admits that this is making fares expensive. “If you compare the price of fuel in west Africa with other regions, say east Africa, it is 20% more expensive and this makes fares unnecessarily expensive and thus affects our business.”



Securing traffic rights is another challenge. “Though we are a pan-African airline, we are denied operating permits by some African countries.”

Zewoldi went on to say that exorbitant taxes imposed on fares, and high ground-handling and airport charges, were the major challenges. “In some airports, it is only one company that renders ground-handling services. So, it charges you whatever price it wants and you don’t have another alternative.”

The on-going conflicts in Mali, northern Nigeria, the Central African Republic, and the Democratic Republic of Congo, is affecting Asky’s operation in the region. But, it seems, the conflicts also bring business to the airlines in the region.

“Sometimes we are forced to suspend flights. The conflicts are very sad incidents and we feel sorry for those unfortunate people. From a pure business point of view, these situations may also benefit an airline as there will be heavy demand for air service to transport UN staff, NGOs, diplomats, etc.” explained Zewoldi.

Last July, Ethiopian started operating three weekly flights to Sao Paulo and Rio de Janeiro in Brazil, with a stopover at Lomé. Zewoldi said Ethiopian flights to Brazil help Asky to boost passenger traffic. “We collect passengers from west and

“In five years time, I see Asky as a successful international airline with a solid market coverage.”
YISSEHAK ZEWOLDI

SOMMAIRE

Asky creuse l'écart

La compagnie aérienne privée ASKY (African Sky) Airlines est en croissance. Elle dessert aujourd'hui 22 destinations en Afrique centrale et de l'ouest et compte une flotte de huit avions dont un cargo avec le soutien de son partenaire stratégique Ethiopian Airlines. Une enquête de Kaleyesus Bekele.

Depuis la disparition d'Air Afrique en 1980, il existe un véritable manque dans le secteur du transport aérien en Afrique occidentale et centrale. Il est souvent nécessaire de transiter par Paris, Casablanca ou Addis-Abeba pour relier deux destinations dans cette région car il n'existe pas de compagnie aérienne régionale.

Les dirigeants de la Communauté économique des États de l'Afrique de l'ouest (ECOWAS) ont ainsi décidé en 1998 de créer une compagnie aérienne régionale pour faciliter le transport aérien dans la région. ASKY Airlines a donc vu le jour en 2009 avec comme partenaire stratégique Ethiopian Airlines. Son premier défi fut d'obtenir des permis de vol, une tâche difficile pour la direction de la compagnie aérienne.

Selon Yissehak Zewoldi, directeur général d'ASKY, la compagnie avait pu obtenir des permis d'exploitation dans uniquement certains pays. Cela reste une véritable problématique car il existe de nombreux traités bilatéraux entre ces états. « Vous ne pouvez pas voler vers l'Angola ou le Nigéria même si vous êtes un transporteur africain. La Déclaration de Yamoussoukro n'est donc pas pleinement mise en œuvre. Les dirigeants africains parlent souvent d'intégration économique et régionale mais en vérité ces pays en sont bien loin. Ils veulent avant tout protéger leurs intérêts et leurs propres transporteurs nationaux. »

Le conseil d'administration d'ASKY devrait d'ici peu valider son plan de développement pour les cinq ans à venir. La compagnie compte ajouter quatre nouveaux avions à sa flotte et relier 11 nouvelles destinations en Afrique orientale et australe ainsi que Beyrouth. Des vols sont prévus vers Johannesburg et Luanda. Des études de marché sont également menées sur l'Europe en partenariat

avec Ethiopian Airlines. Il existe toutefois une forte concurrence pour ASKY en Afrique occidentale et centrale avec notamment Air Sénégal, Air Côte d'Ivoire, Camecor (une nouvelle compagnie aérienne camerounaise), Arik Air et Air Burkina.

Selon Yissehak Zewoldi, le marché en Afrique de l'ouest est en essor mais il reste saisonnier pour plusieurs pays. Il aime à rappeler qu'ASKY est une compagnie qui offre un large choix et de la flexibilité aux voyageurs d'affaires. Elle a également atteint son seuil de rentabilité en 2013 comme prévu et ceci malgré le coût élevé des opérations dans la région. Une start-up de ce type ne réalise pas de profits au cours de ses premières années.

ASKY est en effet confronté à de véritables défis comme le coût élevé du carburant. Il est par exemple 20% plus cher en Afrique de l'ouest qu'en Afrique de l'est. ASKY est aussi soumis à un fort niveau de taxes et de redevances aéroportuaires ainsi qu'à des tarifs élevés de manutention. Les conflits en cours au Mali, au nord du Nigéria, en République centrafricaine et en République démocratique du Congo affectent également le fonctionnement de la compagnie. Il y a pourtant une forte demande pour transporter le personnel des Nations Unies, des ONG et des diplomates.

Yissehak Zewoldi souhaite qu'ASKY reste une compagnie aérienne de premier plan en Afrique occidentale et centrale. Elle s'attèlera à relier les grandes villes commerciales en Afrique de l'ouest et à augmenter ses fréquences. Elle envisage surtout de devenir une compagnie de haute technologie car une grande partie de ses ventes provient des réservations sur internet. ASKY travaille donc sur son plan de marketing et de commercialisation dans différentes parties du monde pour avoir une solide couverture du marché.

Asky s'attèlera à relier les grandes villes commerciales en Afrique de l'ouest et à augmenter ses fréquences.

central Africa that want to travel to Brazil and feed Ethiopian at Lomé, and the reverse is also true as passengers from Brazil transfer to Asky for travel to their final destination. Currently, on average, we feed or de-feed about 40 passengers and we are confident that figure will grow substantially in the near future.”

Zewoldi wants Asky to remain a dominant airline in west and central Africa. He said it would keep connecting major cities and commercial towns in the region with increased frequencies.

According to the CEO, in the near future, Asky will also go

transcontinental by flying to Beirut and in five years time it will serve a number of destinations in Europe.

“We are working on knowledge transfer and human resource development. We are planning to do some maintenance work on our own aircraft here in Lomé. We have already started training technicians and engineers at the Ethiopian Aviation Academy. We will work more on IT as we envisage [we will be] a high-tech airline with a big portion of our business coming from online sales. We are working on marketing the airline in different parts of the world. So, in five years time, I see Asky as a successful international airline with a solid market coverage,” he concluded.

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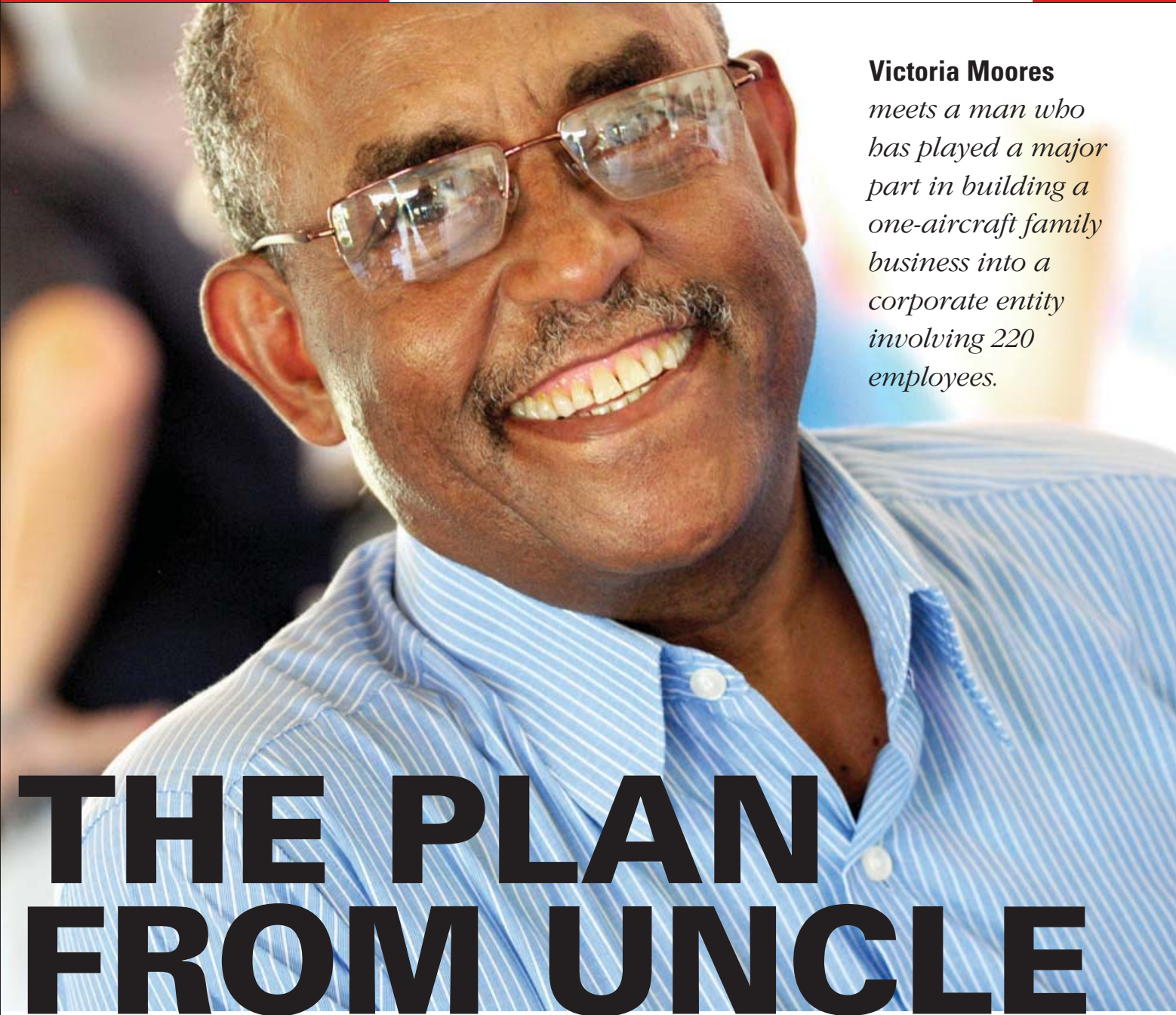


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Victoria Moores
meets a man who has played a major part in building a one-aircraft family business into a corporate entity involving 220 employees.

THE PLAN FROM UNCLE

Like many young boys, Shakeel Khan dreamed of becoming a pilot when he grew up. But, just as he was on the brink of turning this childhood fantasy into reality, he instead chose to join his uncle's company, Aircraft Leasing Services (ALS).

"I joined about 10 years ago. Originally, I had a passion to become a pilot. I worked to get my private pilot's licence (PPL) and I started my commercial pilot's licence (CPL), but I didn't complete it because I realised that I would do better in the business world than actually flying," explained Khan, who is now ALS commercial director.

"ALS is a family business, run by my uncle, Aslam Khan, who is the chairman and founder. He started off in the Kenya Air Force and then became an Airbus pilot for Kenya Airways, but he retired to run the business full time.

"My uncle gave me the opportunity to get involved in the business side."

Khan's uncle set up Kenya-based ALS in 1985 with a single Cessna 150, which is still a prized member of the fleet today. "That is the aircraft that started the company; it's just there for sentimental value and for private flying," said Khan.

Since then, that solitary Cessna has been joined by two Eurocopter AS350s, two

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Captain Nyambura Kiman (right) and First Officer Pritul Raithatha with a Safarilink Cessna Caravan.



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Cessna 310s, two Beechcraft King Airs, 10 Beechcraft 1900s, eight Bombardier Dash 8-100s, two Embraer ERJ-135s and a single ERJ-145. Today ALS employs 220 staff, including 70 pilots, and the group also has a majority shareholding in leisure and tourism operation, Safarilink.

“We are trying to corporatize the business. In fact, [new Air Uganda CEO] Cornwell Muleya is our former CEO. He was with us for about three years, but he left us for greener pastures. We have moved away from a family business mentality and have become more corporate,” said Khan.

Humanitarian work makes up the bulk of ALS’s revenues, boosted by a bit of commercial airline work and some oil and gas flying. “We have been serving a niche market, providing aircraft on wet-lease to humanitarian aid organisations, the United Nations and non-government organisations (NGOs). We base the aircraft in strategic locations so, at present, we are operating out of Somalia, Sudan, Congo and Rwanda. Our job is to move humanitarian staff from A to B; we actually operate a mini-scheduled airline for these organisations so they

come and audit us to make sure we meet their standards.”

In the early days, these aid organisations were after small turboprops, such as single-engined Cessna Caravans, but today ALS operates three regional jets for these clients, transporting the whole spectrum of peace-keeping personnel and humanitarian aid professionals. “We have come a long way since we started flying for them from Lokichoggio in Kenya. Today we are operating three jets for NGOs in Somalia and Sudan. There is still a lot of demand in humanitarian operations.”



For the last four years, ALS has also operated a Bombardier Dash 8 out of Kigali for RwandAir and Khan is keen to pull in more work along these lines. “We had a five-year partnership with Kenya Airways, where we ran the Nairobi-Lokichoggio route, but that ended and now we are trying to set up partnerships with new airlines. There are a bunch of domestic routes that

are not captured by the major airlines because they are too busy fighting over international and regional routes. That is what we want to do; we want to support the larger airlines by providing them with aircraft up to 100 seats on a wet-lease, joint-venture or codeshare basis and then operate routes under their flagship.”

After teaming up with a couple of start-ups, which ultimately ran out of cash (namely Fly6ix in Sierra Leone and Southern Star in South Sudan), Khan is hoping to secure work from larger, more established carriers. “Kenya Airways is obviously our number one choice because they are a big brother to us in our local market. We have had some discussions with them, but they have opted to launch [new low-cost carrier] Jambo Jet. We are trying to see whether there will be opportunities to work with Jambo once they are properly up and running.”

One thing that will tip the balance in ALS’s favour is the fact that it has IOSA certification. “We will be going through our third IOSA audit next week,” Khan proudly stated when we met, adding that

“We want to support the larger airlines by providing them with aircraft ... and then operate routes under their flagship.”
SHAKEEL KHAN

ECO Warriors leading the fight for tourism

Safarilink is an airline that is big for tourists and also for its local environment. Alan Peaford meets the Kenyan domestic carrier.

On the ramp, outside the brand new terminal of Phoenix House in Nairobi's Wilson Airport, there is a mish-mash of aircraft squeezed into the limited space of the apron.

There is a Diamond DA42 fitted with sensors; a decades-old Cessna 172 and, behind these, positioned for a quick getaway, is a trio of Cessna Caravans dwarfed by a Dash 8.

These aircraft are part of the fleet of Safarilink, a domestic airline set up to support the tourism industry through flights to the many game lodges in the national parks and to the white sand Indian Ocean beaches on the east coast.

The need for Safarilink to have a pole position on the starting grid is clear.

There is a steady stream of passengers making their way from the new terminal a few metres along the road to the old departure terminal for security checks before boarding their holiday flights.

"We are waiting for the arrival of some airport security X-ray equipment and hope we can move the full customs and security process into the new terminal," said the airline's managing director John Buckley. "The new terminal, with its café and open feel, is something international visitors would hope for."

The development of security handling and customs would also delight Safarilink's landlord, business aviation operator Phoenix Aviation, which wants to convert a second-floor area to a VIP lounge for its private customers.



John Buckley,
CEO of Safarilink.

"We are in discussions with Kenyan Airports and are hopeful," Buckley said.

Safarilink is weathering the storm that has affected the tourism trade in Kenya.

The industry is cyclical anyway but government levies, high taxes on travel and game drives, as well as terrorist incidents, such as the Westgate Mall atrocity, have hampered the operators.

Safarilink carried more than 85,000 passengers in 2013.

"We serve some 22 airstrips and airports across Kenya," Buckley said. "Nine of these are in the Masi Mara."

The Safarilink fleet consists of 11 aircraft: nine Cessna Caravans; a Dash-8; and a Twin Otter. The airline has 77 staff, of which 26 are pilots.

"We are increasing the number of pilots," Buckley said. "Although the aircraft are certified for single pilot we believe that adding a second crew member will enhance our safety. They are flying about eight or nine sectors a day and two heads in the cockpit are better than one."

Safety is key to Safarilink's operations and the company has an Embry-Riddle-trained safety officer. "It is very much part of our culture," Buckley said.

As we talked on the ramp, groups of schoolchildren walked past looking at the aircraft. This is part of a community exercise by the airport and its tenants to raise awareness of aviation to people, many who have never seen an aeroplane close up, let alone flown in one.

There is a whole sense of community around, and Safarilink takes its social responsibility seriously too.

"Safarilink supports various conservation projects and charities that assist disadvantaged children," Buckley said.

In 2010 it became the only domestic airline to be carbon neutral due to its involvement in an indigenous tree planting exercise with the Bill Woodley Mount Kenya Trust.

This, and other projects – such as the conservation work to save the colobus monkey; the MEAK project (formerly known as the Kenya Orthopaedic Project) to supply medical equipment and help; and protection of the wildlife in the Lewa area – has seen Safarilink pick up two ECO Warrior awards from the Eco Tourism Society for being the most responsible carrier.



his uncle's company was the second airline in Kenya, after Kenya Airways, to receive this IATA stamp of approval.

The IOSA audit is also a catalyst for Khan's second area of business development – oil and gas work.

Even if an airline is IOSA audited, major oil and gas companies put would-be operators through rigorous audits and safety checks, but IOSA approval serves as a positive signal of a sound operation.

"There is lots of oil and gas in this particular region and we have already been audited by Total and Tull Oil," said Khan. Off the back of these audits, ALS has already secured a contract to operate a corporate shuttle from Addis Ababa in Ethiopia to destinations around the country for Tull Oil.

Corporate shuttles and airline work broadly require the same sort of aircraft, so Khan is now planning to expand the ALS fleet still further as the company diversifies into these new areas.

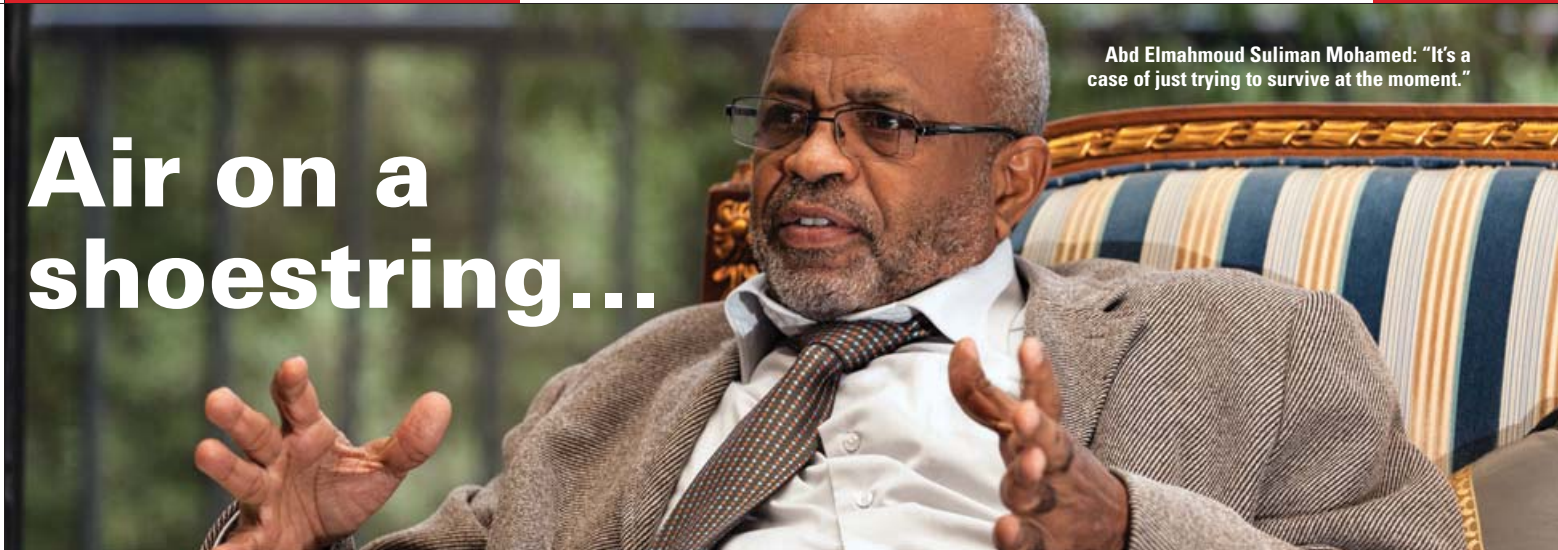
"We are in discussions with Embraer to bring in more ERJ-145s and we have also been talking with Bombardier, looking at the Q400. That is part of our expansion. There is demand for both, because the Q400 can go into unpaved runways and, for

certain operations, the jet makes more sense. We have also just secured a Dash 8-300 through some brokers and we are now working on the financing for this aircraft," Khan said, explaining that he is hoping to bring in one more ERJ-145 immediately, with the Q400 following later.

"Operationally, one is none and two is one, so we will have to bring in at least two Q400s initially and then grow it from there. It will require a lot of capital – around \$25 million – to get the Q400, so we are looking for a strategic partner that we can work with. This is all part of the roadmap, part of our strategic plan, to get into the oil and gas, and airline business."

Khan is obviously extremely proud of his family's achievements in building up ALS from that single Cessna to the operation it is today. But does he have any regrets about giving up flying for the boardroom? "I still keep my PPL current and I will never lose the passion for it, but you have to be realistic and recognise what job you are cut out for. I think I add more value on the business side than I would as a line pilot."

But does he ever envy the pilots as they head out on their humanitarian aid missions? "Every day," Khan said, smiling, thinking of the career that might have been.



Abd Elmahmoud Suliman Mohamed: "It's a case of just trying to survive at the moment."

Air on a shoestring...

Sudan Airways is hanging on to its continued existence as an airline by its fingertips.

Alan Dron
reports.

Sudan Airways has a single A300-600 on strength but, like the other two aircraft in the fleet, it is currently grounded.

Sudan Airways' small fleet is grounded through a combination of economic and political factors. The national economy is coping with the loss of most of its oil revenues and clear guidance from national government is lacking, according to the airline's top official.

The carrier has single examples of the Airbus A300, A310 and A320. None is currently flying. "It's partly lack of finance, partly difficulties relating to US sanctions," explained general manager Abd Elmahmoud Suliman Mohamed.

The US sanctions, initially imposed in 1997 as a trade embargo on Sudan, blocked the assets of the government on the grounds that the country was a supporter of international terrorism and guilty of human rights abuses. A further 2006 US presidential executive order targeted those involved in the conflict in Sudan's Darfur region.

As a result, "it's difficult to find people who can work with you", said Suliman. "We find difficulties in funding from the international financial community. There are difficulties in even transferring simple sums of money."

Speaking on the sidelines of the Arab Air Carriers Organization AGM in Doha last November, Suliman said his company had leased in an A310, an A320 and a Boeing 737-400 to try to maintain services and was using two Fokker F50 turboprops for domestic services.

International routes operated by the leased aircraft are focused on Saudi Arabia, where many Sudanese expatriates work. Sudan Airways also carries Haj pilgrims to Saudi from locations throughout central Africa. The company used to operate to Qatar and the UAE, but these ceased due to its operational difficulties.

However, the presence of sanctions did not stop entrepreneurs or foreign companies offering solutions to Sudan Airways' equipment shortage, he noted. "To be frank, almost every day I receive an offer from someone. But they want financial guarantees."

The carrier had an application for funding new aircraft with the Islamic Development Bank. "The bank is very

willing, but its money comes from all its participating countries and they won't put us up the priority list."

Apart from the problems created by the US sanctions, he said the Sudanese economy had suffered following the 2012 secession of South Sudan as an independent nation.

Sudan had formerly been an oil exporter but most of the oil industry – 75%, according to the Sudanese Government – was bequeathed to the fledgling nation. That had had an obvious effect on the economy of Sudan, although modest growth is predicted for coming years.

In 2007, the Sudanese Government decided to privatise its national carrier, with Kuwaiti investors taking 49% of the shareholding and a Sudanese holding company acquiring a further 21%; the government retained 30%. But the Kuwaitis pulled out in 2011, selling its shares back to the Khartoum government. "The government was very disappointed because what they thought was a solution turned out not to be and they didn't know what to do," said Suliman.



Africa is recognised as being one of the major growth areas for civil aviation over the next decade; Suliman agrees with this assessment, but is realistic about prospects for Sudan Airways.

"The potential, as they say, is there, but the limit is the government itself. They don't have a clear vision. There are two schools of thought. There is the 'national carrier' concept and the free market."

Sudan is a signatory to the open skies agreement but Suliman is sceptical about the reality behind the principle. Countries in the region have signed up to the idea but, in practice, they protect their national carriers, he said.

Part of the reason behind the success of carriers like Emirates, he said, was that their governments treated them as instruments of the national economy. "Sudan has open skies, but other countries do not. Foreign carriers are not granted the necessary privileges [by those other countries]. We should treat them equally. We want the Sudanese Government to be more forceful in asking for privileges in return.

"Our location in the centre of Africa and connecting the Middle East to Africa is not being utilised."

Like many airlines around the world, Sudan Airways is finding that its future prosperity depends as much on events outside its control as on its success on filling seats through its own efforts. As Suliman said: "It's a case of just trying to survive at the moment."



Leading the aviation industry in **Africa**

SAFAT is Sudan's premier aircraft manufacturing and maintenance complex and one of the country's busiest organizations. From its early beginnings in 2004, the company has been known for high quality products, service and technical innovation. In 2006, SAFAT received its first aircraft for overhauling and maintenance.

SAFAT has continued to play a leading role in aircraft maintenance and services in Sudan. The SAFAT Aviation Complex [SAC] is located 20km north of the capital Khartoum.

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- More than 700 full time employees, qualified engineers and technicians



STOUT OF AFRICA

Carving a niche for itself in the African airliner market is the robust, relatively little-known British Aerospace 146 regional jet and its updated variant, the Avro RJ. As Alan Dron discovered, the type is likely to become an increasingly common sight at African airports as European carriers replace it with more modern twin-jets.

The BAe 146/Avro RJ was always something of a niche player in the airliner market. It was the British aerospace industry's best-selling passenger jet but, nevertheless, only a comparatively modest 387 were built between 1983 and 2002.

It is, however, increasingly being appreciated in developing markets, where its relative simplicity and undoubted ruggedness are valuable assets.

"The British tend to build very heavy, over-engineered and robust aircraft and this is no exception," said Chris Sedgwick, sales and marketing director for lessor Falko, which has 59 of the type on its books. Flightglobal's Ascend database records 34 of the type as being in service with African carriers.

The 146/RJ was designed from the outset for the regional aircraft market: "The systems were deliberately designed to be simple," added Sedgwick's colleague Andy Whelan, vice-president sales and marketing.

"It's built like the proverbial brick out-building," added Stephen Doughty, former senior vice-president, sales and marketing at Falko's predecessor, BAE Systems Regional

Aircraft, who knows the aircraft well. "No aircraft is free from the ravages of time, but it's a very robust product."

That strength stems from the aircraft's design gestation in the 1970s. "It comes from that previous generation where aircraft were, if anything, rather over-engineered," commented Doughty.



"In the last 40-50 years not only has materials technology advanced in leaps and bounds, but also the design and knowledge of structures has improved, so they are much lighter than they were when the 146 was designed."

That lower weight brings the benefit of lower operating costs when the aircraft is new, but potentially means that modern-generation aircraft may not have the durability of older types, he said.

Not only is the 146/RJ robust – its trailing link undercarriage has shown itself to be particularly resilient over the years, useful when operating in and out of rough airstrips – but also it is quite a forgiving aircraft, said

Doughty, whose aviation consultancy, Cockley Brake, is currently remarketing three BAe 146s from Ghanaian carrier Starbow. "It's relatively benign in handling characteristics. It's an easy aircraft to graduate up to if you've been flying turboprops."

Although 146/RJs are inexpensive in terms of capital costs – today, most of the aircraft being leased or sold on the open market are RJs due to their younger age – they are more expensive to operate than more modern types.

One obvious factor for this is the type's configuration.

Just as the Airbus A340 and Boeing 747 are rapidly being retired by mainline carriers in favour of 'big twins', so the four-engined 146/RJ carries a penalty in terms of fuel burn. This is significantly higher than an Embraer 'E-Jet', for example.

However, whereas this would be a problem for a carrier seeking 2000-plus cycles a year from its equipment, it is less of a worry for companies with lower utilisation rates, as is frequently the case in Africa.

With lower utilisation, operating costs are





The type's rugged characteristics – particularly its undercarriage – are demonstrated by an RJ85 landing on a Serengeti airstrip.

less important than capital costs, noted Doughty. "If you're only doing 5-600 cycles a year you want an aircraft that's cheap to buy and it doesn't really matter if the operating costs are a significant amount higher than a brand new product like an Embraer or a Boeing 737."

Like any ageing aircraft – the youngest RJ in the worldwide fleet is now around 13 years old – maintenance costs are inevitably rising. Engine and landing gear overhauls are notably expensive.

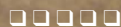
Indeed, said Doughty, some airlines which specialise in taking on 146/RJs as end-users (the aircrafts' final berth before being scrapped) are buying up more examples to cannibalise for spares rather than attempting to overhaul existing aircraft.

"It's often cheaper to buy another aeroplane than have your own parts overhauled," he said. "Rather than send an engine off to Honeywell for \$700,000, you go into the marketplace, buy a new aircraft and use its engines."

That marketplace is likely to see an influx of second-hand Avro RJs over the next few years as the last remaining major European users

start to roll over their fleets.

Swiss has 20 RJ100s; Sweden's Malmö Aviation has nine RJ100s and two RJ85s; while Ireland-based CityJet has 23 RJ85s. Both Swiss and Malmö intend to replace the types with the Bombardier C Series, while CityJet, put up for sale by parent Air France, said last year that the future shape of its fleet would depend on the policy of whoever bought it. Germany's Intro Aviation is expected to become the new owner.



Depending on the delivery schedules of their replacements, this means that a steady flow of middle-aged but well-maintained Avro RJs will be available for lease or purchase by new owners, who are likely to be located outside Europe and North America.

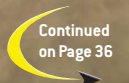
The RJ has a design life of 60,000 cycles/60,000 hours. Typically, said Sedgwick, aircraft being returned from initial operators, such as SN Brussels Airlines, had been in the 32-35,000 cycle range, leaving plenty of useful life available for new owners.

The 146/RJ has recently found a new niche as a 'fly-in, fly-out' (FIFO) aircraft, transporting personnel to remote mining sites that would otherwise take a full day, or more, to reach by road. Air Libya, for example, uses its aircraft to ferry oil industry personnel to sites in the south of the desert nation.

The type can be made more suitable for rough strips by the addition of a retrofitted gravel kit that provides protection from flying stones for hydraulic lines around the undercarriage and lower fuselage. Requests for such kits crop up in around 25% of leases or sales to regions such as Africa.

The aircraft's high-wing configuration makes it particularly suitable for less-than-pristine runways.

"The engines are quite some way clear of the ground, especially compared to something like a 737-300, which is a bit like a vacuum cleaner along the runway," noted Doughty. "Similarly, rear-engined types such as the Fokker 100 or MD-87 are prone to picking up stuff thrown up by the undercarriage."



Airlink is the largest operator of the Avro RJ in Africa, with 12 RJ85s.



CONTINUED FROM PAGE 35

The shorter-fuselage variants are more suited for such rough-field roles, given their higher thrust-to-weight ratios. The heavier, longer-fuselage 146-300 and RJ100 do not perform so well on rough strips, however. Indeed, in some countries they are not approved for such operations.

The aircraft's built-in airstairs and auxiliary power unit (APU) give it a degree of independence at remote airports with limited facilities. And, with relatively small amounts of special-to-type test and ground support equipment required, airlines operating other types with basic ground equipment can probably induct the British aircraft with relatively few problems, said Whelan. "Another beauty of the aircraft is that it has a three-engine ferry capability. If you do have an engine issue, that aircraft can still be ferried back to the main maintenance base."



Like any aircraft, however, the BAe 146/RJ has to be in an appropriate market before it can perform to its best capabilities.

It is a relatively short-legged aircraft, which does not always suit it for the longer sectors common in Africa, as some of the continent's carriers have discovered.

New operators also have to make the correct investment in tools, spares and training, cautioned Doughty. "If you don't, your operation will fall apart. We've seen a number of instances of this, with 146s being acquired because they were cheap but without sufficient attention being paid to the provision of those support services to make them work."

But for those airlines that know exactly what they need out of an aircraft, and know how to operate the four-engined regional jet, it remains a viable piece of kit – one that is likely to be seen at more African destinations in coming years.

Why we chose the BAe 146 and Avro RJ

Rodger Foster, MD of South African carrier Airlink, the continent's largest user of the BAe146/Avro RJ, talks about his company's experience of the type.

Q What factors made you choose it in preference to newer designs?

Airlink considered a few used aircraft types and at the time (early 2007) ownership affordability was a key consideration. Some of the newer types were out of reach.

The BAe 146 and Avro RJ were still fully supported by BAE Systems and the engines fully supported by Honeywell and, in most cases, enrolled on the EMCPP power-by-the-hour programme inclusive of life-limited parts (LLPs). The overall total operating costs of the Avro RJ85 presented a viable solution to Airlink's needs, while offering a tolerable risk of ownership.

Q When did you acquire the type?

The first of four initial BAe 146-200s went into service in May 2007. Airlink started switching to the more modern Avro RJ85s from November 2007 and, in the process, accumulated 10 Avros and exited from the 146-200. The last of the RJ85s arrived in December 2012. Airlink has recently committed to two additional examples.

Q Do you intend to keep the type for the foreseeable future?

Airlink sees a timeframe until after 2018 for the Avro to remain in service. The phasing out will most likely be a process that will endure for three or four years. A replacement type will need to be in the 70-85 seat range.

Presently the Embraer E-175 could be a

suitable successor, but it is not yet clear whether these will be used or new second-generation E-Jets. Airlink will need to work hard on building a strong enough balance sheet to take on the significant capital commitment associated with the change. There are other prospective successors in development that may be available at the time.

Q What are the plus and minus points of the RJ85 from Airlink's perspective?

The Avro's ability to perform at limiting airports such as Pietermaritzburg, which has a 5,000ft/1,530-metre runway and is surrounded by hills, is extraordinary, while also offering the capability for Airlink to address some further afield, thinner routes such as Ndola, Pemba and Antananarivo. The Avro is not the most fuel-efficient aircraft but fuel expenditure is merely one element of total operating costs. Airlink has been able to manage the maintenance costs by having all engines enrolled in the Honeywell EMCPP programme inclusive of LLPs, and by performing all airframe maintenance in-house.

Q Do passengers and crews like them?

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Tassili Airlines, Algeria's second national carrier, is steadily growing its presence in the scheduled domestic market, as commercial director Kamel Mezghiche explains to Martin Rivers.

The Algiers-based carrier was established as a joint venture between Sonatrach, a state-owned oil company, and Air Algérie in 1997. It became wholly owned by Sonatrach in 2005.

With its roots in the oil and gas industry – which accounts for 30% of Algeria's GDP – the airline has traditionally focused on ferrying oil workers across the vast north African country.

But, in March 2013, Tassili began deploying its fleet of 12 aircraft on scheduled domestic operations. "Now we serve 14 destinations in Algeria," Mezghiche noted. "Before we were only doing charter for the petrol and gas sector. So for us, this is something new. There are, of course, some issues which are challenging at the moment, but we are going in a good direction."

The resurgent threat of Al Qaeda in the Islamic Maghreb has wrought uncertainty across north Africa in recent years, taking the baton from the political upheaval of the Arab Spring.



In January 2013, the Tigantourine gas facility near In Amenas, on Algeria's eastern border with Libya, was targeted by an Al Qaeda-linked suicide squad in the most high-profile terror attack to date. Sonatrach operates the facility, but the assailants singled out foreign nationals, killing 39.

While such atrocities risk deterring western oil companies, the allure of petrodollars has, so far,



Tassili steps on the domestic gas

kept the sector afloat. Mezghiche insisted that Tassili's move into scheduled operations was incidental to the In Amenas attack.

"Our new philosophy is to complement [scheduled passenger] routes offered by Air Algérie," he explained. "We have no intention of competing with them. There are about 13 airports in Algeria which are of international standards, and others are being modernised by the state."

With its fleet of four Boeing 737-800s, four Bombardier Q400s and four Bombardier Q200s, the airline's domestic network stretches from the Mediterranean coastal city of Oran to the oasis city of Tamanrasset in the Sahara Desert.

"We are not excluding doing scheduled international flights in the future," Mezghiche said, responding to media reports about possible regional route launches. "We will start doing studies soon. Of course, Africa is naturally an area of interest for us, and southern Europe and all countries in the Mediterranean. But I think it will probably be after 2014."

He admitted that scheduled services are still in the nascent stages – Tassili operates just 4.5% of Algeria's scheduled domestic flights – but predicted that the sector could account for one third of the carrier's revenue "in the future". In the meantime, charter flights remain the backbone of the business and new clients are constantly being sought.

Mezghiche stressed that hydrocarbon companies are not the airline's only customers. Tour operators have also shown interest in Tassili during politically stable periods. Last summer, for example, a French travel agent chartered one of its 737-800s for regular flights from St Etienne to Bejaia, and from Grenoble to Jijel.

"There are many opportunities to develop charter flights," he affirmed. "We have many enquiries from the market for these services. Sonatrach is our proprietor, but as a subsidiary we have independence to manage the company."

The fleet, which also includes smaller turboprops and helicopters, is "sufficient" for now, Mezghiche added, downplaying talk of new orders.

But at the Dubai Airshow, Air Algérie announced a long-awaited preliminary order for three A330s, enabling it to replace its ageing 767s. Further orders are expected, with the flag-carrier previously announcing a requirement for 16 units and promising to make Algiers a sixth-freedom hub.

Tassili's contribution may be modest by comparison, but the two airlines are working hand-in-hand to ensure Algeria keeps pace with north Africa's fast expanding aviation sector.



Tassili Airlines operates two Bombardier Q200 turboprops and four Q400s.

Tassili Airlines has four Boeing 737-800s.



SOMMAIRE

Tassili Airlines se diversifie

Tassili Airlines, deuxième compagnie nationale de l'Algérie, renforce progressivement sa présence sur le marché intérieur du pays. African Aerospaces s'est entretenu avec son directeur commercial, Kamel Mezghiche.

Tassili Airlines a été créée en 1997 suite à un partenariat entre la compagnie pétrolière étatique Sonatrach et Air Algérie. Basée à Alger, elle est devenue la propriété exclusive de Sonatrach en 2005. La compagnie s'était spécialisée dans le transport du personnel travaillant pour l'industrie pétrolière et gazière. Ce secteur représente 30 % du PIB de l'Algérie. Depuis mars 2013 Tassili Airlines a commencé à opérer des vols réguliers sur le marché domestique.

« Nous desservons maintenant 14 destinations en Algérie », souligne Kamel Mezghiche.

La menace d'Al-Qaïda au Maghreb islamique et le printemps arabe ont provoqué des incertitudes en Afrique du Nord. L'attaque du site gazier de Tigantourine près de Amenas a été particulièrement meurtrière pour Sonatrach qui exploite l'installation. De telles atrocités risquent de dissuader les entreprises pétrolières étrangères d'investir dans la région.

« Notre stratégie est de compléter les routes proposées par Air Algérie.

Il existe environ 13 aéroports qui fonctionnent selon des normes internationales en Algérie. D'autres sont en cours de modernisation », explique-t-il.

« Notre stratégie est de compléter les routes proposées par Air Algérie. »

Tassili Airlines possède une flotte de 12 avions (quatre Boeing 737-800, quatre Q200 et quatre Q400 de Bombardier). Elle intègre également des petits avions à turbopropulseurs et des hélicoptères.

Son réseau s'étend d'Oran à la ville de Tamanrasset. Kamel Mezghiche évoque aussi la mise en opération de vols régionaux et internationaux réguliers à l'avenir.



Des études relatives sont en cours. Il précise que les pétroliers ne sont pas uniquement les clients de la compagnie.

Des voyageurs ont manifesté un intérêt pour Tassili Airlines. Un agent de voyages français a déjà affrété un Boeing 737-800 de la compagnie pour des vols réguliers. Il existe de nombreuses possibilités pour développer les vols charters.

La contribution de Tassili Airlines peut s'avérer modeste par rapport à Air

Algérie mais les deux compagnies travaillent main dans la main pour permettre à l'Algérie d'accompagner la croissance du transport aérien en Afrique du Nord.



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The test programme for Airbus' new A350 is now under way, with the airliner due to enter service with several African airlines later this decade.

Alan Dron visited the Airbus headquarters in Toulouse to hear the European airframer's plans for the future and its predictions for Africa.

GROWING TOGETHER

«Airbus dévoile l'A350-900 aux médias » – Page 42

The African airline market will grow as quickly over the next 10-15 years as the Middle East has over the past decade, believes Airbus.

Currently, Airbus sells only a tiny fraction of its output to the continent; figures released by the manufacturer a few days before last year's Paris Airshow revealed that only 1% of the 588 aircraft Airbus delivered in 2012 went to Africa, rising to around 2% in 2013.

In the medium term, Africa accounts for only 1% of Airbus's near-5,000 aircraft order backlog.

Although air traffic in the continent is expanding, much of it is not yet benefiting African airlines, according to Chris Emerson, Airbus senior vice-president and head of marketing. "With Africa you have to look at origins and destinations. There's a lot of traffic going in and out of Africa but the domiciled traffic is based in Asia and Europe," he said.

For example, China's huge investment in Africa has generated considerable numbers of passengers, but these have been captured by Chinese, rather than African, carriers. "You'll see that situation reverse as domestic traffic strengthens. At the moment, however, there isn't

enough domestic competition in Africa to stimulate lower fares which, in turn, stimulate demand."

Emerson believes that this situation will change in the next few years, with African carriers linking up with external airlines in joint ventures. Factors that might affect this phenomenon include the overall financial environment, the perceived risk of doing business in Africa, and whether governments step in to help promote entrepreneurial activity.



"It's really a question of the [health of] African economies. When you see the population and burgeoning demand, it will happen. Once you can unlock this potential, [the market] is there," said Emerson, who was speaking during a media briefing on the European manufacturer's various aircraft programmes.

Much of the two-day briefing was spent detailing progress on the new A350 medium to long-haul jet, which flew for the first time on June 14 last year and performed its first public fly-by on the last trade day of the Paris Airshow a week later.

Airbus is positioning the core A350-900 and

the smaller -800 version against Boeing's 787-8 and newly launched -10, while the largest -1000 member of the A350 family will compete against the 777, including the forthcoming 777X. In typical three-class configuration, the -800 will seat 270, the -900 314 and the -1000 350 passengers.

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

With this new fuselage – along with the latest Rolls-Royce Trent XWB engines and an advanced wing optimised for Mach 0.85 cruise speed – Airbus says this will give the A350 25% lower fuel burn, 25% lower operating costs and 25% lower CO₂ emissions than current competitors.

A highlight of the 'innovation days' briefing was Airbus's chief salesman, John Leahy, revealing that the company was planning a new regional version of the A350-900, with its Rolls-Royce Trent XWB engines de-rated from 84,000lb to 75,000lb thrust and a shorter (but as-yet unspecified) range.

With five pre-production aircraft in the process of completing a 2,500-hour flight-test programme

Continued
on Page 42



Airbus unveiled the first A350-900 in Toulouse on June 6.

Inset: Airbus A350XWB MSN3 was the second test aircraft to fly, and visited the Singapore Airshow in February. MSN1 flew in June 2013.



CONTINUED FROM PAGE 40

(the third and fourth flight test aircraft made their maiden flights on February 26 with the fifth aircraft due to follow), the first A350-900 is due to enter service in late 2014 or early 2015 with lead customer Qatar Airways.

African customers for the twinjet are Libyan Airlines (four -800s), Afriqiyah (10 -900s) and Ethiopian (12 -900s). A commitment for three -800s from a fourth African customer, Tunisair, disappeared from Airbus's list of future customers at the end of May, indicating that the airline had cancelled its commitment.

Tunisia also featured in a presentation by Tom Williams, Airbus's executive vice-president, programmes. He revealed that Airbus had to repatriate some work on components being undertaken in Tunisia because of political problems in the country.

Preparations for the first flight of the A350 included around 700 virtual simulator flights, while the Trent XWB engine has been flown on the company's A380 test-bed for more than a year.

The preparations also included some 2,000 hours of tests on the undercarriage, around 3,000 on the hydraulic system of the 'iron bird' static rig and 2,800 in the simulator. "We have a good grip on the aircraft itself, as well as its customisation. We have modelled everything we can. The level of uncertainty is not high," said Didier Evrard, executive vice-president in charge of the A350 programme.

However, during the Airbus Group annual results press conference on February 26 this year, the company announced a €434 million (\$600) charge due to A350 cost overruns and delays, and

warned that this may not be the last write-down due to a programme that, it said, remained "challenging."

Williams, at the earlier briefing, had also cautioned: "We've made a lot of progress in the last year but it's still a very challenging programme." However, to help to ensure that as many kinks as possible are eliminated from the A350 before its entry into service, Airbus plans to handle the flight-test programme in a novel way.

"The next step will be to call ourselves 'Airline One'," said Evrard. "We have five flight-test aircraft and we're going to use them, not merely as flight-test aircraft, but as a small airline. We're refurbishing an airport building at Toulouse to accommodate airline-like operations and will have a hangar for working parties and daily maintenance."



With this aim in mind, the second flight-test aircraft has a fully outfitted passenger cabin, as will the fifth.

In the test fleet, aircraft 1 and 3 are heavily instrumented and are being used to handle systems testing.

Aircraft 2 has medium instrumentation and a passenger cabin interior. It is destined for the climatic chamber at Eglin Air Force Base in the US, where it will endure temperatures ranging from -40°C to +50°C. This aircraft will also be used for the first flight with a full complement of passengers.

Aircraft 4 is lightly instrumented and is being

used for avionics development and certification. It will also be used for noise testing.

Aircraft 5 will be used for a 300-hour programme of route proving, carrying a full load of passengers around the world. It will also be used to train the first instructors and crews. Certification is planned for summer 2014.

Other talking points from the innovation days briefing included:

■ A stretch of the A380 is still possible, but not before airlines more fully utilise the space inside the existing aircraft. Airbus will look at a larger aircraft when carriers start asking for capacity upwards of 560 passengers. An 11-abreast economy cabin is possible, but would only be suitable for short-haul trunk routes. More orders for the A380 are expected this year.

■ Airbus' current 15% market share in North America "is not satisfactory", said Williams. "We need to get to the 40-50% we have elsewhere. There's not a lot of growth there but there's a big replacement market and we want to be well-positioned for that." Airbus plans to open an A320 final assembly line in Mobile, Alabama in 2015, with first deliveries in 2016.

■ The cargo market is weak. "It's a difficult 'sell' at the moment to persuade an airline to buy a new dedicated freighter," commented Williams. "There are a lot of dedicated freighters parked out in the desert. The market will come back, but it could be another couple of years before we see it."

■ The supply chain has caused some concerns. Williams added: "In some cases we've had to inject management or money to solve supply problems. We even had to take management control [in companies] in some cases."

SOMMAIRE

Airbus dévoile l'A350-900 aux médias

La campagne d'essais de l'Airbus A350 bat son plein. Cet avion devrait entrer en service auprès plusieurs compagnies aériennes africaines à la fin de cette décennie. Alan Dron s'est rendu à Toulouse pour cerner la vision de l'avionneur européen ainsi que ses prévisions pour l'Afrique.

Airbus estime que le marché du transport aérien africain va croître rapidement au cours des 10-15 prochaines années comme cela a été le cas au Moyen-Orient. Actuellement, l'avionneur n'écoule qu'un infime pourcentage de sa production sur le continent africain, soit 1% (588 avions) en 2012 et environ 2% en 2013.

Chris Emerson, directeur du marketing chez Airbus, a donné sa vision de la situation lors des Journées de l'innovation d'Airbus. « Il y a beaucoup de trafic entrant et sortant de l'Afrique dont une bonne partie vers l'Europe et la Chine. Les investissements considérables de la Chine en Afrique ont généré un nombre considérable de passagers mais ceux-ci ont été captés par des compagnies aériennes chinoises et non des transporteurs africains. Cette tendance s'inversera lorsque le trafic domestique se consolidera. Il n'y a toutefois pas assez de concurrence régionale en Afrique pour provoquer une baisse des tarifs et par conséquent stimuler la demande. Cette situation

pourrait évoluer dans les prochaines années si les transporteurs africains nouaient des alliances avec des compagnies aériennes hors du continent. »

Ces journées de l'innovation ont permis également de savoir davantage sur le programme A350. Rappelons qu'il a volé pour la première fois le 14 Juin 2013 et a effectué sa première apparition publique au Salon du Bourget.

L'A350-800 et l'A350-900 se positionnent comme les concurrents du Boeing 787-8 tandis que la version A350-1000 sera en concurrence avec le Boeing 777 et même le B777X.

Plus de 70% de la cellule de l'A350 est fabriquée à partir de matériaux novateurs dont des composites en titane et d'alliages d'aluminium. L'A350 apportera une réduction de 25% de la consommation de carburant, des coûts d'exploitation et des émissions de CO₂ par rapport à ses rivaux.

Airbus prévoit cinq avions pour assurer son programme d'essais. La certification de l'A350 est prévue pour l'été 2014, le premier avion devant entrer

en service auprès de Qatar Airways fin 2014 ou début 2015.

Libyan Airlines, Afriqiyah et Ethiopian figurent parmi les clients africains de l'A350. La compagnie Tunisair a quant à elle rompu son engagement. Lors de sa présentation Tom Williams, directeur exécutif d'Airbus, a révélé que l'avionneur a dû rapatrier certains travaux réalisés dans ce pays en raison des problèmes politiques.

D'autres programmes de l'avionneur ont également été abordés. Une version stretch de l'A380 est encore envisageable. Tout dépendra de la demande des compagnies aériennes. Airbus juge également non satisfaisante sa part de marché en Amérique du nord (15%). L'avionneur prévoit d'ouvrir une chaîne d'assemblage final de l'A320 à Mobile, en Alabama en 2015. Airbus constate également la faiblesse du marché du fret ainsi que quelques problèmes de sa chaîne d'approvisionnement où il a fallu parfois intervenir au niveau financier ou de la gestion pour trouver des solutions.

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The weakest link:

«La force aérienne kenyane : un maillon faible ? » – Page 46

*Kenya has the largest and strongest economy in east and central Africa and is among the top 10 African nations in terms of defence spending. However, as **Jon Lake** discovered, the country's air force is not as far up the continent's pecking order as its navy and army.*

Kenya's army is a large and well-equipped military force that has received a considerable amount of new kit in recent years, including small arms and armoured vehicles.

Having fought in neighbouring Somalia and taken part in numerous peacekeeping operations, Kenya's army is experienced and highly competent, though its reputation has been tarnished by accusations of corruption and of human rights abuses against Somali refugees.

The Kenyan navy is small but similarly highly regarded – viewed by many as the best equipped force on the east African coast, having trained with the US, UK, French and South African navies, and having undertaken anti-piracy operations as well as operations against al Shabaab militants in Somalia.

But, while the Kenyan army and navy are considered to be among the most powerful in the region, the Kenya Air Force (KAF) is small and

relatively modestly equipped, unable to match several of its neighbours.

Ethiopia operates the Sukhoi Su-27, Uganda the Su-30, while Tanzania has the MiG-29. Against this, Kenya's upgraded Northrop F-5Es look barely credible, let alone adequate.

Of Kenya's immediate neighbours, only South Sudan and Somalia have weaker air arms.

Until now, the KAF has proved adequate to meet the demands of supporting Kenyan army peacekeeping missions and undertaking a number of attacks against al Qaeda affiliate al Shabaab targets in Somalia since October 2011.



But the air arm would be ill equipped to intervene should tension between Kenya and Uganda (over something like the ownership of Magingo Island) lead to clashes.

And, as the air force approaches the 50th anniversary of its formation (which falls on June 1



De Havilland DHC-5 Buffalo. KAF reportedly has three airworthy examples.

Kenya's air force

2014), it should be remembered that it is not that the force has failed to modernise and re-equip, it has just failed to do so as comprehensively as some neighbouring air arms.

Military aviation in Kenya dates back to before the new nation gained its independence. Formerly Britain's East Africa Protectorate, the 'Kenya Colony' formed a Kenya Defence Force Air Unit in the 1930s, with aircraft operated by Wilson Airways. During the war, this became the Kenya Auxiliary Air Unit, under the control of the Kenya Regiment.

The UK's Royal Air Force opened Eastleigh airfield for full operation on August 1 1940, one of four wartime RAF airfields in Kenya, and then kept it as a major frontline and logistics base in the region.

When Kenya gained independence on December 12 1963, the new Kenyan Government sought British assistance to form a new Kenya Air Force, initially under the command of a seconded British Group Captain, with RAF Eastleigh becoming KAF Eastleigh.

Of Kenya's immediate neighbours, only South Sudan and Somalia have weaker air arms.

The Kenya Air Force was officially formed on June 1 1964. The new government placed considerable emphasis on 'Africanisation' and a new flying training unit was established at Eastleigh, equipped with DHC-1 Chipmunks (and a handful of DHC-2 Beavers), and with a planned output of 10 pilots per annum.

A Defence Forces Technical College (DEFTEC) was established with the responsibility of training all technicians in the Kenya Defence Forces.

The first element in the new air arm was a transport squadron, which formed with eight Beavers and four DHC-4 Caribou aircraft in 1966. A frontline fighter/light ground attack unit was formed in 1971, equipped with BAC Strikemasters. Scottish Aviation Bulldogs supplanted the Chipmunks from 1972, with the last of the Chipmunks departing in 1974.

On February 25 1974, the KAF opened Nanyuki Air Base and the Strikemasters moved there in June, while KAF Eastleigh remained the main transport and training base.

Long-range air defence radar systems were obtained in 1974, allowing round-the-clock surveillance of national airspace.

The combat capability of the Strikemaster (an armed Jet Provost) was limited, and the KAF also acquired ex-RAF Hawker Hunter aircraft in 1974. These were better able to deter aggression from Uganda and Somalia, though Kenya really wanted a supersonic, missile-armed fighter.

Kenya approached the USA in October 1974 hoping to buy a package of defence equipment, including a squadron of jet fighters, but this was unsuccessful.

In the autumn of 1975 Kenya entered negotiations to buy 10 surplus Iranian Northrop F-5A Freedom Fighters but, in the event, Iran refused the sale and the Hunters soldiered on.

Recapitalising the transport element was easier and, in 1977, the Caribous were augmented by DHC-5 Buffalo transports and Dornier Do28D Skyservant utility aircraft.

Kenya finally requested the supply of 10 Northrop F-5E and two two-seat F-5F Tiger jet fighters from the USA, with the US \$65 million 'peace drum' deal financed through a

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combination of military assistance program (MAP) and foreign military sales (FMS) credits.

Deliveries began in September 1978 and the last three single-seat Hunter FGA.Mk 80s, and two two-seat Hunter T.Mk 81s, were stood down in 1979 and sold to the Zimbabwe Air Force in 1981.

An initial cadre of seven F-5 pilots was trained by the USAF's 425th Squadron at Williams AFB during 1978, though financial difficulties saw training transferred to Kenya, where a USAF technical assistance field team, including instructor pilots, was deployed to Laikipia AB between January 1979 and August 1982 to assist.

From 1979 to 1982 the new F-5Es escorted President Daniel Arap Moi's flights in and out of the country and, though there was no threat, this high-profile mission demonstrated that Kenya at last had a viable, effective, fighter force. More quietly, from 1978, Kenya fielded a surface-to-air missile capability.

The introduction of the F-5E, as well as Aerospatiale SA-330G Pumas and SA342 Gazelles for a new helicopter squadron, increased demand for pilots beyond the capacity of the flying training school and a number of Kenyan fighters were trained in the USA, the UK, France, India, and Pakistan between 1976 and 1981.



Fortunately the KAF training machine was revitalised by the addition of 12 BAE Hawk T.Mk 52s, ordered on February 9 1978, and delivered between 1980 and 1981. These jet trainers had a limited attack capability.

After a failed coup by a group of junior Air Force personnel (the ringleaders were three sergeants and three corporals) the KAF was disbanded on August 22 1982. KAF commander Major General Kariuki was relieved of his appointment, tried by a court martial, and sentenced to four years' imprisonment on January 18 1983.

Army Major General Mohamoud Mohamed was appointed commander of the renamed 82 Air Force, which was placed under tighter army control, and the air bases were renamed, with KAF Eastleigh becoming Moi Air Base, and KAF Nanyuki becoming Laikipia Air Base.

The Air Force uniform, flag and motto were all changed.

The DHC-2 Beavers were retired in 1983 and the Caribous followed in 1987, replaced by three DHC-8 Dash 8 transports.

The Strikemasters were replaced by 12 Shorts Tucano trainers (some of them configured for counter-insurgency duties) and were sold in 1993.

The air arm opened a succession of forward operating bases (FOBs) from October 1979, with FOB Wajir (little more than a concrete runway close to the Somali border) being the first.

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SOMMAIRE

La force aérienne kenyane: un maillon faible?

Le Kenya possède l'économie la plus dynamique d'Afrique orientale et centrale. Le pays figure dans la liste des dix premiers pays pour ses dépenses en termes de défense. Jon Lake a mené son enquête pour constater si l'armée de l'air, de terre et la marine kenyane sont suffisamment équipées pour assurer leurs missions.

Le Kenya possède une grande force militaire qui est bien structurée. Elle a reçu de nouveaux équipements pour ses systèmes de défense au cours des années écoulées. L'armée du Kenya a démontré son expérience après avoir combattu en Somalie et lors de nombreuses opérations de maintien de la paix. Sa réputation a cependant été ternie par des accusations de corruption et de violations des droits de l'homme.

La marine kenyane est certes modeste mais demeure la mieux équipée de la côte est-africaine. Elle a eu l'opportunité de suivre des sessions d'entraînements avec les États-Unis, le Royaume-Uni, la France et l'Afrique du Sud. Elle a pris part à de nombreuses missions anti-pirateries ainsi qu'à des opérations contre les activistes d'Al Shabaab en Somalie.

Même si l'armée de terre et la marine kenyane sont considérées comme les plus puissantes en Afrique orientale et centrale, l'armée de l'air du Kenya (KAF) reste, elle, limitée. Elle a peu investi dans des équipements. La KAF peut en effet difficilement rivaliser avec ses voisins en termes de combat aérien. L'Éthiopie exploite le Su-27 de Sukhoi, l'Ouganda le Su-30 et la

Tanzanie le MiG-29. La KAF opère des F-5E de Northrop qui sont moins performants. Ses proches voisins (le Sud-Soudan et la Somalie) sont les seuls pays de la région à bénéficier d'un système d'armes moins perfectionné.

La flotte d'avions de la force aérienne du Kenya s'est avérée jusqu'à présent suffisante pour assurer ses missions de maintien de la paix et mener des opérations contre des cibles d'Al-Shabaab présentes en Somalie depuis le 16 Octobre 2011. La KAF a notamment bombardé ses camps en Somalie et soutenu la prise de Kismayo en septembre 2012. Al Shabaab a cependant mené des représailles contre des intérêts du Kenya dont l'attaque de Westgate à Nairobi.

L'armée de l'air kenyane et son système d'armes seraient pourtant suffisants si le pays n'avait pas de conflits avec l'Ouganda concernant l'appartenance de l'île Magingo.

Le Kenya n'a pas suffisamment investi pour moderniser et rééquiper ses forces aériennes, alors même que la KAF se prépare à célébrer son cinquantième anniversaire le 1er Juin 2014. Le pays n'a pas réussi à le faire de manière aussi optimale que ses voisins.

L'armée de l'air du Kenya (KAF) reste, elle, limitée. Elle a peu investi dans des équipements.



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The army retains control of the majority of the 34 (estimated) Hughes/McDonnell Douglas MD500 helicopters that remain in service.

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FOB Mombasa followed in 1986. This was a KAF enclave at Moi International Airport at Mombasa.

FOB Lokichoggio, close to the borders with South Sudan and Uganda (in the far north east of Kenya), began operations from 1992. Since then a FOB has opened at Mandera (a dirt strip) and another at FOB Nyeri, south of Nanyuki. This has a grass runway and is mainly used by helicopters and lighter aircraft.

Larger transports, army and police helicopters use KAF enclaves at Embakasi (Jomo Kenyatta International Airport) in the eastern outskirts of Nairobi, and at Wilson Airport, west of Nairobi.

Since 1982, the KAF has not operated combat helicopters, which have been retained by the army and are used by the 50th Air Cavalry Division.



Following a legal challenge by an air force captain, the Kenya Air Force regained its independent status and its name in 1994.

New equipment for the VIP Transport Flight arrived in 1995, in the shape of a Fokker 70ER, which has been used primarily as the presidential aircraft. Chinese Harbin Y-12 utility transport aircraft were obtained for the Liaison Squadron (and for multi-engine pilot training) in 1997. One of these aircraft was subsequently converted for intelligence, surveillance, target acquisition and reconnaissance (ISTAR) duties with a Wescam MX-15 turret.

With the situation in Somalia deteriorating, investment in the F-5 fleet was accorded a higher priority and, in 1996, \$20 million was spent on F-5 spare parts, support equipment and weaponry to maintain availability and operational usability of the fleet.

However, this investment was not maintained, and by 2004 many of the surviving F-5 fleet had

been grounded, and five aircraft were lost between 1979 and 1986.

Two additional Northrop F-5Fs had been delivered in June 1982 as attrition replacements, but the airworthy fleet was restored to nine aircraft after an eight-man USAF team was deployed to Laikipia in March 2007.

In 2007, Kenya acquired a package of 10 surplus F-5Es (at a cost of US \$4.5 million), three upgraded F-5Ems (\$3.75 million) and two F-5Fs (\$6.6 million), plus spares and training from Jordan. The total bill of 1.5 billion Kenyan shillings (\$23 million) saw the aircraft overhauled, modernised with new Rockwell Collins avionics, and repainted in Kenyan camouflage by the Jordanian Aeronautical Systems Company. Deliveries began in September 2008.

By 2011, four aircraft from the first batch were still operational, though at least two F-5Es were lost in the Somali operations, and no more than 17 F-5Es and four F-5Fs remain in service today, equipping No. 15 Tactical Fighter Squadron of the Tactical Fighting Wing at KAF Laikipia AB, Nanyuki. The Hawks of the Strike Squadron are grounded.

Moi Air Base in Eastleigh North is the HQ and operations centre for the KAF and houses a transport squadron with DHC-5s, DHC-8s and Y-12s.

The similarly named Moi IAP at Mombasa houses a transport squadron detachment, the training squadron, whose five remaining Bulldog Series 103 and 127s are being replaced by the first of six Grob G120s on order, as well as about 10 surviving Tucano T.Mk 51s.

There is also a support helicopter squadron with about a dozen SA.330Gs and IAR 330L Pumas, two Mil Mi-17s and, perhaps still, an SA.341K Gazelle and an MBB Bölkow Bo.105S.

Jomo Kenyatta IAP at Nairobi-Embakasi houses a further transport squadron detachment

with DHC-5s, the Government/VVIP Flight's Fokker F70ER, and may be the home of a liaison squadron with some of the Y-12s.

The KAF has been involved in combat operations against Islamic al Shabaab guerrilla groups in Somalia since 2011, when Kenya initiated military action against the al Qaeda affiliate group. The Air Force has bombed al Shabaab camps and supported the capture of Kismayo in September 2012, using F-5Es armed with bombs, rockets and AGM-65 Maverick air-to-surface missiles.

Since then, al Shabaab has conducted retaliatory strikes against civilian and government targets in Kenya, including the attack against Nairobi's Westgate shopping mall that killed at least 67 people.



The army retains control of the majority of the 34 (estimated) Hughes/McDonnell Douglas MD500 helicopters that remain in service, including about 11 TOW-armed MD 500MD Scout Defenders and eight ASLT-equipped MD500ME Defenders.

It is not known whether the five (or so) newly delivered Mil Mi-28N 'Havoc' helicopter gunships, and eight older Changhe Z-9WA and Z-9WE armed and utility helicopters, serve with the army or the air force, though some reports suggest that the Mi-28Ns serve at Laikipia Air Base, and that a total of 16 were due for delivery to the air force by March 2012 (though delays have been reported in these scheduled deliveries).

The ownership of two Mi-17s and a dozen or so Aerospatiale and IAR-built Pumas is similarly uncertain.

The Police Air Wing is headquartered at Wilson Field in Nairobi and operates four Cessna 185s, three Cessna 310Qs, two Cessna 402s and five Mil Mi-17 helicopters.



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*Even as the US Air Force withdraws its brand new C-27J Spartan tactical airlifters from service, a host of new customers are emerging for this versatile airlifter, as **Jon Lake** discovered.*

C-27J gets a lift from new markets

At first sight, the decision of the US Department of Defense to withdraw the C-27J from service – even before deliveries were complete – could have been seen as harmful to the aircraft’s reputation.

However, in reality, the cancellation of the programme after the delivery of 21 aircraft reflects the impact of US budgetary cuts and sequestration, rather than any inherent deficiency in the aircraft itself.

Now Italian manufacturer Alenia is pushing hard to open up new markets in north Africa and the Middle East, with the Royal Moroccan Air Force already operating four aircraft at the 3rd Air Force Base (3rd BAFRA).

The type is also in service in Bulgaria (3), Chad (2), Greece (8), Italy (12), Lithuania (3), Mexico (4) and Romania (6 of seven ordered).

The C-27J has also been ordered by Australia (10, to be delivered from 2015) and Peru (2), has been selected by Slovakia and Taiwan, and has been shortlisted by Canada, India, Indonesia and the Philippines.

The US Air Force (USAF) originally procured the C-27J in order to directly support urgent army needs in difficult environments such as Afghanistan, where it was anticipated that airfield constraints might prevent the C-130 from operating effectively.

In practice, these constraints were negligible, and the USAF expected them to be marginal in future scenarios, making the C-27J a ‘niche capability’ that it could no longer afford.

The USAF claimed that the C-130 could complete most of the C-27J’s missions, and could do so more economically when it came to through-life costs.

Former Air Force Chief of Staff, General Norton Schwartz, told Congress that the C-27J cost \$9,000 per hour to operate, while the C-130 cost little more, at \$10,400.

However, the Ohio Air National Guard, one of four guard units to fly the C-27J, came up with very different costs to General Schwartz, saying that the C-27J’s direct operating costs were only \$2,100 per hour, while the C-130 cost \$7,000 per hour to fly.

By the time the USAF cancelled the C-27J, just 38 were on order, reduced from an initial planned total of 145 aircraft – 75 USAF and 70 army, with Finmeccanica projecting a possible total of 207 JCA aircraft (JCA being the original joint cargo aircraft requirement in the US, which L-3 won as systems integrator).

Some 17 aircraft had been delivered by October 2013, by which time 13 had been withdrawn from use, retired to long-term storage in the Arizona desert at the USAF’s military aircraft ‘boneyard’ storage facility outside Tucson.



One more was with L-3 Systems at Waco (where systems integration work is carried out), and three had been delivered to Special Operations Command (SOCOM) at Pope AFB.

It is a tribute to the C-27J that, even though the USAF decided to retire it, a number of US Government agencies soon queued up to take the aircraft. SOCOM will receive seven, for parachute training, though some or all could be converted to MC-27J Stinger configuration with a pallet-mounted GAU-23 30mm roll-on/roll-off gun system and systems from the AC-130 Hercules, as demonstrated to SOCOM officials at Eglin Air Force Base during July 2012. This is a different gunship configuration to the MC-27J ‘Praetorian’ upgrade developed by Alenia and ATK and ordered by Italy, and offered to Colombia.

The US Forestry Service put in a bid for seven C-27Js for fire-fighting, dropping smoke jumpers

and for transporting passengers and cargo, but will instead receive seven HC-130H Hercules – which can carry the USFS’s required load of 3,000 gallons of retardant, where the C-27J could carry only 1,850 gallons – from the US Coast Guard. This will allow the Coast Guard to take all 14 remaining C-27Js.

The Coast Guard originally wanted all 21 C-27Js, claiming that such a transfer would allow it to save \$800 million by cutting its planned purchase of 36 HC-144A Ocean Sentry (CN-235) SAR/patrol aircraft to 18.

The C-27J is not equipped with the search radar, electro-optical and infrared cameras that are integral on the HC-144A, and it remains to be seen whether it can accommodate the HC-144’s mission systems pallet (MSP) and command and control (C2) system.

The four remaining undelivered USAF aircraft were due to be delivered by April this year, and they were expected to go to SOCOM (via L-3 at Waco). What this meant is that the ex-USAF aircraft would not be sold to Alenia’s potential export customers, a prospect that led the Italian company to warn that it would not support the aircraft if the US resold them to other nations.

The aircraft faces considerable competition in the international military transport aircraft market, not least from Airbus Military’s C295. The C-27J and C295 are in the same broad class – both being turboprop-powered, high-wing military light transport aircraft. But, despite these broad similarities, they differ in some important aspects. In particular, their cargo bay dimensions mean that they have quite different load-carrying characteristics.

The C-27J’s cargo bay is wide and tall but shorter in length, which allows it to carry larger items of cargo (such as light military vehicles), whereas the C295’s cargo compartment is

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The cancellation of the C-27J programme after the delivery of 21 aircraft reflects the impact of US budgetary cuts and sequestration, rather than any inherent deficiency in the aircraft itself.

Harsh conditions ideal for a Spartan

Four Alenia Aermacchi C-27Js are in service with the Royal Moroccan Air Force and being used in different operational roles.

It is the only aircraft capable of directly transporting troops and their equipment in typically harsh Moroccan operating conditions, which means high mountains or the hot desert areas of the south.

Today a tactical transport aircraft is a real force-multiplier, whether in the war against terrorism, smuggling and drug trafficking, providing tactical support to troops, or in humanitarian/natural disaster relief missions operating from short/unpaved strips.

In addition to the outstanding climb rate, high 3G manoeuvrability, and inherent rugged design of the C-27J Spartan, the aircraft features the capability to be completely prepared for flying a wide range of combat and civil missions.

The Spartan is able to take off in hot and high conditions with more than 10 tonnes of payload, and to reach a destination 500nm away faster and safer than its direct competitors (the C-27J has a cruise speed of up to 325kts, which is at least 25% higher than its direct competitor).

Landing on narrow, short and unpaved runways is not a problem. Combat proven in Afghanistan, the Spartan needs less than 600 metres at take-off and less than 400 metres on landing at its maximum weight.

The aircraft can maintain an altitude of 18,000ft

with only one engine operational from a cruise altitude of 26,000ft at 24tonnes all-up weight.

Such performance makes it ideal for operations in mountainous terrain.

The C-27J today is one of the best, and only, medium-sized military transport aircraft available on the market, with Alenia claiming that it offers superior and cost-effective performance in speed, range, payload, load compartment volume and cross section, combined with the system reliability and considerable commonality of equipment with larger, legacy transport aircraft.

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longer, but narrower and lower, allowing it to carry more passengers, paratroops or stretchers.

Airbus Military also claims that the C295 has lower fuel consumption, longer endurance and lower maintenance man-hours per flying hour figures, and that it can use shorter runways – though Alenia says that its aircraft has a longer range and can operate from real, softer, unprepared strips, and is more rugged and robust with redundant three-spar wings and tail surfaces.

The Spartan also features fully redundant hydraulics – the aircraft has two fully independent systems with two independent reservoirs and four pumps; two engine-driven and two electrically powered. The Spartan has an auxiliary power unit (APU), allowing operation from semi-prepared and primitively equipped airstrips and making the engines more easily restarted in flight.

The Spartan also has an oxygen distribution system for the passenger compartment, with up to 46 distribution points (up to 60 may be fitted as an option), meaning that passengers do not need to carry personal oxygen bottles.

A greater power-to-weight ratio makes the C-27J significantly faster than the C295 (315kts or 583km/h, compared to 260kts or 480km/h).

The aircraft has 16 cockpit windows, giving better visibility for the pilots, and allowing very steep approaches. The USAF judged that the C-27J had a “superior military operational envelope” and provided “superior military utility”.

The USAF’s original judgement was based

principally on the C-27J’s performance and, to a certain extent, its cargo compartment, which allows the carriage of light vehicles and which is more compatible with pallets from larger airlifters, thereby imposing fewer restrictions on the transfer of stores from the larger C-130 and C-17 aircraft than competitor aircraft.

The C-27J and C295 have virtually the same floor width (2.45 metres) but the C-27J has a greater maximum width, permitting the carriage of wider loads further forward. This allows the loadmaster to more easily inspect and check on loads in flight.



Due to height clearance requirements, neither aircraft can accommodate the maximum pallet height of 2.44 metres that a C-130 can carry, but with its higher roof, the C-27J can take pallets that are 35% taller than those accommodated by its rival.

The C-27J can adjust the height and inclination of the cargo floor to facilitate loading and unloading operations where no external cargo loader is available, and features extra-large paratroops doors (which are not influenced by propwash) for safer airdrops.

There is clearly a cost difference between the two aircraft and the RAAF assessed that the C295 would have lower acquisition and through-life costs than the C-27J, though when both aircraft were offered to the USAF in 2006, the up-front cost differential was put at just 15%.

Some operators would see such a cost difference as being a price well worth paying, especially if their requirement was more focused on carrying military vehicles and large items of cargo, rather than personnel.

As well as offering compelling performance and capability advantages, the C-27J also offers useful commonality with the bigger C-130J. The C-27J was designed from the start to be an upgraded and improved version of Alenia’s G.222, using the C-130J’s glass cockpit and powered by more powerful engines.

Between 1996 and 2006, development of the C-27J was undertaken by a joint venture between Alenia and Lockheed Martin, known as Lockheed Martin Alenia Tactical Transport Systems (LMATTS), and the C-130J’s Rolls-Royce AE 2100 engine and six-blade propeller were adopted for the C-27J.

The LMATTS partnership was dissolved when Lockheed offered the C-130J to meet the US Army and US Air Force Joint Cargo Aircraft (JCA) requirement, in direct competition with the C-27J. Thereafter, Alenia partnered with L-3 Communications (and later Boeing), forming the Global Military Aircraft Systems (GMAS) joint venture to market the C-27J.

Although Lockheed Martin is no longer directly involved in the C-27J, the aircraft still represents a remarkable complement to the bigger four-engined airlifter, with a similar cockpit and the same engines and propellers providing a degree of support commonality.

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Mozambique looks to revive its air power

After years as little more than a token force, capable of limited liaison and surveillance flights, the Força Aérea De Moçambique (FAM) is now undergoing a major and rapid transformation, including the re-establishment of a fast jet fighter arm with newly refurbished MiG-21s.
Jon Lake reports.

As one of the so-called 'frontline states' during the long confrontation with Rhodesia and apartheid South Africa, which saw Rhodesian forces making numerous cross-border raids to attack ZANU and ZAPU insurgent camps, Mozambique built up significant armed forces following independence in 1975, largely supported by Cuba and the USSR.

Known as the People's Liberation Air Force between 1985 and 1990, the air force received MiG-17 fighter-bombers, Mil Mi-8 and Mil Mi-24 attack helicopters, and no fewer than 48 MiG-21bis fighters, delivered with pilots, from Cuba.

These saw little use against South African or Rhodesian forces, though one scored a kill against a South African Air Force Seeker UAV.

They were, however, used extensively against RENAMO guerrillas in the civil war that began in 1977.

By 1990 only 18 MiG-21s were still operational but, after that year's ceasefire, the new government progressively ditched Mozambique's previous revolutionary communist leanings, embraced western-style economics, and became a democratic multi-party state with periodic elections.

Cuban support for the air force was cut off, the FAM became little more than a token force, and the defence budget was cut to 1.5% of Mozambique's gross national product (GDP).

□□□□□

The MiG-21s (and most of the combat aircraft) were put into storage or simply abandoned where they stood at the three main bases of Beira, Nacala and Nampula, where they deteriorated rapidly, and quickly became ineffective.

By 2011, the FAM consisted of light aircraft (believed to comprise a Cessna 152, a Cessna 172 and a Piper PA-32 Seneca, acquired around 2011) with perhaps three Dornier Do28s and a handful of light transports (Airbus Military listing three CASA C212s as being operational in

Mozambique). However, since then, a re-equipment effort has steadily gathered pace.

On March 3 2011, Portugal handed over the first of a pair of refurbished ex-Força Aérea Portuguesa Reims Aviation Cessna FTB-337G Milirole aircraft to the FAM under the cooperação técnico-militar (CTM) technical military cooperation agreement between Mozambique and Portugal.

This also includes the training of aircrew and mechanics in both countries, with Portuguese advisers already working at the recently formed Escola Prática de Aviação (EPA – School of Practical Aviation) at the FAM enclave at Maputo-Mavalene International Airport.

Flight International's 2013 World Air Forces Directory chose to discount the CASAs (and the new Miliroles) and listed only a pair of Mil Mi-17s and a pair of Mi-24s as the air arm's sole operational aircraft.

Some sources have also reported that the An-26 tactical transport remains operational in Mozambique.

□□□□□

The air force received around 10 An-26s from 1978. One crashed on March 30 1986, and six are derelict in open storage at Maputo, two more are at Beira and one lies at Cuamba, making claims that the type is still in use unlikely.

This is likely to change in the near future, however, as the FAM is due to receive two second-hand Antonov An-26B-100 transport aircraft, which are currently being refurbished at Kiev-Zhuliany in Ukraine. The first of these began test flying in July 2013.

In September 2013 the air force took delivery of a second-hand Hawker 850XP business jet, originally built in 2005.

The FAM will also soon receive eight MiG-21s (six MiG-21bis and two MiG-21UM) from Aerostar at Bacau International Airport in Romania, once their overhauls are complete. A MiG-21UM has been photographed engine-running there, and the first MiG-21bis (in full Mozambique markings) was photographed undergoing test flights at

Bacau in late 2013. One of the MiG-21s destined for Mozambique was involved in an incident on 27 August, catching fire after experiencing a technical problem in flight.

Aerostar is also providing training for Mozambique's new MiG-21 pilots, using an Aero L-39ZO jet trainer (possibly a refurbished ex-Mozambique aircraft) and two Festival light aircraft.

It would seem unlikely that the MiG-21s are ex-Mozambique aircraft, since similar aircraft in much better condition could have been cheaply acquired from another source but, if so, their origin is unknown.



Refurbished MiG 21s are coming from Romania.



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EBACE turns its face towards Africa

Pilatus says its planned PC-24 twin-jet will perform well in Africa.

The European Business Aviation Conference and Exhibition (EBACE) will take place from May 20-22 this year in the Palexpo Convention Centre at Geneva International Airport. The event is second only in the business aviation industry calendar to the NBAA Convention in the US, and serves as a particular focus for operators in Europe, the Middle East and Africa. Ian Sheppard looks at what to expect.

All the leading business jet, turboprop and helicopter manufacturers will be at EBACE looking for sales as the economic environment improves around the world. It is clear that, even though parts of Europe are still struggling to emerge from recession, much of the developing world is continuing on a fast growth curve.

Africa could have a major part to play. Although many of the leading manufacturers will be making an appearance at the African Business Aviation Association (AfBAA) event in Marrakech from April 23-26, a few short weeks before EBACE, this is unlikely to lessen the attraction of the Swiss event because of its sheer size and scope.



As *African Aerospace* was going to press, EBACE organisers said 320 exhibitors – around half from Europe – had already signed up, exceeding last year's total of 294.

The static display looks likely to feature more than 50 aircraft and some 12,000 industry professionals are expected to attend on the three main show days.

"We're still several months out from EBACE and to be this far ahead is outstanding," noted Kathleen Blouin, NBAA's senior vice president, conventions and forums, back in January. "EBACE has proven to be the premier business aviation marketplace in Europe, and the best forum for promoting the industry."

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The Brussels-based European Business Aviation Association (EBAA) and US National Business Aviation Association (NBAA) jointly sponsor the event.

Prior to the opening, three day-long seminars have been scheduled, which are designed to enhance the value for attendees. On Monday, May 19, EBACE organisers are offering a safety workshop, an international aircraft transactions seminar, and a cabin crew conference.

"These three pre-convention seminars are designed to augment the education programme taking place during EBACE 2014," explained Mike Nichols, NBAA vice president, operational excellence and professional development. "Each of the meetings takes an in-depth look at a specific area of interest and offers an opportunity to delve deeper into the subjects."

Blouin added: "If you use an aircraft for business, EBACE is a can't-miss event. It's the only show in Europe that brings together all of the latest aircraft and aviation equipment, as well as the top experts in aviation and business."



Second-guessing what might happen at this year's event is difficult, but several of the manufacturers will be showing off new additions to their product ranges, and this includes whole aircraft and equipment, such as avionics.

It will be a prime opportunity for those in the African aviation industry to speak with leading vendors and service providers from Europe, including lawyers and financiers.

Africa is one of the developing regions that many growing FBO networks and business aircraft operators are looking at.

While the likes of Execujet, which is based in Switzerland, are already well-established in South Africa, giants like Jet Aviation are also eyeing the continent's vast potential. The list of members of AfBAA (which itself will be exhibiting at EBACE) gives some indications of companies that are taking an active interest in Africa – and this even includes VistaJet.

Turboprop manufacturers have a particular interest in African opportunities, with these aircraft being well suited to shorter, less well-

IN-SERVICE BUSINESS JETS BASED IN AFRICA

Country	Count
Algeria	10
Angola	29
Botswana	6
Burkina Faso	2
Cameroon	3
Chad	3
Congo	4
Cote d'Ivoire	2
Dem. Republic of Congo	18
Djibouti	1
Egypt	43
Equatorial Guinea	6
Eritrea	1
Gabon	9
Gambia	3
Ghana	4
Kenya	10
Libya	12
Madagascar	4
Mali Republic	1
Mauritania	1
Mauritius	4
Morocco	25
Mozambique	2
Namibia	11
Nigeria	78
Sao Tome and Principe	1
Senegal	4
Seychelles Islands	3
South Africa	173
Sudan	4
Swaziland	3
Tanzania	2
Togo	4
Tunisia	4
Uganda	1
Zambia	1
Zimbabwe	2
TOTAL RECORDS:	494

SOURCE: JETNET LLC (MARCH 2014)

maintained airports and airstrips. Aircraft such as Beechcraft King Airs and Pilatus PC-12s are ideal for use by mining companies and other corporations operating in Africa, but the size of the continent means that getting to Europe or other destinations outside Africa calls for jets

AfBAA the voice of Africa's business aviation

Two years ago, during the last EBACE event (May 2012), Tarek Ragheb, chairman of the African Business Aviation Association (AfBAA), announced the organisation's inauguration. "We are very proud to announce that Africa's business aviation community will have a unified voice to relay its importance to the continent's strive for growth and prosperity, he said."

He stated further that the organisation's vision was "to establish business aviation as an asset that is recognised, valued and supported by governments, their respective civil aviation authorities, and enterprises throughout Africa".

There were 14 founding members and, noted Rady

Fahmy, an Egyptian and AfBAA's programme director: "Our roster of founding members managed to balance operators from the continent with leading suppliers and OEMs."

AfBAA aims to become the business aviation community's voice in relation to Africa's civil aviation associations and enterprises. Its mission is to assist African states in understanding and valuing the benefits that business aviation provides for the continent's economic development and prosperity through its unwavering commitment to the organisation's guiding principles.

AfBAA is again exhibiting at this year's EBACE.

from manufacturers such as Dassault, Gulfstream and Bombardier.

Pilatus is also depicting its new PC-24 as ideally suited to developing regions such as Africa, while aircraft like the Gippsland Airvan and Viking 400 could prove popular over the years, as the Cessna Caravan has already, especially for humanitarian operations.

Of course, there will be a lot of interest at EBACE over the integration of Beechcraft; Cessna's parent company Textron having recently acquired the manufacturer, which, like Cessna, is based in Wichita, Kansas.

With small and medium-sized jets there is a lot of interest in Nextant's re-engineered Beech 400, the Nextant 400XTi, and Beechcraft has also started to offer the Hawker 400XPR. It also has the 800XPR, of course, a popular midsize jet around the world.

A relative latecomer to business jet manufacturing, Brazil's Embraer has started to build its Legacy jets in China and, with Africa's strong business links to China, this could lead to more Legacy aircraft in the African fleet.

Embraer will also be hoping for interest in its larger Lineage 1000E, which is based on its fast-selling ERJ-190 regional jet.

Having launched its all-new 5X last year, French manufacturer Dassault Aviation is preparing to reveal a new aircraft, aimed at updating its flagship 7X aircraft, which has sold well.



It is likely to target this squarely at Gulfstream and Bombardier. The former's G650 has sold in large numbers, while Bombardier has also upped the capabilities of its Global family with the in-development Global 7000 and Global 8000 ultra-long-range jets, which have new GE passport engines.

Bombardier forecast last year that the large business jet fleet in Africa would grow from 350 today to 960 in 2020.

The Canadian manufacturer also now offers the Challenger 350, taking its Challenger 300 to a new niche and building the Challenger line-up, which also includes the 605 and 800. As if that's not enough, Bombardier has also complemented the Learjet family with the Learjet 85.

While the manufacturers and suppliers are busy selling their wares, the backdrop to the show will be the numerous issues that affect the industry; from the environment (noise and emissions), through airspace development, to safety.

The latter is a particular focus for Africa, with a lack of adequate infrastructure and relatively few trained personnel, or training schools. African visitors to EBACE will have an ideal opportunity to forge better links with the rest of the world, in order to adopt best equipment and best practices and ultimately grow a safe and sustainable African industry.



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1988 Airbus A310-304	2005 Eurocopter AS 365 N3	2010 Global XRS
2000 Airbus A319CJ	2007 Falcon 900DX	2001 Gulfstream 200
2010 Challenger 300	2002 Falcon 900EX	2008 Gulfstream 450
1997 Challenger 604	2005 Global 5000	1999 Gulfstream GIVSP
2002 Challenger 604	2007 Global 5000	1998 Gulfstream IVSP
2010 Challenger 605	2009 Global 5000	1991 Hawker 1000B
2007 Challenger 850ER	2014 Global 6000	2008 Lear 45XR
2006 Citation CJ1+	2005 Global Express	2008 Lear 60XR
1997 CRJ 200	2007 Global XRS	Q1 2015 Legacy 500

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Tracey Curtis-Taylor flew from Cape Town to Goodwood in her Stearman biplane, as did Mary Heath (inset).



How Tracey traced Mary's daring flight

Two women, two epic journeys across two centuries... it's just too compelling for Liz Moscrop to resist.

A murderer's daughter and thrice-wed six-footer – Lady Mary Heath would have attracted attention even before she got started with flying. A celebrity before the term was invented; in the three months from January to May 1928 she became the first person to fly a small open cockpit aircraft from Cape Town to Cairo.

Her story was the inspiration behind one of the bravest contemporary aviation feats today.

Last year British-born Tracey Curtis-Taylor recreated Heath's daring flight in 'The Spirit of Artemis', a 1942 Boeing Stearman. The aircraft has a

top speed of 95mph, an operating ceiling of 10,000 feet and a range of 450 miles.

However, Curtis-Taylor has the right credentials for such a monumental task. She was the first female pilot to be based at the historic Shuttleworth Collection, at Biggleswade in in the UK and now works with historic aviation and air show organisations.

She explained: "I was interested in pioneering flights and the idea to fly across Africa crystallised around Lady Heath's story, giving it greater meaning and purpose."

The trip took four years' planning,

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including finding the right aeroplane. Curtis-Taylor said: "I wanted a 300 horse power engine, and it took a long time to find the right one and get it outfitted the way I wanted it."

This meant adding a modern glass Garmin 430 cockpit, extra fuel tanks and a fresh paint job. In other respects, though, the aircraft was exactly as it had been nearly 80 years ago, and geared to visual flight rules (VFR) flying – ie daytime in good weather conditions.

Nylon Films documented the adventure, flying its Cessna support aircraft twice as fast as the Stearman.

A team of eight engineers, technicians and a camera crew filmed her departures, then whistled down to her next destination to capture her arrivals. The logistics involved in the operation were enormous. She said: "We owe a large debt of gratitude to ExecuJet, who really helped us out."

Heath's luggage, meanwhile, had been a Bible, a shotgun, a couple of tennis rackets, six tea gowns and a fur coat (in contrast to a male pilot's luggage of boiled eggs and ham sandwiches).

Even that had proved too much in the hot and high conditions over the Rift Valley in Kenya. She staggered over the valley's ridge by just 20ft, and had to throw most of her cargo overboard. Although Curtis-Taylor managed to ride the thermals without shedding any kit, she describes her own struggle to climb at the same spot as one of her "Lady Heath moments".



Heath battled the journey alone, but Curtis-Taylor had to grapple with issues her inventive hero would never know.

For example, landing in contemporary international airfields, dealing with air traffic control, and flying in circuits with positioning airliners flying at approach speeds 1920's aviators would not have believed.

Despite the challenges, there was plenty of fun to be had for the daredevil pilot.

She flew over Victoria Falls in Zambia at 400ft, with water vapour furling so high that the engine coughed. "I ignored procedure," she laughed. "The place was deserted, so I just flew through the gorge." After a subsequent two-hour drubbing from air traffic control, she was allowed to be on her way.

The biggest scary monster on a VFR trip over two continents over two months was always going to be the climate.

Curtis-Taylor said: "The weather is always a slight concern flying an aircraft like this. We were bound to catch it somewhere. We flew into thunderstorms in Zimbabwe, and picked up storm systems in the eastern Mediterranean."

The worst problems were in Egypt, where military air traffic control operators insisted she flew at altitudes of nine to 10,000 feet in strong winds of up to 40 knots. This gave her a groundspeed of around 40mph. She continued:



Born in the UK, Tracey also lived in New Zealand where she worked as a flying instructor and flew with the NZ Warbirds, flying old aircraft with ex-military pilots. In 1997 she became the first female pilot at the historic Shuttleworth Collection in the UK. She works predominantly with vintage aviation and air show organisations.

"We were not moving on the radar and couldn't descend. I realised we were never going to get anywhere. I had to push the aircraft right to the edge of its endurance."

Cold, scared and cheesed off, she was then grounded for three days in torrential rain and 70mph howling winds.

That combination killed the right magneto, which in turn caused an electrical problem in the ignition system, and it took her own engineer and the film crew soundman two days of scouring motorbike shops to find a suitable replacement 'fixit' part.

The compensations outweighed the negatives. Flying along the South African coast at low level, she watched breeding whales in a foamy blue sea. She cried: "I was hooting with joy. It was one of the most spectacular things I have ever seen."

Her favourite moments came passing over "the prehistoric landscape of live volcanoes, gliding at 50ft over the rock faces".



She said: "I had a new perspective of the geographical vernacular. They are real pyramids, and the man-made structures are nothing compared to the scale of what you see in the desert. The elemental mineral landscape is mind blowing. I was quite spaced out."

There were heart-breaking moments, too. Vast plains bereft of animals, disappeared through poaching; a pregnant rhino, slaughtered for her horn; the tension of South Sudan, shortly to be devastated by the bloodbath of civil war.

The final part of the journey required every last ounce of courage she had.

Limping home across Europe with her engineer (to help tie the aircraft down in the wintry strong winds), most airfields were closed for Christmas. At one point she had to fill a jerry can with car fuel – problematical due to a higher water content, which can cause carburettor icing, potentially fatal for an engine. She finally battled it back to Goodwood in the UK on New Year's Eve during a tiny weather window, in perhaps the poorest visibility of the entire escapade.

Would she do it again? "In a heartbeat."

She is still absorbing the enormity of her accomplishment.

It was hard to take it all in at the time, especially as she was filmed for up to 15 hours a day (the documentary will be released in April). While she does so, she is planning her next trip, possibly across Saudi Arabia.

Her hero is surely cheering from somewhere beyond the stars. Mary Heath once declared: "When we are very young, we look for adventure and long for it, but it is generally only when we are grown up that we are able to have it, and often then do not make use of our opportunities." That cannot be said of Tracey Curtis-Taylor.

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Martin Ferguson *evaluates the importance of global distribution systems to Africa's modern commercial airlines.*

Going global could be just the ticket!

The maturity of the internet, lightning-fast connection speeds, and the proliferation of mobile devices mean consumers are shopping and booking air travel in different ways.

The sales model in mature markets, such as western Europe and North America, has evolved; airlines now think and act more like retailers than traditional carriers.

For them, marketing and selling fares is no longer just about direct sell, bricks-and-mortar travel agencies and flight consolidators. They have to take into account the growth of online travel agencies (OTAs), meta-search websites, and also understand that referrals from user-review sites have made airfare commerce multi-dimensional.

In this regard, Africa's largest carriers, South African Airways, Ethiopian Airlines and Kenyan Airways, are just about keeping pace.

But the rest of Africa is different.

On the one hand, a significant number of transactions across the continent are still made in cash, while, on the other, there is an unusually high level of mobile-booking penetration.

In the midst of all this change, the global distribution systems (GDSs) have remained central to doing business.

Amadeus, Sabre and Travelport (which is comprised of Galileo and Worldspan platforms) are the three GDS competitors in Africa. Their technology platforms – once known as central

reservation systems (CRSs) – allow airlines to market and sell tickets through travel agencies.

There are subtle differences between their product offerings but the common unique selling point is their global reach into travel agencies in marketplaces around the world.

Contracts between airlines and GDSs all have unique elements, but on a fundamental level the airline pays the GDS a fee each time a segment is booked by an agent. Conversely, the GDS pays an incentive fee, based on booking volumes, to its travel agency customers.



Michael Arumemi-Ikhide, group chief executive of Arik Air, believes the GDSs have an important role to play for certain types of African carrier, but insists a thorough examination of business model and customer base should be carried out first. "GDSs mean different things to different types of carriers," he explained. "For the longer established full-service carriers, national carriers, those with wide-body, long-haul route structures, carriers in alliances, and those serving main cities, commercial and political centres, they are essential.

"As in the rest of the world, the low-cost carriers (LCCs) are largely anti-GDS and not dependent on them at all. Hybrid carriers tend not to be so reliant on multi-interline traffic and their business models are more sensitive to GDS

distribution system and host system integration costs. So they are more critical in their evaluation of the GDS value proposition."

Arumemi-Ikhide says each airline must evaluate its passenger profile, the reasons they travel and their likely mode of purchase, before considering the relative strength of the GDSs presence in the markets in which it sells.

"There are lots of questions," he said. "How big and mature are the local billing & settlement plan (BSP) markets? What alternative distribution channels and payment methods are available? Credit card acceptance is very restricted outside national boundaries within Africa and web bookings are constrained, so does the GDS become more attractive as a short-medium term strategy until cross-border card transactions can be processed by the banking systems? Does the airline intend to interline?"

"Then, of course, there is the GDS pricing and the wider cost of travel agent indiscipline in making travel bookings (GDS abuse) to take into account."

The evolution of consumer shopping and buying habits has forced the hand of airlines in recent years. Having a multi-channel distribution strategy has become commonplace in many regions of the world.



Hamish Broom, director of supplier commerce for Sabre in Europe, the Middle East and Africa, says using the GDS as part of a contemporary distribution strategy is important for modern African airlines. "I think what needs to be clearly understood and recognised by African carriers is the value of multi-channel distribution. As airlines step up their focus on increasing revenue in an increasingly sophisticated buying environment, they need to be well represented in each channel. The GDS marketplace is similar to Amazon and eBay in the retail sector, except we just retail travel products."

Broom says there is a vast audience of people connected to the GDS that want to buy travel, and believes the platform is now as relevant to major network carriers like South African Airways and Ethiopian Airlines as it is to low-cost and hybrid carriers such as FastJet and Kulula.



"The GDS marketplace is similar to Amazon and eBay in the retail sector, except we just retail travel products."

HAMISH BROOM



"It's SAA bookings made by agents in other international marketplaces that brings the value."

WILL OWEN HUGHES



“An airline has brand recognition in its home market. But as they spread further away around the world it diminishes, so they need assistance selling their products. And, of course, they want to get business travellers who tend to spend more on their ticket,” added Broom.

There are a number of reasons why the vast majority of large businesses, corporations and organisations use the services of a travel management company (TMC). Arranging a business trip can be complex, so it saves the employee time and their business money. The TMC can manage its customer’s travel budget, making sure spend is optimised. An agent can also easily change, amend or cancel travel arrangements on behalf of travellers. And that’s all before you get to traveller tracking and data management.

However, one thing all TMCs have in common is their commitment to using one or more of the GDSs. “It is apparent, therefore, that for airlines looking to enhance their market share, particularly in the higher yield business segments, the GDS is a very efficient channel to expand distribution,” said Antoine Medawar, Amadeus’ vice-president for MENA.

Broom added: “The majority of business

travel is purchased through a TMC or a self-booking tool (SBT), both of which ultimately lead back to the GDS for the fulfilment and the issuing of tickets. If you want to get to the business traveller you have to get in the GDS.”

Will Owen Hughes, Travelport’s senior director for supplier services in the Middle East and Africa, said the region’s mega carriers have benefited greatly from participation in the GDSs over the last decade. “Everyone knows who South African Airways is in Johannesburg and Cape Town. But it’s SAA bookings made by agents in other international marketplaces that brings the value,” he said.

Hughes added that a large number of agencies in Africa cater for both business and leisure travellers and were, therefore, also attractive conduits for smaller airlines.

Medawar predicts that low-cost and hybrid carriers in the region will increasingly turn to GDS distribution. He said: “It is important to highlight the emerging low-cost model in the region. Capacity is increasing. These carriers have the value of the GDS in expanding their distribution channels and many are realigning their strategies in order to stay ahead of the game.”

FastJet started its low-cost airline operation in Africa in late 2012. Its ambition was to deliver the same service to the African continent as its European low-cost counterparts. Ellis Cain-Jones, the airline’s head of commercial, said it is focused on taking an omni-channel approach to distribution, meaning there is one single place where everyone has access.

In the African markets in which it operates, travel agents have a direct connect to inventory. Revenue is managed on a daily basis. Around 18% of all FastJet’s African bookings are made by agents, while the other 72% are made on the airline’s website, via mobile phone, or in one of its bricks and mortar stores. “It keeps distribution costs to a minimum and allows us to offer \$20 fares,” said Cain-Jones.

At the time of writing, Cain-Jones said FastJet had entered two agreements to distribute its fares through international third parties, including the GDSs. Users of Skyscanner will have a direct-connect to the airline, while a contract with Hahn Air means fares, schedules and inventory will be available to agents connected to Amadeus, Sabre and Travelport systems.

GDS PROFILES

SABRE

Full-service carriers: South African Airways, Ethiopian Airlines, Kenya Airways, Arik Air, Senegal Airlines, Air Mauritius.
Hybrid/LCC carriers: Kulula

AMADEUS: No information available.

TRAVELPORT

Full-service carriers: South African Airways, Ethiopian Airlines, Kenya Airways, Air Botswana, Air Mauritius, Air Uganda, Comair, Precision Air, Senegal Airlines, Trans Air Congo
Hybrid/LCC carriers: Kulula, Federal Air, Mango, Proflight Commuter Services



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The fourth edition of the Marrakech Airshow will be taking the premier north African event to new levels, the show organisers are promising.

What began as a simple aerial extravaganza on a military camp to the north of the tourist city's main airport, is now stretching way beyond the borders of its own country.

The event, scheduled to take place at Marrakech Menara Airport on April 23-26, 2014 will be bigger than ever and is attracting the serious attention of major international players.

The French, the Americans and the Canadians are firmly committed, with pavilions to support a manufacturing industry that is supplying key components and aerostructures to their civil aviation programmes.

And this year, for the first time, the show co-locates with an event for the African Business Aviation Association (AfBAA), specifically targeted at the fast-growing private aviation market in north Africa.

In a special report, commissioned by MEBA, the Middle East and north African business aviation association, it was shown that north Africa is witnessing a 6.3% growth in the number of registered aircraft utilised for business aviation; a figure that is nearly double the global average of 3.7%.

While Morocco heads the field, Algeria, Tunisia and Libya are also developing the industry in the post Arab Spring growth.

"We are delighted to be part of the Marrakech show," said AfBAA founding

MAROC READY TO ROLL

Alan Peaford
suggests the latest edition of the Marrakech Air Show will herald a boon for North Africa.

chairman Tarek Ragheb. "We always said we didn't see ourselves as being in the business of shows, but the demand from our members proved that there is a need – and so we responded."

The dedicated business aviation area is expected to see most of the world's major business aircraft manufacturers on display with some of their latest models.

But it is not just meeting the business aviation need that is driving this show.

North Africa's maintenance, repair and overhaul (MRO) market has grown by 30% over the past five years. World-renowned MRO provider Sabena Technic already has a presence in Morocco, through its facility at Monastir, but with almost 50% of all north African aircraft movements in 2013 passing through Morocco, there are others hot on its tail.

While business aviation favours the larger aircraft – light jets and

SOMMAIRE

Le Maroc prêt à décoller

Alan Peaford estime que le salon aéronautique et spatial de Marrakech sera une véritable aubaine pour l'Afrique du Nord.

Cette quatrième édition, qui se tiendra à l'aéroport Menara du 23 au 26 avril, prendra une nouvelle dimension selon ses organisateurs. Le salon regroupera de nombreux acteurs internationaux du secteur aéronautique, de la défense et de la sécurité. La version 2014 du « Marrakech Airshow » attirera à nouveau de nombreux exposants, des délégations internationales, des chefs d'état-major, des représentants gouvernementaux africains de même que des milliers de visiteurs professionnels.

Et, cette année pour la première fois, le salon de Marrakech coïncide avec un événement important de l'African Business Aviation Association (AfBAA) visant à mettre en exergue la croissance rapide du marché de l'aviation privée dans la région. Tarek Ragheb, président de l'association, s'est félicité de faire partie intégrante d'un tel salon et d'avoir pu répondre aux demandes de ses membres.

Ce n'est pas uniquement les professionnels de l'aviation d'affaires qui stimuleront le salon, les industriels de la MRO y seront également nombreux. Ce marché a en effet augmenté de 30% lors des cinq dernières années. Une multitude d'avions tant civils que militaires, des drones et des équipements de dernière génération auront toute leur importance sur le tarmac et sur les stands des exposants. C'est le secteur de la défense qui va principalement attirer la foule et les exposants. Placé sous le patronage du Roi Mohammed VI, le salon verra une démonstration en vol quotidienne de la force aérienne royale marocaine.

African Aerospace publiera une édition quotidienne en collaboration avec Arabian Aerospace lors du salon.

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RMB FUNDS PAN-AFRICAN PULLING POWER



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RMB provides US\$50-million of traction to the African rail leasing industry

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CONTINUED FROM PAGE 67

turboprops/pistons accounted for 20% and 28% of flight hours respectively – in the charter market, more than 60% of all flight hours were undertaken by corporate jetliners, ultra-long-range and heavy jets, underlining a distinct customer preference for large-cabin long-range aircraft.

But light aircraft also have their place, as general aviation and flight training is seeing new opportunities. Companies like Italian manufacturer Tecnam have used the show in the past to demonstrate new models.

It is the defence market, however, that will draw the crowds and the exhibitors. The show has the support of Morocco's ruler, King Mohammed VI, who has given the event royal patronage. As a result, the event has the full support of the Royal Moroccan Air Force, which will be demonstrating the breadth of its fleet – both fixed-wing and rotary – on a daily basis.

The show has expanded this year to include aerospace, defence and security procurement for Morocco, Africa and the Mediterranean countries, as a key driver for the event.

Organisers say the 2014 edition will attract exhibitors, international delegations, ministries of defence, and civil aviation department delegations, as well as representatives of local regional and national governments.

□□□□□

In 2012, 300 exhibitors from 18 countries showcased their aerospace and defence products and services to 35 military delegations, 18 civil aviation delegations, 30 ministers, 19 heads of General Staff, 11 ambassadors, and 20,000 trade visitors from 52 countries.

This year *African Aerospace* will be producing a show daily newspaper in conjunction with its sister publication, *Arabian Aerospace*.

There is expected to be a wide range of equipment on show, including military aircraft; commercial aircraft; unmanned aerial vehicles and drones; civil satellites; missiles; ATC radars; electronic warfare systems; data processing equipment; logistic services; radars and sensors; launch vehicles; unpowered guided weapons; communication and navigation systems; integrated avionics systems; civil defence; law enforcement equipment; medical equipment; humanitarian relief equipment; health care services; crisis response and disaster recovery; maritime & coastal security; fire safety; security/safety equipment; small calibre/non-lethal weapons; simulation & training; and professional services.

L'avionneur canadien Bombardier Aerospace vient de célébrer le premier anniversaire des opérations de son usine à Casablanca au Maroc. Vincent Chappard s'est entretenu avec Souad Elmalleh, représentante en chef de la stratégie et du développement des affaires internationales pour l'Afrique. Elle nous livre sa vision du transport aérien en Afrique mais également les ambitions de l'avionneur sur le continent.

Souad Elmalleh.
«Le continent Africain à un avenir prometteur.»

Le Maroc : une implantation stratégique pour Bombardier

«Morocco the perfect African base for Bombardier» – Page 70

Bombardier Aerospace est déjà bien implanté en Afrique. L'avionneur canadien compte à ce jour plus de 240 avions en service sur le continent dont environ 160 avions commerciaux et 80 avions d'affaires. Il dispose également de centres de maintenance et de distribution de pièces de rechanges pour le support de sa flotte en service en Afrique du sud et au Nigéria. Bombardier Aerospace a choisi de renforcer ses capacités industrielles à travers le monde afin de se positionner davantage sur les marchés émergents et de mener une stratégie globale de sa Supply Chain.

« La stratégie de Bombardier Aerospace est d'être présent concrètement sur ces marchés », soutient Souad Elmalleh. « Le continent africain a un avenir prometteur. Nous souhaitons répondre aux besoins du transport aérien

et contribuer à travers nos produits et services à l'essor du marché régional ».

L'avionneur a donc revu sa stratégie industrielle dans le souci de la rendre plus optimale. Il a choisi de s'implanter dans des pays répondant à ses critères.

Bombardier Aerospace a ainsi consolidé ses assises au Mexique, en République Populaire de Chine puis a choisi d'implanter une usine au Maroc. Un accord a été signé avec le gouvernement du Maroc en novembre 2011 pour lancer le projet. L'avionneur canadien a dans un premier temps loué « une usine de relais » en attendant la construction de son propre site. L'usine a débuté ses opérations en février 2013 et réalise des opérations de contrôle des ailes de la famille d'avion CRJ. La livraison définitive de l'usine de Bombardier

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Aerospace est prévue pour fin 2014. La proximité de Casablanca avec le site de Belfast est optimale et permet de bonnes synergies.

« Le choix du Maroc s’est rapidement confirmé pour l’implantation de notre nouveau site industriel », explique Souad Elmallem. « La qualité de l’infrastructure, l’éducation, la formation, le dynamisme du business ainsi que la stratégie industrielle dans le secteur aéronautique et spatial ont été des éléments décisifs. La stabilité du pays joue également un rôle primordial. »

Selon elle, cette présence au Maroc permet à l’avionneur canadien d’avoir une porte d’entrée sur l’Afrique et de mieux appréhender la complexité du marché africain en termes de développement des affaires. Bombardier Aerospace apporte une solution adaptée pour chaque segment du marché du transport aérien. Il bénéficie d’une large gamme d’avions (CRJ, Q400 et CSeries) allant de 20 à 149 passagers. Malawian Airlines est par exemple devenu en février dernier le 15ème opérateur africain du Q400 NextGen. Bombardier Aerospace compte bien évidemment introduire le CSeries en Afrique. Cet « avion du futur » apportera, selon l’avionneur canadien, de meilleurs coûts d’opérations avec notamment une réduction de 20% de la consommation en carburant et une division par 4 du bruit par rapport à ses

concurrents (les avions monocouloirs actuellement en service).

Souad Elmallem souhaite enfin mettre en avant l’importance de l’aviation régionale en Afrique. Elle travaille auprès des acteurs du secteur aéronautique et des décideurs politiques pour développer un cadre et une régulation nécessaire pour l’aviation régionale. Les dessertes point à point demeurent encore une véritable problématique en Afrique et il est encore difficile d’envisager qu’il faille encore transiter par Paris ou une autre ville en dehors du continent pour relier certaines villes. Le développement économique du continent passera avant tout par l’aviation régionale. Cela reste un défi pour les compagnies aériennes et les gouvernements et il y reste encore de nombreux marchés à développer.

Souad Elmallem, la stratège

Souad Elmallem est née à Casablanca au Maroc. Elle est diplômée de droit à l’université du Maroc et a poursuivi ses études à HEC Montréal. Elle a débuté sa carrière dans l’intégration des systèmes chez Nortel au Canada. Elle intègre l’équipe de management de systèmes d’information de l’avionneur Bombardier en 2001.

Elle attire l’attention de Bombardier Aerospace sur le développement en Afrique. En 2011, le groupe dévoile son projet de construire une usine à Casablanca, une première sur le continent. Souad Elmallem devient alors la représentante en chef pour la stratégie et le développement des affaires internationales pour l’Afrique.

Son rôle consiste à concevoir et à exécuter des stratégies de développement régional pour Bombardier Aerospace et Bombardier Transport, et à créer et à gérer de solides réseaux de relations avec les gouvernements.

Elle a reçu la décoration du Wissam Royal du Grand Mérite National de Sa Majesté le Roi du Maroc en reconnaissance de sa contribution au développement du secteur aéronautique dans le pays. Souad Elmallem est également un membre fondateur de l’association Women In Aerospace (Africa) depuis 2013.



Malawian Airlines est devenue le 15ème opérateur africain du Q400 NextGen de Bombardier.

In February Malawian Airlines became the 15th African operator of the Bombardier Q400 NextGen turboprop aircraft.

SUMMARY

Morocco the perfect African base for Bombardier

In January Bombardier Aerospace celebrated the first anniversary of it starting manufacturing operations in Casablanca, Morocco. Vincent Chappard met with Souad Elmallem, Bombardier head of strategy and international business development for Africa, to discover her vision for the Canadian manufacturer in Africa.

Bombardier is already well established in Africa, boasting more than 240 aircraft in service on the continent (around 160 commercial aircraft and 80 business aircraft). It also has service and distribution centres in South Africa and Nigeria. The company is keen to position itself better in emerging markets and establish a comprehensive strategy for its supply chain.

“Bombardier Aerospace’s strategy is to be present specifically in these markets,” said Elmallem. “The African continent has a bright future. We wish to respond to the needs of air transport and contribute through our products and services to the development of the regional market.”

Bombardier Aerospace has strengthened its foundations in Mexico and China, and decided to set up a factory in Morocco. An agreement was signed with the Government of Morocco in November 2011 to launch the project. The transitional plant began operations in early 2013 producing flight control structures for CRJ aircraft.

“The choice of Morocco was quickly confirmed for the implementation of our new industrial site,” said Elmallem. “The quality of the infrastructure, education,

training, dynamic business and industrial strategy in the aerospace industry were key elements. Stability of the country also plays a crucial role.”

She said the presence in Morocco allows the Canadian aircraft manufacturer to have an input on Africa and to better understand the complexity of the African market in terms of business development door.

Bombardier Aerospace is hoping for success with its latest aircraft, the CSeries, in Africa. This “plane of the future” has, according to Bombardier, better operating costs, including a 20% reduction in fuel consumption, is 25% quieter than single-aisle aircraft currently in service.

Elmallem highlighted the importance of regional aviation in Africa. She is working with players in the aviation sector and policymakers to develop a framework for regional aviation regulation. The point-to-point routes are still a real problem in Africa – and you still have to pass through Paris or another city outside the continent to connect with certain other African cities. Therefore the opportunities for regional aircraft are considerable.

Souad Elmallem

Souad Elmallem was born in Casablanca in Morocco. She graduated in law at the University of Morocco and continued her studies at HEC Montreal.

She began her career in systems integration with Nortel in Canada, and joined Bombardier in 2001. When the group unveiled plans to build a factory in Casablanca, a first on the continent, Souad Elmallem was appointed as head of strategy and international business development for Africa. Her role is to create a strong network of relationships with governments in Africa.

Souad Elmallem is already a recipient of the Wissam Royal Grand National Merit from His Majesty the King of Morocco in recognition of her contribution to the development of the aviation sector in the country.

She is also a founding member of the Women In Aerospace (Africa), which was formed in 2013.





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Le Maroc a su développer au cours de ces dernières années une plateforme aéronautique et spatiale de qualité dans des conditions de compétitivité internationale.

Vincent Chappard nous dresse le tableau de cette industrie émergente et analyse ses perspectives de développement.



Câblage chez Labinal Power Systems Maroc.

PHOTO : LABINAL POWER SYSTEMS

L'attractivité de l'industrie aéronautique au Maroc

«Why aerospace has taken off in Morocco» – Page 74

Le Maroc écrit sa propre histoire du secteur aéronautique et spatial dans le sillage de la compagnie nationale Royal Air Maroc. Pour ce faire, le pays a développé de nombreux partenariats. La plateforme aéronautique et spatiale marocaine comptabilise à ce jour plus de 100 entreprises internationales dont EADS, Bombardier Aerospace, le groupe Safran, Creuzet, Daher, Souriau, Zodiac Aerospace, Teuchos, Casablanca Aéronautique, Le Piston Français... Il n'y en avait qu'une dizaine voici dix ans.

L'industrie aéronautique et spatiale représente aujourd'hui plus de 10 000 salariés hautement qualifiés, essentiellement des jeunes de moins de 30 ans et pour moitié des femmes. Elle a également bénéficié de 500 millions d'euros d'investissement et a connu un taux de croissance de 25% par an sur les 5 dernières années. Le Maroc bénéficie d'un savoir-faire industriel diversifié : assemblage d'éléments de structure, câblage, connectique, chaudronnerie, électronique, ingénierie, MRO, mécanique, usinage, traitement de surface...



« Notre ambition est de doubler la taille du secteur aéronautique en ayant 100 nouvelles entreprises à l'horizon 2020. »

HAMID BENBRAHIM
EL-ANDALOUSSI

« Le secteur aéronautique et spatial est désormais un axe stratégique pour le Maroc avec la présence de grands groupes mondiaux. Il contribue aux exportations et génère beaucoup d'emplois », affirme Hamid Benbrahim El-Andaloussi, président du groupement des industries marocaines aéronautiques et spatiales (GIMAS).

En 2013, ce secteur a réalisé environ 1 milliard de dollars de chiffres d'affaires à l'exportation. Il contribue à hauteur de 6% environ aux exportations du pays. Cela représentait moins de 0,5% voici dix ans. Le groupe international de haute technologie Safran, spécialisé dans la propulsion aéronautique et spatiale, les équipements aéronautiques, la défense et la sécurité, est fortement implanté au Maroc. Il représente environ 30% des exportations de ce secteur. Le groupe y possède plusieurs entreprises et a développé des partenariats avec Aircelle Maroc, Labinal Power Systems Maroc, Morpho Maroc, Safran Engineering Services, MATIS aerospace ou encore Snecma Morocco Engine Services.

Hamid Benbrahim El-Andaloussi

compte bien consolider et pérenniser l'attractivité du Maroc pour les entreprises aéronautiques et spatiales en nouant des partenariats durables entre l'industrie et la recherche.

« Notre ambition est de doubler la taille du secteur aéronautique en ayant 100 nouvelles entreprises à l'horizon 2020 », rappelle-t-il. « Nous souhaitons attirer de nouvelles industries en particulier dans le domaine de l'électronique embarquée, du spatial et des matériaux composites. »

Pour atteindre ces objectifs, le Maroc doit attirer de nouveaux marchés en particulier les États-Unis, le Royaume-Uni, l'Allemagne et le Japon. Il faudra également amener de nouveaux métiers afin de développer la supply chain. Il sera également nécessaire de nouer des partenariats avec les universités pour la recherche, cela reste un élément indispensable du développement.

Le Maroc a toujours mis en place des dispositifs d'aides pour développer ce secteur et bien sûr pour être compétitif par rapport à ce qui est offert dans d'autres pays. Le pays réalise des investissements à travers des fonds



Assemblage d'un panneau composite chez Aircelle Maroc. PHOTO: AIRCELLE / PHILIPPE STROPPA
Maintenance d'un moteur CFM56 chez SMES. PHOTO: SNECMA

Le Maroc est devenu au fil des années une terre d'accueil de grands groupes internationaux dans le secteur aéronautique et spatial. Vincent Chappard a recueilli le témoignage d'industriels du secteur afin de connaître les raisons et les motivations de leur présence sur la terre ocre marocaine.

Le Maroc, terre d'accueil des industries aéronautiques

Le Maroc attire de nombreuses entreprises aéronautiques et spatiales et en particulier Safran, un groupe leader dans le domaine de l'aéronautique, de la défense et de la sécurité.

Le groupe Safran est présent au Maroc depuis près de 15 ans. C'est en 1999 que Safran et la compagnie aérienne Royal Air Maroc ont créé Snecma Morocco Engine Services (SMES). Ce partenariat assure la maintenance et la réparation des moteurs CFM56 équipant les familles d'avions Boeing 737 et Airbus A320. SMES est aujourd'hui le leader dans le domaine de la MRO des moteurs CFM56.

Safran dispose aujourd'hui d'une véritable base industrielle au Maroc et compte environ 3 300 salariés dans le pays. Le groupe est présent dans le domaine de la MRO, des systèmes de câblage électriques, des nacelles de moteurs, des contacteurs, de l'ingénierie et de la sécurité biométrique. On y trouve Aircelle Maroc (production et assemblage de composants pour les nacelles), Labinal Maroc (câblage aéronautique), MATIS Aerospace (partenariat entre Labinal et Boeing pour le câblage aéronautique), SMES, Sagem Sécurité Maroc (documents d'identité biométriques, étude et développement) et Safran Engineering Services (services en ingénierie). Safran qui est aussi leader des solutions de sécurité gouvernementale se développe sur le continent pour répondre aux besoins de la population, de son développement et de la modernisation des pays du continent africain en général.

Le Maroc représente avant tout un point d'ancrage industriel compétitif offrant une situation géographique idéale et une porte d'entrée sur le continent africain.

« L'implantation du groupe Safran au Maroc s'inscrit dans le cadre d'une co-localisation compétitive », souligne Hamid Benbrahim El-Andaloussi, directeur général du groupe Safran pour le Maroc.

Selon Safran, la qualité et la continuité des relations d'affaires entre le Maroc et la France crée un environnement favorable pour les affaires. La proximité géographique, linguistique et culturelle est également un véritable atout.

Les industriels du secteur mettent aussi en avant une réelle visibilité des plans de développement du Maroc et une coopération fructueuse avec les autorités marocaines. La nouvelle plateforme industrielle

d'investissements comme l'Aerofund ou via les industriels sur place. Des infrastructures comme le Midparc, qui représente une plateforme industrielle remarquable pour attirer les sociétés dont les PME, ont été créées.

L'accent est également mis sur la formation. Ainsi, l'Institut des métiers de l'aéronautique (IMA) forme plus de 500 jeunes par an et prend en charge 250 jeunes en formation continue à la demande des entreprises.

L'institut et a déjà formé 1200 stagiaires depuis son ouverture en Avril 2011. Jusqu'en 2016, plus de 1 000 jeunes auront été sélectionnés par les entreprises. Ils devront suivre une formation en alternance à l'IMA d'une durée de 5 à 7 mois avec un certificat et un emploi à la sortie.

Le Maroc souhaite donc profiter de la

période faste que connaît le secteur aéronautique dans le monde en attirant un maximum d'investisseurs en quête de capacité de production ou souhaitant se développer dans les meilleures conditions de compétitivité. Selon Maria El Filali, directrice du GIMAS, il reste encore des défis à relever. Le GIMAS cherche à

développer la supply chain locale pour créer davantage d'intégration locale et diversifier ses activités.

L'association cherche à accompagner les entreprises dans leurs croissances en mettant à disposition les ressources qualifiées et les compétences nécessaires.

Cela passe par davantage de projets d'innovation en partenariat avec les universités. Le GIMAS cherche enfin à développer le savoir-faire du Maroc dans les domaines du composite et de l'électrique, composantes fondamentales.

« Le secteur aéronautique et spatial est désormais un axe stratégique pour le Maroc. »

HAMID BENBRAHIM
EL-ANDALOUSSI



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Midparc à Casablanca dédiée à l'aéronautique, la défense, la sécurité et l'électronique embarquée offre aussi un environnement particulièrement favorable. Cela favorise le développement d'une supply chain à proximité des principaux sites en Europe. C'est le cas des industriels européens et également de Bombardier Aerospace dont les sites du Maroc et de Belfast travaillent en réelle synergie.

« Le Maroc a mis en place des infrastructures de qualité et il est également aisé de développer des affaires », explique Souad Elmallem, représentante en chef de la stratégie et du développement des affaires internationales pour l'Afrique. « Le Maroc est un pays stable et de surcroît proche de l'Europe. Il est également dynamique et favorise le développement des métiers et de la formation dans ce secteur et dispose de nombreuses compétences. »

Le Maroc bénéficie d'une position géographique privilégiée et se trouve à la fois aux portes de l'Europe et à l'entrée de l'Afrique. Cela offre des opportunités de développement pour une base aéronautique compétitive avec un potentiel de main-d'œuvre qualifiée avec des coûts appropriés pour des secteurs de hautes technologies.



« Cette situation réunit des conditions favorables pour le développement de relations triangulaires et innovantes entre l'Europe et notamment la France, le Maroc et l'Afrique », précise El-Andaloussi. « Ces échanges profitent à la compétitivité des sociétés du groupe Safran et créent de la valeur. C'est également bénéfique pour la création d'emplois de haute technologie dans les pays de la région. »

Cette perspective encourage la progression des parts de marché pour les sites implantés au Maroc. Aircelle Maroc représente aujourd'hui 25 % de l'activité industrielle mondiale d'Aircelle et Labinal Maroc fabrique des câblages présents sur plus de 50% des programmes d'avions civils.

Le Maroc garde donc une bonne cote auprès des industriels du secteur aéronautique et spatial. Le pays est ainsi devenu une plateforme de réexportation de produits et de services et un point central pour nouer d'autres partenariats notamment avec les pays méditerranéens et africains. La stratégie des grands industriels est d'être présent concrètement sur l'ensemble de leurs marchés. Le Maroc est idéalement positionné pour mieux comprendre le marché africain, y développer des affaires de même qu'élaborer une stratégie internationale sur le continent.

SUMMARY

Why aerospace has taken off in Morocco

Morocco's aerospace industry has grown quickly over the past 10 years. Vincent Chappard spoke to some of the leading players, who are driving the country's industry forward.

Ten years ago there were around a dozen aerospace companies in Morocco; today there are more than 100.

The country's aerospace industry currently supports more than 10,000 highly skilled employees, mostly younger than 30, and half of them women.

One of the first companies to realise the potential of Morocco was Safran, which has had a presence there for almost 15 years.

In 1999, Safran and Royal Air Maroc created Snecma Morocco Engine Services (SMES) to provide maintenance and repair services for CFM56 engines.

Today Safran boasts about 3,300 employees in the country, working for a number of companies and partnerships including: Aircelle Morocco (production and assembly of components for nacelles), Labinal Morocco (aircraft wiring), MATIS Aerospace (equally owned by Boeing, Royal Air Maroc and Labinal, and making electrical wiring for commercial aircraft), SMES, Sagem Sécurité Morocco (biometric identity documents) and Safran Engineering Services.

According to Hamid Benbrahim El-Andaloussi, CEO of Safran Morocco, the country offers a gateway to the African continent. "The implementation of the Safran Group in Morocco is part of a competitive colocation," he explained.

According to Safran, quality and continuity of business relations between Morocco and France creates a favourable environment for business.

One example of that favourable environment is the new Midparc in Casablanca, dedicated to aerospace, defence, security and electronics companies, which is currently being used by the likes of Bombardier Aerospace.

"Morocco has implemented quality infrastructure and it is also easy to develop business," explained Souad Elmallem, Bombardier head of strategy and international business development for Africa.

"It is a stable country and close to Europe. It is also dynamic and supports the development of business and training."

Benbrahim added: "This situation is favourable for the development of innovative triangular relations between Europe and especially France, Morocco and other African concerns."

Morocco has enhanced its aeronautics and space sector, building on the success of national airline Royal Air Maroc. To do this, the country has developed numerous partnerships. Moroccan aerospace now includes around 100 international companies including Airbus Group, Bombardier Aerospace, Safran, Creuzet, Daher, Souriau, Zodiac Aerospace, and Teuchos Aerospace Casablanca.

Morocco also has a diversified industrial know-how: assembly of structural components, wiring, connectors, sheet metal, electronics, engineering, MRO, mechanical, machining, surface treatment and so on.

"The aerospace industry is now a strategic priority for Morocco, with the presence of major international groups. It contributes to exports and generates a lot of jobs," said El Andaloussi, who is also president of the group of Moroccan aerospace industries (GIMAS).

In 2013, this sector generated approximately \$1 billion in turnover for export.

It contributes about 6% to the country's exports by value, an increase from 0.5% 10 years ago. Safran represents about 30% of aerospace exports.

GIMAS intends to consolidate and sustain the attractiveness of Morocco for aerospace enterprises by building lasting partnerships between industry and research.

"Our ambition is to double the size of the aviation sector with 100 new companies by 2020," said El-Andaloussi. "We want to attract new industries, especially in the field of electronics, aerospace and composites."

To achieve these goals, Morocco needs to attract new markets, in particular the United States, the UK, Germany and Japan.

As well as bringing new business to develop the supply chain, it will also be necessary to establish partnerships with universities for research, which remains an essential element of development.

Morocco makes investments in its aerospace sector through investment funds such as Aerofund, or by developing industrial sites. Infrastructure such as Midparc is available to accommodate companies, including SMEs.

Emphasis is also placed on training. For example, the trade institute of aeronautics (IMA) helps more than 500 young people each year and has trained more than 1,200 students since opening in April 2011. In addition, more than 1,000 young people have been selected by companies to follow a sandwich course at IMA for a period of five to seven months, receiving a certificate and a job afterwards.

Morocco wants to attract investors seeking production capacity or wishing to improve their competitiveness. However, according to Maria El Filali, director of GIMAS, there are still challenges. GIMAS is seeking to develop the local supply chain still further to create more integration and diversification.

It also aims to assist companies in their growth by providing qualified resources and skills, and wants to develop more innovative projects in partnership with universities.

"Our ambition is to double the size of the aviation sector with 100 new companies by 2020."

HAMID BENBRAHIM EL-ANDALOUSSI



Une nouvelle taxe qui met la pression

On connaissait la taxe « Chirac » sur le transport aérien en France. Le parlement marocain vient d'approuver la mise en place d'une taxe aérienne pour la solidarité et la promotion touristique du pays. Elle devait entrer en vigueur au premier avril au moment où le magazine allait sous presse.

Cette taxe s'applique à l'ensemble des déplacements depuis le Maroc, qu'il s'agisse de vols aller ou retour. Son montant sera de 100 dirhams (9 euros) pour la classe économique et de 400 dirhams (36 euros) pour la classe affaire. L'Association internationale du transport aérien (IATA) estime que la logique de cette taxe va à l'encontre de la Vision 2020 du tourisme et que celle-ci ne pourra qu'être néfaste pour la cohésion sociale et l'économie en général du pays.

« L'instauration de cette taxe sur les billets d'avions se traduira par un manque à gagner de 1,1 milliard de dirhams (près de 100 millions d'euros) pour le Maroc et va menacer près de 13 000 emplois », estime Brian Pearce, chef économiste auprès de l'IATA.

Plusieurs compagnies aériennes, en particulier

des compagnies européennes à bas coûts, ont menacé de supprimer plusieurs destinations marocaines. Cette nouvelle taxe aura également un impact négatif sur les compagnies aériennes nationales. Royal Air Maroc reste la plus exposée. Selon les récentes déclarations de son PDG à la presse, la compagnie ne compte pas répercuter la taxe à cause de la rude concurrence des compagnies étrangères. Cette taxe affectera fortement sa trésorerie, l'équivalent de 250 millions de dirhams (environ 22,3 millions d'euros), soit environ 30% de son résultat d'exploitation.

Le ministre du tourisme marocain, Lahcen Haddad a minimisé l'impact de cette nouvelle taxe sur les entrées touristiques auprès de l'AFP. Il estime que cette taxe reste insignifiante au regard des dépenses faites par les touristes. Le Maroc a accueilli environ 10 millions de visiteurs en 2012. Le pays s'est fixé un objectif de 20 millions par an d'ici 2020 pour devenir l'une des 20 premières destinations touristiques au monde. Le tourisme totalise actuellement 8% du produit intérieur brut du Maroc et pourrait représenter entre 10 à 12% du PIB à l'avenir.

SUMMARY

New tax puts the squeeze on companies

A new tax was due to be imposed on air travel in Morocco, starting in April 2014, as *African Aerospace* was being published.

The Moroccan parliament has approved the establishment of an air solidarity tax for tourism promotion in the country.

This tax applies to all movements from Morocco, whether one-way or return flights. The amount will be 100 dirhams (\$12.3) for economy class and 400 dirhams (\$50) for business class.

The International Air Transport Association (IATA) estimates that the logic of this tax goes against Vision 2020, aimed at promoting tourism growth.

"The introduction of this tax on air tickets will result in a shortfall of 1.1 billion dirhams (approximately \$139 million) for Morocco and will threaten nearly 13,000 jobs," said Brian Pearce, IATA's chief economist.

Several airlines, in particular the European low-cost airlines, have threatened to remove some Moroccan destinations. The new tax will also have a negative impact on domestic airlines, with Royal Air Maroc being the most exposed.

According to recent statements by its CEO, the company does not intend to pass on the tax because of stiff competition from foreign companies. This tax will, therefore, strongly affect its cashflow, to the tune of 250 million dirhams (\$31 million), representing approximately 30% of its operating income.

Moroccan Minister of Tourism, Lahcen Haddad, believes that the tax is insignificant in relation to the expenses incurred by tourists. Morocco received about 10 million visitors in 2012 and the country has set a target of 20 million per year by 2020, aiming to become one of the top 20 tourist destinations in the world. Tourism currently accounts for 8% of gross domestic product in Morocco and could represent between 10 to 12% of GDP in the future.



While the Rafale was hotly tipped as Morocco's next generation fighter, the RMAF acquired 24 F-16C/D Block 52s instead in 2007. Deliveries were completed in August 2012. The F-16s have been acquired to provide the RMAF with a deadly air-to-ground capability, which also covers the SEAD role. Picture: Lockheed Martin.

Formidable technology

Today, Morocco boasts the most sophisticated net-centric air defence system; linked by its newly acquired Thales ground radar air defence technology.

At the core of the network are eight AN/MPQ-64F1 Sentinel radars, offering protection at low to medium altitude, and providing an air surveillance range of up to 120km (75 miles) to support a multitude of advanced weapons systems like Hawk and Stinger.

The 3D system, equipped with a phased array X-band unit capable of automatic target detection and tracking, plugs into Morocco's highly autonomous command and control system.



Having also acquired eight Sentinel M1152 high-mobility multipurpose wheeled vehicles (HMMWVs) to tow the radars, it is a highly mobile system aimed at protecting the country from airborne threats.

The MPQ-64 can be easily transported by one of the RMAF C-130s, or sling-loaded under a CH-47 Chinook helicopter.

Morocco and eastern neighbour, Algeria, who share a common border, have a long-standing dispute over Western Sahara and share a deep mistrust. The acquisition of this defensive screen in 2011, along with the purchase

Over the past few years the Royal Moroccan Air Force (RMAF – Forces Royales Air Marocaines) has been revolutionising its inventory with a major modernisation programme, as Alan Warnes explains.

«Les forces armées marocaines se modernisent» – Page 78

and upgrade of existing combat aircraft, go a long way to countering any attempted strikes from Algeria.

Territorial disputes over this region have seen the Moroccan military fighting the POLISARIO Front (POLISARIO is a Spanish acronym for Popular Front for the Liberation of Saguia al-Hamra and Rio de Oro), which is backed by Algeria.

Having previously been neglected by the former king of Morocco, Hassan II, the first step to enhancing RMAF capabilities came in 2003 when the entire fleet of 24 Northrop F-5E/Fs was upgraded with IAI Lahav's new modern EL-2032M radar, accompanied by Rafael Litening laser designation pods.

There has also been speculation that some Cruise missiles were also acquired, aimed at punching into Algeria's defence and radar system.

They were followed, somewhat surprisingly, by the \$2.4 billion acquisition of 24 new Block 52 F-16s, with the initial contract signed on May 30, 2008. The weapons fit included: AIM-120C-5 AMRAAM, AIM-9M Sidewinder, AGM-88B/C HARM, AGM-65D/G/H Maverick, GBU-31 JDAM, GBU-38 JDAM, GBU-24 Paveway II, GBU-10 Paveway II, GBU-12 Paveway II, and Enhanced GBU-12 Paveway II.

Four Goodrich DB-110 electro-optical/infra-red airborne reconnaissance system pods and 12 Lockheed Martin AN/AAQ-33 Sniper targeting pods were also ordered for these aircraft.

The first four aircraft (two F-16Cs and two F-16Ds) were ferried to Morocco on July 30 2011 and were formally accepted into service on August 4 that year.

The handover took place at their new home at Ben Guerier Air Base, a previously disused former US air base, and emergency US Space Shuttle landing field, some 36 miles south of Marrakesh, which had been extensively refurbished and upgraded to house the F-16s. Deliveries were completed on August 22 2012, when the final three (two F-16Cs and a single F-16D) arrived.



The need for a bigger tactical helicopter, particularly for operations in the western Sahara, has seen the RMAF order three CH-47Ds. This example is one of the earlier CH-47Cs, which are based at Rabat-Sale. Picture: Alan Warnes.



With a considerable amount of digitisation to the RMAF fighter cockpits, as well as acquiring the F-16s, a new more modern trainer was needed to replace the ageing T-37Bs. The Raytheon T-6 was ordered in September 2009 and by January 2012 all of them had been delivered to the pilot school at Marrakesh-Menara. Picture Raytheon.

keeps Morocco on track

The F-16s have a powerful suppression of enemy air defences (SEAD) mission when their AGM-88 HARM missiles are combined with the Raytheon digital radio frequency memory (DRFM) electronic warfare jammers.

Morocco's fleet of Dassault Mirage F1CH/EH fighters has been in service since 1978, but a contract was agreed in September 2005 with Sagem and Thales joint venture company ASTRAC to undertake a wide-ranging modernisation of the 27 surviving aircraft. Reflecting this, they have been redesignated the Mirage F-1MIV.



Among the modifications and weapons acquisitions came the stand-off strike capability courtesy of the Armement Air-Sol Modulaire (AASM) new generation air-to-ground weapon, as used by French Rafales and Mirage 2000Ds, and also known as the Hammer.

The Mirage F-1VIMs have been described as "a striker on steroids with a powerful electronic intelligence (ELINT) capability". The latter has derived from four Thales ASTAC ELINT pods, which has helped the Moroccan Air Force develop a powerful capability.

An upgraded prototype had commenced flight-testing by April 2010

By Royale appointment

Morocco's Gendarmerie Royale has undertaken a modest expansion of its helicopter fleet of late, including the second-hand acquisition of five AS550C2 Fennecs within the last few years.

These were purchased after they had been retired by the Republic of Singapore Air Force and put up for sale.

A single EC225LP Super Puma Mk II+ was acquired in 2010, while other purchases from the Eurocopter stable included two EC145s that had entered service by early 2011 and three EC135T2+, the first of which also entered service in 2011.

and work is still under way in Morocco.

All Moroccan combat aircraft are now net-centric combat-capable and highly integrated via datalinks into the Thales ground radar air defence systems.

A €27 million (US\$37 million) contract to upgrade 22 of Morocco's surviving Alpha Jets was awarded to SABCA of Belgium and Thales in late-2009. The selected modification turns the original Alpha Jet into an advanced jet trainer, filling the gap in the training process between basic flying training and operational modern jet fighters.

The work primarily involves installation of improved Thales avionics in a new glass cockpit, with multi-function displays, hand-on throttle and stick (HOTAS), new head-up display (HUD), upgraded weapon and navigation system and new Martin Baker Mk 10 zero-zero ejection seat.

The upgrade is similar to that carried out on the French Air Force Alpha Jet fleet, although there is a requirement that the new system is compatible with the Al Ghait weather management system.

One prototype or lead-the-fleet (LTF) aircraft (serial number 246) arrived at SABCA's facility in Charleroi, Belgium, on October 4 2010 for the modernisation work to begin. After a full flight test campaign, the LTF was flown to Morocco during May 2012.

Development work was completed in mid-2012 and followed by two pre-production upgrades undertaken in-country under the supervision of Thales.

Kits are now being supplied to Morocco, allowing the air force to complete work on the remaining 19 upgrades, assisted by SABCA specialists, by the end of 2015 at Meknes, home of the RMAF's 2nd BAFRA.

In order to replace its Cessna T-37Bs in the training role, Morocco selected the Beechcraft T-6C Texan II, signing a letter of offer and acceptance for 24 of the type in June 2008. A production contract was awarded in September 2009, following which deliveries commenced with the first four aircraft in January 2011. Twelve months later, deliveries were completed with the final four aircraft. All of them are operated by the Ecole de l'Piloteage (flight

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school) at Marrakesh, which has led to the retirement of the T-37Bs.

A notification to US Congress in October 2009 first revealed plans by Morocco to boost its depleted Chinook helicopter fleet, with a planned foreign military sales purchase of three CH-47Ds for \$134 million.

A total of 12 CH-47Cs had originally been delivered to Morocco, commencing in 1978, from the Meridionali production line in Italy.

There have been reports the surviving helicopters were upgraded and re-engined to CH-47C+ standard, but it is unknown whether this work was ever undertaken. A contract is reported to have been signed for the three CH-47Ds and, although it is unclear when this was finalised, they have not yet been delivered. Morocco is also considering purchasing three more CH-47Ds.

A single Bombardier 415 fire-fighting amphibian was delivered in mid-February 2011, the order for which had not previously been announced. Bombardier then confirmed in March 2011 that a further four of these aircraft had been ordered by an unspecified customer, later confirmed to be Morocco.



The first of the additional aircraft was delivered in May 2011, while the final example arrived in Morocco in September 2013.

In order to supplement its transport fleet, four C-27J Spartans were ordered under a contract announced in September 2008. The first delivery took place in July 2010, with the fourth and final aircraft arriving in Morocco in September 2011.

Adding to its VVIP transport fleet, a notification to US Congress in May 2009 revealed plans to acquire a Gulfstream G550 for an estimated total cost of \$142 million. The aircraft was subsequently ordered from Gulfstream and it was officially handed over in the US at the manufacturer's Savannah, Georgia factory in November 2010, before being ferried to Morocco. It joins a Gulfstream IITT and Gulfstream III already in use for VVIP transport.

Reports in January 2014 suggest that Morocco has purchased at least three Harfang medium-altitude long-endurance (MALE) unmanned air vehicles from France, which developed the type from the IAI Heron. A contract for these UAVs, also including electro-optics, data links and communications

SOMMAIRE

Les forces armées marocaines se modernisent

La « Royal Moroccan Air Force » (RMAF) a procédé à un important programme de modernisation de ses équipements.

Une enquête d'Alan Warnes.

Le Maroc bénéficie aujourd'hui d'un système de défense aérienne très sophistiqué. Il partage une frontière commune avec l'Algérie et ces deux pays ont un différend de longue date sur la question du Sahara occidental. L'acquisition de nouveaux systèmes et la modernisation des ses avions de combat permettront au Maroc de mieux se protéger.

■ Avions de combat

La flotte de l'armée de l'air marocaine compte 24 F-5E/F de Northrop. Ils ont été « rétrofités » avec le nouveau radar EL-2032M. Certains spéculent sur l'achat de missiles de croisière.

Le pays a ensuite fait l'acquisition de 24 F-16 (Block 52). Le contrat initial a été signé le 30 mai 2008 et comprend plusieurs systèmes d'armement.

En juillet 2011, les quatre premiers F-16 ont été livrés au Maroc. Une ancienne base aérienne américaine au sud de Marrakech a été entièrement rénovée pour accueillir ces F-16 marocains. Les dernières livraisons ont eu lieu en août 2012.

La flotte d'avions de combat du Maroc comprend des Mirage F1 de Dassault. Un contrat a été signé avec Sagem et Thales en septembre 2005 afin de procéder à une modernisation de grande envergure.

■ Avions d'entraînement

Fin 2009, le Maroc a signé un contrat pour la modernisation de 22 avions Alpha Jet.

Il permettra à Alpha Jet de combler les lacunes dans le processus de formation des pilotes entre un avion d'entraînement et un avion de combat plus moderne.

Cette mise à niveau est similaire à celle réalisée sur la flotte française d'Alpha Jet.

Le Maroc a également choisi le Beechcraft T-6C Texan II pour remplacer ses Cessna T-37B.

Ils sont, depuis 2012, en opération à l'école de pilotage de Marrakech.

■ Hélicoptères

Le Maroc compte renforcer sa flotte d'hélicoptères Chinook selon une note du congrès américain datant d'octobre 2009. Le pays compte investir dans trois hélicoptères CH-47D.

■ Avions de transport

Le Maroc dispose depuis février 2011, d'un avion Bombardier 415 pour la lutte contre les incendies. Deux autres avions ont ensuite été livrés. Quatre C-27J Spartan ont aussi été commandés en 2008. Ils ont été réceptionnés en septembre 2011.

Le congrès américain a également révélé les intentions du Maroc pour acquérir un Gulfstream G550 pour le transport des VVIP. Il a rejoint la flotte marocaine composée d'un Gulfstream IITT et d'un Gulfstream III.

■ Drones

Selon des informations datant de janvier 2014, le Maroc aurait acheté au moins trois drones Harfang à la France. Un contrat semble avoir été signé en mars 2013. La société General Atomics a reçu en 2010, une licence d'exportation pour fournir une version « non armée » à l'exportation du drone Predator XP au Maroc. Tout indiquerait que quatre exemplaires auraient été livrés.

■ Le futur

Lors d'Aeroexpo 2012 à Marrakech, la presse a évoqué que le Maroc serait intéressé par l'achat de deux Boeing C-17A Globemaster III pour remplacer une partie de ses C-130H. Il est possible que deux C-17A soient livrés au Maroc même si Boeing a décidé la fermeture de la ligne de production de cet avion. Il y a également une éventualité pour que le Maroc fasse l'acquisition de KC-135 de l'US Air Force pour assurer le ravitaillement en vol de sa flotte de F-16. L'armée de l'air marocaine aurait également passé une commande de douze hélicoptères Eurocopter EC725. Elle a aussi montré son intérêt en 2008 pour l'achat de Sikorsky SH-60 Seahawk.

systems, was said to have been signed in March 2013, with deliveries commencing the following month.

In 2010, General Atomics received an export licence to supply an unarmed export version of the Predator XP UAV to Morocco, with unconfirmed reports indicating that four may have been delivered.

During AeroExpo 2012 in Marrakesh, there were reports that Morocco was interested in purchasing two Boeing C-17A Globemaster IIIs to replace some of its C-130H Hercules. Although Boeing is remaining tight-lipped about customers for its remaining C-17As, as it heads towards closing down of the production

line, it is still possible that two of them could go to Morocco.

The possibility of acquiring surplus US Air Force KC-135 Stratotankers to provide aerial refuelling for the F-16 fleet was also being mooted during AeroExpo 2012. Unconfirmed reports in 2012 also indicate the Moroccan Air Force may have placed an order for 12 Eurocopter EC725 Caracal helicopters. No further details are known.

US government documents from December 2009 indicated Moroccan interest in a possible purchase of an unspecified number of Sikorsky SH-60 Seahawks, but nothing further has been heard of this since then.



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Jamestown, St Helena, and the endangered Wirebird.

St Helena wired for connection

«L'île Sainte-Hélène prépare activement sa connectivité aérienne» – Page 82

The island of St Helena, off the southwest coast of Africa, is being offered a new opportunity to connect thanks to the development of a new airport. But, as Dan Brightman finds out, this progress is not without its challenges.

St Helena is a lonely outpost in the vast Atlantic Ocean, 1,200 miles off the western coast of southern Africa.

A mere 6.5 miles long, this now-extinct volcanic island is only served by a Royal Mail ship, which calls in at the capital – Jamestown's James Bay – three or more times a month.

The island was once sustained by its flax-growing industry. However, the cost of transportation and the growth in man-made fibres has effectively halted demand for St Helena flax. It now survives on its fishing industry, some tourism and an annual UK Government financial injection of around £20 million per annum.

Along with fishing, the island also cultivates its own brand of coffee, which has been growing there since 1733.

Sadly, the population, currently a few more than 4,250 residents, is slowly declining due to lack of employment opportunities.

Many will know the island as being the last home of defeated French Emperor, Napoleon Bonaparte, who was exiled to St Helena in 1815. Napoleon eventually died there in 1821.

This banishment to one of Britain's oldest colonies was to become an island tourist attraction, supported

in smaller measure by the later exile of more than 6,000 prisoners taken during the Boer War. It is also largely forgotten that St Helena was an important staging post for freed slaves and was the location of one of England's most important naval bases, established in 1840 to halt this much-despised trade.

While the island colony adopted the more politically correct classification of a British Dependent Territory, rather than a Crown Colony, the UK Government has tried to find ways of enabling the community to become more self-sufficient. With an investment of more than £200 million, construction company Basil Read began clearing a site at the south-east corner of the island on the Prosperous Bay plain. The single (and relatively short) 1,650 metre runway has presented many logistical challenges relating to the construction site, not least a large area of landfill, including an eight-million cubic metre rock-filled embankment.

A 3,500sqm airport terminal building will also be constructed, as well as facilities for air traffic control, a six-million litre fuel farm, access road and emergency centre. The construction company has had to import, not only excavating machinery and vehicles, but also personnel, who are housed in a dedicated pre-fabricated village close to the site.

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Bringing such a modern facility to one of the world's oldest colonies has, predictably, led to some controversy – much of it relating to the effect an influx of visitors will have on the island and its people.

Although an airport has been under discussion since the 40s, the project is now attracting the inevitable attention of developers, some of whom have explored the possibilities of establishing luxury property-related sites, including one South African company.

Furthermore, environmentalists have expressed concern that the island's unique and national bird, the endangered Wirebird, or St Helena Plover, will be at risk. The Wirebird's breeding grounds are said to be in the region of the construction project.



In September 2013, South African construction workers went on strike over employment terms and conditions. According to *St Helena Online*, it was the first strike on the island in half a century. Basil Read insisted the issue was 'internal'.

Although islanders, or 'Saints' as they are commonly known, are worried about the changes the airport will bring about, the project has many supporters. The UK Government describes the airport as a momentous investment with the island's governor, Mark Capes, saying: "It's the best chance St Helena will have of reversing its economic decline of the last 50 years. It will also encourage those Saints who have moved overseas to return to the island and contribute to a growing economy."

The island will present challenges for the

As airport construction proceeds, Atlantic Star Airlines is preparing for its start-up based on services to the island and to Cape Town and Ascension.



operators planning to fly there. Few airlines have shown much interest so far, apart from UK-based Atlantic Star Airlines (ASA), which plans to fly a Boeing 757 between the UK and the new airport.

The two biggest issues are, arguably, extended range twin operations (ETOPs) compliance rules and the modest runway length. ASA intends using either Gatwick or Stansted as a departure point, with a refuelling stop in Madrid before taking on the nine-hour final sector to St Helena.

According to ASA's director of compliance, Captain Andrew Radford, the final decision on which carrier will be utilised rests with the contracted consultants, Avia Solutions.

Avia has an important role beyond suggesting which operator is best suited to starting the service. It will also advise on the UK Government's necessary financial support for the first few years until the route becomes self-

sustaining. ASA says it would begin services with a weekly St Helena flight that may carry on to Cape Town, as well as providing an airline service to Ascension Island, a major Atlantic Ocean US and UK military base.

Even at an industry standard 75-80% load factor, the route would only approach profitability on three flights a week, which would take five years to achieve, according to ASA's operating plan.

To get around the ETOPs qualifying barriers, the airline would initially contract a European carrier that already has an existing compliance, suggesting one of Europe's airlines currently operating lengthy overwater flights. ASA would not reveal the carrier.

The Boeing 757 is a popular aircraft among European and US carriers. The type is now getting old, which means more are becoming available for use by second-tier airlines. They have a reputation

SOMMAIRE

L'île Sainte-Hélène prépare activement sa connectivité aérienne

L'île Sainte-Hélène, située à 1930 kilomètres de la côte ouest de l'Afrique australe, a une nouvelle opportunité de se connecter au continent africain grâce à la construction d'un nouvel aéroport. Ce projet, comme le souligne Dan Brightman, fait toutefois face à de nombreux défis.

L'île Sainte-Hélène, ancienne colonie britannique, est desservie à ce jour par voie maritime par le « Royal Mail Ship » avec une fréquence de trois fois par mois. Elle est connue pour être la dernière demeure de l'empereur français Napoléon Bonaparte, qui y fut exilé en 1815.

L'île a connu une période faste avec son industrie de lin. Le coût du transport et l'émergence des fibres synthétiques ont eu raison de sa production. Sainte-Hélène survit aujourd'hui grâce à son industrie de la pêche, au tourisme mais surtout grâce à l'apport financier (environ 20 millions d'euros par an) du gouvernement britannique. Elle compte environ 4250 habitants mais sa population s'amenuise en raison d'un manque d'emplois.

Le gouvernement britannique cherche cependant à

trouver des moyens pour permettre aux habitants de Sainte-Hélène de gagner en autonomie. Cela passe inexorablement par un accès aérien.

Avec un investissement de plus de 200 millions de livres sterling, l'entreprise Basil Read a commencé les travaux de construction d'un aéroport et d'une piste de 1 650 mètres. Un nouveau terminal de 3500 m² et un bâtiment pour le contrôle aérien seront également aménagés. Ces travaux engendrent d'importants défis logistiques à savoir le stockage de la terre et de la roche, la nécessité d'importer des nombreux véhicules de construction et le besoin de faire venir et de loger le personnel. Le carburant sera livré par voie maritime via une nouvelle installation portuaire située à Rupert's Bay, puis transporté par camion. L'aéroport de Sainte-Hélène aurait également

signé un contrat de gestion avec l'aéroport privé de Lanseria (Johannesburg).

Bâtir une telle infrastructure aéroportuaire apporte son lot de controverses. Les écologistes ont exprimé leurs craintes pour les oiseaux endémiques de l'île et en particulier l'emblème national, le « Wirebird » en voie de disparition. Ce projet va aussi susciter l'appétit des investisseurs et en particulier des grandes sociétés immobilières sud-africaines. Les habitants sont donc préoccupés par l'impact de ce projet sur leur île et l'habitat des animaux. Selon Mark Capes, gouverneur de Sainte-Hélène, ce projet est la meilleure chance d'inverser le déclin économique de l'île. Il encouragera également le retour de ses habitants qui pourront contribuer à sa croissance économique.



for long range and getting out of shortish runways. Under current regulations, island destinations such as St Helena allow for a two-hour hold in the event of adverse weather, as well as an alternate, and 30 minutes fuel.

For a crew arriving overhead at their destination and being unable to land, some quick decision-making needs to take place. Ascension Island, the nearest alternate, is some two hours flight time away from St Helena. However, Ascension is not yet available as an alternate airport to commercial operators – a circumstance that may change by the time St Helena opens in 2016, particularly as many Saints work on Ascension.



Peu de compagnies aériennes ont cependant montré un intérêt pour desservir Sainte Hélène, mise à part Atlantique Star Airlines (ASA). ASA compte opérer depuis le Royaume-Uni avec un Boeing 757 (via une escale à Madrid). Un avion se posant à Sainte Hélène devra également avoir la certification ETOPS et s'accommoder d'une piste courte pour atterrir. Il sera nécessaire d'obtenir le conseil et le soutien financier du gouvernement britannique pour que cette route devienne autonome et rentable. ASA se dit prête à opérer un vol hebdomadaire depuis Cape Town (environ quatre heures de vol). Même si

South African Airways a montré peu d'intérêt, elle reste cependant la seule compagnie aérienne sud africaine à détenir la certification ETOPS. TAAG Angola Airlines reste également un candidat sérieux mais le doute persiste quant à la demande réelle pour relier Sainte-Hélène.

ASA prévoit initialement de déployer le personnel nécessaire pour assurer la rotation aérienne vers Sainte-Hélène. L'ouverture de l'aéroport est prévue en 2016 avec les accords des autorités de régulation du Royaume-Uni. Le mode de transport entre l'île et le continent africain sera alors transformé.

By contrast, St Helena is 1,700 nautical miles away from Cape Town, or some four-and-a-half hours flying time.

The only airline from South Africa with ETOPS approval for this distance is South African Airways, which has not shown much interest, if any, in the new route. TAAG Angolan Airlines is also a possible carrier, but it's doubtful there's sufficient demand for St Helena connections.

If there appear to be few takers for the route, the airport will at least be reasonably well equipped for airline operations. The runway (north/south 18/36) will have a localiser-only approach on 18 due to an offset that precludes a glideslope, while 36 will benefit from co-located VHF omnidirectional range/distance measuring equipment (VOR/DME) and, perversely, the airport will have a non-directional beacon (NDB) – possibly one of the very few newly installed in the world.

The nav aids will be installed by French company Thales, which will also help design a global navigation satellite system (GNSS) approach.



The island's climate is tropical, marine and influenced by the Benguela current, with almost continuous prevailing south-east trade winds favouring runway 18. The navaid cluster means that all arrivals will be non-precision, with GPS the dominating approach choice. The island's highest point is Diana's Peak at 2,684ft above sea level; the airport is being built at 1,000 feet above sea level.

Logistics will remain a challenge and it is expected that flights will be conducted into the airport using Hercules supply aircraft before it is officially opened. Jet fuel will be delivered by sea via a new harbour facility at Rupert's Bay and taken to the fuel farm by road tankers.

A management contract for the airport appears to have been established with privately owned Lanseria Airport in Johannesburg, South Africa. Lanseria is undergoing an ownership change, which will include broad-based black empowerment shareholders. Airports Company South Africa (ACSA) is believed to be one of the minor shareholders.

ASA says the route will initially support up to 10 cockpit and roughly 30 cabin crew, plus ground handling staff at the departure and arrival points. If the tourism developments get off the ground, the airline will provide a two-class cabin to accommodate upmarket holiday guests to the island.

When the airport opens in 2016, and is finally signed off as fully operational by the UK regulatory authority, the current method of transport to the island, the RMS St Helena, will be retired, leaving a pure supply ship as the only other means of transport between the island and the mainland.



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Airport in Botswana.



TERMINALS DIG DEEP

«Les opportunités d'ADB Airfield Solutions en Afrique» – Page 87

New in-terminal, airfield and airport technologies are gradually being integrated at key gateways around Africa. Keith Mwanalushi speaks to ADB Airfield Solutions about what systems are being applied in the southern African region, and what challenges are being encountered.

Airport-related technologies are constantly developing to adapt to the ever-increasing requirement to improve safety, as well as to meet international standards and growing passenger expectations.

With many African airports lacking the infrastructure and still utilising post-colonial terminal and airfield systems, the need to upgrade and modernise could not be greater.

For example, in December last year, the National Airports Corporation Ltd (NACL) of Zambia selected ADB Airfield Solutions to help upgrade its four international airports (Lusaka, Livingstone, Ndola and Mfuwe) to meet International Civil Aviation Organisation (ICAO) standards.

ADB is supplying specialised in-terminal requirements, including the baggage-handling system, passenger screening and security system, substations, transformers and switchgear to the airports.

The company is also executing a project for Harry Mwaanga Nkumbula Airport in Livingstone, gateway to the Victoria Falls from the Zambian side. “In addition to the fact that we have to standardise our processes and approach,

technical specifications, training and after-sales service at our airports, we were very happy with the consistent level of quality and support offered by ADB,” said Prince Chintimbwe, director for airport services, NACL.

“In the past, too, the company has provided us with well-designed and executed projects that realise a quick return on investment and guarantee equipment lifecycle costs.”

As with most businesses in Africa, it takes time to know the market well in order to succeed. Manfred Oetl, ADB’s country manager for southern Africa, stressed that the company had been doing business there for several decades, supporting the development and modernisation of the continent’s airfield infrastructure.

“Our recent wins in Zambia and Botswana are a clear reflection of customer confidence in end-to-end integration capabilities and, more importantly, our ability to work closely with our customers,” declared Oetl.

He noted that, in the past five years, ADB had become the airfield ground lighting (AGL) partner for the Civil Aviation Authority of Botswana, with the successful completion of

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four major AGL modernisation projects at key international airports.

It's reported that the Government of Botswana is making a \$61 million investment to further develop airports in the country to accommodate increased traffic and larger aircraft.

The ADB deal includes works at Sir Seretse Khama International Airport (SSKIA), Maun International Airport, Kasane International Airport, and Francistown International Airport. Oetl reported that ADB has delivered AGL, signs, airfield ground lighting control systems, apron floodlighting and LED lighting, power equipment, as well as automated weather observation systems.

"At Harry Mwaanga Nkumbula airport we are currently executing a project, which includes inter-terminal equipment, in partnership with the best-in-class vendors. This includes baggage-handling and security, such as metal detectors," Oetl said, before revealing that some of these key vendors included Smiths Detection and baggage-scanning specialists Vanderlande Industries.

Zambia, too, is in the process of significant airport rehabilitation and construction. According to the NACL, Kenneth Kaunda International Airport (KKIA), in the capital, Lusaka, will by 2030 serve about 400,000 domestic passengers and 2.8 million international passengers (having recently passed the one million mark).



NACL predicts it will receive about 160 domestic passengers and 1,150 international passengers per hour at peak times; and that it needs 4,000sqm of domestic terminal and 34,500sqm of international terminal space. The current airport terminal, which is about 7,000sqm, will be repurposed and upgraded into a domestic terminal.

China Jiangxi Corporation for International Economic and Technical Cooperation is the company contracted to upgrade and expand KKIA. According to NACL, the new passenger terminal will cover approximately 34,500sqm and is designed to be a two-storey building.

The first floor will handle arrivals, with an open corridor connecting to the existing terminal, which will be transformed into a domestic terminal. The arrival terminal will also accommodate a VIP lounge, luggage claim units and a power station.

The second floor will cater for departures. It will include a check-in lounge, security check lounge and departure lounge, as well as business service centre, duty-free store, offices, first-class waiting area and prayer room.

The departure floor will be constructed with 22 check-in counters, five inspection channels, four customs channels, 12 border and immigration desks and six security check counters.

The Zambian Government has confirmed the

Financing for airfield systems is often a challenge at some airports.



release of K140 million (\$27,000) as advance payment towards the reconstruction and expansion of KKIA. NACL has said it is content with progress being made towards the commencement of the work, adding that construction of the \$360 million project will focus on priority areas, such as the passenger and cargo terminal and fire station.

The new passenger terminal, with the capacity to handle four million passengers per annum, is part of the corporation's five-year strategic plan aimed at repositioning the organisation through an ambitious expansion and upgrade programme.

The developments in Zambia and other locations in Africa should stimulate the market for high-end, in-terminal and airfield technologies.

The ADB South Africa team oversees ADB's operations in southern Africa, including Nigeria. Oetl said ADB's South African operation is comprised of multiple business units, each with a special focus on its area of expertise.

"Using our end-to-end approach, which encompasses all of our offerings – AGL products and related systems, AGL design, system integration, maintenance and training – ADB helps customers improve their airside safety and reliability, and reduce operational complexities."

According to Oetl, ADB offers the full range of airport lighting solutions, equipment and systems for airports of all categories, whether CAT I, II or III. The product range covers lights, signs, power control and distribution equipment and isolating transformers.

AGL solutions include remote control and monitoring systems as well as AGLAS – an ADB product used to control and

monitor the AGL lighting, airfield lighting control systems and advanced surface movement guidance and control systems.

ADB has reportedly secured two contracts with Airports Company South Africa (ACSA) to support air traffic in low visibility conditions.

Last year ADB announced AGL upgrades at Cape Town International Airport. The project was vital for the airport, which serves as a gateway for millions of passengers visiting the country's most popular tourist destination.

Oetl added that ADB has supported AGL infrastructure upgrades and modernisation at Johannesburg's OR Tambo International Airport and Cape Town International, as well as several regional airports.

The company had extended its offering for African airports to include automated docking systems; weather observation systems; and ICAO-compliant installation, air bridges, navigational aids for surveillance, landing, communications, ATC systems and in-terminal solutions.

"We have successfully strengthened our existing customer relationships by demonstrating our turnkey project approach at several airports," explained Oetl. "We undertake end-to-end responsibility and make sure all parties talk to each other. This is what customers like; one project manager is the key interface and he groups a team around him to deliver on what we promise to the customer."

While developing African airport infrastructure is a welcome move, Oetl acknowledged that there are some challenges that are associated with providing solutions on the continent. "The biggest challenge we see is that there is a lot of project potential but

"The biggest challenge we see is that there is a lot of project potential but finance is a problem."
MANFRED OETTL

Botswana's main gateway in Gaborone has had significant airfield systems upgrades.



finance is a problem.” Once the financing comes through – usually via Brazil or China – Oetl observed that the financial partners tend to bring in their own local partners. “For instance, Chinese contractors bring in their own products with no references outside of China, and this is often where it gets hard to compete if we compare on price alone.

“We need to explain the importance of complying with regulation, the proven value of our solutions that have been used for years in all kinds of weather conditions, and the importance of how our products are conceived to fit the purpose in that specific region. The value of our offering goes beyond pure pricing, as our aim is to support airports to achieve safer, more efficient and lower-cost operations,” said Oetl.



He expressed contentment with ADB’s overall performance in Africa. “Plus, we offer a complete range and possess deep experience in ensuring our solutions are properly installed, integrated and maintained, so they work seamlessly. On the strength of these capabilities, we continue to win projects in the continent,” he added.

In terms of developing further markets in Africa for in-terminal solutions, Oetl was adamant that the business would continue to develop.

“At Victoria Falls, Zimbabwe, we are deploying a full ICT solution and, while our in-terminal solution is not related to security, we are focused on expanding the scope of the project to partner with other vendors and support delivery and installation of lifts and elevators, electrical distribution and passenger bridges,” he concluded.

SOMMAIRE

Les opportunités d'ADB Airfield Solutions en Afrique

Les nouvelles technologies liées aux infrastructures aéroportuaires sont progressivement introduites dans les aéroports africains. Keith Mwanalushi s'est entretenu avec les responsables de la société ADB Airfield Solutions pour identifier les nouveaux systèmes qui seront mis en place dans les aéroports.

Les technologies aéroportuaires sont connues un progrès soutenu. Elles s'adaptent aux exigences inhérentes à la sécurité, au respect des normes internationales et aux attentes des passagers. Il existe une nécessité en Afrique de moderniser davantage de nombreux aéroports qui ne bénéficient pas d'infrastructures et de systèmes de terminaux aéroportuaires adéquats.

La Zambie a choisi ADB Airfield Solutions pour la modernisation de quatre aéroports internationaux (Lusaka, Livingstone, Ndola et Mfuwe) dans le respect des normes de l'OACI. Des systèmes de manutention des bagages, de contrôle des passagers et de sécurité seront installés dans les aéroports.

Manfred Oetl, directeur d'ADB Airfield Solutions en Afrique du Sud a confié au magazine African Aerospace qu'il est primordial de bien connaître le marché pour y réussir. ADB est présent depuis des décennies sur le continent pour soutenir le développement et la modernisation des infrastructures aéroportuaires.

« Nos récents succès en Zambie et au Botswana témoignent de la confiance de nos clients par rapport à notre expertise et notre capacité de mettre en opération nos produits », explique Manfred Oetl.

ADB Airfield Solutions a mis en place quatre systèmes d'éclairage (AGL) dans les aéroports internationaux avec le concours de l'autorité de l'aviation civile du Botswana. Le pays souhaite moderniser davantage ses aéroports pour soutenir l'augmentation du trafic et accueillir de plus gros avions. D'importants projets de réhabilitation d'infrastructures aéroportuaires sont également en cours en Zambie. L'aéroport international de Lusaka pourra accueillir environ 400.000 passagers domestiques et 2,8 millions de passagers internationaux d'ici 2030. Deux contrats ont été également signés avec l'ACSA en Afrique du Sud pour mieux assurer le trafic aérien dans des conditions de faible visibilité.

Alors que le développement des infrastructures aéroportuaires est sur la bonne voie, Manfred Oetl admet qu'il reste de nombreux défis à relever pour trouver des solutions appropriées dans les aéroports africains. « Il y a beaucoup de projets mais leur financement reste un problème majeur. Le financement provient surtout du Brésil et de la Chine et les partenaires financiers ont tendance à apporter leurs propres partenaires locaux ou entrepreneurs pour effectuer les travaux. Cela devient donc difficile de rivaliser en particulier sur le prix. Il est donc important d'expliquer l'importance de se conformer à la réglementation, la valeur reconnue de nos solutions et notre expertise pour rendre les opérations plus sûres, plus efficaces et par conséquent réduire les coûts. »

ADB Airfield Solutions est persuadée qu'elle va continuer à développer ses activités comme c'est le cas à Victoria Falls au Zimbabwe.

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*Africa is coming up large on the radar at Turkish Technic, the fast-growing and ambitious maintenance arm that grew out of Turkish Airlines. The MRO operation sees new opportunities to develop its own style of strategic partnerships to the advantage of everyone concerned, reports **Chuck Grieve**.*

TECH TO HEART

It makes sense to have a strong presence in Africa. That's the view of Dr Ismail Demir, chief executive of Turkish Technic. For Demir, the man who has been presiding over the expansion of Turkey's independent maintenance, repair and overhaul (MRO) operation since 2006, the indicators suggest the time is ripe for a discreet continental advance.

Turkish Airlines, the one-time parent and still major customer of Turkish Technic, has great ambitions in Africa and wherever it goes, it needs to be supported technically. Moreover, the ageing fleets of the continent's own airlines have a big and growing requirement for servicing. And, on top of that, with its economic environment opening up, Africa is of increasing importance to Turkey as a source of trade partners.

But Demir is not rushing in. "First we have to get our name known as a reliable partner," he said, "then we can base our strategy on this relationship."



The Turkish Technic approach to Africa is long-term and has three strands: joint operation of MRO facilities; technical support and training; and the provision of design and component services.

Demir said the company has an open mind on the kind of joint activity it will entertain. "We could become involved in joint MRO activity, or just consultancy in building hangars – particularly greenfield projects – and transferring our expertise. We've brought many new hangars online recently."

The kind of relationship that Turkish Technic is looking for will benefit from a little "warming up" so, to that end, the company is prepared to offer free consultancy to consider ideas for collaboration with prospective partners.

He said the company is looking to develop opportunities first in north and central Africa, where it has contacts. The activity is not all one way, however, and Demir claimed that "many airlines" are approaching Turkish Technic for

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2020 vision:
Dr Ismail Demir.

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discussions on a variety of projects. Some approaches are connected to Turkish Airlines activity but many are not.

With 36 destinations in 24 countries in Africa, Turkish Airlines has one of the widest networks on the continent. It has a variety of partnership arrangements with local companies for line services. In many cases, the airline's demands stretch available resources, creating opportunities for what is essentially still its sister organisation, Turkish Technic, to fly in qualified personnel.

To cope with the accelerated growth of the airline, the MRO organisation is in the midst of an extensive hiring and training programme. The plan, said Demir, is to send Turkish-trained mechanics to establish line maintenance bases at key points on the Turkish Airlines system.

Turkish Technic uses a partnership model successfully in its home market for engine repair and overhaul, component design and the manufacture of seats and aircraft interiors; the latter through a joint venture named TCI. For the African market, said Demir, the company is in the process of establishing new manufacturing companies concentrating on galleys and cabin interiors. "It's a good market for us," he said. Turkish Technic's expertise covers both new aircraft and refurbishments.



Over a third of the total African fleet is more than 20 years old. There are numerous examples of older aircraft that require refurbishment and upgrading to current standards. The facilities to do this work for the most part do not exist in Africa, forcing operators to seek appropriate services in the west.

In addition, Boeing forecasts that the African civil fleet will grow by 900 aircraft in 20 years, doubling its size – and Turkish Technic is aiming for a share of that market, at least in the transition phase. The company knows from experience that it is unlikely to be a limited market.

"Refurbishment will be important for the time being," said Demir. "We observed this in the Russian market a few years ago, when older aircraft were undergoing a transition to western-style components. The market was not as big as some analysts thought.

"We expect it to be similar in Africa. Airlines have older versions of western aircraft. Some will need maintenance and overhaul; some will need total refurbishment. It's not a long-term market. You can't base a strategy on this."

In parallel, the component capabilities that Turkish Technic has built up over many years with extensive investment, particularly in narrow-body aircraft, places the company in a strong position to serve local needs through partnerships. "This includes logistics," said Demir. "We can provide some consignment



Habom: It has the capacity to handle 11 narrow-body and three wide-body aircraft simultaneously.

Left: Turkish Technic says there is no shortage of personnel willing to man new MRO bases.

inventory in our partners' bases to provide for their requirements and benefit them."

He said the company has signed agreements in a number of countries but declined to elaborate. Talks are in progress on many fronts, and this appears to be forcing Turkish Technic to walk a political tightrope. "Decisions must be very carefully made," he said, "and shouldn't upset someone else."

It seems each country wants a state-of-the-art MRO facility that will become a service hub for the whole continent. And, despite the 1999 Yamoussoukro Decision, by which the 44 signatory countries agreed to liberalise intra-African air transport and coordinate activities, restrictive practices remain in place. "Everyone has their own ambitions," observed Demir.

For its part, Turkish Technic's willingness to take on the challenges of difficult and low-margin areas set it apart from the western competition. Despite the risks of some of the postings – a Turkish Airlines employee was killed last December in a burglary at the airline's

offices in Tripoli – Turkish Technic is "not short of people willing to go to trouble spots", he said.

But usually the Turkish airline and MRO operator are warmly greeted in Africa. This welcome extends to approaches by countries inviting the Turkish companies to undertake joint commercial activities.

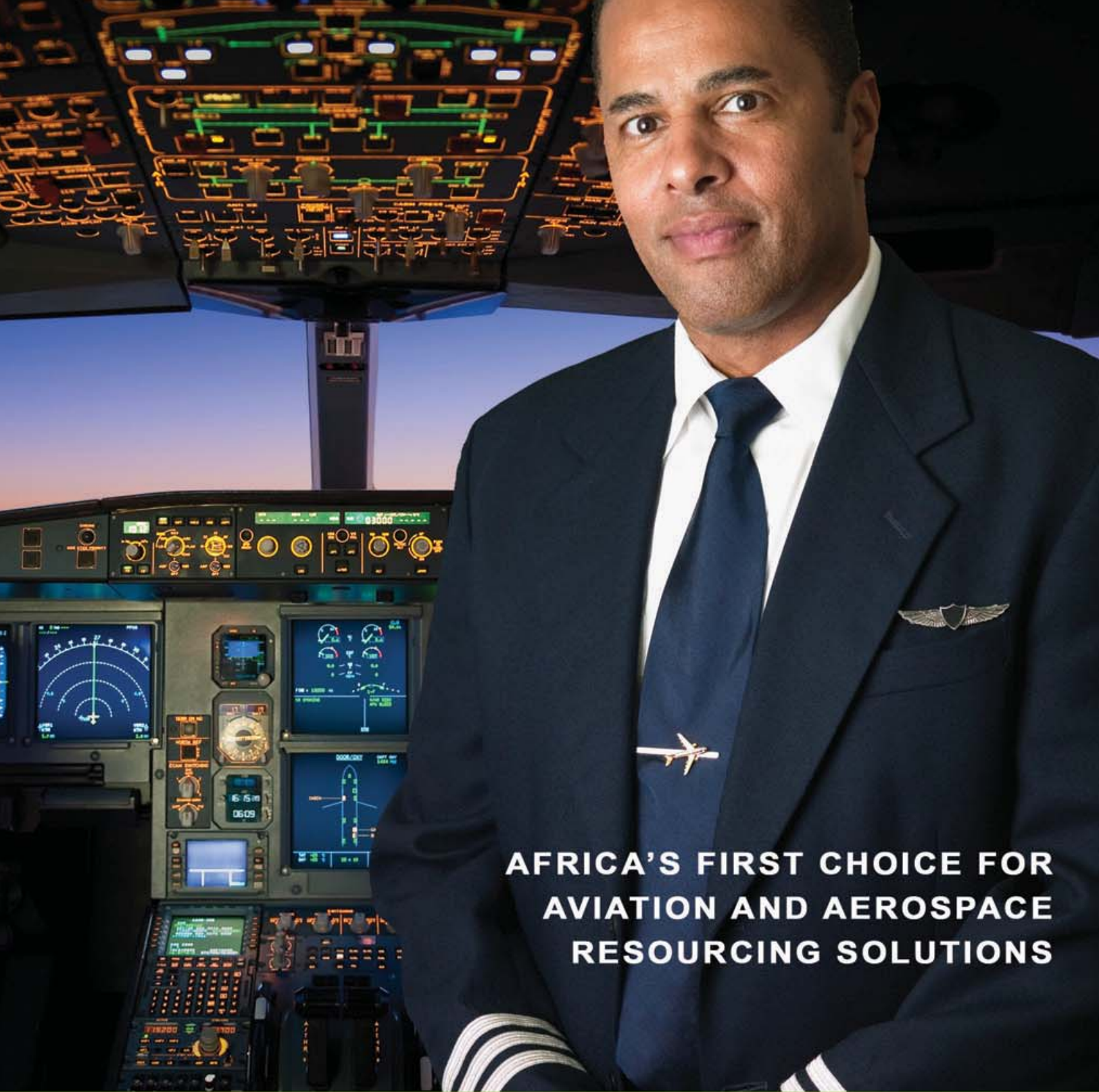
Flexibility is an important attribute. In countries where Turkish Technic has long-standing relationships, including Libya, Egypt, Algeria, Angola, Zimbabwe and Tanzania, the nature of its arrangements is different.

"We want to build a good reputation for long-term relationships," said Demir. "So we plan to build good stations, provide good technical and component services, and train their people.

"Success in Africa will be based on long-term partnerships. There will be a period when we provide services to our partners as customers. Meanwhile, we will be training their people, developing their resources. That makes sense for both parties. It's better for logistics, HR, and is more cost-effective in long term."

Ideally, he said, Turkish Technic would like to start training its partners' personnel as soon as possible, especially with practical, on-the-job experience at Turkish Technic's facilities in Istanbul.

"We don't mind if our partners do their own work in the long term. We don't see this as losing a market. We can take our service to a different level with design and components. We're on this journey together."



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One of the main obstacles still facing African aviation is state protectionism and red tape and, as **Keith Mwanalushi** finds out from **Ed Winter**, CEO of new low-cost carrier FastJet, there is still a lot of talk but very little action.

WINTER OF DISCONTENT

«Ed Winter fort mécontent» – Page 94

Ed Winter, CEO of low-cost carrier FastJet, believes that regulatory obstacles and protectionism are “fairly high on the list of reasons” why Africa is lagging behind other parts of the world.

The statistics are quite evident, he said; according to the African Airlines Association (AFRAA), Africa accounts for only 3% of the world’s passenger traffic and 1.8% of freight. “It’s way out of proportion to where it should be considering that Africa has 15% of the world’s population and 20% of its land mass,” Winter added.

He stressed that, in almost every case, countries were protecting their own aviation environments and subsidising inefficient, loss-making state airlines: “It has to be a culprit in holding back the aviation market in Africa,” Winter said. “Aviation connectivity is absolutely

vital for any economy. How can an economy progress without proper connectivity?”

Africa is, indeed, behind other regions in terms of deregulating and liberalising air transport. According to AFRAA, this has a very negative impact in terms of the volume of traffic, ticket prices, size of airlines, tourism development and general socio-economic development.

“We have seen from other continents, particularly in North America, Europe and Asia, that deregulation and liberalisation has resulted in healthy competition, including from low-cost carriers that has brought air transport within the reach of the masses,” commented Elijah Chingosho, AFRAA’s secretary general.

The slow pace of liberalisation and regulatory obstacles are also making cross-border trade and investment in Africa expensive and uncompetitive.



The combined effect of low traffic volumes and high costs is that African airlines are unable to attract the capital necessary for them to grow and be larger and more viable operating entities. Thus, the majority of African airlines are very small with fleet sizes typically fewer than a dozen aircraft, so they do not benefit from economies of scale.

“What I see is a lot of people talking but no action,” observed Winter. “What we are doing is trying to convince and persuade the authorities that there are huge benefits to be obtained by changing the status quo.”

Chingosho agrees that deregulation of the industry can work in Africa if governments appreciate the enormous economic benefits of a vibrant and liberalised air transport environment on the continent. He said the Yamoussoukro Decision, signed by African heads of state, and

aimed at liberalising the internal African aviation market, was the key instrument.

“This needs to be fully implemented,” Chingosho stressed. “Implementation would unleash the full potential of the African aviation industry by allowing African carriers with the resources to access any market within the continent without restrictions. As we have witnessed from other continents, deregulated and liberalised air transport markets would result in consolidation and strategic alliances by carriers, which is critical for viable airline operations,” Chingosho explained.

However, he added that there had been some progress, as some African markets were largely deregulated, although this was largely confined to west and central Africa. “All other regions in the continent need to follow suit if African aviation is to play a major role in the social, economic and political integration of African peoples,” he said.

There is also a pressing need for regulatory harmonisation to facilitate fair and equitable competition in a liberalised market. Because of the size of the continent (54 countries), Chingosho noted that it may be more feasible and faster “to liberalise on a piece-meal basis,” starting with countries that are ready and willing – rather than the entire continent liberalising at the same time.

Winter agrees that it will be a gradual liberalisation. “I can fully understand why some governments find it quite difficult,” he said, citing South Africa as an example: “South African Airways has a huge workforce. They have far more employees per aircraft than any other airline in the world and liberalising in that environment needs to be done very sensitively, but it still needs to be done.”

FastJet has been dogged by a series of snags in its attempt to create Africa’s first continent-wide



Elijah Chingosho:
Yamoussoukro Decision needs to be fully implemented.



Ed Winter and Fastjet have been dogged by a series of snags.

LCC. Despite the airline's calls for easier access to markets, Winter and his team have to accept the situation in order to progress to any form of a pan-African network.

"We want to create a series of airlines. We have created FastJet Tanzania; we have openly talked about FastJet Zambia, FastJet Kenya and South Africa and so on – the idea being that each of those has to be an independent airline subject to local regulatory requirements and controls. We want to achieve a common standard throughout those airlines, so that the consumer is able to treat it pretty much like a single airline network," Winter said.

He further stressed that, from a consumer's perspective, there should be no variation, regardless of which airline is flying. "It's a bit like a franchise but taking it a little bit further so that we really do control the quality. It's not like some of these hotel chains where the badge at the front door is the same but, once you enter, inside it's very different."

Seemingly, in order for FastJet to fully achieve its continental ambitions, it will have to continue to persuade governments that it's in their best interest to liberalise and move away from protectionism. "African governments don't have a huge amount of spare cash floating around and to have so much of it being effectively wasted by subsidising a status symbol is illogical. If you subsidise a company long enough, it becomes inefficient, it doesn't have any incentive to become efficient and it distorts the marketplace. It's a waste of money," Winter explained.

Africa is a bit like Europe up until the 1990s, where most of the routes were controlled by governments, and airlines such as Sabena and Olympic Airways were hugely subsidised by their governments. The key question is whether this transition can be replicated in Africa, where conditions are very different.

In Europe, the common market helped pave the way for liberalisation and, as a result, the

amount of connectivity increased tremendously, fares lowered and airlines became much more efficient.

Winter has acknowledged that there have been discussions among the regional groupings in Africa, such as the Economic Community Of West African States (ECOWAS) and the Southern African Development Community (SADC), to push liberalisation and similar issues. "But, sadly, all the time all it's been is discussion... they need to turn it into action, bite the bullet and get on with it," Winter said.

He continued to elaborate on the importance of developing connectivity, especially considering that intra-African trade only accounts for 10% of African trade, whereas in most continents regional trade is much higher.

"The ability to travel creates business, it creates connectivity. But what connectivity there is in Africa is unreliable and hugely expensive. Average fares in cost per seat-kilometre in Africa are three to four times [those] charged in Europe."

Chingosho said AFRAA is working closely with the African Civil Aviation Commission (AFCAC) to lobby African states and other stakeholders to remove regulatory obstacles.

"The two organisations are urging states to strengthen their safety and security oversight, while granting airlines commercial freedom to operate where it is viable to do so without restrictions," said Chingosho. "AFRAA and AFCAC have engaged the African Union (AU), urging this continental body to – among other things – push for the full implementation of the Yamoussoukro Decision and create a climate conducive to consolidation, cross-border investment and the formation of strategic alliances among African airlines."

He added that AFRAA works with and encourages regional

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economic communities to develop and harmonise aviation regulations across sub-regions rather than the current different regulatory regimes pertaining in each country. "In this regard, the Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC) and SADC now have common regulations pertaining to ownership and control, competition and dispute resolutions and settlement. ECOWAS is also on track to adopting similar regulations. Such uniform regulations will make it easier for implementation among states and also between states and third countries," Chingosho explained.

CEOs of some major African airlines are also known to be engaging their governments, urging them to work with other African governments to deregulate the industry and create a level playing field. As Chingosho puts it, this will: "avoid favouring non-African carriers in the granting of traffic rights, which are denied to their African counterparts".

AFRAA is also aware that some African airlines actually urge their governments not to open their markets, fearing that they may be driven out of business. Chingosho said that AFRAA is in regular talks with these airlines, explaining the benefits of deregulation and encouraging strategic partnerships between the

smaller carriers and the larger, better-resourced African airlines.

"The smaller carriers benefit from the market reach, sophistication and management expertise of their larger African counterparts, while the larger carriers benefit from the feeder traffic from the smaller airlines. The excellent examples of successful collaboration between Askya and Ethiopian Airlines, and [between] Kenya Airways and Precision Air, are testimony to how such collaboration can result in win-win outcomes."



Winter warned, however, that the intercontinental ambitions of airlines in Africa are already fully realised by the likes of Emirates, Air France and British Airways, saying that each country did not require its own state airline flying to London or Paris – "They can't afford it, it's not good use of the limited resources," he said.

"Belgium does not have a national airline anymore, nor does Greece. Alitalia is virtually non-existent – I think the biggest airline in Italy now is EasyJet."

In February this year FastJet launched services from Dar es Salaam (Tanzania) to the Zambian

capital Lusaka. "Previously that was a 24-hour bus journey," Winter stated.

Zambia, being landlocked, relies on its neighbours, such as Tanzania's sea port, for trade. "These traders now fly with us; we are stimulating the marketplace and that's what should be happening all over the continent," said Winter, who added that plans to form an affiliate airline in Zambia are progressing well.

"We have certainly found the Zambian Government very friendly, very straightforward – and no, we will not be flying to London and so forth but we will provide really good local connectivity and internationally within Africa. I think Lusaka is very well served, especially with Emirates going in there. If FastJet is there providing good linkages around southern Africa, it's going to attract the likes of British Airways and others to get back in there."

Zambia is centrally located and should provide FastJet with plenty of opportunity, if it can tap into that geographical advantage, where all the capital cities in southern and central Africa are within two hours flight time from Lusaka.

"Zambia is a particular market that looks like it is going to be administratively easy to deal with. We are not going to find a lot of regulatory obstacles in our way and it makes sense to move forward on that," Winter concluded.

SOMMAIRE

Ed Winter fort mécontent

Le protectionnisme étatique et la bureaucratie omniprésente représentent aujourd'hui de véritables obstacles pour le développement du transport aérien en Afrique. Keith Mwanalushi a rencontré Ed Winter, directeur général de la nouvelle compagnie low-cost Fastjet et le constat est sans appel : il y a encore beaucoup de discussions mais peu d'actions.

Le directeur général de Fastjet, Ed Winter, a évoqué les principales raisons pour lesquelles l'Afrique reste à la traîne concernant le développement du transport aérien. Selon l'AFRAA, il existe trop de barrières réglementaires, le protectionnisme et un manque de libéralisation du marché. Ces freins ont un impact négatif en termes de volume de trafic, de compétitivité, de prix des billets, de développement socio-économique et touristique. « L'Afrique ne représente que 3 % du trafic mondial des passagers et 1,8 % du fret alors que le continent compte 15 % de la population mondiale et couvre 20 % de sa superficie. »

Les mesures prises pour protéger ses propres intérêts dans le domaine de l'aviation s'avèrent à chaque fois inefficaces à la fois pour les transporteurs nationaux et les états. La connectivité aérienne est absolument vitale pour toute économie. « Nous avons observé notamment en Amérique du Nord, en Europe et en Asie, que la déréglementation et la libéralisation ont entraîné une hausse du trafic ainsi qu'une concurrence saine », souligne Elie Chingosho, secrétaire général de l'AFRAA.

L'effet combiné du faible volume de trafic et des coûts élevés fait que les compagnies aériennes africaines ne sont pas en mesure d'attirer les capitaux nécessaires pour assurer une croissance et viabiliser leurs opérations. La majorité d'entre elles restent modestes et ne bénéficient pas d'économies d'échelles.

« La mise en œuvre intégrale de la déclaration de

Yamoussoukro implique de libérer pleinement le potentiel de l'aviation en Afrique en permettant à chaque transporteur d'accéder à un marché sur le continent sans restriction. La déréglementation et la libéralisation des marchés du transport aérien se traduiraient alors par la consolidation et des alliances stratégiques », rappelle Elie Chingosho.

L'AFRAA travaille en étroite collaboration avec l'AFCAC pour faire pression sur les états africains afin de faire tomber les obstacles réglementaires, harmoniser les règlements et mettre en œuvre l'intégralité de la déclaration de Yamoussoukro. Cela créera un climat propice pour le développement du transport aérien. Il existe de belles réussites de coopération entre grands et petits transporteurs africains comme ASKY et Ethiopian Airlines ou encore Kenya Airways et Precision Air.

Selon Ed Winter, Fastjet essaie de convaincre les autorités qu'il y a de multiples bénéfices à sortir de ce statu quo. « Les gouvernements africains n'ont pas autant d'argent pour le gaspiller en subventionnant des compagnies aériennes nationales. Cela fausse également le marché. Cette libéralisation sera donc progressive. » Même si Fastjet a eu beaucoup de difficultés pour bâtir la première compagnie à bas coûts du continent africain, elle souhaite cependant étendre son réseau en développant le concept de franchise, comme on peut le voir au niveau des chaînes hôtelières.

« Nous souhaitons mettre en place plusieurs compagnies aériennes sur le continent africain tout

en répondant aux exigences et aux réglementations des pays où elles opéreront. Nous avons créé Fastjet en Tanzanie, nous sommes en discussion pour sa mise en place en Zambie, au Kenya, en Afrique du Sud et ainsi de suite. Nous voulons arriver à un standard commun entre toutes ces compagnies pour que le consommateur puisse les identifier comme une compagnie unique et un réseau », précise Ed Winter.

Fastjet devra cependant continuer ses actions de lobbying auprès des gouvernements afin de libéraliser le transport aérien et réaliser pleinement ses ambitions continentales. La compagnie a ainsi lancé en février 2014, une route entre Dar es Salaam (Tanzanie) et Lusaka (Zambie). Auparavant, il fallait faire un trajet en bus de 24 heures. Fastjet compte développer le hub de Lusaka. La capitale zambienne a un avantage géographique dans la région. Toutes les capitales de l'Afrique australe et centrale se trouvent à deux heures de temps de vol de Lusaka.

« La possibilité de voyager augmente le volume d'affaires et la connectivité or le coût par siège et par kilomètre en Afrique est trois à quatre fois plus élevé qu'en Europe », fait ressortir Ed Winter.

L'Afrique se trouve dans la même situation que l'Europe dans les années 1990 où des compagnies aériennes comme Sabena ou Olympic Airways bénéficiaient d'importantes subventions gouvernementales. La question est maintenant de savoir si cette transition peut avoir lieu en Afrique même si le contexte est différent.

Ethiopian is building a new cargo terminal to expand and modernize operations.



Air cargo is a key enabler for the movement of high-value products and perishable goods around the globe. According to IATA, more than \$6 billion worth of goods is air freighted annually, accounting for around 35% of total world trade. Kaleyesus Bekele highlights the African scene after a recent visit to IATA in Geneva.

Africa's freight of expectation

«Les prévisions du fret en Afrique » – Page 96

International freight volumes are expected to increase by 17% over the next five years with Africa tipped to be the fastest growing region, according to the International Air Transport Association (IATA).

The IATA industry forecast 2013-2017 shows that Africa can expect a 4.0% compound annual growth rate (CAGR) over the period.

The fastest growing freight routes for the continent will be the intra-Africa market (5.3%).

As Africa's economy grows, so does the demand for air cargo transport. Currently, the continent's GDP is growing at a rate of 5%. Increasing investment in agriculture and the manufacturing industry is, in particular, stimulating airfreight growth in the region.



Desmond Vertannes, global head of cargo for IATA, said the market in Africa had stagnated for a while, in the same way as the global airfreight market. However, he believed cargo potential in Africa was still very strong.

"The reason is that the African exporters are finding new markets," explained Vertannes. "The big contributor is the perishable cargo industry. Perishables, flowers, fish, and the manufacturing industry all contribute to the growth of the air cargo in Africa."

According to Vertannes, the developing airport infrastructure in Africa is also making a difference. Air navigation, airport security and customs regimes are being improved.

"Considering the huge investment coming from Asia and other parts of the world, we can say that Africa has a great potential for air cargo transport development," he said.

However, there could be a question mark over whether African carriers are ready to meet the growing demand?

Carriers such as Ethiopian Airlines, South African Airways, Kenya Airways and EgyptAir, have modern cargo fleets but most other African operators have ageing aircraft and are very small in number.

Raphael Kuuchi, commercial corporate and industry affairs director with the African Airlines Association, said there was a huge

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demand for air cargo transport because of the economic boom in Africa and he urged cargo operators to renew their fleets and embrace new technology.

Vertannes agreed: "I believe the African carriers have a number of opportunities that they can pursue," he said.

"The most important thing is to look at the air cargo departments and make sure that they put in the right level of expertise. They need to ensure that they get the right level of investment into the IT platform, embrace electronic data exchange, and make sure that the ground-handling facilities have the appropriate investment so that they can handle a great deal of import and exports."

According to Vertannes, Ethiopia is doing an exemplary job in expanding its cargo transport sector. Ethiopian Airlines is acquiring a new cargo fleet and building a new cargo terminal. Expanding the handling facility to greater capacity will help the country's economic growth, he said.



"Lots of African countries can do the same thing. They are enhancing the handling capacity for the air cargo. I congratulate Ethiopian Airlines for working with their customs authority on the e-freight agenda. They have been very good in adopting the e-freight business.

"We want to encourage other African countries to follow suit. We know that it is happening in Kenya and South Africa. But more countries should join the club."

IATA-initiated e-freight is an industry project, which aspires to create a paperless environment across a united cargo supply chain.

Vertannes pointed out, in order to have a paperless environment, a number of things have to happen. "The country has to endorse and instil



Beech 1900D have proved popular among cargo integrators such as DHL.

treaty MC 99, the Montreal convention 99, which allows an electronic trading environment," he said.

According to Vertannes, African states have to make sure that they have the treaty in place and that their customs regimes operate to harmonised standards adopted by the World Customs Organization (WCO).

"When you have created the safe framework of standards (WCO and IATA worked very closely to agree on one set of standards) then you also have to have the IT mechanism that calls for a paperless transaction," he said.

IATA officials expect African states to invest in IT infrastructure that would enable the countries to provide electronic data to their trading partners. "This helps the acceleration of the airfreight supply chain," said Vertannes.

"What you cannot afford is to have cargo [being sent] to Africa and getting stuck at customs for four or five days. That is not airfreight. That should not happen. That is not the reason why people invest in a high mode of transport."

The other major issue needing to be addressed

is EU airport validation regulation. Anyone exporting goods into the EU has to have an ACC3 accreditation. By July 2014, the accreditation will need to be independently validated. Countries outside of the EU will need to make sure that the cargo supply chain maintains the EU security standards, at least to the ICAO Annex 17 level.

"I believe that, where cargo is important to them, the carriers are taking steps to be independently validated," said Vertannes. "However, July 2014 is approaching fast and African carriers should take the necessary steps. If they need information, IATA is ready to help.

"If African cargo operators adopt global standards, they can compete with any international cargo operator in the world," he added.

Kuuchi agreed that African cargo operators should invest on their IT infrastructure and work closely with their customs authorities to embrace e-freight. "We, at AFRAA, encourage African operators to adopt the e-Airway Bill. We also encourage African states to get their airports independently validated," Kuuchi said.

SOMMAIRE

Les prévisions du fret en Afrique

Le fret aérien est un élément clé pour l'acheminement des marchandises et des denrées périssables à travers le monde. Il représente, selon l'IATA, 6 milliards de dollars soit environ 35% du commerce mondial. Kalesyesus Bekele enquête depuis le bureau de l'association à Genève.

L'IATA a annoncé que le volume de fret international devrait augmenter de 17% au cours des cinq prochaines années. L'Afrique affichera la plus forte croissance mondiale, soit 4% par an pour la période 2013-2017.

L'économie africaine est en pleine croissance et les investissements agricoles et industriels stimulent la demande de fret aérien. Les infrastructures aéroportuaires s'améliorent progressivement.

« Le marché du fret a stagné pendant un certain temps mais son potentiel reste cependant élevé », souligne Desmond Vertannes, responsable cargo pour l'IATA.

Il s'agit maintenant de voir si les transporteurs africains sont prêts à répondre à cette demande croissante du fret. Il existe quelques compagnies qui peuvent rivaliser avec leurs homologues internationaux mais de nombreux opérateurs restent modestes.

Selon Raphaël Kuuchi, responsable commercial de l'AFRAA, les opérateurs de fret africains devraient renouveler leurs flottes et investir dans les nouvelles technologies. L'e-fret est un projet prometteur pour ce secteur. Il vise à développer un environnement sans papier pour la chaîne d'approvisionnement du fret.

« Les états africains doivent aussi s'assurer de la mise en place d'un système douanier harmonieux et du respect des normes adoptées par la WCO », rappelle Desmond Vertannes.

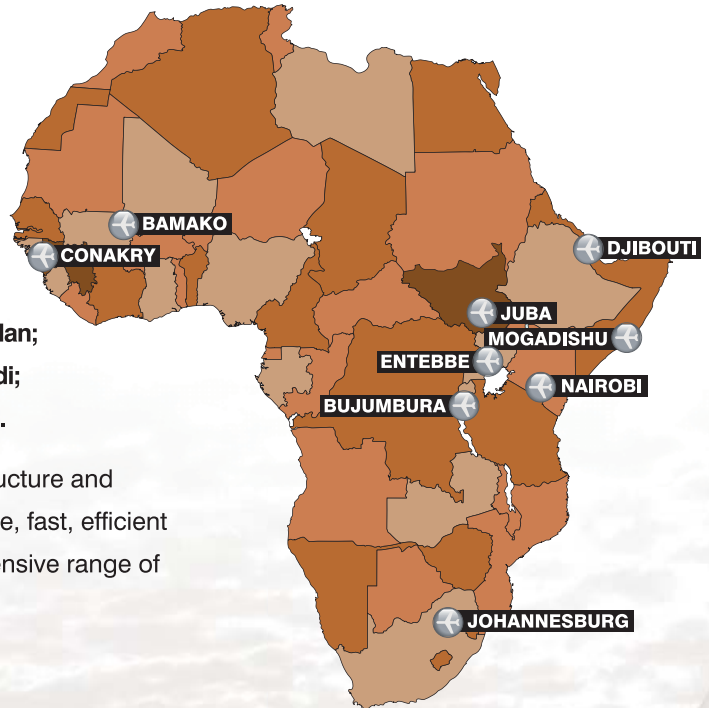
L'IATA s'attend à ce que les états africains investissent dans des infrastructures modernes ce qui permettrait d'échanger des données électroniques entre les différents acteurs du marché. Raphaël Kuuchi partage cette analyse et encourage le développement des technologies et le travail d'équipe au niveau des autorités douanières pour adopter l'e-fret.



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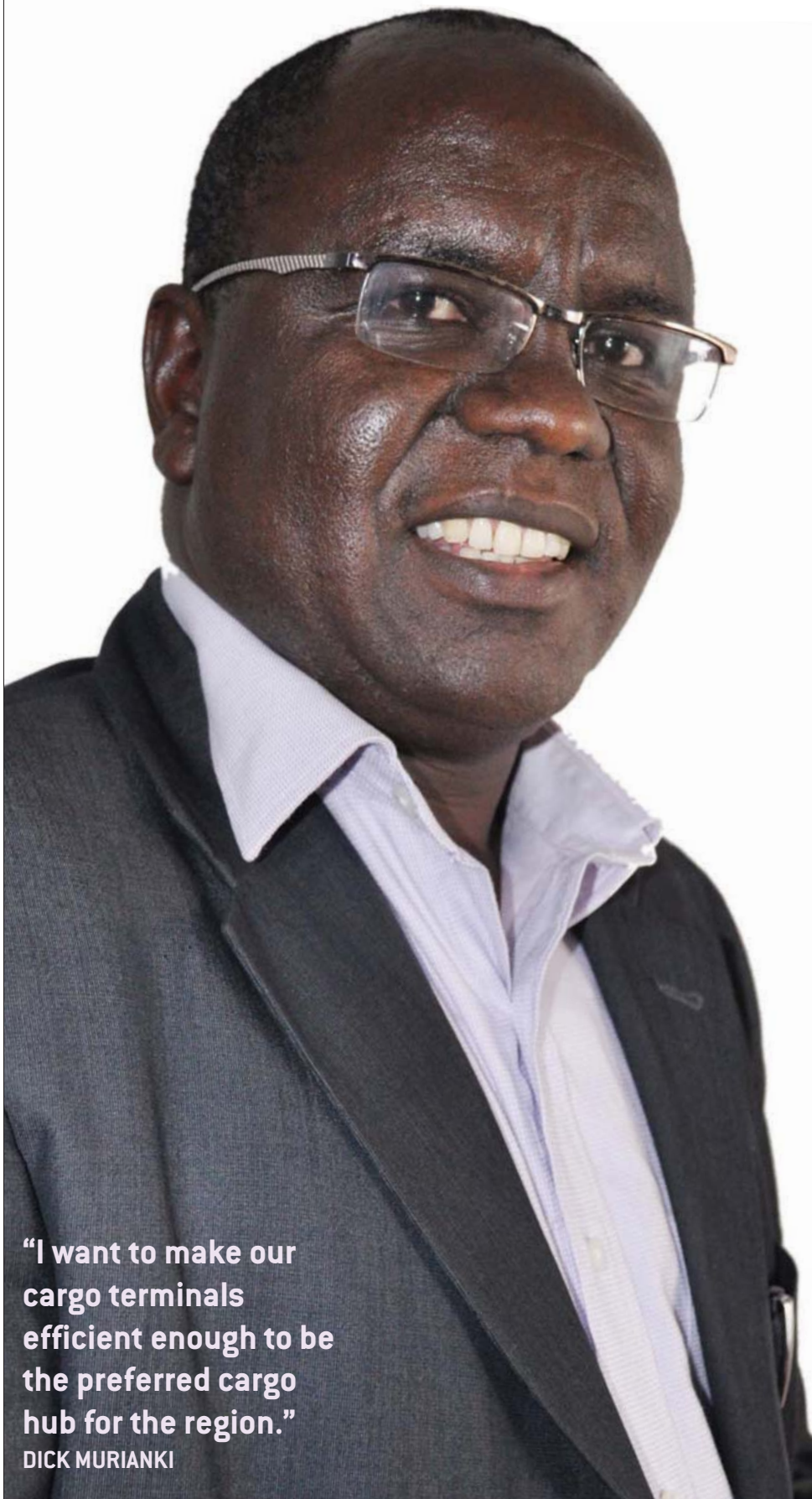
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“I want to make our cargo terminals efficient enough to be the preferred cargo hub for the region.”

DICK MURIANKI

Kenya Airways Cargo started taking delivery of Boeing 737-300 freighter conversions last year.



Dick Murianki loves cargo. He has done ever since he was first transferred to what was then Kencargo Airlines International in 2002 and met the man who fired his passion for the segment.

“I joined Kenya Airways (KQ) in 2001 and moved to Kencargo in 2002 as finance manager,” he said. “I was baptised into cargo by the MD, Geert Martens. He talked non-stop and he taught me lots, but most importantly he was passionate about cargo and that passion was infectious. I wanted to do his job one day and to be just as passionate.”

Kencargo was a joint venture between Kenya Airways, KLM and Martinair, but it ceased operations in 2004 with the reintroduction of Kenya Airways Cargo. That move sent Murianki back to headquarters to become the airline’s business performance manager but, he admits, he kept his “bias” for cargo – so much so that after only a year he orchestrated his return. “I always told the CEO that if there was one job I really wanted to do it was to be head of cargo.”

Now, after another period back at headquarters (as head of audit), Murianki has had his wish granted. But the last thing he wants to do is start empire building. So, what does he see himself doing there? “In a nutshell, I just want KQ Cargo to become efficient. Specifically, I want to make our cargo terminals efficient enough to be the preferred cargo hub for the region.”

Doing that is challenging in an industry where cargo is still treated dismissively by the majority of the passenger-focused boards of airlines; and since they ultimately control the purse strings, sometimes a little lateral thinking is needed to tackle the problem side-on.



A man with a load on his mind

*The cargo business isn't all about trying to afford new freighters and increasing rates. As Dick Murianki, new chief of Kenya Airways Cargo, told **Tom Pleasant**, it is just as important to spark the flames of passion in your workers.*

"For the next 12 months I don't have any radical goals, in terms of routes or the like," Murianki said. "Instead, the absolute first thing we have to do is to infuse confidence in our people. I want them to own the business. I want intimacy between them and the business so that when the loader handles the cargo, he loves and cares for it. That way, when customers give us their cargo, they trust us to look after it. They need to know when they give us a shipment that it's as good as being in their own hands."

Inspiring passion in staff is notoriously difficult. For cargo, the non-sexy cousin to passenger services, it is even more difficult. Murianki is confident, however, and said there are

two foundations he needs to lay to start building such a culture.

The first is with the operations team, which is often overlooked but is the only team that actually comes into any direct contact with the cargo. "I want to have a debate with them – with the loader, with the equipment operator, because it is they who are the experts, not me – about how we can give the customer the best service," said Murianki.

"My main message to them is this: do the best you can in serving the customer because, in a way, it's not the bosses who pay your salary; you pay your own salary. When you sign an employment contract with us you give us your hands. But we also need your heart and mind –

your passion. Only when we have that commitment, only then can I launch a growth strategy."

Murianki's message for the second foundation – with the sales team – focuses less on engagement, and more on truth. "Unfortunately, there's been a lot of dishonesty in the industry, a lot of misinformation. I want people to trust our word. That will mean sometimes giving them the bitter truth; that if we can't deliver something we will tell them. But I say we have to be honest with our customers, because businesses want to be able to plan with certainty and that only comes with honesty."

Nonetheless, there are still technical and strategic considerations that must be addressed. Notably, the arrival of KQ Cargo's new freighters. The outfit plans on owning a fleet of 12 freighters by 2022. It already has one 747 – the Safari Connection – wet leased from KLM-Martinair, which operates between Africa and China. That now flies the Amsterdam-Guangzhou-Nairobi-Lagos-Nairobi-Amsterdam circuit,

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with occasional stopovers in Sharjah on its way from Guangzhou to Nairobi.

Capable of carrying 120 tonnes, Murianki admits that a good load is 90 tonnes out of Guangzhou, but is nonetheless happy with the freighter's performance thus far.

In April 2013, the carrier also took delivery of the first of four KQ 737-300 passenger jets identified for conversion to freighters. These freighters are marked for regional routes, such as to Kigali (Rwanda).

So far, while certain legs of the two current freighters are seeing healthy load factors, there are some that are not performing as hoped, such as the Nairobi to Lagos leg, although Murianki said it is at least breaking even.

Luke Arrum, cargo commercial manager, agrees that while it has been good to get into the freighter business, it has been a tough start. "Yes, it has been a bit of a challenge in the beginning, but it is starting to stabilise and there is a lot of interest from Kigali and other places in the region," he said. "The way we are seeing demand growing will hopefully allow us to activate some stations and routes we haven't been able to yet."



However, Arrum is realistic and admits the need to be cautious. "The freighter business can be very challenging and globally it's stagnating, so we have to take careful steps with the conversions. We have converted two, but the other two identified are dependent on demand.

"We do need wide-body freighters though," he insisted. "They will feed into the hub [from out of Africa] so we can use the narrow-bodies for distribution around the region and continent," he added.

"In our 10-year plan we've made provision for a 777 to come on board, if all goes well, sometime in 2014. We may opt for something smaller though, such as a 767, which would be cheaper and more readily available."

Part of what may swing the decision either way on freighter numbers and types is the global slump in demand for cargo that has led to massive overcapacity on the market. In response, many airlines, particularly those from Europe and North America, have grounded their freighters and so balanced out capacity supply and demand. But emerging and growing markets continue to see healthy interest in cargo, even though destinations and routes remain patchy and uneven.

"There is a renaissance of trade and business in Africa," said Murianki. "There's a lot of fresh produce – food and flowers – moving from Kenya to Europe, mining equipment, gem stones, too. Kenya is positioning itself to take advantage of Nairobi's strategic position to east and central Africa. I want Kenya Airways Cargo to be among those that take advantage of that."

Part of the carrier's proactive attempts to encourage intra-African trade is by facilitating trade missions.

"There is a renaissance of trade and business in Africa. There's a lot of fresh produce – food and flowers – moving from Kenya to Europe, mining equipment, gem stones, too."

DICK MURIANKI

"We are partnering with the Kenyan Export Council to help them spread their goods as far as possible throughout Africa," said Arrum. "Intra-African trade is growing but it can still involve flying to Europe first, and we hope to change that as we have one of the best networks in Africa.

"We are also helping traders to reduce their turnaround times and so do more business, which means they will come back again and again. And with wide-body freighters we can fly to Asia and the Middle East. Hopefully, this will all make them want us to be their main transportation agent."

Arrum agrees with Murianki, though, that KQ Cargo needs to improve itself if it wants to make any truly impressive gains. "We need to improve on our systems, in particular our cargo handling at all our stations where we sometimes have challenges. As we grow, we may also need a completely dedicated freighter operations team, starting with capacity and revenue management."



Since Arrum heads the sales team, his focus is on that, and he wants to increase the number and spread of the team around the continent.

"Where we have placed our own people we have seen our business change virtually overnight," he said. "For example, Addis Ababa went from virtually 0% to 300%. How quickly we expand our sales presence, though, will depend on the frequency of flights the stations have."

He said that the carrier is looking to expand frequencies to Entebbe, Dar es Salaam and Zanzibar, which are all doing well and are steady. The latest wave of massive oil and gas projects around Africa is stimulating demand for cargo, and KQ is looking to take advantage. So, too, in the growing pharmaceutical market, coming in from both Europe and India in massive amounts, as the overall level of healthcare improves.

All of this would be encouraging for an airline of KQ's size if it were not for the looming threat of the non-African giants, such as Emirates. They are poised to swamp the regional industry before it has an opportunity to grow in strength until it can readily compete.

This is certainly something that KQ CEO Titus Naikuni recognises and has spoken at length about. At the African Airlines Association

(AFRAA) conference in Johannesburg (in late 2012) he even raised the suggestion of Africa's big three – Kenya Airways, South African Airways and Ethiopian Airlines – merging in order to compete. While that seems unlikely at the moment, the more reasonable suggestion of a pan-African alliance of airlines was also mooted and, unlike previous years, this time there was considerable interest in the suggestion.

Arrum agrees that the threat is real and African carriers need to recognise it. "It is becoming more and more important that African carriers learn to cooperate, rather than going for each other's necks all the time," he said. "Because, if we don't, eventually what will happen is that other players from the Middle East and Europe will be all over the place while we are standing by fighting each other. That is fact and we cannot ignore it. Some of the African players are beginning to understand why they need to form an alliance. But the discussion about doing it has gone on too long. Let's start doing it."

Arrum suggests existing hubs – Addis Ababa in the north, Nairobi in the centre, Johannesburg in the south, and another undecided one in the west – could, if there was better cooperation between the relevant airlines, strengthen all of their businesses.



"If the carriers in all of those places can learn to work together, then I think we can put together a front and not be eaten up and swallowed. We can be stronger players."

However, as can often be a problem, this requires regulators to help the industry. "There is supposed to be an open sky policy within Africa for African carriers, but while plenty of countries have put ink on paper they have not actually implemented it," said Arrum. "Some of the greatest challenges we face are in getting permits to go into African airspaces."

Not all African countries have this attitude though. "The Malawian Government has been very good," admitted Murianki. "They allow us into three cities. They recognise that competition is a reality in life and that it is foolish to wish away your competition."

And, what is true for aviation in general, Murianki believes is doubly so for under-appreciated cargo.

"Africa is still totally underserved by air transport and air cargo more so. It's an undervalued asset and I see a lot of potential. For Kenya Airways, I believe cargo is the main growth area for the airline and is so significant it needs to be a subsidiary of its own, but that won't be immediate. Currently, it is a unit under the chief operating officer. We have work to do first; we need to mature."

"Yes, I want to develop some routings, but first we have to focus on profitability, the efficiency of the terminal and the operation of the freighters. And I have the challenge of making it all work," he said, laughing.

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The air cargo market is now lagging behind the global economic recovery.

Martin Rivers finds out how IAG Cargo, one of the largest freight operators serving Africa, is adapting, while playing to its strengths.

New markets key to IAG easing the burden

News that British Airways will end its aircraft, crew, maintenance and insurance (ACMI) agreement with Atlas Air's Global Supply Systems, a wet-lease operator, caused some dismay among aviation aficionados.

The end of the partnership means that, from May onwards, the Boeing 747-8F will no longer be seen flying in BA's livery. The flag-carrier, a subsidiary of International Airlines Group (IAG), will instead rely on belly capacity in its passenger fleet, plus a new commercial agreement with Oneworld partner Qatar Airways.

But, beyond the sentimental fall-out, BA's decision to axe the 747-8F points to continued uncertainty in air freight markets. Indeed, some commentators now believe a structural change has taken root across the entire cargo industry.

Speaking as BA upgraded one of its Johannesburg flights to the Airbus A380, Tony Snell, IAG Cargo's region commercial manager for the Middle East and Africa, said the switch away from all-freight aircraft was a pragmatic move that boosted flexibility, and he added that further cooperation with Qatar was likely.

"It's enabling us to maintain our presence in key markets when we won't have the long-haul freighters, which is important," Snell stressed. "There's definitely an appetite on both sides to work closely together, and I think we can benefit each other."

The change comes as other operators also show an appetite for withdrawing from the dedicated freighter market. In February, Air France-KLM CEO Alexandre de Juniac said he would consider further cuts to the group's cargo

fleet. Air France is already in the process of retiring three 747-400ERFs, leaving it with just two 777Fs. KLM, meanwhile, leases all four of its 747-400ERFs to subsidiary Martinair Cargo.

In the Asia Pacific region, cargo volumes were down 1% in 2013 – the worst performance of any region. Weak market conditions prompted Cathay Pacific, the world's second-largest international freight carrier, to cancel an order for eight 777-200Fs last year, while it also grounded several of its 747-400Fs.

"The year 2013 was tough for cargo," warned Tony Tyler, director general of industry body IATA, noting that global freight tonne-kilometres (FTKs) increased by only 1.4% last year.

"While we saw some improvement in demand from the second half of the year, we can still expect that 2014 will be challenging."

Airlines were forced to add belly capacity last year due to a 5.2% rise in global passenger demand. But global trade volumes are only moving in tandem with economic growth, rather than accelerating at twice its pace, as has historically been the norm. Rising freight volumes by sea have also significantly outpaced airfreight growth, with exporters favouring lower costs over speed and convenience.

Factor in the growing tendency for manufacturers to 'reshore' back to the developed world – citing rising costs elsewhere – and it is easy to see why airfreight yields are under pressure.

Africa is not immune to such worries about over-capacity. In 2012, the region enjoyed rampant growth of 7.1% in freight volumes, buoyed by new routes to China via the mega-hubs in the Middle East. But last year saw the

growth taper off to just 1% – below the global average.

For IAG Cargo, which shuttles freight from 22 points in Africa to its hubs in London and Madrid, the sluggish environment partly explains BA's decision to deploy the double-decker A380 to Johannesburg.

The aircraft started serving Johannesburg three times weekly in February, taking over some of BA's twice-daily 747-400 flights. Frequencies rose to six times weekly in March, and will become daily later this year. The switch is beneficial for passenger traffic, with the 469-seater A380 carrying 124 more people than the 747-400. In the cargo hold, however, BA's A380s have only five pallets compared with six the 747-400's six.

Nonetheless, IAG Cargo's response to over-capacity has been more refined than simply scaling back operations. On the contrary, the carrier is focused on lifting load factors while ensuring that freight "complements" the group's passenger business.

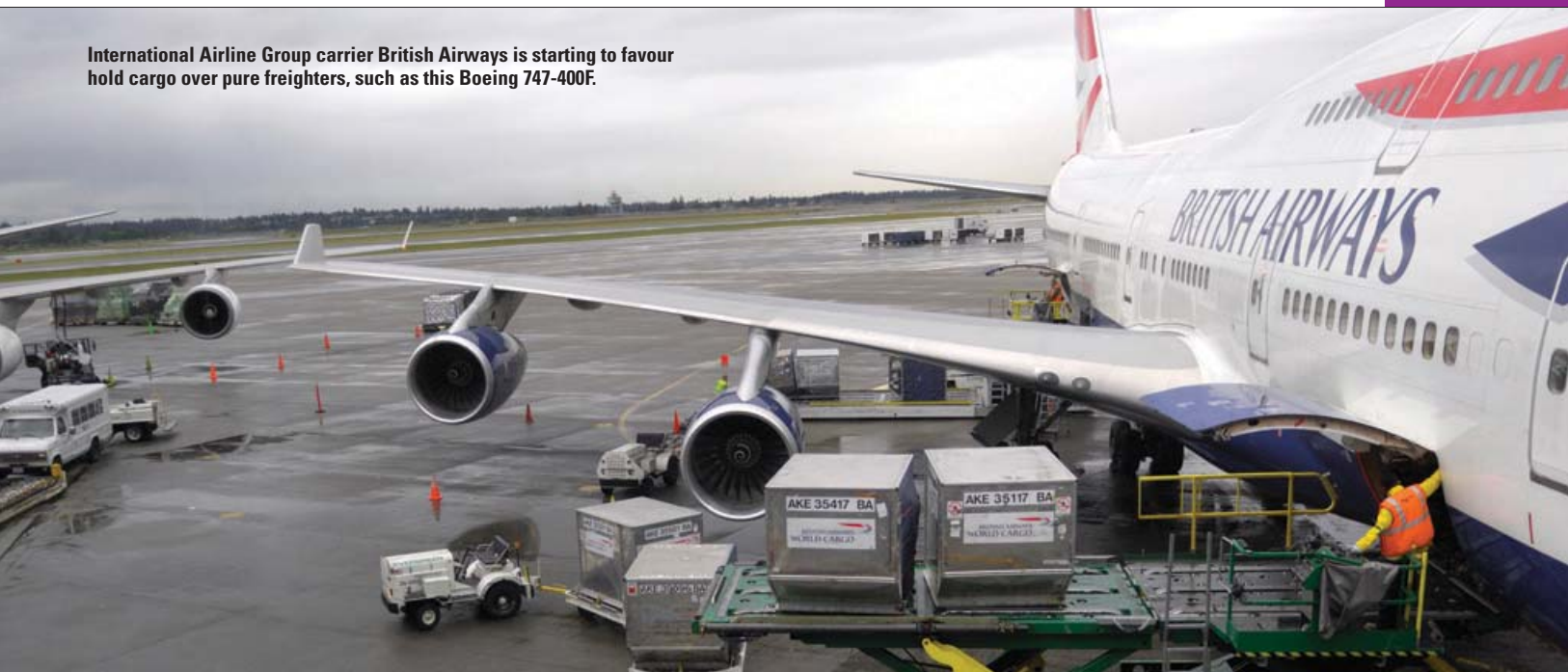
"We do pretty well with the capacity we have available to us," Snell said. "I believe that the African freight market will stay stable. Our flows are stable. I don't think there's significant growth, but I don't think there's a decline either... From southern Africa we tend to ship fruit and fish – lychees, grapes, blueberries and raspberries. From east Africa it tends to be more vegetables and flowers. And then from west Africa, processed fruit and chopped fruit."

In an effort to boost efficiency on its A380 operations, Snell noted that BA had purchased two additional unit load device (ULD) positions in the aircraft. It has also become the first carrier to receive certification for a maximum take-off weight at 12 metric tonnes above the current norm for the type.

Air conditioning on the aircraft is accurate to

"We're keen to develop every market as best we can."
TONY SNELL

International Airline Group carrier British Airways is starting to favour hold cargo over pure freighters, such as this Boeing 747-400F.



1°C, which enables IAG Cargo to preserve the perishable freight that forms the bulk of its African cargo. But, in contrast to pharmaceuticals originating in Asia, Snell said that fruit, vegetables and livestock do not require the more advanced special temperature controls used on other routes.

“On this aircraft and the others the temperature control is sufficient,” he said. “It needs to be kept chilled rather than very cold, and then the speed of delivery means that the cool chain is preserved in London.”

With about 80% of intercontinental traffic from Africa being provided by foreign carriers, IAG Cargo is a logical choice for producers seeking to export goods to Europe and North America. Three-quarters of the fresh produce shipped by IAG Cargo from Johannesburg terminates in the UK and Ireland, with forwarders like Morgan Freight and Lonrho serving as ‘middle men’ for ground-based logistics.

Along with its Johannesburg base, the carrier’s African network centres on Cape Town – which will benefit from three additional weekly 777-200ER flights in May – Luanda, Nairobi and Accra. It also has sizable cargo outflows from Entebbe, Abuja and Lagos.

“The freight we carry out of Africa is mostly bound for the UK and northern Europe, but there’s also tuna that goes to North America,” Snell noted. “Our focus is on our to-market delivery proposition. We can offer a very quick overnight flight, early morning delivery to the perishable handling centre in London, which enables them to get it into the shop very quickly.”

But capacity is also actively being marketed by IAG Cargo for inbound journeys, resulting in a six-fold increase in flows from North America to Johannesburg over the past five years.

The operator’s dependence on passenger

flights by BA and Iberia, IAG’s other main subsidiary, inevitably limits its network development options. However, Snell said local partnerships with carriers like Kenya Airways, DHL and Air Uganda expand its reach.

“We’re keen to develop every market as best we can,” he said. “In east Africa, we’re setting up flows from Juba; we’re looking at setting up flows from Addis Ababa. We want to broaden our set-up so that we can get more relationships in some of those other stations – Bujumbura, Kigali – places we don’t actually fly, but where we can use relationships with other carriers to enable us to flow freight into either Entebbe or Nairobi.”



While IAG Cargo seeks out new partners, the parent company is positioning itself defensively for further headwinds.

The group’s cargo revenue fell 11.8% last year, with volumes down 7% year-on-year, and yields down 5.2%. In an otherwise upbeat full-year report for IAG, the cargo division lowered expectations and said it would aim to “at least cover our marginal costs.”

IAG chief executive Willie Walsh added that there is now “no connection” between global passenger and cargo markets. He endorsed the view that airfreight has undergone a structural change, saying: “The traditional lead indicator that cargo provided is completely gone.”

If accurate, that would mean freight activity no longer serves as a reliable bellwether for the health of the global economy.

Perishables require fast, professional and reliable handling, and producers expect access to onward destinations. IAG’s decades of experience, and its global network of 350 cities, makes it one of the few operators up to the task.

SOMMAIRE

De nouveaux marchés pour IAG Cargo

Martin Rivers nous dévoile IAG Cargo, l'un des plus grands opérateurs de fret desservant l'Afrique, s'adapte au marché.

La fin du contrat ACMI qui liait British Airways à l'opérateur Atlas Air a jeté un froid dans le secteur du fret aérien. Pour l'opérateur IAG Cargo, il s'agit de s'appuyer sur une nouvelle entente commerciale notamment avec Qatar Airways. Cette décision de la BA continue à semer le trouble sur le marché du fret aérien et un changement structurel semble en marche.

Alors que BA va relier Johannesburg avec un Airbus A380, Tony Snell, directeur commercial d'IAG Cargo pour le Moyen-Orient et l'Afrique, affirme que cette tendance d'opérer un avion uniquement cargo reste une solution pragmatique qui augmentera sa flexibilité.

Les volumes de fret ont par exemple diminué de 1% en 2013 dans la région Asie-Pacifique. Cela a poussé Cathay Pacific à annuler une commande de huit B777-200F.

« 2013 a été une année difficile pour le fret, 2014 le sera encore », précise Tony Tyler, directeur général de l'IATA.

L'Afrique n'est pas à l'abri d'avoir une surcapacité dans le secteur du fret. Le continent a connu une croissance effrénée de 7,1% en 2012 soutenue par de nouvelles routes vers la Chine et le Moyen-Orient. Le fret n'augmentera que de 1,4% en 2013.

Selon Tony Snell, IAG Cargo opère efficacement avec sa capacité actuelle. « Notre société reste un choix naturel pour les producteurs de fruits, de légumes ou de produits frais qui cherchent à exporter des marchandises vers l'Europe et l'Amérique du Nord. »

IAG Cargo est désireux de développer des flux vers Juba, Addis-Abeba ou encore Bujumbura ou Kigali. Des partenariats sont possibles pour opérer vers Entebbe ou Nairobi. Selon Willie Walsh, directeur général d'IAG, il n'existe maintenant plus de lien entre le marché mondial de passagers et celui du fret. Le fret aérien s'est donc engagé dans un changement structurel, ce qui rend caducs les indicateurs du marché.

Ethiopian Airlines, the fastest growing airline in Africa, is making a huge investment in its cargo division. The airline is acquiring new freighter aircraft and building a state-of-the-art cargo terminal. Kaleyesus Bekele reports from Addis Ababa.

SHIP SHAPE FOR THE FUTURE

Ethiopian Airlines has transformed itself into an aviation group consisting of seven different profit units – ET International, ET Domestic, ET Cargo, ET Aviation Academy, ET Catering, ET Ground Handling and ET MRO.

The move, which took place on October 1, was in line with the company's Vision 2025, a 15-year development strategy that it launched in 2010.

Although the first cargo charter operation was launched to Nairobi in 1946, it was the boom in agricultural products being exported from Ethiopia to Europe starting in the early 1970s that has driven growth in Ethiopian's cargo services.

In addition to utilising the belly space of the Boeing 767-300, 757-200, 777-200LR, and 737-700/800 passenger fleet aircraft, Ethiopian's cargo services include dedicated freighter aircraft operating on both a chartered and scheduled basis.

According to Ethiopian Cargo, outgoing goods from Addis Ababa typically consist of frozen meat, fruits, semi-processed (finished) leather, vegetables, flowers, carpets, rugs, chilled meat and frozen fish products. Incoming cargo includes chemicals, equipment and machinery, spare parts, electronics, garments, medicines and tea.

Ethiopian Cargo has a history as long as the airline's passenger services. According to the company, the cargo division now contributes 15% of total group revenue.

Ethiopian Cargo adopted its first ever five-year strategic plan in 2008. The introduction of this 'road map' has helped identify cargo services as a major and strategic business unit of the airline group. It has included a multi-million dollar infrastructure expansion programme, including the phasing-in of six wide-body dedicated freighter aircraft and construction of a state-of-the-art cargo terminal.

This has enabled the cargo business to flourish and achieve



Ethiopian Cargo now has two Boeing 777-200Fs, which are replacing its ageing 757s and MD11Fs.

record growth rate of more than 25% per annum during the past few years.

Following these results, a new 15-year cargo strategy was launched to harness growth opportunities in Ethiopia, Africa and across the globe. Ethiopian Cargo has been established as a fully fledged profit centre with the vision to be the most competitive African cargo airline by providing safe, market-driven and customer-focused cargo, courier and mail transport services by 2025.

The scheduled and charter operations serve points in Europe, Africa and the Middle East, mainly to export flowers, fruit and vegetables, and chilled meat. Services to India, Hong Kong and China carry low-volume goods, such as leather products.

Currently, after phasing out two Boeing 747 freighters, Ethiopian Cargo operates six dedicated freighters – two Boeing 757-200Fs, two MD11Fs and two 777-200Fs. It will soon replace the 757s and MD-11s with 777-200LRFs. Orders have been placed for four 777-200Fs for delivery in 2014 and 2015. By the end of Vision 2025, Ethiopian Cargo will have 11

B777-LRFs (six owned and five leased), four B767Fs (two owned and two leased), and three B737SFs.

The company said fleet acquisitions so far had helped it take advantage of performance efficiency and cater for the increase in demand, especially for northbound horticultural and similar products to the new markets in Asia and eastern Europe.

Ethiopian Airlines' CEO, Tewolde Gebremariam, claimed his company is the largest cargo operator in Africa and among the top 50 in the world. He said it currently operates to 24 destinations and annually carries around 200,000 tonnes of cargo. Over the past few years, Ethiopian has seen a huge upsurge in its cargo operations, thanks largely to the growth of exports.

"In 2005-06, our cargo revenue was just 610 million birr (\$30 million). In 2012-13, it was close to 6 billion birr, a tenfold increase. Ethiopia exports mainly perishable products such as flowers, vegetables and meat, which are carried by air, by and large by Ethiopian Cargo," he said.

Tewolde added that, although the cargo business was difficult in the current context of slow global economic growth, persistently high fuel prices, and unbalanced directional flows, the

"Our cargo business has strong competitive advantages."
TEWOLDE GEBREMARIAM

“We are now into the fourth year of our Vision 2025 Ethiopian Cargo strategic roadmap and are meeting all our targets.”

TEWOLDE GEBREMARIAM

economic growth of Africa in general – and Ethiopia in particular – gave his company great confidence about the future prospects.

Africa-Europe and Europe-Africa cargo business is expected to grow between 5-6% per annum over the next years. Owing to the growing economic and trade ties between Africa and Asia, robust air cargo growth is also forecast between the two regions.

“Our cargo business has strong competitive advantages, such as recognised brand in Africa, strategic location, low unit costs, economies of scale with strong hub and spoke network, deployment of latest technology, growing exportable products in a northbound direction, and synergetic advantages with cross-utilisation of resources with our other businesses,” Tewolde said.

He continued: “We are now into the fourth year of our Vision 2025 Ethiopian Cargo strategic roadmap and are meeting all our targets. In line with our roadmap, we have recently established our cargo business as a fully fledged profit centre of the Ethiopian Airlines Group, with the aim of fully tapping into the fast-growing air freight business between Africa and the rest of the world.”

The airline has also started to implement a

multiple cargo-hub strategy with west African partner airline Asky, by deploying a Boeing 737-400 freighter which, through its west African hub in Lomé, is collecting outbound cargo from west and central Africa and feeding Ethiopian’s global cargo network.

Similarly, the airline is distributing in-bound cargo to the entire west and central Africa region through this partnership. The airline intends to replicate this model in other regions.

The airline’s Vision 2025 cargo strategy is based on four pillars – fleet; infrastructure; human resource development; and systems, processes and procedures.

The national flag-carrier continues to expand its cargo fleet; two of the four additional Boeing 777Fs will be phased-in in October and November 2014, while the remaining two will arrive in September and October 2015. By 2025, the airline plans to operate close to 20 dedicated freighters to 37 destinations across five continents.

Currently, the airline has a cargo terminal with more than 300,000tonnes annual capacity. It recently completed a state-of-the art cold storage facility with a 65,000tonnes annual capacity and it is in the process of building, in two phases, a new cargo terminal with a 1.2 million tonnes

annual capacity, which will be one of the biggest in the world.

Tewolde added: “The third pillar of our strategy is human resource development. We are investing heavily in our aviation academy so that it is able to produce sufficient technical and leadership personnel for our growing cargo business. Over the last three years, we have invested around \$55 million into the expansion of our academy, which now has an intake capacity of 1,000 trainees.”

Tewolde said his airline is improving its systems, processes and procedures with the aim of providing the most efficient cargo service to its customers. “We started to implement electronic airway bills (e-AWB) in 2012 and are finalising preparations to implement e-freight with the expected ratification by Ethiopia of the 1999 Montreal Convention... and [we] are working to achieve cargo 2000 (C2k) certification by 2015.”

IATA has said that Ethiopian is taking the lead in Africa by introducing the e-freight business, and that the Ethiopian cargo market is the fourth fastest growing in the world.

The national flag-carrier plans to carry 820,000tonnes annually and to generate \$2 billion from the cargo business by 2025.

L'aéroport international SSR Ramgoolam de l'île Maurice s'est engagé en janvier dernier dans le programme « Airport Excellence in Aviation Safety » (APEX) de l'Airport Council International (ACI). **Vincent Chappard** a interrogé Serge Petit, directeur général d'Airport of Mauritius, sur l'importance de cette démarche et les projets de développement de la zone aéroportuaire.



Serge Petit: Nous pensons qu'il est impératif que la qualité de l'infrastructure soit accompagnée d'une qualité de services.

L'île Maurice s'engage dans le programme APEX

VC : Pourquoi Airport of Mauritius s'engage-t-il dans le programme APEX? Quel est l'objectif?

SP : Nous avons maintenant une très belle infrastructure avec des développements réalisés sur les pistes. Nous pensons qu'il est impératif que la qualité de l'infrastructure soit accompagnée d'une qualité de services, de prestations de l'ensemble des acteurs aéroportuaires afin de respecter les normes internationales. Le programme APEX nous permet, ainsi, de profiter des meilleures pratiques internationales, d'établir un constat sur ce que nous sommes en train de faire, de mesurer le niveau de notre prestation, de pouvoir réagir efficacement et de trouver des champs d'actions qui nous permettraient de monter vers l'excellence. Nous bénéficions d'une expertise internationale qui va tirer l'île Maurice vers le haut. Nous avons aussi la possibilité de rejoindre l'ACI pour décliner ces exercices sur d'autres aéroports. C'est aussi une source de motivation et de cohésion pour notre personnel.

VC : Quels sont les prochains développements de l'aéroport international SSR Ramgoolam?

SP : Airport of Mauritius va mettre en place 2 aires de stationnement additionnelles pour les avions long courriers. Nous allons également construire d'ici 2015, une nouvelle tour de contrôle, un pavillon d'accueil pour recevoir les hôtes de la république et du gouvernement mauricien. Nous prévoyons également de réhabiliter l'ancien terminal et surtout d'aménager une nouvelle zone cargo.

VC : Pouvez-vous élaborer sur la réhabilitation de la zone cargo?

SP : Cette zone va couvrir 72 hectares et nous développerons 17 hectares dans un premier temps. Nous installons actuellement l'infrastructure de base. Cette phase sera suivie immédiatement par le marketing des espaces. Nous sommes également en discussion avec les opérateurs cargo pour un déplacement vers cette nouvelle zone plus structurée. Nous envisageons à terme la construction d'un terminal cargo pour répondre à ces besoins.

SUMMARY

APEX: a route to the top

SSR Ramgoolam International Airport in Mauritius committed itself in January to the Airport Council International (ACI) airport excellence (APEX) programme, as **Vincent Chappard** found out when he talked to airport CEO **Serge Petit**.

APEX, designed by ACI in collaboration with the International Civil Aviation Organization (ICAO), aims to measure the performance of airport security in comparison with international best practices.

It was developed to support airports of all sizes and complexities to identify and mitigate security vulnerabilities through peer reviews.

Mauritius, itself, generates the required audits and then ACI provides guidance, facilitates improvements through coaching, provides training and promotes the exchange of experience and best practice to address any shortcomings.

The programme is based on ICAO standards and recommended practices (SARPs).

"We now have great infrastructure and believe it is imperative that this is accompanied by quality services, meeting international standards," explained Petit. "The

APEX programme allows us to enjoy the best international practices and to measure the level of our service. It is also a source of motivation and cohesion for our staff."

There are also more planned developments at SSR Ramgoolam International Airport.

"We will introduce two additional parking areas for long-haul aircraft," said Petit. "We will also build a new control tower in 2015, and a welcome centre for receiving guests of the Republic and the Government of Mauritius."

There are also plans for a new cargo area. "This area will cover 72 hectares, with 17 hectares developed first," said Petit.

"We are currently installing the infrastructure. We are in discussion with cargo operators about them moving to this new, more structured area.

"We also plan to build a cargo terminal to meet their needs."

■ Le programme APEX

Le programme « Airport Excellence in Aviation Safety » est conçu par l'association Airport Council International (ACI) en collaboration avec l'OACI. Il vise à mesurer la performance des aéroports en matière de sécurité en comparaison avec les meilleures pratiques internationales. Il a été développé pour soutenir les aéroports de toutes les tailles et complexités afin d'identifier et d'atténuer les vulnérabilités de sécurité grâce à des examens par les pairs. L'ACI fournit des conseils, facilite les améliorations grâce à l'encadrement, prodigue des formations et favorise les échanges d'expériences et les meilleures pratiques pour remédier aux insuffisances identifiées lors de la visite des experts. Ce programme est basé sur les normes et pratiques recommandées (SARP) des annexes 14 et 19 de l'OACI et les meilleures pratiques de l'ACI.

L'île Maurice réalise elle-même les audits nécessaires de ses aéroports afin de les certifier, selon Surapranand Kinoo, directeur de l'aviation civile mauricienne. « Nous faisons parfois appel à des organismes externes pour avoir une autre vision. L'APEX vient ainsi en complément en appliquant une série de procédures pour vérifier si des problèmes n'auraient pas été détectés et trouver des solutions appropriées. Nous y trouvons donc des opportunités et pouvons bénéficier de l'expérience des experts de l'ACI. »

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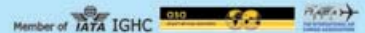


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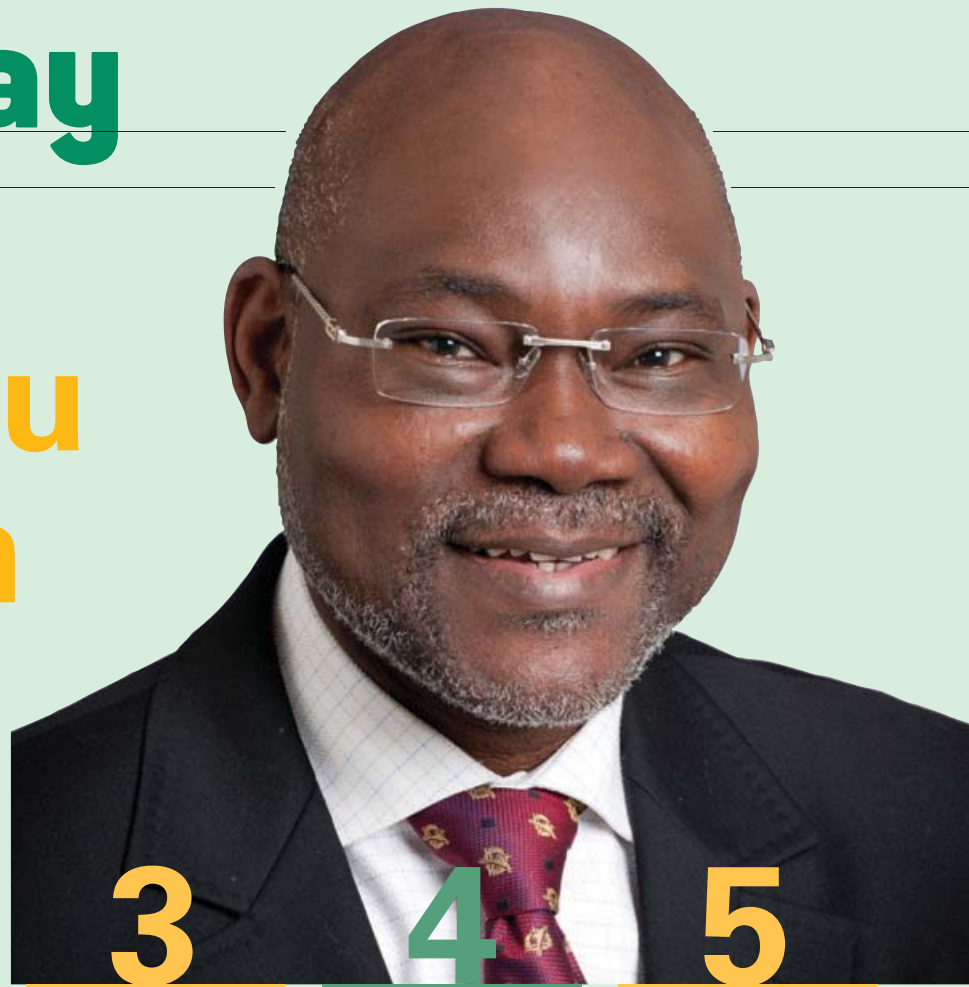
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Chamsou Andjorin

Marcella Nethersole *speaks to the Boeing director aviation safety, Middle East & Africa.*



1

■ What do you see as the biggest challenge to the development of the air transport industry across Africa?

In my view, it is the market size. Although the African market has experienced impressive growth for the past few years, it is from a very low base.

Africa is credited with a global traffic share of less than 3% but has a population of about 15% of the world and 20.4% of the total landmass.

Impediments include strong protectionism, high taxes and charges, inadequate infrastructures, and poor access to finances.

2

■ What role does the manufacturer have in aviation safety?

The manufacturer's role in aviation safety is very well represented in the Boeing safety leadership model, which is based on assuring a healthy safety foundation through our products and services, promoting worldwide safety culture through cooperation with all stakeholders, and aligned focus, and promoting a proactive risk management approach through data driven approach and knowledge sharing.

This is done across the value stream, from design, to production, certification, operation, maintenance, infrastructures and regulation.

3

■ What do you see for the future of African aviation?

I am very optimistic.

As the middle class is growing, with increasing purchasing power, and the growing economy, I foresee the aviation market growing to a significant size and truly playing a catalytic role for economic development.

But the roadblocks identified earlier need to be addressed. A safety oversight capability is the foundation.

4

■ What does a typical day involve for you?

My role is to work with the stakeholders in Africa and Middle East to establish the regional safety priorities and to mobilise Boeing's available resources to address those priorities.

This is done through the regional aviation safety groups, where governments and industry partners develop regional safety strategies aligned with the ICAO global aviation safety plan, and develop implementation plans for safety initiatives. We do the same with our customers, to help them address their safety concerns, and share experiences.

5

■ What is the biggest challenge you face in your job?

The biggest challenge is the lack of commitment [in the world] to aviation safety and the inadequate allocation of resources to train and retain skilled personnel.

Given the size of national and regional aviation industries, there is no other option than regional cooperation, but there are very few successes of regional cooperation.

“ I foresee the aviation market growing to a significant size and truly playing a catalytic role for economic development. ”



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