



AFRICAN AEROSPACE

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN AFRICA

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THE KEY TO UNLOCKING RWANDA

«LA CLÉ POUR
DÉVERROUILLER LE RWANDA»

PAGE 66



AIR TRANSPORT

Why
Malawi
is smiling
again

PAGE 16



DEFENCE

Nigeria
boosts
combat
power

PAGE 44

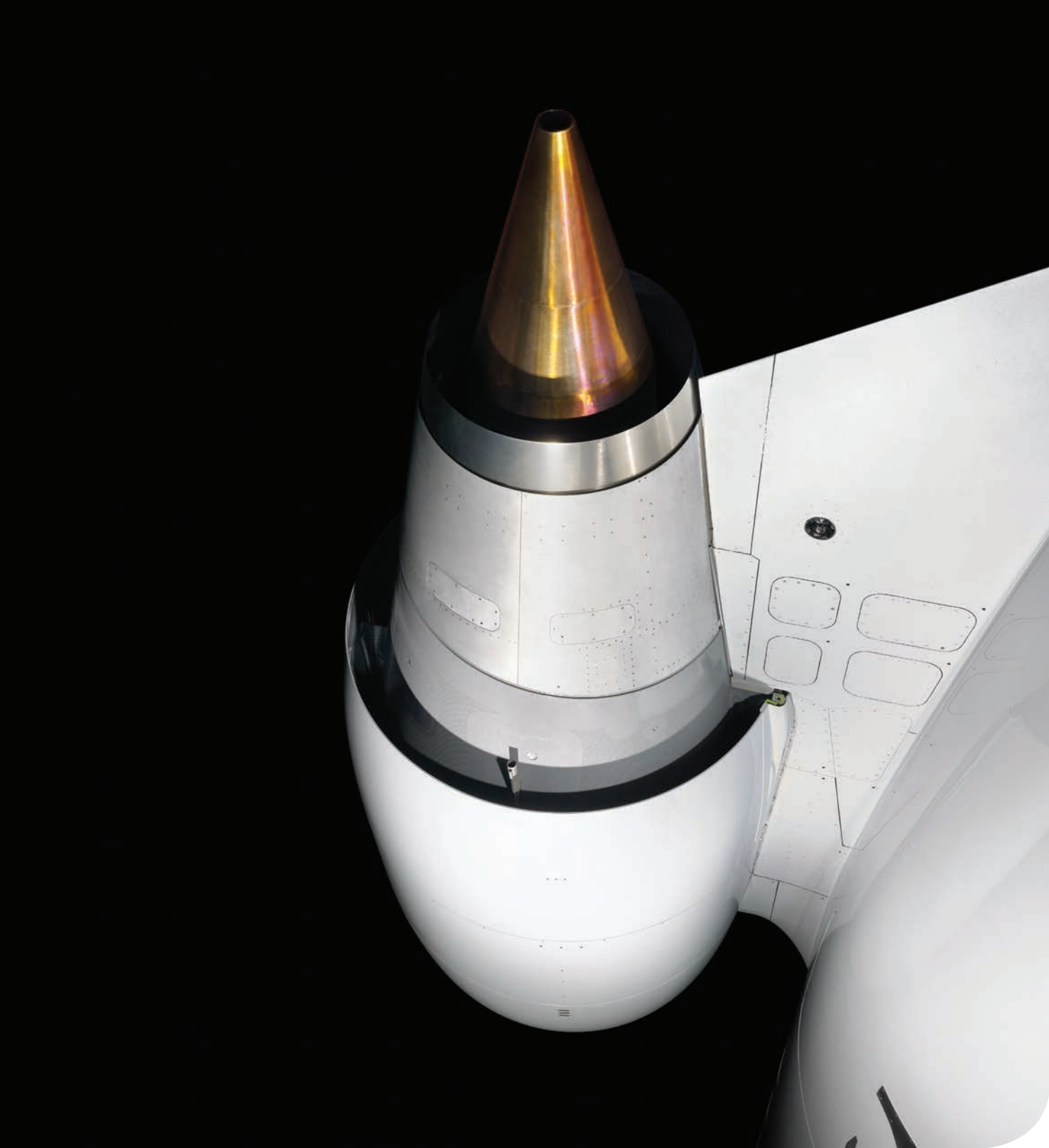


CONSERVATION

Can drones
help to
protect
wildlife?

PAGE 53





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Africa must engage to change perceptions

The first Aviation Africa event held in Dubai in May was a watershed moment in many ways. One thing that it highlighted was the anxiety felt by many African aviation businesses.

This is not anxiety about the potential of the business but more over the reluctance of the aerospace industry outside Africa to take a look at how it can get involved, how it can invest, and how it can partner with local companies.

That Africa is viewed by many in the world as dangerous and mysterious is certainly detrimental. Yet, the overwhelming feeling after any visit is of the vast space and untapped potential. It is the last great frontier, having taken over from the Asia Pacific as the next great hope for development.

The hotspots for trouble in Africa tend to give it a bad name. However, as the delegates meeting in Dubai pointed out, this does not paint a true picture.

Doing business in Kenya or South Africa or Angola or most of Africa's other 50-or-so countries is likely to prove worthwhile. Yes, there is red tape and other frustrations, such as finding skilled workers, but none of the problems are insurmountable. It's just a case of taking a long-term view and finding local partners who can get things done.

How can perceptions be changed? One way could be for African aviation/aerospace players to engage more with the world aviation/aerospace community. As I write this, I am at the Paris International Airshow and a search on the show's website for Africa turns up very little. So where are the Africans? Why aren't they engaged? Even searching for such stalwarts of the industry as Denel revealed no result.



At the Aviation Africa event there was an exhibition hall with several African companies and at the EBACE business aviation show in Geneva a few days later the African Business Aviation Association (AfBAA) exhibited with several of its member companies. In fact, AfBAA was present at Aviation Africa too.

This engagement is precisely what sector groups need to do if they are to make international connections.

Getting over the perceptions issue is a wider problem, not helped by adverse news about trouble spots and terrorist attacks. But these are isolated. More than 90% of the continent's land mass is relatively safe at any one time. It's not hard to find where the riskier areas are and to take necessary precautions if doing business there.

Whether Africa can work together to improve its image in the wider world is a question for leaders of countries rather than aerospace/aviation people, but that doesn't stop the latter lobbying the former for a more co-ordinated, proactive approach across the board – as all industries in Africa would benefit.

Ian Sheppard, Editor

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COVER: James Musoni, Rwanda's Minister of Infrastructure.

Advertisers

Abyssinian Flight Services and Pilot Training School	103
Aerotask FZE	36
AfBAA - African Business Aviation Association	68
African Aviation Services	84
AIFA - AVIC International Flight Training Academy (Pty) Ltd.	41
Airbus	2, 3
AJW Group	35
Bestfly Flight Support	57
Bombardier	IFC
CFM International	33
Dassault Falcon	59
Dubai Airshow 2015	78
Embraer Commercial Jets	7
Embraer Defence & Security	77
Ethiopian Airlines	8
FlightPath International	IBC
Ingenieria Semasa	93
International Flight Clearances	29
Jet Support Services, Inc (JSSI)	60
Kenya Airways	88
Lufthansa Technik AG	25
Mebaa Show Morocco 2015	99
MH Aviation Services	14
NEXUS	22
Pan Am International Flight Academy	31

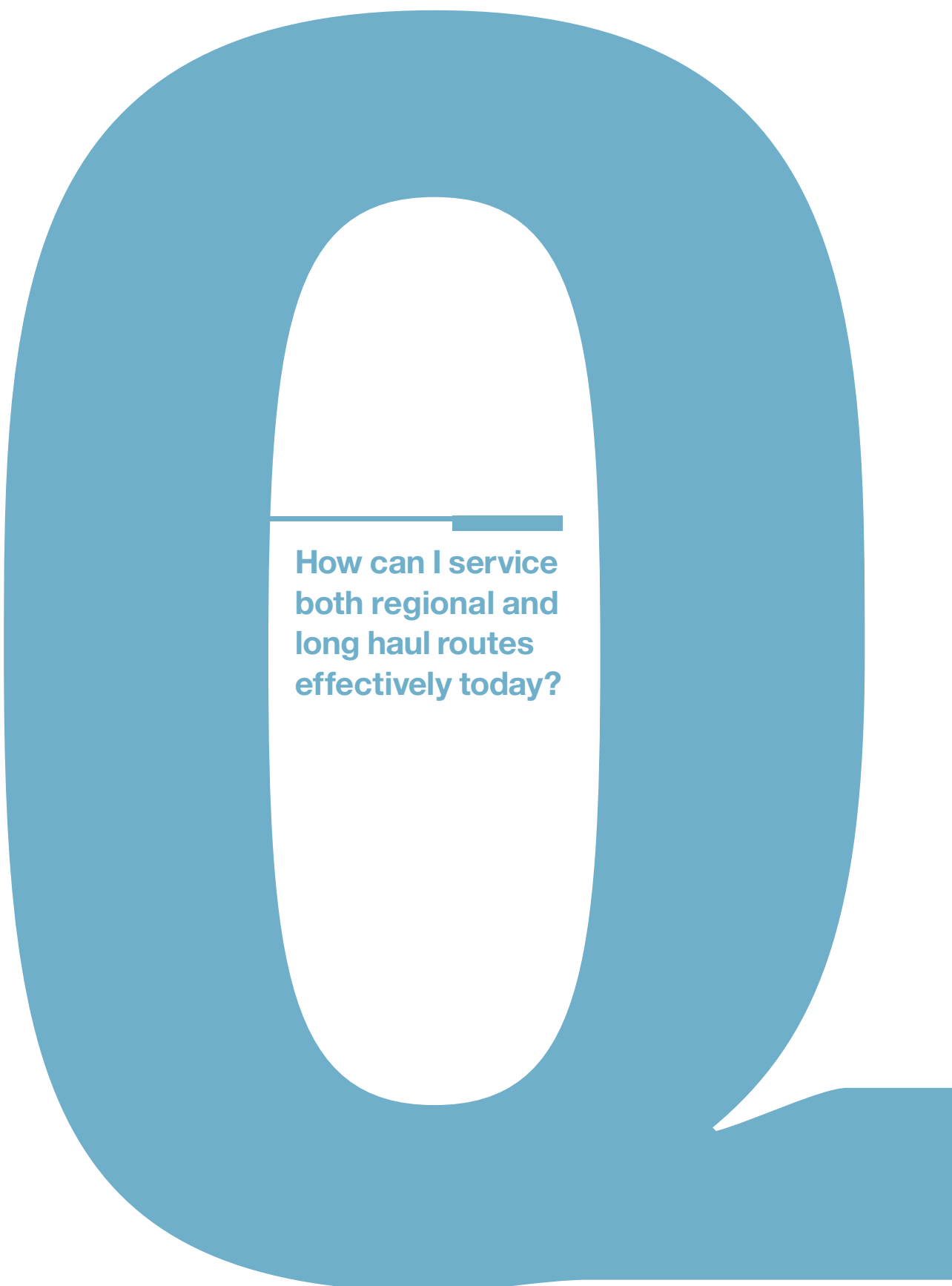
PRIMUS Aero Group	81
Rockwell Collins (ARINC)	4
Sabre Airline Solutions	26
San Marino Aircraft Registry	63
Saudia Aerospace Engineering Industries	IBC
South African Airways Technical (SOC) Ltd	90
Spectrum Aeromed	55
Sprung Instant Structures EC.	29
SuperJet International	19
Textron Aviation	11
Turkish Aviation Academy	12, 13
Universal Weather and Aviation	52




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09 **business brief**

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

AIR TRANSPORT

16 Malawian takes off

With the help of Ethiopian Airlines, Malawi has the start of a new national airline.

«Le Malawi a lancé une nouvelle compagnie aérienne nationale grâce à Ethiopian Airlines.»

20 Wise move?

It may seem unwise for Skywise to take on SAA and Comair, but it is confident it can succeed.

23 Daallo fights back

Daallo boss Mohammed Yassin describes how Daallo has continued to provide a “lifeline” for the country’s people.

27 Culture club

Respecting culture in your marketing is a key to success, Africa’s first Chinese-owned airline believes.

30 Challenge Africa

Although African air transport is evolving and operations are becoming more viable, it is still a precarious path.

«Même si le transport aérien africain évolue et que les opérations deviennent plus viables, la situation demeure précaire.»

34 BlueSky thinking

Botswana’s BlueSky Airways is planning to start airline operations again. Victoria Moores spoke with CEO Mark Spicer.

CARGO

37 The freight shake-up

Tom Pleasant’s analysis of African air freight shows that home-grown carriers are coming back.

«L’analyse du fret aérien africain de Tom Pleasant montre que les transporteurs du continent reviennent en force.»

40 Weight of expectations

With demand for air cargo increasing dramatically, IATA says there is much still to be done to improve efficiency.

DEFENCE

42 Ethiopia’s failed air force

While the country has struck gold with its airline, its air force has declined gradually due to neglect.

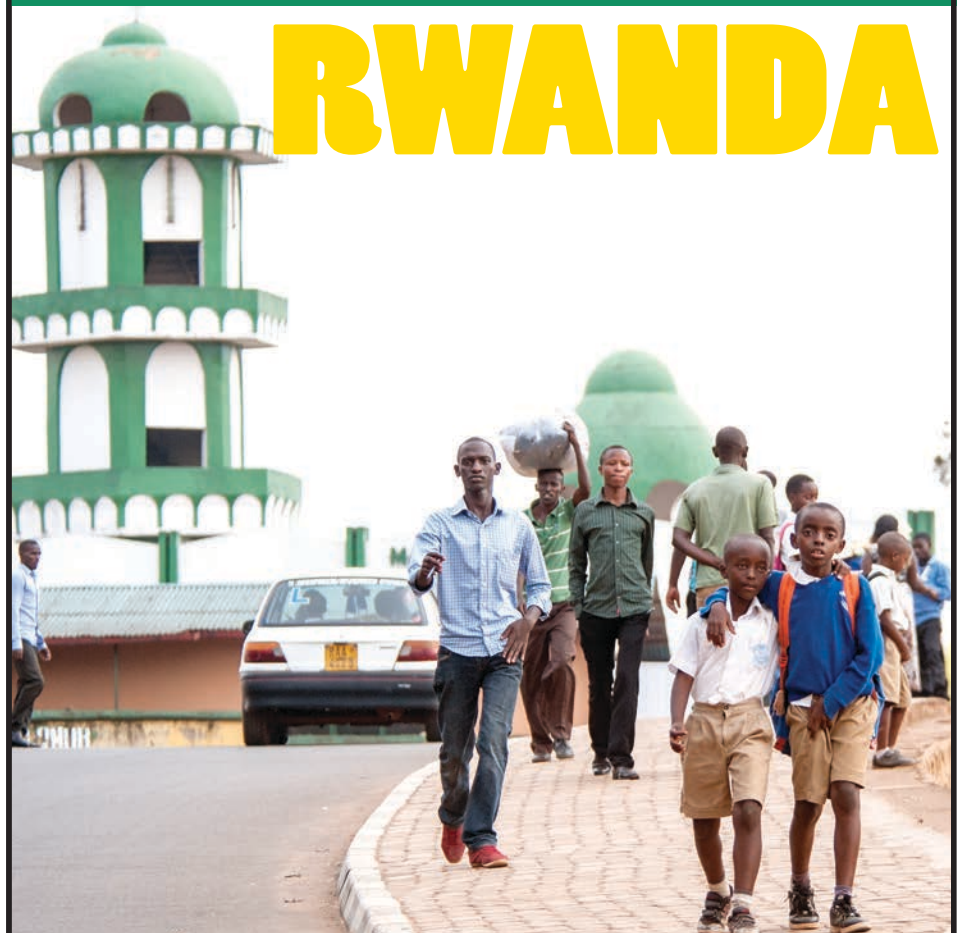
44 Nigeria’s build-up

With Boko Haram ripping into its population, Nigeria has been forced to seek more airborne equipment.

Continued
on Page 6

SPECIAL REPORT

RWANDA



66 LAND OF HOPE

The little land-locked country has left its past behind and it feels as if Kigali is the centre of Africa again.

70 SHINING LIGHT: RWANDAIR

Having built a small but effective route network in Africa, RwandAir is looking to expand further as it waits for new Airbus A330s.

72 PATRICK’S PILOTS

Marcella Nethersole spoke with Patrick Nkulikiyimfura about developing Akagera Aviation, which typifies general aviation in Africa.

73 CABIN CREWING

Projecting the image of an ambitious airline, RwandAir’s cabin crew are carefully selected and trained.

74 CATERING KIGALI

ASL started out in Nigeria and last year became Kigali’s sole provider of onboard catering.

75 RWANDAN AIR FORCE

Quality training has made Rwanda’s RAF small but effective in supporting the Rwanda Defence Force.



47 The A team

Denel Dynamics says the development of its new missile is coming to fruition.

48 Decisive Storm hits Yemen

Jon Lake describes the contributions made by several Arab nations when they came to the aid of the Yemeni government.

50 Defence News Extra

Ghana to acquire Chinese Z-9 helicopters; Regional air forces support Libya; and Tunisia updates heli-force to fight Islamic militants.

AIRPORTS

79 The magnificent eight

Oscar Nkala spoke with the Namibian Airports Company about ambitious plans to upgrade the eight airports it oversees.

80 Crash simulation

Vincent Chappard describes an Emergency Response Planning exercise at Mauritius international airport.

«Compte-rendu de Vincent Chappard sur un exercice d'intervention d'urgence à l'aéroport international de l'île Maurice.»

82 Unruly passengers

Governments and aviation organisations are trying to tighten the net so that disruptive passengers can always be prosecuted.

MAINTENANCE

91 Ethiopian MRO

Zemene Nega answers our questions about Ethiopian Airlines' maintenance operations.

94 All about Addis: MRO Africa

Africa is crying out for aircraft MRO capacity so that the growing fleet can be maintained more cost-effectively and closer-by.

«L'Afrique recherche désespérément des capacités MRO pour une maintenance plus rentable et de proximité de sa flotte d'avions en croissance.»

INTERIORS

97 Future in-flight entertainment

Alan Dron went to Hamburg for AIX, the world's biggest aircraft cabin event, where all the talk was of "connectivity".

«Alan Dron s'est rendu au salon AIX à Hambourg où les débats étaient centrés sur la connectivité.»

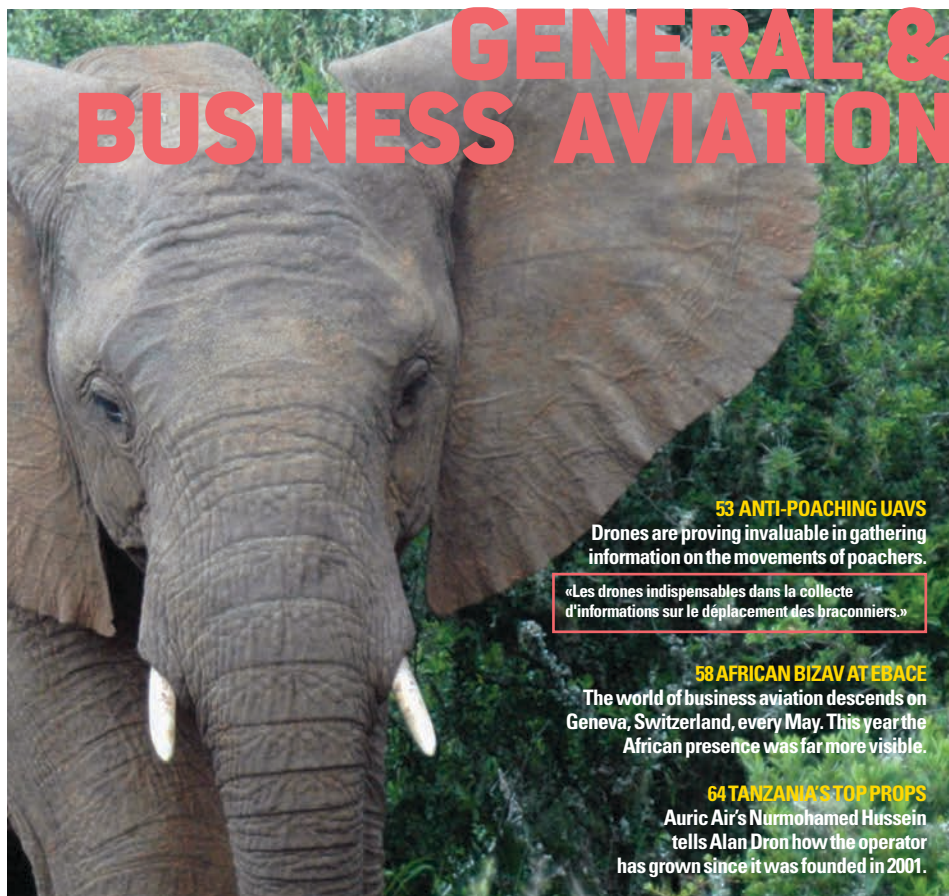
TRAINING

100 Chinese pilots train in George, SA

With a severe lack of capacity to keep up with demand for pilots, the Chinese looked to South Africa and set up their own operation.

PEOPLE

104 All in a day: Issa Karanja



GENERAL & BUSINESS AVIATION

53 ANTI-POACHING UAVS

Drones are proving invaluable in gathering information on the movements of poachers.

«Les drones indispensables dans la collecte d'informations sur le déplacement des braconniers.»

58 AFRICAN BIZAV AT EBACE

The world of business aviation descends on Geneva, Switzerland, every May. This year the African presence was far more visible.

64 TANZANIA'S TOP PROPS

Auric Air's Nurmohamed Hussein tells Alan Dron how the operator has grown since it was founded in 2001.



EVENTS

CONFERENCE REPORT

85 AVIATION AFRICA: SETTING THE STANDARD

The very first Aviation Africa event took place 10-11 May in Dubai. Organised by Times Aerospace Ltd, it proved to be a great success.

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Ethiopian launches mobile payment

Ethiopian Airlines has announced the launch of mobile payment for online ticket purchase in Ethiopia. The option was made possible with the cooperation of the Commercial Bank of Ethiopia (CBE) and Flocash, an integration system provider.

Ethiopian has already implemented the mobile payment option in some African markets, enabling its online customers to book and pay with their local card. Now customers in Ethiopia will be able to book their trip, pay and receive payment confirmation with a single connection.

Jambojet launches Q400 services

Bombardier Commercial Aircraft has welcomed Kenya-based Jambojet to its family of Q400 aircraft customers and operators following the carrier's launch of service with a Q400 turboprop chartered from DAC Aviation.

Jambojet is using the aircraft to provide service to three new destinations in Kenya's coastal region – Lamu, Malindi and Ukunda – from its base at Jomo Kenyatta International Airport in Nairobi.

Air Madagascar adds ATR 72-600

ATR and Air Madagascar announced in April the signing of a contract for the purchase of three ATR 72-600s. The first will be delivered in 2017.

At the same time, the airline recently signed an agreement with Irish leasing company, Elix Aviation Capital, to add two new ATR 72-600s, the first having been delivered in early April and the second in May.



Proflight surprise flight cuts journey time home

Schoolchildren from Luangwa got the surprise of a lifetime when their planned gruelling eight-hour road trip home turned into a flight on a Proflight Zambia aircraft.

The youngsters soared above the clouds on the 25-minute flight, which for many was their first experience of flying.

It proved a memorable end to a three-day visit to the Lower Zambezi National Park as part of a Conservation Club

environmental education programme organised by Conservation Lower Zambezi (CLZ).

"The pupils and the teachers didn't know anything about this trip," said CLZ environmental education manager Besa Kaoma. "Using our truck it takes about seven to eight hours moving from Luangwa to CLZ. Having this opportunity to fly instead of jumping on a truck is wonderful."



Astra's birthday celebration

Astra Aviation, the UK-based African flight services provider, marked 10 years of operations in May with its managing director, Phil Eyre, cutting a cake.

Eyre said: "I'm really thrilled for Astra to be celebrating a decade in African aviation; it's an extremely interesting place to do business and Astra has become a permanent fixture in the African aviation fraternity. I'm looking forward to seeing what the next 10 years bring."

As Astra Aviation moves into its 11th year of operations it has implemented 24/7 opening hours at its Johannesburg office, providing customers with improved support and immediate responses to inquiries and requests.

EgyptAir enters medical market

EgyptAir Hospital has signed a cooperation protocol with EgyptAir Tourism (Karnak) & Duty Free and EgyptAir Airlines to activate medical tourism.

Captain Sameh El-Hefny, chairman and CEO of EgyptAir Holding Company said: "This cooperation between EgyptAir companies in this field aims at activating medical tourism and offering medical services in Egypt in general and through EgyptAir in particular. The field of medical tourism has had a remarkable development during the last few years. In addition, Egypt has a good climate, competitive prices and very qualified doctors in all specialties."

ECAir wins back B757-200

Equatorial Congo Airlines (ECAir) has now repossessed the Boeing 757-200 seized at Paris Charles De Gaulle Airport on April 11. The aircraft was released following a judicial judgment against third-parties other than ECAir.

Air France's travel show

Air France's new travel cabins have been serving Douala (Cameroon) and Malabo (Equatorial Guinea) – the first African destinations to benefit – since April 7 2015. The gradual entry into service of the best-equipped Boeing 777 enables Air France to serve Douala and Malabo with the new cabins up to seven times a week throughout the summer season.

Cabin fever

Two out of three new A330-200s with redesigned cabins have been delivered to Air Algérie, bringing the airline's fleet of the Airbus widebody to seven. The aircraft are part of an order announced at the 2013 Dubai Air Show. The airline also has eight Boeing 787-8s on order.

AFRAA to Brazzaville

The 47th general meeting of the African Airlines Association (AFRAA) will be held in Brazzaville from November 8-10.

Air Seychelles and Jet Airways link up

Air Seychelles and Jet Airways unveiled a codeshare agreement in April that offers travellers enhanced connections on their respective networks.

The agreement heralds an era of closer cooperation between the two airlines, which, in subsequent months, will include reciprocal frequent flyer programmes, cargo handling and expansion of codeshare arrangements.

Air Seychelles will place its 'HM' code on Jet Airways' domestic services from Mumbai to Ahmedabad, Jaipur, Kochi, and Thiruvananthapuram, and also on Jet Airways' international services between Abu Dhabi and Mumbai.

In turn, Jet Airways will place its '9W' code on Air Seychelles' four-per-week flights between Mumbai and Mahé, as well as the carrier's flights to Abu Dhabi and Johannesburg.

Passengers up 52% year-on-year

Low-cost carrier Fastjet's operations in Tanzania carried a total of 65,118 passengers in May 2015, with a load factor of 70%. Compared with the same month of 2014, passengers increased by 52%.

The airline has also just added additional flights on the busy Dar es Salaam to Mwanza route, as well as an extra weekly flight linking Dar es Salaam with both Lusaka and Harare. This further increases utilisation of the current fleet.

Tunisair receives first A330-200

Tunisair has taken delivery of its first A330-200.

Named 'Tunis', the wide-body aircraft has



Saab wins follow-on order for Dhruv

Saab, through its local South African company, Saab Grintek Defence, has received follow-on orders from Hindustan Aeronautics Limited (HAL), India, for serial production of an integrated electronic warfare self-protection system for installation on the Indian Army and Air Force Advanced Light Helicopter (Dhruv).

The orders have a total value of approximately 940 million Rand (\$75.5m).

Saab's integrated defensive aids suite (IDAS) protects crew by enhancing platform survivability in sophisticated, diverse and

dense threat environments. The system provides timely warning against radar, laser and infrared guided threats, and automatically deploys the appropriate countermeasures.

"HAL and the Indian end-users remain one of Saab Grintek Defence's most important customers and we are delighted that they have continued faith in the IDAS system, of which this follow-on order is a clear indication," said Chris Skinner, vice president and head of marketing, sales & commercial, Saab Grintek Defence.

joined the airline's existing fleet of Airbus aircraft comprising four A319s and 17 A320s.

Boasting an entirely new, fully equipped cabin, it can accommodate 24 passengers in business class and 242 in economy class.

RwandAir chooses ARINC systems

RwandAir has selected Rockwell Collins' ARINC common use passenger processing systems (CUPPS) and related technologies to support the airline's strong passenger growth.

Under a five-year contract, RwandAir will implement the company's ARINC vMUSE common use check-in platform, ARINC AirVue flight information display system (FIDS) and AirDB 7, the latest generation ARINC airport operational database (AODB) system.



EAN facelift for Lagos Lounge

EAN Aviation is completely refurbishing its fixed-base operation (FBO) VIP lounge at Murtala Muhammed International Airport.

The lounge comprises approximately 170sqm of floor space and has been designed to create a contemporary look and feel.

Key features include comfortable, spacious seating for up to 25 passengers at any one time, while a separate private area provides further sumptuous seating for up to eight passengers. There is a dedicated buffet providing light refreshments, along with a selection of hot and cold beverages.

The designated crew area inside the lounge incorporates a new crew flight planning workstation with the latest connectivity and printing facilities. Also, a comfortable seating area will complement the existing crew offering with hotel-style accommodation and a relaxation lounge.

It was anticipated that the FBO renovation would be complete in early July 2015.

Mozambique green light for trio

The Mozambique Civil Aviation Authority (MCAA) has given the go-ahead for three new airlines to apply for air operators certificates (AOCs).

The three companies include a dedicated helicopter operation based in Maputo, while the others were named as Fly Africa and MAIS.

Regarding the European ban on the national flag-carrier, LAM, minister of Transport and Communications, Carlos Mesquita, said that the concern of Mozambique was not only to fly to Europe but also to guarantee greater security for passengers at national and regional level.

"We will continue to work to clean up our image because we will not allow it to be negatively exposed in the market," he said. "The approval of aviation regulations by the Council of Ministers is a contributor to this end. It is another tool that will allow us to get out of this situation."

Boeing starts work on first 737 MAX

Boeing employees in Renton, Washington, have started building the first 737 MAX on schedule.

Wings are the first 737 components to be assembled in the Renton production process.

"Employees in Renton are the best in the world at building single-aisle aircraft and now this world-class team is building the future with the first 737 MAX," said Keith Leverkus, vice president and general manager, 737 MAX.

"Achieving this milestone on schedule is a testament to the success of the 737 and our integrated design and build team."

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Muammer Tükenmez, one of the program participants expresses his feelings after the program as "I never thought that I would overcome my fear of flying I have suffered for 56 years only in two days but I did it".

Turkish Aviation Academy invites the ones who cannot fly because of fear of flying get over their fear through the two-day program of "Conquer your Fear of Flying."

The program, performed by trainers and psychologists specialized in the fields of pilotage, aircraft maintenance and cabin which are within the body of the academy is carried out every month with the increasing demand in recent years. Maximum ten participants are included in the program consisting of the combination of homogenous groups so that it can be as efficient and effective as possible. Each expert, who actively contributed to the program, has an invaluable experience in their fields and they also bear the educator's qualifications. The participants are interviewed before the program, and they pass through the anxiety test and the analysis of psychological situation. During the program in the classroom, the captain and technical trainer explains the following subjects based on some concrete data; aircraft structures and systems, maintenance processes, turbulence, the effects of weather events, and why the aircraft is the safest mean of transportation. Then psychologists teach some methods on how to overcome their fear of flying. After having performed all technic-theoretic and psycho-theoretic lectures and applications, a virtual flight in the cabin simulator is performed. Thus, the participants experience all conditions of the actual flight. A round-trip is organized to a city determined beforehand by participation of all team members in the second day of the program. Thus the concerns and the root causes of these concerns our participants experience are identified, and the ways of solutions for them are offered. Concerns or fears emerge from various reasons. Some people have fear of flying due to lack of technical information about the aircraft and flight while psychological reasons lie under others' concerns. The technical instructor, cabin trainer and the captain, who are together with the participants during the program, instill confidence in the participants by trying to remove the lack of technical knowledge. The psychologist strives to eliminate psychological concerns through the interviews he/she conducts with the participants before and during the program. All of these components ensure to remove the question marks engaging participants' minds, and enable the participants to get rid of the related problems. One of the most important reasons for the success of the program, which is over 90%, is that, participants are followed by the team after the program as well. Participants have free participation right to attend the programs scheduled in the following months if they need.



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Gabon to get new airline

Development of a new airline in Gabon is under way following an announcement by the country's National Civil Aviation Authority (ANAC) that it has issued an air operator certificate (AOC) to a new Gabonese airline company, Tropical Air Gabon. It will operate from Libreville.

Royal Air Maroc and Qatar link up

Qatar Airways and Royal Air Maroc have announced the launch of a strategic joint business agreement on their services between Qatar and Morocco.

Qatar Airways group chief executive, Akbar Al Baker, and Royal Air Maroc chairman and CEO, Driss Benhima, signed the joint business agreement at the Arabian Travel Market in Dubai in May.

The move provides enhanced links between Qatar and Morocco, greater choice of flights to more destinations and improved frequent flyer benefits.

Passengers will be able to purchase a single itinerary combining flights on both carriers' global networks, affording them the ease of one-stop ticketing and baggage check-in.



caption

Air Djibouti on-track for 2015 launch

Air Djibouti is on schedule with its plans to begin operations in late 2015.

The new airline has confirmed that it will start cargo operations later this year and add passenger services in 2016.

The airline has already secured aircraft for the launch of its cargo operations.

In May, the airline signed a memorandum of understanding (MoU) with Cardiff Aviation, which will implement and manage a European-level air operators licence (AOC) for Air Djibouti, source aircraft, and provide operational, maintenance, repair and overhaul (MRO) and management support for the new African national carrier.

Aboubaker Omar Hadi, chairman, Air Djibouti, said: "The MoU brings Djibouti not only one-step closer to having a flag-carrier but to achieving this long-term strategic objective. We are looking forward to seeing the outcome of this agreement boost Djibouti's international appeal and promote economic growth."

The Cardiff company is headed by Iron Maiden rock star Bruce Dickinson, who added: "Djibouti is uniquely placed to provide a hub for investment from Europe, the Middle East and Asia into Africa."

The country is currently building two international airports to cater for the boost in traffic.

Swaziland to be home to SASO

Swaziland is to become home to a safety organisation covering the whole of the Southern African Development Community (SADC). The SADC Aviation Safety Organisation (SASO) will be responsible

for overseeing all safety precautions in the aviation industry.

The organisation formerly had its base in Botswana. The move came as the result of an International Civil Aviation Organization (ICAO) audit, said Swaziland Civil Aviation Authority (SWACAA) director general Solomon

Dube. The country has put right issues that arose in the 2007 audit and is now ready to host organisations like SASO – demonstrated when the SASA conference took place in Swaziland for the first time and enabled SASO officials to see what was available to them there.

FlyAfrica ready to start operations

Namibia-based start-up, FlyAfrica, has received its foreign air operator permit (FAOP) from the country's civil aviation authority and is set to make its inaugural flight from Windhoek to Johannesburg.

The launch had been delayed for more than two months while awaiting the necessary permits.

Using Namibian-registered Boeing 737-500s, FlyAfrica is still hoping to gain seventh freedom approvals to link Johannesburg with Zambia's Lusaka, according to Clifford Strydom, CEO of the Namibian airline's parent company, Bay Air Aviation.

AviAssist takes safety to Rwanda

The AviAssist Foundation – regional affiliate of the Flight Safety Foundation – is to hold the fourth edition of the Safety in African Aviation Conference at the LeMigo Hotel in Kigali, Rwanda on November 19-20 2015.

Key topics include: runway safety; just culture; safety management systems; flight data management; dangerous goods; industry standards including IOSA, BARS & ISSA, and airport wildlife management.



Final plug pulled on Air CEMAC

The proposal for a consolidated airline for the primarily Francophile central African countries has finally been abandoned.

The economic and monetary community of Central Africa, Communauté Économique et Monétaire de l'Afrique Centrale (CEMAC) has formally abandoned its regional airline venture – Air CEMAC (Brazzaville) – following a meeting of heads-of-state in Gabon.

During the gathering in Libreville, the leaders of Cameroon, Chad, the Central African Republic, Equatorial Guinea, Gabon, and the Republic of Congo announced the abandonment of the carrier, citing difficulties in its implementation.

The community had planned for Air CEMAC to improve connectivity between the neighbouring countries in a region long starved of reliable air services. There were also plans for international routes to major cities such as Johannesburg, Dubai, Frankfurt and London.

Speaking at the Aviation Africa conference in Dubai on May 11, the chairman of RwandAir and former Ethiopian CEO, Girma Wake, said that while the ideas of consolidation always made great sense they "fall down on political intervention and individual national protectionism and interests".

When Air Malawi closed down in 2012, it represented a crushing blow for the country – both economically and in terms of self-esteem. Now, as **Ian Sheppard** reports, Ethiopian has come to the rescue by helping set up Malawian Airlines.

Ethiopian helps Malawi to start a new family

«Ethiopian aide le Malawi à fonder une nouvelle famille» – Page 18

It was the trip that almost didn't happen. In Johannesburg there had been no word on whether going up to Malawi would be possible, as there had been severe flooding around the country, causing schedule disruptions.

After lunch at the new Fireblade FBO at OR Tambo Airport, and after a day in George seeing the AVIC International Flight Training Academy (AIFA) about its activities (see page 100), it wasn't until Cape Town that word came that a visit to Lilongwe to see Malawian would happen after all.

So, after a Mango flight to Lanseria and a long minibus trip to catch the Gautrain to OR Tambo again, things started to look up. With a business class ticket in hand it was time to head for Malawi!

Malawian's 737 was parked on the very last gate so it was quite a trek but the executive lounge had definitely been worth the visit. Going from that to the business class on Malawian made for a relaxing trip, and the passengers were so friendly – they don't say 'Smiling Malawi' on the tourist brochures for nothing.

□□□□□

This was a country I'd lived in as a boy, in the 70s, when my father was a pilot for Air Malawi flying BAC 1-11s, while also doing some work for the Flying Doctors operating Britten Norman Islanders. We'd started out in Zambia in 1975, so the Zambian Flying Doctor Service had been our world for a whole year before the Malawi job came up.

It wasn't the newest or most high-tech business class in the world but the service and catering was exemplary. After take-off and climb out of Jo'burg, the captain (capt Abraham Mangwana) was quick to come back to welcome me on board and, indeed, he went right down the cabin, chatting with some of the passengers. He said that the airline's CEO, Kassim Geresu, who I was going to see, had said that I could sit in the jump seat, so that was a perfect opportunity. At the time, the service to Lilongwe stopped in Blantyre on the way and the way back, meaning that my trip would end up involving nine flights in six days from London.

The first officer, Muhammad Adam, was the airline's newest FO, he said. Already, after two



Capt Abraham Mangwana was quick to come back to welcome me on board.

months flying the 737-800, he was very competent and worked in a relaxed and professional way with Captain Mangwana, a Malawian who is the chief pilot and operations manager for the airline. Malawian uses its 737 for the Jo'burg route but it has a Bombardier Q400 for the other routes.

The stop at Blantyre (having landed on runway 10 at Chileka Airport) was uneventful but it was striking how there had been very little development around the airport – it was as if we were still in the 70s, and the even the runway markings looked to date from that era and were badly in need of refreshing.

There was a new terminal building under construction but I gathered it had been that way for a while. An hour later and the 737 was on the short hop to Malawi's capital city, Lilongwe.

Having been back to Lilongwe in March 1995 for my honeymoon, I recalled how all flights had been cancelled and we'd had to take a taxi all the way to the lovely Club Makokola ('Club Mak') on Lake Malawi. Thankfully, when we came back, the ATR42 did arrive at Club Mak's dirt airstrip, just after a King Air had slewed off the runway when its right gear collapsed.

At Lilongwe Airport there was an opportunity to look around and speak briefly to the engineering staff that Ethiopian had deployed while it gradually handed over control to Malawians.

Dawit Kumsa, maintenance and engineering manager, said: "I have tried to develop technicians



Malawi Airlines 737-800 on its short stopover in Blantyre; and (inset) the under-construction new Blantyre terminal.

from Malawi.” Flight operations is now all Malawians, having been started with Ethiopian pilots. Kumsa also said there were plans for a maintenance hangar at Lilongwe.

We were soon in a car heading into town as Geresu, who was until 2013 Ethiopian’s chief financial officer, was on a tight schedule. He was with two other key staff from the Ethiopian Airlines team, director commercial Eskinder Alemu and director of finance and strategic planning, Feleke Legese.

The CEO set out the strategy under Ethiopian’s Vision 2025. “In our strategy, we had a plan to have around four hubs in Africa; in west Africa it is with Asky [Airlines] but over here we were searching. Air Malawi had been liquidated in December 2012 and the government wanted someone to work with. So discussions started in 2013 and, by July, we had signed an accord.

“This said Ethiopian (ET) would provide the first aircraft on a lease basis and that the leasing cost of this would be considered as a capital injection. And there was also a maintenance agreement so the ET MRO department looked after that. There is a team of seven from ET MRO supporting the aircraft and one maintenance guy travels with each aircraft.

“The third part was for management for five years by ET, providing CEO, maintenance, finance and commercial. We are growing the staff who are from Malawi, and the flight operations [personnel] are all Malawian now,” said Geresu.

He added that the airline, as of March this year,



Kassim Geresu: “We are growing the staff who are from Malawi, and the flight operations [personnel] are all Malawian now.”

had 84 employees, only five being Ethiopian (and only five others are not Malawian nationals).

“We started operations on January 31, 2014, having signed the agreement on November 1, 2013.”

In fact, Malawian Airlines Limited was incorporated on July 2, 2013 with Ethiopian Airlines owning 49%, the Malawi Government 20% and Malawian citizens the remaining 31%, with about \$20 million of start-up capital invested by Ethiopian Airlines. The Malawi Government invested \$4 million up front, with another \$6.2 million to come at a later stage.

“It’s a miracle actually to start an airline in only three months,” said Geresu. “You couldn’t do that without a strategic plan – and it included the air operators certificate (AOC).” He added that the Malawian Department of Civil Aviation (DCA) was being “reformed” with the help of the European Aviation Safety Agency (EASA).

“Through this strategic partnership with Malawian [Airlines], Lilongwe will become Ethiopian Airlines’ third hub on the continent after its main hub in Addis Ababa and Lome, Togo,” said the Ethiopian Airlines’ CEO, Tewolde Gebremariam, at the time.

Geresu then outlined the airline’s ambitions: “In our 15-year plan, we are aiming to operate in six years’ time direct to Dubai. Currently to Dubai there are three outlets, Jo’burg, Addis and Nairobi with Kenya Airways.

Continued on Page 18

CONTINUED FROM PAGE 17

“For now,” he added, “we are flying to nine destinations.”

As well as Blantyre and Jo’burg, the airline flies a Dash 8 to Harare three times a week, Dar es Salaam three times a week, and three destinations in Mozambique – Tete, Nampula and Beira (each served twice a week). There are also four weekly flights to Lusaka in Zambia and then three domestic destinations – Mzuzu, Karonga and Likoma Island. He added that there was also a plan to serve Club Makokola.

Geresu said that the airline would also be flying to Victoria Falls. Much of its thinking is based on stimulating the European market and working with travel agents to promote Malawi and Malawian’s routes, and linking via Ethiopian, which operates to Dar es Salaam and Lilongwe from its main hub at Addis Ababa.

He said that to develop domestic services, Malawian needed “a third aircraft [type]” with 30+ seats. “We’re working with lessors – it’s under

Why change the name?

Initially an entity called Air Malawi (2012) was formed but it was decided that the Air Malawi name was so damaged that it would be better to form a differently named organisation. “The Air Malawi brand was considered seriously damaged due to erratic services and a negative reputation it had accumulated through frequent flight cancellations and bankruptcy records,” said the CEO of the Malawi Public Private Partnership Commission, Jimmy Lipunga. “There is an additional concern that using the name Air Malawi could expose the new airline to predatory creditors, who would wish to create embarrassment on the new airline. The new name is equally effective in stimulating Malawi’s international image.”

negotiation,” he said, while admitting that “because of commonality” with the existing fleet, a Q200 would be ideal.

“Or an Embraer 145 could be OK... [and] the capability is there for an ATR too. We just need a good aeroplane.”

The airline’s Q400s are leased from Ethiopian, which put business class sections in so that they are 67-seaters. “Now they are good for the African market and they also have two lavatories and two galleys.”

Geresu then went on the talk about the need for investment in airport infrastructure. “The Government [here] is working on that and there are two groups here – in Blantyre they are Chinese and in Lilongwe Japanese. So the expansion plan is being put together now.”

Other issues, such as the way the airport is managed, are being “streamlined” with the airline’s encouragement, while it is trying to address the cost of jet fuel. “Puma is supplying this and they say it is [expensive] because the volume is small. It is 75% more than in Addis, and 30-50% more than other airports in the region!”

Geresu added that they are tinkering to help make things more economical “but you burn more fuel by carrying more”.



A Malawian Airlines pilot walks to his aircraft through the general aviation aircraft parked on the ramp at Lilongwe. Below: the airline’s Bombardier Q400.



SOMMAIRE

Ethiopian aide le Malawi à fonder une nouvelle famille

Lorsqu’Air Malawi a cessé ses opérations en 2012, c’était un coup terrible pour le pays. Mais, comme nous l’explique Ian Sheppard, la compagnie Ethiopian Airlines est venue à la rescousse en mettant en place Malawian (Airlines).

Selon le directeur général de Malawian, Kassim Geresu, ce fut un miracle de démarrer une compagnie aérienne en seulement trois mois. Cela a été possible grâce à un plan stratégique (énoncé dans la « Vision 2025 » d’Ethiopian Airlines (ET)) et au certificat de transporteur aérien (AOC). Kassim Geresu a également ajouté que l’aviation civile malawite était en train d’être réformé avec le soutien de l’AESA.

Air Malawi avait été liquidée en décembre 2012 et le gouvernement cherchait un partenaire. Ainsi, les discussions ont commencé en 2013, un accord fut signé en novembre et les opérations ont démarré le 31 janvier 2014. Malawi Airlines Limited fut intégré à ET détenant 49% des parts, le gouvernement du Malawi 20% et les citoyens du Malawi les 31% restants, avec un capital de démarrage d’environ 20 millions de dollars investi par ET. Le gouvernement du Malawi a investi 4 millions de dollars au départ et 6,2 millions de dollars dans un deuxième temps.

Ethiopian Airlines planifie d’avoir environ quatre hub en Afrique. A l’ouest il y a ASKY et ce partenariat vient à point nommé. L’accord concerne

la location d’un premier avion dont le coût serait considéré comme une injection de capital, un contrat de maintenance et la gestion pendant cinq ans par ET. Le personnel est malawite et les opérations en vol sont assumées par le personnel local.

□□□□□

« Grâce à ce partenariat stratégique avec Malawian, Lilongwe deviendra le troisième hub d’ET sur le continent après ses principaux hub d’Addis-Abeba et de Lomé (Togo) », a déclaré Tewelde Gebremariam, directeur général d’ET.

L’objectif est également d’opérer en direct vers Dubaï. Elle dessert neuf destinations à ce jour. Victoria Falls s’ajoutera à cette liste.

Selon Kassim Geresu, Malawian aura aussi besoin d’un avion de plus de 30 sièges pour développer les liaisons domestiques. La compagnie a également d’autres sujets à l’ordre du jour comme sa gestion, l’investissement dans des infrastructures aéroportuaires ainsi que le prix du carburant.

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Having abandoned efforts to resurrect South Africa's 1time Airline, Pak Africa Aviation has hit the ground running with its latest venture, Skywise.

Martin Rivers meets co-chairpersons Tabassum Qadir and Javed Malik.

WISE MOVE THAT PAKS A PUNCH

When Pak Africa Aviation emerged in 2013 as a potential white knight for 1time Airline, the failed South African carrier, almost nothing was known about the private-equity group fronted by Tabassum Qadir and Javed Malik.

Aside from confirming that investors in Pakistan and Dubai were funding Pak Africa, Qadir and Malik kept a tight lid on the organisational structure of the group – which had ambitious plans not only to resurrect 1time but also to franchise its brand across Africa through a wave of mergers and acquisitions.

Even Erik Venter, the combative chief executive of Comair, South Africa's largest private carrier, was in the dark about the company. Asked if he intended to take Pak Africa to court for breaching foreign ownership laws – mirroring the strategy Comair had pursued against local start-up FlySafair – he joked: “How? We don't even know who they are!”



Fast-forward two years, however, and the once-mysterious group has come out of the shadows to reveal a decidedly South African face. Its newly unveiled board is headed by Yusuf Saloojee, the country's former ambassador to Iran, while Zinhle Dlamini, the grandson of South Africa's beloved former leader Nelson Mandela, sits as a non-executive director.

Pak Africa has also now made good on its promise to launch domestic flights in South Africa, albeit not under the 1time brand as originally envisaged. Instead, it last year purchased the air service licence of Skywise; another local start-up whose launch plans had stalled.

Perhaps unsurprisingly for a group with close ties to the Mandela family, Pak Africa launched its long-awaited airline on a symbolic date for the



Skywise has close ties to the Mandela family. Ndileka Mandela (centre) is a brand ambassador, pictured here with Tabassum Qadir (left) and Javed Malik (right), the two co-chairs of the airline's board.

former president, who passed away nearly two years ago.

“Our first flight was on February 11. We always wanted to launch on this date, because it was on February 11 that Mr Mandela was released after 27 years,” Qadir said, referring to the human rights campaigner's lengthy imprisonment at the hands of South Africa's apartheid government.

“We took 95 children [from Khamane High School and the Thembekile Mandela Foundation] on the flight, because Mr Mandela was 95. All the children were first-time flyers, so it was a very exciting launch.”

After the initial fanfare of the promotional launch, Skywise got down to scheduled operations on March 5 with the inauguration of a twice-daily service between Johannesburg's OR Tambo International Airport and Cape Town International Airport. The airline has since taken delivery of a second Boeing 737 Classic, and, at the time of writing, frequencies were about to rise to four-times daily.

Skywise was the brainchild of former 1time bosses Rodney James, Glenn Orsmond and Michael Kaminski, as well as ex-Sun Air

managing director Johan Borstlap and Wayne Duvenage. Its management team had originally seen Pak Africa as rivals, but after both start-ups failed to get off the ground in 2014, Qadir and Malik abandoned plans to resurrect 1time and instead swooped on their floundering competitor.

“The process [of acquiring the 1time brand] took too long,” Qadir said of Pak Africa's failed effort to revive the airline, which ceased operations in November 2012 with debts of R450 million (\$52 million).

“Our company was under control, but 1time's financials were not under control. It took a long time to get all the information to the Johannesburg Stock Exchange (JSE). Eventually, so much time passed that the brand faded out of memory... So it's all about Skywise now. We will go with the Skywise brand.”



Among the original Skywise management team, only Borstlap remains part of the new project. He has been appointed chief executive of Skywise, as well as chief operating officer of Pak Africa.

The parent company's long-term ambitions are as grand as ever, with Qadir and Malik still eyeing up several countries for new franchises. In the near-term, however, its growth trajectory has slowed. Skywise is not committing to additional aircraft or routes this year, instead focusing on growing brand awareness for the existing service – by far South Africa's largest trunk route.

“We want to settle down with Joburg-Cape Town for six, seven months,” Qadir confirmed, estimating that the city pair is under-served by 500,000 seats per year. “By the end of this year we will still only be doing this route.”

Despite marketing itself as a low-cost carrier, Skywise has adopted a hybrid model that bundles some ancillary services into its basic fare. All passengers receive a 20kg checked baggage

Skywise is focusing on only the Cape Town - Jo'burg route to start with.



allowance, for example, mirroring the strategy pursued by South Africa's two dominant low-cost carriers: Comair sub-brand Kulula and South African Airways subsidiary Mango.

Complimentary coffee is also served on-board. In a further departure from the European no-frills model, Skywise offers two distinct pricing options. The GO fare is aimed at budget travellers, with prices starting at R594 (\$48) one-way. The Wise fare, meanwhile, gives higher-paying customers the flexibility to alter their bookings.

"It's not just about price," Qadir insisted. "We are going to cater for both leisure and business travellers. Leisure travellers, of course, go for low prices, but business travellers want convenience and the right flight times."

Malik put it another way, arguing that passengers value transparency and accessibility over cutthroat price competitiveness. "When you fly with us, you don't need to be an accountant. We offer everything under one price," he said, in a veiled criticism of FlySafair. "We keep it plain and simple, to make it easier."

Though the brand and product have evolved since Pak Africa first broke into the aviation scene, the strategy of pursuing mergers and acquisitions is still integral to the group's vision. It already owns Global Airways, a South African

wet lease (ACMI) operator, and has a joint-venture agreement with Zimbabwe's Central Air Transport Services.

Global Airways is now being managed as a "separate project" unrelated to Skywise, while the Zimbabwean offshoot – formerly earmarked to become 1time Zimbabwe – has been put on the backburner until 2016. When it does progress, it will be likely to operate under the Skywise brand.

But there is no shortage of other markets on the table, with Zambia, Malawi and the Democratic Republic of the Congo also being evaluated as future bases.



"There are other opportunities available regionally," Qadir affirmed. "As time passes, we get better opportunities... We'll announce at least one acquisition by December."

In terms of fleet development, Pak Africa is keeping its options open until the regional acquisitions have been finalised. Talks are at "quite an advanced stage" with Boeing about 737NG deliveries around 2017/18. But, despite praising the US manufacturer for its "good infrastructure" in Africa, Qadir said Airbuses could yet be deployed in the group's fleet.

"We are not closing any doors," she stressed.

"For example, if we do an acquisition and the fleet is all Airbuses, then we will have two options there."

Pushed for an update on the Zimbabwean unit, the co-chairs would only confirm that its licence remains active. Having previously outlined plans to deploy ATR turboprops, the joint venture lost momentum and was pipped to the post in Harare by Flyafrica and likely soon also FastJet.

Those two airlines, much like Pak Africa, have encountered plenty of red tape in their bid to offer point-to-point connectivity across the continent. FastJet's three-strong fleet is a shadow of the 40-strong armada it promised in 2012, while Flyafrica is being blocked from launching a subsidiary in Namibia.

But Pak Africa has learned from its false start with 1time, swiftly adapting its strategy and tempering its projections. With an upcoming listing on the JSE under the shell of 1time Holdings, Skywise now seems an ideal vehicle for measured, transparent growth across Africa's lucrative aviation market.

"We want to complete everything first and then we will announce things as they happen," Qadir said, perhaps wisely declining to pin down her next move. "We spent two years on the 1time process. Things take time."

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“Instead of each airline doing some flights which are not profitable, when you put them together the situation immediately changes.”

MOHAMMED IBRAHIM YASSIN



When Mohammed Ibrahim Yassin, the chief executive of Daallo Airlines, describes his company as providing a “lifeline” to Somalis, he is not exaggerating.

“There was a time when there were no money transfers, no telephones, no postal system – we were everything for the country,” the airline boss recalled. “We were the link to the outside world. We transported not only people but also goods, money, medicine. It was quite a history. And still we are playing that role.”

Established in 1991, the same year that Soviet-backed dictator Siad Barre lost his grip on power, Daallo found opportunity in the declaration of independence by the north-western province of Somaliland.

As the rest of the country descended into a power struggle between competing warlords, Somaliland, which is globally recognised as an autonomous region, but not an independent state, focused on reconstructing its self-declared capital Hargeisa – scarred by years of war with the central government.

Limited resources in Somaliland’s fledgling public sector meant that local entrepreneurs and foreigners – many from across the northern border with Djibouti – became the driving force of the recovery. One sector, civil aviation, had to start from scratch.

“There was a void. Somali Airlines had collapsed,” Yassin said, referring to the former flag-carrier, which was based in Somalia’s capital Mogadishu but also had a strong presence at

Daallo merger key to re-emergence

Somalia’s private airlines kept the country connected through two decades of civil war and, as Martin Rivers discovers, they are now entering a new phase of consolidation.

Hargeisa International Airport. “So we filled the void.

“Initially it was very easy and there were a few factors that helped us. One was the availability of equipment. When the Soviet Union collapsed, there were a lot of Russian aircraft available everywhere. The other thing that helped was the development of technology. The internet came into being, and all the systems which had been difficult to get – unless you were one of the major airlines – became easier.”

From its humble beginnings with a 14-seater Cessna Caravan that flew from Djibouti to Hargeisa, Daallo quickly took advantage of the glut of Soviet aircraft to expand operations.

Chartering an Ilyushin Il-18 in 1992 allowed it to launch services to Sharjah in the United Arab Emirates, which had become a dumping ground for Soviet aircraft formerly based in the central

Asian republics. Daallo then moved its headquarters to the relative tranquillity of Dubai, before taking delivery of a Tupolev Tu-154 and adding more Middle Eastern points to the network in 1993.

Regional expansion across east Africa followed and, by 2002, long-haul flights to London and Paris were being operated with a wet-leased Boeing 757.

Although those European services have since stopped, Daallo maintains a scheduled presence on both sides of the Gulf of Aden. Mogadishu, Hargeisa and Djibouti are considered its home bases, while internationally the airline serves Dubai, Jeddah and Nairobi (with a security stop in the remote Kenyan outpost of Wajir).

Daallo has also been designated as Djibouti’s national carrier, thanks to a short-lived partnership

Continued
on Page 24

One of the airline's two
Airbus A321 jets.



CONTINUED FROM PAGE 23

with Istithmar World Aviation, the investment arm of Dubai World, which unravelled during the global financial crisis.

Looking back over the company's history, Yassin said Daallo "has been lucky" to preserve operations in such a challenging business environment.

There have been several close shaves. In late 2009, one hijacking and one bombing were foiled – the latter having eerie parallels with the attempted terror attack on Northwest Airlines Flight 253 just days previously. Somalia's battle against the Al Shabaab insurgent group and its proximity to Yemen – a stomping ground for Al Qaeda's most dangerous affiliate – makes jihadist violence a constant worry for travellers.

But, with a semblance of security returning in recent years, foreign airlines are increasingly spying their own flights to the country. Turkish Airlines now serves Mogadishu; Ethiopian Airlines and Flydubai serve Hargeisa; and Qatar Airways is among the many carriers considering entering the market.



For Yassin and co-founder Mohammed Haji Abdillahi, this influx of competition has justified a once-unthinkable merger with Jubba Airways, Somalia's biggest carrier.

"We have been operating for the last 24 years. We have realised that Africa really needs a different way of playing the game of competition," Yassin explained. "It's not that easy to finance aircraft in Africa but, by mobilising resources locally among the people, by putting our forces together, we have an alternative way. This is what we have realised after so long, and that's the reason we are taking this step."

Describing the merger as a "complete reform", he said that Daallo and Jubba will now operate jointly under the banner of Africa Aero Alliance. Although they will retain their own distinct brands and products, equity has been

redistributed through the holding company and codeshare agreements are in place to share traffic.

"Now we will have the ability to raise aircraft utilisation, so we can get better equipment," Yassin continued. "Also, instead of each airline doing some flights which are not profitable, when you put them together the situation immediately changes."

Cooperating, rather than competing, with Jubba makes sound commercial sense. The one-time rival serves all the same markets as Daallo, as well as scooping up feeder traffic from the domestic points of Baidoa, Bosaso, Galkayo and Kismayo.

Collectively, the airlines deploy a fleet of two Airbus A321s, two 737 Classics and one BAe 146. At the time of writing Yassin was negotiating finance leases for a pair of 70-seater ATR 72-500s, which will help optimise the domestic network. The BAe 146 will then be reserved for charter flying and one of the 737s may be withdrawn. Longer-term, Daallo will transition to 737NGs, while also evaluating wide-body options for the resumption of its European routes.

Regional expansion is the priority for the remainder of 2015. Addis Ababa and Entebbe will be the first points to join the network – gaining links from both Mogadishu and Hargeisa – while the Yemeni cities of Taiz and Aden should be launched as soon as that country stabilises.

"We have to cover our home market adequately," Yassin insisted. "That includes Djibouti, Somaliland, Somalia, Kenya, Ethiopia and Yemen. These are the countries we have to serve well."

Noting that several other east African nations have under-served aviation markets, Yassin said his ultimate goal is to create a "bigger alliance for African carriers" – grouping together regional underdogs and finding strength in numbers as they compete with industry goliaths Kenya Airways and Ethiopian Airlines.

"Daallo and Jubba are the first airline members, but we are looking to expand the alliance across Africa," he confirmed. "The company will expand to some countries which don't have national carriers, or are under-served. We're looking into Chad, Uganda, other countries where transportation hasn't developed well."

Africa Aero Alliance is currently headed by Yassin as group chairman and Abdullahi Warsame, Jubba's managing director, as group chief executive. Each new airline will gain a presence on the board, alongside a growing list of industry experts "who can add value into the venture".

Yassin noted that Somalia's oldest private airline, African Express Airways, has already been invited to join the alliance, and he is hopeful that it will accept the offer.

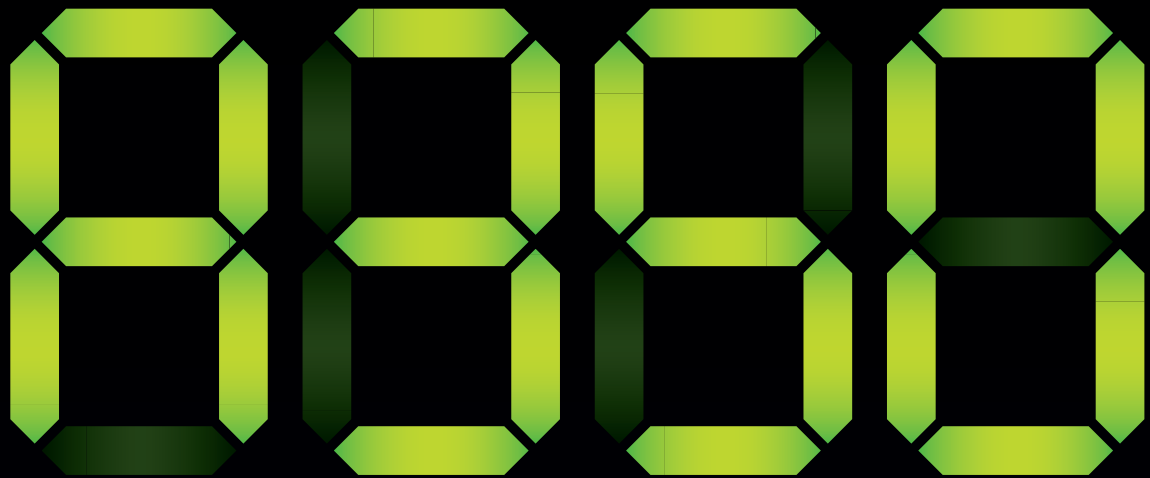


However, not everyone is expected to welcome the establishment of the new holding company. Last year, the cash-strapped government urged local operators to merge and resurrect Somali Airlines through a public-private partnership. While Yassin said he is "really excited" about the prospect of Somalia regaining its flag-carrier, he cautioned against focusing too much on branding.

"The idea of a national carrier is not what it used to be. It doesn't necessarily have to carry the name of the country," he insisted. "The most important thing is that the company should be an economic facilitator of the country. It has to meet the demand and work towards the national strategy."

After two decades without a functional government, the future of Somali civil aviation is now rightly being determined by those plucky entrepreneurs who kept the country connected during its darkest days.

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As Africa World Airlines approaches its third birthday, the continent's first Chinese-backed carrier is seeking to overcome early problems and expand both domestically and internationally – and gain an international operational safety award as well. Alan Dron reports.

Chinese puzzle starts to make sense

China has had interests in Africa for decades. The country was an early political supporter of young nations such as Tanzania and Sudan and, in more recent times, has made major investments in sourcing raw materials from the continent to feed its rapidly-expanding economy.

It has not, however, had a majority interest in an African airline – until now.

Chinese investors, notably the huge HNA Group that is the parent company to several Chinese carriers including Hainan Airlines, hold 70% of Ghana-based Africa World Airlines (AWA).

HNA had been interested in African involvement for some time, said Katherine-Lois Woode, AWA's chief commercial officer, explaining that representatives had held talks with Ghana Airports Company to see what opportunities were present in the small west African nation.

AWA's main Ghanaian promoter, Togbe Afede XIV, paramount Chief of Asogli State, already had commercial involvement with Chinese companies in other sectors: "Ghana is a very small place, so when somebody comes in, you hear all about it," explained Woode.

"If you look at HNA's history and strategy, they want to have some sort of an affiliated airline on each continent."

Afede and the HNA Group got together and an agreement was brokered.

Investors in AWA come from a spread of private and public bodies, including Afede, the Chinese African Development Fund and Ghana's Social Security and National Insurance Trust, the country's largest non-bank financial institution.

Before it became operational, the aim had been to make AWA a low-cost carrier (LCC) but this was scrapped and a hybrid model adopted. Trying to market an unbundled fare concept, with passengers paying for 'extras' such as checked baggage and on-board refreshments is "a hugely tough sell" in Ghana, explained Woode.

AWA started operations on September 21, 2012, operating the Embraer EMB-145 regional jet. There are now three examples in the fleet, leased from HNA Group. These were the first Chinese-built Embraers to be leased outside the Asian nation.

The benefits of the EMB-145 include the ability to serve

Continued
on Page 28



Africa World CEO Michael Chen-Lo is one of several managers seconded from China's huge HNA airline group to operate Africa World Airlines.

CONTINUED FROM PAGE 27

routes too long for the ATR turboprop and too thin for the larger BAe 146/Avro RJ. It also comes with technical support from HNA.

Although some observers regard the Brazilian regional jet as less than optimal for domestic Ghanaian services, its speed means that block time savings on each sector can be the difference between squeezing an extra rotation out of the day in a country where many airfields have restricted operating hours.

Public perception was another reason to go down the regional jet road, said Woode. "We did have a number of competitors that were using turboprops, but you can't beat a jet in Ghana." Passengers simply prefer jets, even if they are older than the latest-generation turboprops, fresh off the final assembly line.

The Embraers, built in China under licence from the Brazilian manufacturers, are fast, can get above the unpredictable African weather more easily and are reasonably fuel-efficient, she added.

They have drawbacks – relatively limited space for the large quantities of baggage that African travellers habitually carry, for example – but are popular.

Fleet utilisation remains low by western standards at around five hours a day. "It's a bit of an issue," admitted Woode. "It's not as high as we wanted. We have a very strong morning and evening wave of flights, but there's less utilisation in late morning and afternoon."

There are several reasons for the low utilisation, one being the lack of airports in Ghana with runway lighting. Kumasi became only the second Ghanaian airport to be so equipped a few months ago. This limits flying hours, as does the traditional aversion of west African passengers to travel at night.

AWA's business plan has evolved to take account of unexpected events, such as the Ebola epidemic. Further complications have come over the past year in the shape of adverse currency exchange rates.

Woode declined to give detailed financial figures but said that AWA is where you would expect a new airline to be two-and-a-half years into its existence. Projections are pointing towards reaching break-even not too far in the future.

Until now, travellers have mainly been business

passengers, although leisure travel is starting to grow as Ghanaians become more adventurous.

AWA operates between Accra, Kumasi and Tamale within Ghana, with Takoradi having been added to the route map this spring. The last of these is an air force base whose runway length was insufficient for the Embraers. A 200-metre runway extension was required before services could begin. Under an investment plan for the nation's airports Tamale will be the next to undergo a major upgrade, with a runway to international standards, while the instrument landing system at Kumasi is being improved.

Around 18 months ago, AWA embarked on a gradual programme of international expansion with services into Lagos in neighbouring Nigeria. "There are some challenges," admitted Woode. The airline began with 14 weekly services to the

Route' and a major trade highway since the times of the ancient tribal empires.

The group of Chinese managers that arrived from HNA had to adapt to the very different cultural norms of west Africa and some things surprised the new arrivals. The airline sector in China remains relatively regulated and "I think they were surprised at how deregulated we were."

Whereas in China little marketing is required to persuade people to fly with a particular carrier because of the volume of passengers available to airlines, the situation in Africa is very different.

"The [Chinese] managers felt that if you just have a good service, people would come. Oh no! Not in Ghana or Nigeria. You need to do your marketing culturally. If Airline X is giving away little computer pen drives or other marketing products, you have to do that, too."

AWA has spent considerable effort over the

past two years preparing for the International Air Transport Association (IATA) operational safety audit (IOSA).

It is, admitted Woode, "difficult, expensive and time-consuming", but if AWA can achieve the necessary standard, it will propel the company to a new level. "If we get that certification, a huge set of doors is open to us. We become 'the African airline that's compliant with international standards'."

So far, AWA has been through extensive staff

training, three rounds of gap analysis and the rewriting of all its manuals, just to get to the point where it can be admitted to the IOSA programme. It finally underwent the two rigorous weeks of auditing at the end of April and expects to hear sometime in the second half of this year if it has achieved the necessary standard.

If all goes well and AWA expands, it is likely to seek aircraft in the Boeing 737 or Airbus A320 category for longer routes. Embraer has pushed its 170/190 family as the next step in AWA's growth, but its extra range compared to the EMB-145 does not open up any new key markets that cannot be adequately served by the smaller aircraft.

While Bombardier's C Series would give AWA a good balance between capacity, range and cost, its delayed service entry means that it is likely to be some years before examples of the Canadian twinjet will be available, whereas 737s or A320s can readily be leased.



Embraer EMB-145.

"The [Chinese] managers felt that if you just have a good service, people would come. Oh no! Not in Ghana or Nigeria. You need to do your marketing culturally. If Airline X is giving away little computer pen drives or other marketing products, you have to do that, too."

KATHERINE-LOÏS WOODE

Nigerian commercial centre, but these have been cut back, although this has more to do with distribution and payment options rather than lack of a market.

The company had not set itself up on a global distribution system (GDS) as quickly as it had wanted and had not taken account of the fact that Nigeria has become a virtually cashless society. "We found our payment options had to be a bit more technological and internet-based."

Once these problems are solved, Abuja is a priority on Africa World's list of new destinations. Abidjan is also "a very big deal because of the presence there of the African Development Bank".

Freetown and Monrovia were also on the airline's list of preferred destinations until the Ebola epidemic caused traffic disruption.

AWA is also keen to get on to sectors between Douala in Cameroon and Dakar in Senegal – Africa's equivalent of Central Asia's ancient 'Silk

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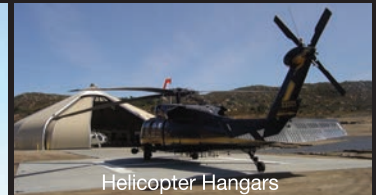
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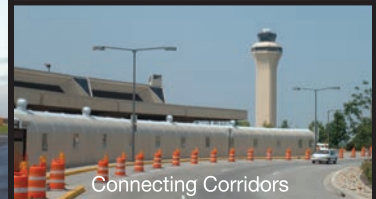
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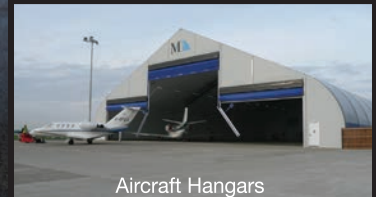
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Connections: The hub

Demand for air transport has increased steadily in Africa but the performance of the aviation industry is still lagging behind. Keith Mwanalushi speaks to industry insiders to look at the issues and solutions.

«La Connectivité : au cœur des défis de l'Afrique» – Page 32

For Africa to develop further, it needs Africans to interact and do business together.

The economic figures that suggest the growing economic prosperity of several African nations are well received but, for a continent of such a magnitude to reap the benefits, air transport is inevitably going to play a vital part.

Connecting domestic feeder traffic with long-haul routes at continental hubs is an area where African airlines could benefit. However, this is still a major challenge in several African states.

Generally Ethiopian Airlines, Kenya Airways, EgyptAir, Royal Air Maroc (RAM) and South African Airways (SAA) are well placed but they are still relatively small. Even if combined they are still barely half the size of Emirates. "Properly connected hubs with optimised schedules are not just a plus for these airlines but are essentially at the heart of running a good hub and spoke operation, both building density on thick routes and opening thin routes," said Sudeep Ghai, founder of Athena Aviation in the UK.



"The number one carrier in Africa is Ethiopian, because it leads the way in passenger numbers and profitability. Johannesburg and Cape Town are still significant airports but their role is declining because they are end-of-line hubs and there are now better opportunities to connect east to west or west to east via East Africa, or routing over the Middle East mega hubs," Ghai added.

Among the major hubs for intercontinental traffic are Addis Ababa, Cairo, Casablanca, Nairobi and Johannesburg. In addition, there are also a number of significant secondary hubs in some states that need to be well connected.

Elijah Chingosho, secretary general at the African Airlines Association (AFRAA) said: "Connecting a capital like Maputo in Mozambique with, say, Libreville (Gabon), Malabo (Equatorial Guinea), or Bangui (Central Africa Republic) is a challenge. It is even more challenging to connect Maputo with North African cities like Algiers, Rabat or Tunis. Such examples are numerous within the continent."

Because of the poor connectivity within the



Sudeep Ghai: "Too many local airlines don't get the basics right."

continent and with long-haul routes at major hubs, foreign airlines such as Air France, Emirates, Qatar Airways and Turkish Airlines are rightfully taking full advantage of the opportunity by flying directly to several African capitals and then linking these capitals to other African cities or to the rest of the world through their hubs in Paris, Dubai, Doha or Istanbul.

Chingosho said improving connectivity within the continent was critical to the development of African aviation, as well as stimulating intra-Africa trade, investment and tourism. "It is imperative for African operators to find the right aircraft to serve the thin regional and domestic routes profitably, with adequate frequency of services for the convenience of the customers to the long-haul hubs."



Tony Irwin: "We have to compete with well established international airlines."

The secretary general accepted that connecting domestic feeder traffic in countries with major hubs like Ethiopia, Kenya, Egypt, Morocco and South Africa was beneficial but he pointed out that the local carriers faced stiff competition from the non-African mega airlines, meaning their intercontinental operations were often uncompetitive or loss making. "However, operations within the continent are very viable because of the huge untapped and growing market," he added.

Some international carriers have successfully negotiated fifth freedom routes in Africa. This essentially allows them to pick up traffic between intra African points and to and from their country of origin.

An interesting case is the situation in Zambia,

of Africa's challenge



The role of hubs such as Johannesburg (where this SAA A340-600 is based) is declining.

with the country's only scheduled airline—Proflight Zambia. In early 2013, Proflight Zambia was granted permission to operate flights between Lusaka and Harare but services have not begun as the airline would be competing against KLM, Ethiopian Airlines, Emirates and Air Namibia, all of which already service the Lusaka-Harare leg due to the fifth freedom rights awarded to them by the Zambian Government.

Tony Irwin, CEO of Proflight Zambia explained: For every passenger that flies directly into Livingstone or Ndola, that is two seats that are potentially not being flown with Proflight. And for every passenger who travels Lusaka-Harare or Lusaka-Lilongwe with airlines using fifth freedom rights, that is a seat that is potentially lost by Proflight. These are some of the challenges posed to Proflight as a domestic Zambian carrier.”

Ironically, it is also the increase in international airline flights into Zambia that has helped Proflight grow its business elsewhere. As Zambia's sole domestic airline, it carried more than 100,000 passengers during 2013. “This is tiny when compared with the 2.9 million passengers in the Kenyan domestic market and 4.5 million passengers on the Johannesburg-Cape Town route alone,” Irwin noted.

Currently, 17 foreign airlines are benefiting from fifth freedom rights between certain African cities compared to 11 African airlines. Chingosho feels the situation is unfortunate and sees the only solution being the full implementation of the Yamoussoukro Decision (YD).

Ghai warned, however, that moves to consider protectionism should be looked at with some caution. “The first move should be to build a strong local player, which is efficient, with private sector stakeholders. The second would be more co-ordination across Africa on

Continued
on Page 32



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CONTINUED FROM PAGE 31

internal liberalisation, creating a more efficient home market,” he advised.

So the question now is, what should existing local airlines be doing to compete in a fifth freedom world?

Unreservedly, Ghai thinks the focus must be on developing a commercially-focused airline, maximising profitable revenue and running a cost-efficient operation. “Too many local airlines don’t get the basics right,” he said.

Many African airlines are small, with an ageing fleet of about three to 12 aircraft, most of which are struggling due to the lack of economies of scale and high industry costs on the continent arising from above world average passenger and fuel taxes, charges and levies.

Chingosho strongly suggested the need for consolidation through mergers, joint ventures and strategic alliances to create viable operating entities that enjoy economies of scale.

“Consolidation can be achieved through partnerships like that of Kenya Airways and Precision Air or Ethiopian Airlines and Asky Airlines and Malawian Airlines,” he said.

“To facilitate more of such mutually beneficial arrangements, it is critical that the regulatory climate in Africa be fully liberalised. The on-going thrust to fully implement the Yamoussoukro Decision needs to be supported by all stakeholders to allow airlines to fly wherever the market exists and facilitate the movement of capital investment among carriers,” he stressed.

Fleet renewal and expansion is another key element Chingosho addressed, suggesting that,

as airlines expand into new regional markets, the demand for aircraft in the 60 to 120-seat segment would be high to meet the growth needs and also to replace ageing fleets.

Aside from the popular 737s and A320s, second tier original equipment manufacturers (OEMs) are looking to find a market in Africa for their new crop of upcoming aircraft, such as the Superjet, Mitsubishi MRJs, COMAC C919 and possibly the CSeries, too.

The growing African aviation scene, particularly in domestic and intra Africa markets, is stimulating demand for new modern aircraft – but the buzzword is ‘affordability’.

Chingosho said that because of the fragmented nature of the industry and the small size of many airlines, they could not mobilise sufficient resources to acquire the most modern, popular aircraft types from the usual OEMs [Boeing and Airbus].

“This is why some airlines are looking further,” he added. “For example, the Chinese-made XIAN MA60 turboprop is finding markets in more and more African states because of its much lower capital cost. The MA60 is currently being operated in Burundi, Cameroon, Djibouti, DRC, Eritrea and Zimbabwe,” he elaborated.



Low-cost carriers (LCCs) are also slowly trickling into Africa, with the arrival of the likes of FlyAfrica and Flysair joining a small list of established or establishing players.

The development of affordable air transport is critical to Africa. The future development of a mass air transport system rests on the development of airlines, including budget carriers, that have costs which should allow them to charge a fare that is affordable. An affordable fare should generate traffic that should enable the development of a strong and viable air transport system on the continent.

Chingosho said: “Indeed, we have seen the development of some low-cost airlines in South Africa, Kenya, Tanzania and elsewhere. The global experience of launching a low-cost carrier is that it creates a completely new market rather than a redistribution of market share in the existing market.”

However, he pointed out that one major constraint to the development of LCCs was the high taxes, charges and levies in Africa that were among the highest in the world. These were charged by some governments, which took the view that air transport was a luxury service for the elite of society.

“Flying is rather a basic need for all people due to the poor surface transport infrastructure in most African countries,” said Chingosho. “It is, therefore, critical that governments avoid burdening this industry with excessive taxes and charges, which ultimately results in limiting the economic benefits to the state and reducing its sustainable contribution to development.”

SOMMAIRE

La Connectivité : au cœur des défis de l'Afrique

La demande pour le transport aérien a augmenté de façon constante en Afrique mais la performance de l'industrie de l'aviation est toujours à la traîne. Keith Mwanalushi tâte le pouls de cette industrie vitale pour en examiner les problèmes et les solutions.

Pour que l'Afrique se développe davantage, les Africains doivent interagir et faire du « business » ensemble.

Le premier transporteur africain reste Ethiopian Airlines en termes de passagers et de rentabilité. Parmi les principales plaques tournantes pour le trafic intercontinental figurent Addis-Abeba, Le Caire, Casablanca, Nairobi et Johannesburg.

Pour Elijah Chingosho, secrétaire général de l'AFRAA, l'amélioration de la connectivité au sein du continent est essentielle pour développer l'aviation africaine, stimuler le commerce intra africain, l'investissement et le tourisme. «Il est impératif pour les opérateurs africains de trouver l'avion idéal pour desservir les routes régionales et nationales de manière rentable, avec une fréquence adéquate et un service répondant aux attentes des clients ».



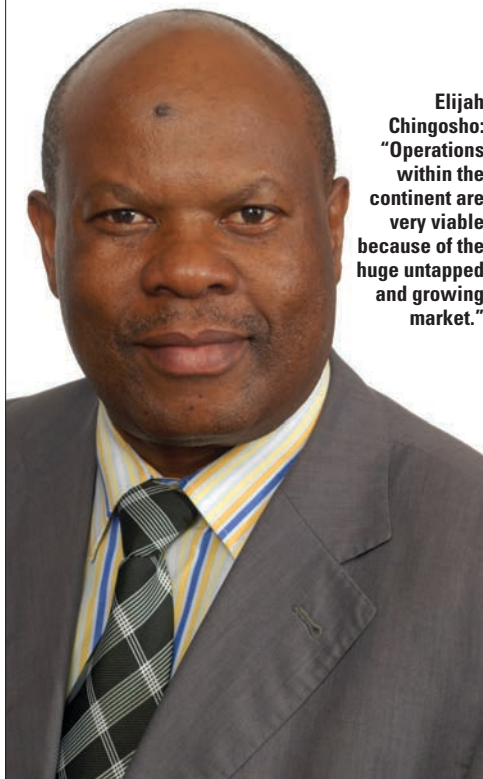
En raison de cette mauvaise connectivité au sein du continent, les compagnies aériennes étrangères profitent pleinement pour desservir directement plusieurs capitales africaines, les reliant à d'autres villes africaines ou au reste du monde à travers leurs hubs de Paris, Dubaï, Doha ou Istanbul.

Elijah Chingosho reconnaît que le trafic de correspondance dans les principaux hubs comme l'Éthiopie, le Kenya, l'Égypte, le Maroc et l'Afrique du Sud a été bénéfique. Les opérations intra-africaines sont toutefois très viables en raison d'un vaste marché inexploité et en pleine croissance.

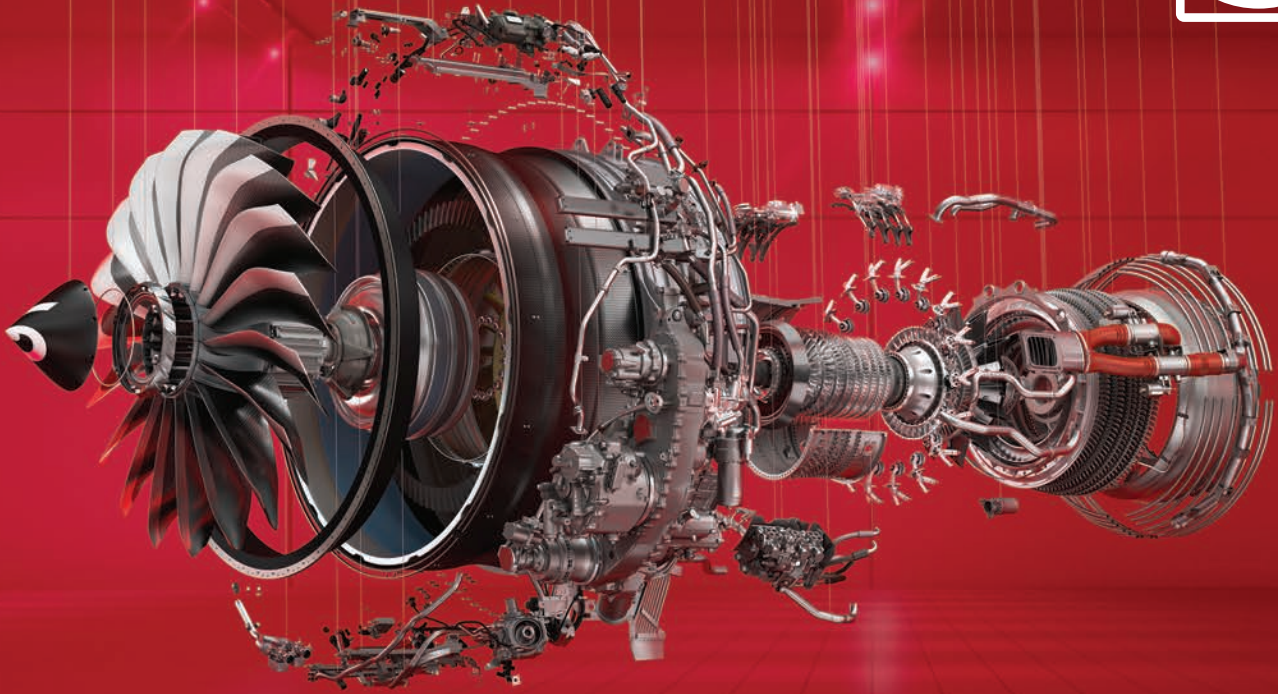
Beaucoup de compagnies aériennes africaines sont également de petite taille avec une flotte vieillissante. La plupart sont en difficultés.

Elijah Chingosho propose fortement des fusions et des alliances stratégiques pour créer des entités d'exploitation viables. Le renouvellement et l'expansion des flottes sont une autre composante clé de la croissance. Il reste cependant à élucider l'épineuse question du financement.

Par ailleurs, les transporteurs à bas coûts (LCC) entrent graduellement en scène mais l'un des principaux obstacles de son développement reste le haut niveau des taxes. Il est donc essentiel que les gouvernements évitent de surtaxer cette industrie.



Elijah Chingosho: “Operations within the continent are very viable because of the huge untapped and growing market.”



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MORE TO BELIEVE IN

Blue Sky plays the

There is an African proverb that roughly translates as “patience attracts blessings”. If this is true, reports Victoria Moores, Botswana start-up BlueSky Airways should be truly blessed.

African Aerospace last caught up with BlueSky Airways managing director Mark Spicer in August 2013. Spicer, an American who came to Botswana in 1992 as a Christian volunteer, had just quit his job with non-profit organisation Flying Mission Services (FMS) to focus on the launch of BlueSky – a comfortable, quality airline and the country’s first Boeing 737 operator.

Spicer was approached about a potential 737-200 lease in 2010 and imported the aircraft in November 2011. Botswana has been upgrading its civil aviation oversight and that stalled the project, but Spicer was hoping to have the air operator’s certificate (AOC) in place by September 2013. Nearly two years on, Spicer is still hoping that the AOC is imminent.

“We’re now at the demonstration flight phase, the fourth part of the five-phase process. Phase five is certification, so we have come a long way,” said Spicer. “We received our air transport licence (ATL) in January, which gives us the ability to perform domestic and international scheduled operations.”



BlueSky’s AOC application was put on the back burner until around February 2014, as Botswana worked to recertify its 13 or 14 existing airlines to International Civil Aviation Organization (ICAO) standards. However, when it came to BlueSky’s turn, it emerged that the 737-200 was too old under the new standards. “We were informed that the 737, which we previously had on the registry, was no longer qualified because they put in a 22-year rule,” Spicer explained.

Over the last 15 months, BlueSky has been seeking additional funding to secure newer Boeing 737-300s, -400s or -500s that meet the requirements. It has turned into a chicken and egg situation. BlueSky could not lease the aircraft without an AOC, but it could not get the AOC without having a dry-leased aircraft on the Botswana register.



To help with this dilemma, the Botswana Civil Aviation Authority (CAA) has written BlueSky a letter, assuring potential lessors that within 30 days of the aircraft’s arrival in the country, it will be put on the local register, assessed for a certificate of airworthiness, given a demo flight and the AOC will be granted. BlueSky has crews on standby to perform the demo flight as soon as an aircraft has been sourced.

Despite the delay, Spicer has not been deterred. “A strong, qualified CAA is good for the airline. That’s what we want, a good, solid CAA that’s going to be there for us and give us the regulatory enforcement that we need,” he said. “I’m still very optimistic. The ministers of transport, trade and tourism have all been very supportive.”

Spicer is a co-owner of BlueSky alongside Chris Garland and Julian Scales, two aviation enthusiasts who have lived in Botswana for more than 27 years. “The three of us started this and we’ve been self-funding it all this time. None of us are well-to-do people – and we’re even less well-to-do now. We’ve all stuck it out because we know it’s going to work; it’s going to be successful and it’s something that’s needed.”

Talks are under way with three potential investors, including one finance and equity investor who could help BlueSky acquire an aircraft and bring it into the country. These discussions should be finalised over the coming weeks. Once the funding and the aircraft are in place, BlueSky could launch within three months. Cabin service

game of patience...



At last things seem to be coming right for BlueSky. At least, this is the hope of CEO Mark Spicer (far left). Pictured left is the 737-200 that proved too old; and below left are some of the aircraft of Spicer's former employer. Today, he is looking for newer 737s or similar to start operations.

manager, Jada Cofield, has already trained up nine local cabin crew, ready for the launch.

"We're excited about it; we're optimistic. I'd like to say we're going to start operations two months from now but, until I get an aircraft, we're still a little bit on hold. We've got some potential partners who recently came on board that I think will meet our needs financially. Once we do get all this in place, things are going to happen at a very, very fast rate and I believe we will be able to expand even quicker than our original plan."

In the meantime, the search for an aircraft is continuing. Spicer is adamant that he wants to go with Boeing, describing the 737 as a reliable workhorse with a good safety record and strong cargo potential. "It will either be a 737-300, or a -500. We want to get two, so it might be one of each. We're looking at a -300, a 1999 model that's currently in the UK, and there are also two -500s that we're looking at as well, but the 300 is my aircraft of choice. This would be a purchase."



BlueSky will launch with three routes, Gaborone-Cape Town, Gaborone-Johannesburg and domestic services to Maun.

Johannesburg has both passenger and freight potential, Maun is a tourist destination. Cape Town is already served by Air Botswana, but Spicer feels there is an opportunity for the two carriers to work together on the route. "I honestly believe Air Botswana will work with us. Their new CEO, Ben Dahwa, has indicated there might be some synergies there."

Within three months of its starting operations, BlueSky will probably add another two routes, a domestic service to Kasane and an international destination, which has been requested and is being analysed.

Spicer, Garland and Scales are all Christians and they agree that the company should give back to

their local community. They have formed a trust and will channel some of the proceeds of the airline into non-profit work.

When asked whether he has ever been on the verge of quitting, Spicer replies: "No, I haven't. People have commented on my perseverance; I don't know whether they meant it positively or negatively. It has taken longer than expected. If you'd told me two years ago that it was going to

take another two-and-a-half to three years, would I still do it? I don't know. That would be something I'd have to re-evaluate."

However, he remains confident that BlueSky will be good for Botswana, creating jobs, revenue and status, by having two airlines in the country.

"To be honest with you, it's been a journey. There are some things that we weren't ready for back then, but we are now. My biggest regret is that we've lost some high-quality people along the way. They had this vision with me, they really wanted to see this happen and be a part of it. We're down to a skeleton crew, but we've got people in the wings who are ready to come on board as soon as I give them the go-ahead."

And with these people, the new airline and upgraded regulatory oversight, Botswana will emerge with a stronger air transport industry. Patience may attract blessings, but it involves a lot of hard work and faith too.

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Kenya's pure cargo-carrier, Astral Aviation, recently became the first such airline to join AFRAA.

*Non-African carriers have dominated the continent's growing cargo market for years but now, reports **Tom Pleasant**, home-grown airlines are taking back their business and supporting booming intra-African trade.*

AT LAST, AFRICA PUNCHES ITS FREIGHT...

«Les compagnies africaines enfin à la conquête du fret»

– Page 38

The global recession cut air cargo to the bone but African cargo has continued to see healthy growth over the past five years. From 2015 onwards, the International Air Transport Association (IATA) predicts this will continue, with the continent becoming the second fastest-growing economic region for cargo, at 4.9%, just behind the Middle East.

While regional trade volumes are still volatile, there are several mitigating factors. These include the improvement of key economies, such as South Africa; large infrastructure projects, in particular for oil and gas extraction; new production centres, like those in Ethiopia; and the continent's growing middle class, eager to spend their money on popular consumer goods.



While Europe has remained the traditional trading partner of choice, accounting for over half of Africa's total cargo traffic, the Middle East and Asia have rapidly expanded their share. The Middle East is now a major hub of sea-air trade to and from Africa and accounts for 14.4% of the continent's air cargo. Meanwhile, follow-on investment by China in extractive industries is driving Asia-to-Africa trade by 6.9% per year. Africa-to-Asia is expected to continue growing at 4.8% per year as industrial ties with Asia develop. Cargo traffic to North America is forecast to hover at around 5%.

It is intra-African traffic that is of most interest, though, having grown to almost 6%. This is still small compared with Europe, but it is seeing significant growth and this is expected to continue, due to the growing trade and investment going on between African countries. In addition, the continent's road and rail infrastructure is limited, which only increases the need for air as the cargo mode of choice.

That has made South Africa, with its traditionally superior infrastructure and economic trade links, the transshipment hub of choice for Africa. However, projects are under way elsewhere on the continent to improve the infrastructure needed to support large-scale cargo operations, which is expected to affect South Africa's domination from 2015 onwards.

But, while the region's air cargo industry is starting to flourish, civil disturbances and



CONTINUED FROM PAGE 37

now the Ebola epidemic continue to thwart smooth growth. For example, political instability kept Cairo out of Kenya Airways (KQ) network, while capacity into South Sudan fell by 11% due to the troubles there.

In response to the Ebola pandemic in parts of west Africa, KQ then suspended operations into Monrovia (Liberia) and Freetown (Sierra Leone), resulting in a capacity reduction of 20%.

Nonetheless, cargo tonnage for the airline, one of the continent's rising stars, rose in the first six months of 2014, growing by 8.4%, following increased sales effort and the roll-out of freighter destinations within Africa. The carrier's cargo division has mainly been using belly capacity on its operations, but the airline announced in October 2012 the conversion of Boeing 737-300s into freighters to complement its Safari Connection 747-400F service, jointly operated with KLM and Martinair Cargo.

Speaking at the African Airlines Association (AFRAA) annual general assembly in Algeria in November, new CEO Mbuve Ngunze said cargo remained a vital part of KQ's future success.

"Our cargo joint venture with Air France KLM – Safari Connection – was a good arrangement,"

he said. "It flew the Amsterdam-Guangzhou-Nairobi-Amsterdam triangle. The Guangzhou-Africa leg was the best product in the market and had a good profitability. However, the Amsterdam-Guangzhou leg was not so strong, so we have had to suspend that arrangement temporarily until things pick up.

"But, I'm optimistic about the evolution of regional cargo," he added, "especially for Nairobi to become a hub for cargo freighters. It doesn't make sense to fly a big freighter into Africa and then make hops around the continent. I'm seeing more and more people coming into Nairobi and dropping off cargo to transfer into the region using our distribution capability.



"We converted two narrow-body regional freighters last year and are working on making them a solid business proposition. They and their network are now settling in and the team is working well. We're building a good platform for the future. Later, once we have coverage of the narrow-body sector, we will think about what else can complement that business in the longer term."

While KQ's cargo future looks good, South

African Airways' (SAA) is not so certain. On the face of it, the airline looks to be in a strong position. It currently has two 737-300Fs and has another on order to eventually replace an existing 737-200F. It is also used to being the flag-carrier of the most economically and infrastructurally advanced country on the continent. However, other African countries are catching up and SAA itself is struggling with its senior-management upheaval, which has seen it go through five changes in leadership over two years.

Available information on cargo operational results has almost disappeared, but what we do know is that acting SAA CEO, Nico Bezuidenhout has a 90-day strategic plan to get the airline back on track. For cargo, there are three significant areas affected by this.

The first was the announcement that Air China and SAA will strengthen their bilateral cooperation within the Star Alliance. The key element of this will be some network reconfiguration for both airlines to provide better passenger and cargo services between South Africa and China and countries adjacent to both.

With Asia being a source and, increasingly, consumer of so much cargo, the deal will have a significant effect on SAA Cargo's business and

SOMMAIRE

Les compagnies africaines enfin à la conquête du fret

Les compagnies aériennes non-africaines ont dominé le marché du fret en Afrique durant des années, mais aujourd'hui, comme l'indique Tom Pleasant, les transporteurs du continent reviennent dans la course et soutiennent l'essor du commerce intra-africain.

Même si la récession mondiale a impacté le fret dans son ensemble, le fret au niveau africain a connu une croissance lors des cinq dernières années. Celle-ci va se poursuivre selon l'IATA et l'Afrique va devenir la deuxième région économique avec la plus forte croissance pour le fret (4,9%) juste derrière le Moyen-Orient. Bien que le volume du commerce régional soit encore volatile, il y a plusieurs facteurs atténuants : l'amélioration des principales économies comme l'Afrique du Sud, les grands projets d'infrastructure (extraction de pétrole et de gaz), les nouveaux centres de production comme en Ethiopie et l'émergence d'une classe moyenne sur le continent.

Alors que l'Europe représente plus de la moitié du trafic total de marchandises en Afrique, le Moyen-Orient et l'Asie ont rapidement pris des parts de marché. Le Moyen-Orient est maintenant un hub incontournable du commerce à destination et en provenance d'Afrique et représente 14,4% du fret aérien du continent. L'investissement de la Chine en Afrique est le moteur du commerce de l'Asie vers l'Afrique. Il devrait continuer de croître de 4,8% annuellement.

La croissance du fret intra-africain augmente de 6%. A noter que l'infrastructure routière et ferroviaire du continent est inadéquate pour le transport de marchandises, ce qui favorise le développement du fret aérien. L'Afrique du Sud demeure le hub de transbordement de la région grâce à ses infrastructures de qualité.

Le secteur du fret aérien reste cependant affecté par des troubles dans certains pays mais également par l'épidémie Ebola. Le fret est également un enjeu important pour South African Airways et son plan stratégique de redressement en 90 jours intègre cette dimension. Il y a trois mesures qui ont un impact réel sur le fret. La première réside dans la coopération bilatérale entre Air China et SAA au sein de Star Alliance. La seconde est l'ajout de fréquences sur son réseau intra-africain. La troisième est le partenariat stratégique entre SAA et Etihad.



Ethiopian Airlines reste le géant du fret sur le continent africain. La compagnie mise sur son plan stratégique « Vision 2025 ». Autre atout majeur, la construction d'un nouveau terminal dédié au fret permettant de traiter 1,2 million de tonnes de marchandises annuellement.

Même si l'industrie du fret en Afrique va être dominé par ces géants, il est nécessaire de s'attarder sur la stratégie des petits opérateurs de fret africains.

En Afrique du Nord, Air Algérie envisage une scission de sa division de fret. Selon son directeur commercial, Zohir Houaoui, il faut donner au fret les moyens de se développer.

En Libye, Afriqiyah Airways et Libyan Airlines

envisagent de renforcer leurs services de fret aérien. L'aviation civile libyenne a aussi affiché son intention de faire de l'aéroport de Sebha, un centre de fret. En Afrique orientale, Astral Aviation compte développer ce secteur en plein essor.

En Afrique centrale, ECAir devrait investir et développer son activité fret pour se connecter avec Dubaï et

l'Europe. En Guinée équatoriale, Punto Azul envisage également de muscler ses opérations de fret avec un ATR 42 ou un B737. En Afrique australe, Khuphuka Kings Airways a débuté ses opérations de fret depuis l'aéroport King Shaka de Durban.

Le Botswana est également à la recherche de nouvelles opportunités. LAM Mozambique Airlines a fait un partenariat avec Bolloré pour créer LAM logistique, qui se chargera de toutes les opérations de fret.

Les transporteurs à bas coût (LCC) qui n'ont pas développé leur activité de fret changent de stratégie. FastJet a, par exemple, signé un accord avec BidAir pour transporter des marchandises sur ses routes tanzaniennes.

L'Afrique est donc un véritable marché en croissance et il est évident que les compagnies non-africaines continueront à défier les compagnies africaines dans le secteur du fret.

Mais en 2015, les compagnies aériennes de l'Afrique seront désormais une véritable force sur laquelle il faudra compter.

may go some way to protecting its regional hub status.

The second was the announcement that SAA has added substantially more frequencies to its intra-African network. These include additional frequencies to Harare (Zimbabwe) and Maputo (Mozambique), with Kinshasa (Democratic Republic of Congo) and Mauritius to follow.

The third was the announcement in December of a greater strategic partnership between SAA and Etihad.

The Abu Dhabi flag-carrier has been investing into multiple airlines recently, so a similar investment into SAA is expected. With the Middle East's growing role as a global cargo hub, a deal that links that with Africa's regional hub introduces interesting alternatives to existing networks between Kenya, Ethiopia, Dubai (UAE) and China.

This is hypothetical though, especially as Ethiopian Airlines (Ethiopian) remains the cargo giant of the continent. It is currently implementing a 15-year Vision 2025 strategic plan. Part of that plan is to support the country's huge export of perishables by rapidly expanding its cargo fleet and infrastructure.

As well as the massive belly capacity it has in its fleet, it also has two 757-200 passenger-to-freighter conversions, five 777Fs, and two MD-11Fs. On top of those, in December it secured a \$41.4 million seven-year loan from ING Capital to buy two more 777Fs.

In 2014 alone, Ethiopian added 14 aircraft to its fleet, including five 787 Dreamliners, one 737-800, one 777-300, two 777Fs and four Q-400 aircraft.

It is also building a new cargo terminal with both cold and dry storage facilities, capable of handling 1.2 million tonnes of cargo annually, making it one of the biggest in the world.

While Africa's future cargo industry is sure to be dominated by Ethiopian, that does not rule out smaller operators staking their own claim.



In northern Africa, Air Algérie is planning to upgrade its Lockheed freighter with two 737-700 combis. It is also planning on spinning off its cargo division into a wholly-owned subsidiary.

"Air Algérie needs to focus on its core passenger business and to give these services [cargo, catering and ground handling] a chance to develop," said Zohir Houaoui, head of the airline's commercial department. "Initially, they will be subsidiaries, but they could be moved to partnerships."

In Libya, state-owned airlines, Afriqiyah Airways and Libyan Airlines, are planning to boost the country's airfreight services. Libyan Airlines is in negotiations to lease one freighter and is thinking of buying another second-hand, most likely an A300-600F. Afriqiyah is also planning to establish a freight subsidiary and to buy a freighter.

Meanwhile, the Libyan Civil Aviation Authority (LYCAA) has said it wants to turn Sebha Airport in southern Libya into a cargo hub.



In Equatorial Guinea, fledgling carrier Ponto Azul is planning to move into cargo operations.

LYCAA's director general, captain Nasereddin Shaebelain, said: "We plan to make Sebha into a hub for airfreight, with a cargo village with hangars and temperature-controlled storage for perishables, such as food and plants, which would then be transported to Africa."

In eastern Africa, Kenya's pure cargo-carrier, Astral Aviation, recently became the first such airline to join AFRAA. Its CEO, Sanjeev Gadhia, said he was "giddy" from the airline's recent success.

Low-cost carriers (LCCs) traditionally have not bothered very much with cargo, as their fast turnaround times usually limit efficient cargo operations. However, one such LCC, Tanzania's FastJet, has signed an agreement with BidAir, to carry cargo on its fleet of Airbus A319s on its Tanzanian routes. Initially, FastJet intends to carry 'dry' cargo, such as post and newspapers.

In central Africa, the Republic of the Congo's ECair has seen cargo traffic rise and is considering whether it, too, should invest in a freighter, potentially to connect with Dubai and Europe.

In Equatorial Guinea, fledgling carrier Ponto Azul is also planning to move into cargo operations using an ATR 42 or a 737 combi.

"I'm looking to bring in cargo as soon as the air operator certificate is issued," said managing director Paul Richards. "It will be a small aircraft initially. We are trying to tempt European operators to use Equatorial Guinea as a hub so we can distribute their cargo throughout west and central Africa," he said.

In southern Africa, Khuphuka Kings Airways, operating out of Durban King Shaka Airport, started cargo services in early 2014 this year using two Il-76s and one An-12, with great success.

Botswana is also looking to move into cargo. Air Botswana's new general manager, Ben Dahwa, said: "We've got a world-class cargo facility at our hub that belongs to our shareholder. Last year the

shareholder put it out to tender, which we won, to make use of it for the next five to 10 years.

"Cargo is a huge area that we're looking at developing in terms of broadening our revenue and so we went into an ACMI arrangement with South African operator SkyClass Aviation, which operates a Turbo DC-3."

In Mozambique, CEO of LAM Mozambique Airlines, Marlene Manave, wants to convert an Embraer 120 into a freighter to develop LAM's cargo business. However, a new joint venture with French oil and gas logistics firm, Bolloré, means LAM is now eyeing far larger aircraft.



"The Embraer 120 conversion was one of our options when we were thinking of doing it [the cargo operation] ourselves, but now it might be a bigger aircraft because we would be flying for the mining industry, which involves large equipment. They have been using a Russian aircraft, the Antonov An-26, from Johannesburg to Pemba so it might be something similar to that," said Manave.

The partners are teaming up to create LAM Logistics, which will handle all of LAM's belly cargo and dedicated freighter operations. The main freight flows will be between Maputo and the provinces, although LAM Logistics will also connect Palma with the port city of Pemba, which are both located in Cabo Delgado, the northernmost province of Mozambique.

With Africa being such a desirable market at the moment, it is obvious that non-African carriers, such as Lufthansa and Emirates, would continue to make a sizeable dent into these African carriers' cargo business, but equally, these signs of growth and success stories suggest that in 2015 and beyond, Africa's airlines will be a force to be reckoned with.

Can Africa manage the

African carriers need to adopt new technology and improve airport infrastructure, ensuring proper security measures are in place, to meet the growing demand for airfreight on the continent. Kaleyesus Bekele has been talking to International Air Transport Association officials in Geneva to view progress.

The African air cargo industry is registering a remarkable growth. According to Brian Pearce, the International Air Transport Association (IATA) chief economist, in the 2013-2014 fiscal year alone air cargo transport in Africa grew by 16%.

Pearce said African air cargo is projected to increase at a rate of 4.4% annually in the next five years, the second fastest-growing region next to the Middle East.

The Africa-Europe market accounts for approximately 2.3% of the world's air cargo tonnage and 2.3% of the world's tonne-kilometres. Air trade originating in, or destined for, Africa was estimated at 1.7 billion tonnes in 2013.

Principal markets include Europe, the Middle East, and Asia.



Europe commands the majority of Africa's international air trade (with an estimated 56.9% share in 2013) owing to the proximity of the two continents and long-standing commercial and investment ties.

Over the past decade, however, the Middle East and Asia have rapidly expanded their share of the African market. In 2013, the Middle East accounted for 14.4% and Asia 12.9%.

Middle East air trade with Africa jumped as fast-growing Gulf airlines added capacity in lower-hold passenger aircraft and dedicated freighters.

Asia has built new commercial ties to Africa, led by Chinese enterprises seeking sources of raw materials to fuel industrial expansion.

"The African region has grown significantly,"



The thriving relationship with China is stimulating demand for links between Asia and Africa.



Kenya Airways (KQ) started implementing the e-AWB in July 2014 and has already reached 7% e-freight.

said Glyn Hughes, IATA's global cargo head. According to Hughes, carriers based in Africa have increased their cargo business by 16% since 2010. "This is extremely important because that is not only to and from Africa – African cargo operators are also serving as gateway for various points on this planet," Hughes said.

African carriers are making significant investments in their air cargo business. "If you look at Ethiopian Airlines, Kenya Airways and South African Airways, they are investing in the quality of infrastructure and in their people in terms of training. They are doing incredibly well for the continent," said Hughes.

There are a number of factors contributing to African air cargo growth. These include the fast economic growth most African countries are registering and growing trade ties between the continent and Europe, the Middle East and Asia.

Particularly, though, it is the thriving trade and investment relationship with China that is stimulating strong demand for links between Asia and Africa.

"It is a natural evolution," said Hughes. "If you

look at China, it sees a lot of future in Africa. So we are witnessing a lot of inward investment coming from China."

Chinese companies are involved in infrastructure development, manufacturing and natural resources development. "There are a lot of Chinese projects; they are bringing plenty of influence, so there is naturally increasing trade flow between China and Africa," Hughes said.

With the growing air cargo transport flow, African carriers need to modernise their services. Among many other things, they are expected to introduce the e-Air Waybill (e-AWB), which has been developed by IATA collaboratively with industry stakeholders. It removes the requirement for a paper Air Waybill (AWB).



IATA said Ethiopian Airlines, South African Airways (SAA) and EgyptAir had taken the lead in implementing the e-AWB.

Guillaume Drucy, head of IATA's cargo e-business, said that in 2013-2014 Ethiopian had increased its e-freight business from 40 to 53%, SAA from 1% to 30% and EgyptAir from 5% to 50%.

Kenya Airways (KQ) started implementing the e-AWB in July 2014 and has already reached 7%.

"I can say we have a good momentum in introducing the e-cargo business in Africa. But there is a lot of work ahead," Drucy added.

One of the major challenges faced by African cargo operators is meeting European Union security regulations.

Following the interception of explosives on board a UPS freighter aircraft in 2010, the EU

weight of expectation?



Ethiopian has increased its e-freight business from 40 to 53%. Pictured: one of its Boeing 757s reloads at Lusaka.

introduced a new cargo transport security regulation, which demanded that carriers operating flights to the European Union had to have their hubs validated by independent inspectors.

The checks would look at, among other things, security infrastructure, including the existence of proper fencing, security cameras and controls at cargo stations. A deadline of July 2014 was set for the validations.

However, conveying that message to African operators has been a challenge. Hughes said:

“Sometimes it is difficult to reach all African carriers to get them to embrace the new legislative requirements.”

According to Hughes, some African carriers had problems meeting the EU deadline. A number asked for a six-month extension, which the EU granted, pushing back the deadline from July 2014 to January 2015.

“We do not have the information today on how many of them have met the requirements,” Hughes said. “From an IATA perspective, we make sure that all our member airlines are aware

of the regulation and we provide information, guidance and assistance, but we cannot force anyone to get the independent validation.”

According to Hughes, meeting the EU security requirement is incredibly important. “The EU could ban African operators from carrying cargo to the EU and that is not something good for the African economy or for the carriers,” he said.

Staff training is another key task for African cargo carriers. “We would certainly encourage much more staff training to be focused on educating the workforce,” Hughes said.



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David Oliver *details the facts behind the long, slow decline of Ethiopia's Air Force.*

Formed in 1924 with the procurement of French and German aircraft by Ras Tafari, later emperor Haile Selassie, the Ethiopian Air force has had nine lives.

It was first annihilated when Italy invaded Ethiopia in 1935, but rebuilt as the Imperial Ethiopian Air Force (IEAF) with Swedish and British assistance at the end of World War Two.

With the arrival of a US Air Force training mission in 1959, the IEAF began to re-equip with US jet aircraft including the North American F-86F Sabre – some of which were deployed to the Congo to support United Nations (UN) forces in 1961 – and later the Northrop F-5A.

Haile Selassie was deposed in 1974 by a Derg – a provisional council of soldiers – with major Mengistu Haile Mariam assuming power.

Following the Soviet Union's switch of support from Somalia to Ethiopia during the Ogaden War in 1977, the EAF became mainly provided with Soviet equipment, and with Cuban and East German 'advisers'.

During Mengistu's 17-year regime, considerable numbers of MiG-17s, MiG-21s and MiG-23s were delivered, along with Mil Mi-8 and Mi-24 helicopters, many of which were used against Somali rebels, Eritrean secessionists and insurrections within Ethiopia.



Several of these indigenous factions merged to form the Ethiopian Peoples' Revolutionary Democratic Front (EPRDF), whose forces advanced on Addis Ababa, forcing Mengistu to flee to Zimbabwe in May 1991.

During Mengistu's communist regime, the EAF had lost a large number of aircraft through defections, even when under the command of well-trained generals.

In 1976, two pilots defected with their Northrop F-5A fighters to Kassala in Sudan, and, a year later, a pilot defected to Somalia with his Canberra B.52 bomber (four converted former RAF B.2s had been delivered in 1969) and more pilots followed them in the 1980s.

In 1987, the Derg was dissolved and The People's Democratic Republic of Ethiopia (PDRE) was established by the Communist government of Mengistu and the Workers' Party of Ethiopia (WPE).

Following Mengistu's elevation to president and the socialist single-party state's creation, another 19 air force pilots chose to defect with their aircraft to Eritrea and Somalia. These included three MiG-23BNs, an L-39ZO, two An-12B transports and seven Mi-24 helicopters. Although most of the aircraft were returned to Ethiopia, the loss of many war-veteran aircrews was a serious blow to the air

An Ethiopian Air Force An-12, carrying ammunition for the African Union Mission in Somalia (AMISOM), crashed at Mogadishu Airport in August 2013 killing four of the crew.



DEMISE OF

force.

After an abortive coup against Mengistu by military commanders in 1989, the commander-in-chief of the Ethiopian Air Force, Major General Amha Desta, committed suicide.

In 1991, the Eritrean People's Liberation Front (EPLF) assumed control of Eritrea after 30 years of struggle and established a provisional government until April 1993, when Eritreans voted for independence from Ethiopia in a UN-monitored referendum.

Although the Ethiopian and Eritrean revolutionary groups were allies leading to the overthrow of Mengistu, there were subsequently serious disagreements about the exact demarcation of their borders and, in May 1998, clashes developed into full-scale war that left tens of thousands dead and both economies almost destroyed.

During the two-year conflict, Eritrea and Ethiopia acquired Russian MiG-29 and Su-27 fighter aircraft respectively, introducing advanced aerial combat capabilities. Despite a UN-brokered ceasefire in June 2000, tension between the two countries remained high.

While Ethiopia has made huge economic leaps in the last decade, and the country is relatively stable, its military, and the EAF in particular, has suffered from a lack of funding, low morale, high aircraft accident rates and more high-profile defections.

It has also seen a high turnover of commanders-in-chief. Major general Alamishet Dagife was dismissed in 2006 after saying that the EAF should be reorganised because many senior officials, with so much invaluable military information, had

defected.

He was replaced by major general Molla Hailemariam, who was suspended from his post in November 2012. His suspension was seen as a sign of tension between several factions of the Ethiopian armed forces following the death of Ethiopian Prime Minister, Meles Zenawi in August.

Major general Adem Mohammed, who had been serving as deputy commander of the UN Interim Security Force in Abyei (UNISFA), succeeded general Molla in October 2013.

The new commander-in-chief is facing many challenges in turning the EAF into an effective motivated fighting force backed up with modern equipment and viable training and support.

With some 3,500 personnel and five air bases, the EAF's inventory is made up of mostly obsolete Soviet-era combat aircraft, few of which are serviceable. They include MiG-21M/MFs, MiG-23MF/BNs and Su-25s.

The flagship of the EAF is the Su-27 air superiority fighter; 12 former Soviet Air Force aircraft were delivered at the end of 1998. Other Russian types include Mi-8/17 and Mi-24/35 helicopters and a pair of An-12 tactical transports.

The Ethiopian Air Force's 15 Squadron is based at Bishoftu, formally known as Debre Zeit, near Addis Ababa. It had flown two former USAF C-130Bs since 1998 and later two commercial L100-30 variants that were previously operated by the Ethiopian Government. However, none remain operational.

Last year the United States donated a single C-130E for tactical airlift of troops and equipment to



Clockwise from top left: The workhorse of the Ethiopian Air Force is a squadron of Soviet-era Mil Mi-17 helicopters; The Ethiopian Air Force's strike capability rests on a handful of operational MiG-23BN fighter-bombers; The Ethiopian Air Force's first female Sukhoi Su-27 pilot, lieutenant Haimanot G Mariam, who later defected and was sentenced to death in absentia; An Ethiopian Air Force Mil M-24P, one of two that defected to Eritrea in December 2014.

AN AIR FORCE...

support Ethiopia's participation in African Union and UN peacekeeping operations. The Hercules had formerly served with Puerto Rico ANG's 198th airlift squadron before being stored in the Arizona desert at Davis-Monthan Air Force Base. The US embassy in Addis Ababa said the donation came with full training support for Ethiopian pilots, technicians and engineers, with specially focused programmes on navigation and maintenance processes.

Pilot training is carried out on Italian SIAI-Machetti SF.260 basic trainers along with a handful of Czech Aero L-39ZO Albatros advanced training and light attack aircraft.

There have been numerous accidents in recent years, the most serious of which occurred in August 2013 when an An-12 crashed on landing at Mogadishu Airport en route from Dire Dawa. It was carrying ammunition for the African Union Mission in Somalia (AMISOM) and four crew were killed.

Less than half of the Su-27 fleet is reported to be operational and, in June 2013, Russia began negotiations with Ethiopia for the sale of 18 former Indian Air Force Sukhoi Su-30K aircraft. But they came to nothing and 12 of them are currently being delivered to the Angola Air Force after refurbishment in Belarus.

The most serious problem, however, remains the continuing defection of pilots and aircraft. In June 2005, eight Ethiopian Air Force pilots, who were in training in Minsk, Belarus, defected. Then, five months later, seven Ethiopian Air Force officers, who had just completed three months of training in Israel, claimed asylum at the Eritrean Embassy in

Israel. They had been receiving unmanned air vehicle (UAV) training after the Ethiopian Army ordered Boomerang unmanned aerial vehicles from Israeli manufacturer BlueBird Aero Systems.

In July 2007 four Su-27 pilots, including lieutenant Haimanot G Mariam, the EAF's first female Su-27 pilot, defected while training overseas. A year later an Ethiopian military tribunal sentenced the pilots to death in absentia.

A total of 12 EAF pilots, not including technicians, defected to neighbouring countries in 2014, the majority of them to Eritrea. In May, four helicopter pilots and a MiG-23 fighter pilot defected to Eritrea.



Another three pilots defected to Eritrea with two Mi-24P helicopters on December 14 and, only a week later, four high-ranking EAF pilots from Dire Dawa Air Force Base were reported to have abandoned the Government and requested asylum in Kenya.

An EAF Mi-35 and its three-man crew departed Dire Dawa on December 19 at 08:35 for a routine training flight. Almost immediately, the helicopter descended to low level and set course for Eritrea. Sources confirmed that it landed in Assab, the port town of Eritrea. The Mi-35's pilot had joined the Ethiopian Air Force in 2003 and served with the Ethiopian peacekeeping mission supporting UNAMID in Darfur, Sudan in 2010.

Tensions between Ethiopia and Eritrea remain high and, on March 20 2015, an Eritrean gold mine was attacked in two raids by Ethiopian fighter-

bomber aircraft. The Bisha mine, located 150km from Asmara, is 60% owned by the Canadian company Nevsun Resources and 40% by the government of Eritrea. The other target was the military depot at Mai Edaga Tikul.

Another point of potential conflict is Ethiopia's \$4.7 billion Grand Renaissance Dam project on the Blue Nile that will eventually provide 6,000 megawatts of power. Egypt was apparently caught by surprise when Ethiopia started diverting the Blue Nile, a tributary of the River Nile, last year and it was reported that Egyptian politicians were proposing military action over the dam, which by then was 40% complete. Ethiopia wanted to replace a 1929 treaty written by Britain that awarded Egypt veto power over any project involving the Nile by upstream countries. However, on March 23 2015, leaders from Egypt, Sudan and Ethiopia signed a declaration of principles relating to the Renaissance Dam.

Despite these on-going tensions with its neighbours, earlier this year Ethiopia deployed 600 additional peacekeepers to Kismayo in Somalia and three Mi-35 helicopter gunships have been sent to support the United Nations Mission in South Sudan (UNMISS). Preparations have also been finalised to deploy some 500 troops and police assigned to UNISF.

It is, nevertheless, a sad irony that the Ethiopian Air Force, a once powerful and well-organised institution, has been reduced to a shadow of its former self and one that is incapable of defending and protecting the country.

With Boko Haram's campaign of terror escalating significantly during 2014, Nigeria has been forced to strengthen the military forces committed to fighting the insurgency.

Jon Lake looks at why this has sometimes been a difficult process.

More than 10,000 of the 13,000 or so civilians killed in Nigeria since 2009 died in 2014, and large numbers (an estimated 1.5 million last year) were displaced from their homes.

There have also been mass kidnappings – especially of girls and women.

The 2,000 females taken in 2014 included 276 schoolgirls kidnapped from Chibok. Boko Haram began to seize territory in late 2014, controlling an area roughly the size of Belgium by the year-end. The group declared north-eastern Nigeria to be a caliphate under its control.

Quite understandably, Nigeria views itself as being on the front line in what it sees as a global war against Islamist terror, and senior politicians and military officers have used every opportunity to urge the west to help them in the fight.

Nigeria has a point – Boko Haram has long-standing ties to Al Qaeda, Al-Qaeda in the Islamic Maghreb (AQIM), al-Shabaab and Al-Qaeda in the Arabian Peninsula (AQAP). On March 7 2015, Boko Haram's leader, Abubakar Shekau, pledged allegiance to the Islamic State of Iraq and the Levant (IS).



The US has largely failed to support Nigeria in the war against Boko Haram, deterred by allegations of human rights abuses by the Nigerian military, including extrajudicial killings and summary executions by security forces, and by allegations of cruel, inhuman and degrading treatment of prisoners, detainees, and suspects.

This has prevented the Nigerian Air Force from acquiring the attack helicopters and close air support aircraft that it needs – with US opposition causing the abandonment of talks with Israel over the acquisition of up to 36 surplus IDF/AF Bell AH-1 Cobras, and for Israeli UAV systems.

Nor was Nigeria able to buy the Textron AirLand Scorpion, which air vice marshal RA Ojuawo, the director of operations for the Nigerian Air Force (NAF), regarded as being an ideal aircraft to meet Nigerian requirements.

Nigeria's ambassador to the United States reportedly said that Washington was not helping Nigeria with the struggle against Boko Haram, and that the USA had failed to share intelligence and to sell Nigeria the weapons that it needed.

Three Beechcraft King Air 350is were delivered to the Nigerian Air Force from the United States in 2014 for intelligence, surveillance, and reconnaissance (ISR) duties, but what Nigeria needs is aircraft with both ISR and lethal attack capabilities.

However, Boko Haram's activities outside Nigeria were

Continued
on Page 46



Nigeria has had its Alpha Jets upgraded. It also ordered six Mi-35M attack helicopters from Russia (inset above). Inset right is an Mil Mi-24 Hind that was acquired in August 2014.

NIGERIA FIGHTS



A LONE BATTLE

CONTINUED FROM PAGE 44

sufficient to persuade Benin, Cameroon, Chad, and Niger to pledge meaningful military support when Nigeria mounted a major offensive against insurgents in the north east of the country in February 2015. Nigerian and Chadian troops and aircraft were heavily committed, with the French Armée de l’Air providing vital reconnaissance support.

The Nigerians have also quietly made extensive use of South African observers, provided by a variety of private military and security companies, including some established by former managers of Executive Outcomes – which played a pivotal role in overcoming the insurgency in Sierra Leone, and which was also heavily involved in Angola.

The South African specialists are enormously experienced practitioners of asymmetric and jungle warfare, and have been able to provide vital training to Nigerian combat units, as well as participating in operations themselves, reportedly supported by gunships flown by contract pilots.

There have also been reports that Nigeria has used Russian and east European ‘advisors’ in its battle against Boko Haram.



Russia has also been able to step in and fill some NAF requirements, allowing Nigeria to order six Mil Mi-35M attack helicopters and 12 armed Mi-171Sh helicopters in August 2014, augmenting nine Mi-35s and 18 Mi-171Sh helicopters delivered in 2013 and 2014.

To further bolster its attack helicopter force, the NAF upgraded and reintroduced a pair of Super Puma helicopters (NAF 565 and NAF 567), and ‘weaponised’ them with a new rocket pod system. The helicopters had been put into storage in 1997 but were then refurbished and upgraded by Eurocopter Romania and returned to service in March 2012.

Aerospatiale Gazelles have also been seen operating in Nigeria, but since these were devoid of national markings and serial numbers, they may have been contractor-owned and operated, like some of the Bell UH-1/212 helicopters used by South African mercenaries in Nigeria.

In the absence of Israeli UAVs, it seems that Nigeria turned to China to provide an unmanned surveillance and light attack capability. This became clear in January 2015, when pictures emerged of a CASC Rainbow CH-3 or CH-3A UAV that had crashed at Dumge village in Borno State on or around January 25. The upside-down machine was clearly fitted with an under-nose sensor turret, and was armed with an AR-1 air-to-surface missile under one wing, and a 25-kg FT-5 lightweight guided bomb under the other.

Nigeria’s existing air force was relatively poorly equipped for the type of campaign being waged against Boko Haram. The 12 surviving Chengdu F-7NI and Guizhou FT-7NI fighters had a good air-to-air capability, but the aircraft were not armed with air-to-ground weapons, nor were their pilots trained in air-to-ground operations. Much more



A Chinese-built UAV that crashed in Borno in January. Clearly visible are the sensor turret, air-to-surface missile and lightweight guided bomb.

useful were the Aero L-39C Albatros and Dassault-Breguet/Dornier Alpha Jet advanced trainers, which also had a real light attack capability.

Nigeria ordered 24 Alpha Jets, from German production, though these had the blunter French-type nose and were optimised for close support and weapons training. The Nigerian Alpha Jets were used to devastating effect in support of the west African Economic Community cease-fire monitoring group (ECOMOG) peacekeeping force in Liberia during the long-running civil war, with a six-aircraft detachment flying roughly 3,000 combat missions between 1990 and 1993.

Alpha Jets were deployed again in September 2002, briefly being based at Abidjan in the wake of the mutiny in Cote d’Ivoire. But, like so many Nigerian Air Force aircraft, the Alpha Jets were soon grounded by spares shortages and a lack of funding – a problem that permanently grounded the NAF’s MiG-21 and SEPECAT Jaguar fleets.



By 2010, just six Alpha Jets were described as being ‘combat capable’, though this seems to have been a rather optimistic assessment.

In early July 2011, the Nigerian Air Force reintroduced four Alpha Jets into service with the Air Weapons School in Kainji, after a German firm upgraded and refurbished them.

Reactivation programmes were launched for six more Alpha Jets and two Super Pumas.

In the event, Aeronautical Engineering and Technical Services Limited (AETSL), a subsidiary of the Nigerian Air Force Holdings Company, refurbished and upgraded nine more Alpha Jets (452, 453, 455, 456, 470, 454, 457, 461 and 466) and these were reintroduced into service in September 2013.

Post upgrade, the aircraft had six under-wing hardpoints, with a new inverted ‘Y’ shaped

‘double pylon’ inboard. They also wore two new camouflage schemes designed by the Plane Schemer company, which was commissioned to create two unique military paint scheme designs for the NAF Alpha Jets. One design was based on the previous green and brown livery while the other used shades of grey.

At least two Alpha Jets have been lost on operations: one crashed in Niger, killing two pilots, in May 2013 while another (466) was lost in September 2014, its wing commander pilot subsequently being captured and beheaded by Boko Haram.

The success of the Alpha Jet reintroduction may lead to a similar return to service programme for half-a-dozen Aero Vodochody L-39 jet trainers.

The Alpha Jet fleet is also being bolstered by the addition of new aircraft acquired from civilian operators in the USA. Reports indicate that four or even six second-hand, but comprehensively upgraded, Alpha Jets have been sold to the NAF by target facilities company Air USA.

These aircraft are optimised for day-night operations and are modified to be fully compatible with night vision goggle (NVG) operations, and have a precision-guided munition capability.

The first of these staged through the UK en route to Nigeria on March 25 and another followed on May 11 2015.

While injections of Russian and Chinese helicopters and UAVs and second-hand Alpha Jets, together with help from neighbouring nations and east European and South African mercenaries have undoubtedly been extremely helpful in the short term, swinging the battle in Nigeria’s favour, in the longer term Nigeria needs long-term solutions.

“It is going to take the international community to fight insurgency, and the only way to do that is to give countries the technology that they need,” Ojuawo said.

A-Darter makes a beeline for production

South Africa's state-owned Denel Group appears to be finally entering the production phase of its A-Darter missile after almost two decades in development.
Sam J Basch
reports.

Given that military programmes often take years to complete, a full picture is almost always far from clear. However, a key recent indicator about the A-Darter missile programme was South Africa's national treasury revealing that the country's defence department would be acquiring "precision-guided air force ammunition for air defence" – as stated in the estimates of national expenditure (ENE).

Published in late February 2015, the ENE elaborated no further than this one-liner. But defence commentators believe this item was most likely a reference to Denel's A-Darter short-range air-to-air missile (SRAAM) being developed jointly with Brazil.

In an interview in mid-2014, Denel's group chief operating officer, Jan Wessels, indicated that the A-Darter development programme "timeframes were largely driven by the in-service dates of the South African and Brazilian air forces".

In trying to explain the persistent shift in production start dates he said the performance of the missile was being "optimised within the context of these [air force] time lines," allowing it to be taken to its most advanced configuration, "once we go into production".



Denel Dynamics, the group's division responsible for missiles and unmanned aerial vehicle systems (UAVS), gave the clearest indication yet when it undertook a series of final in-flight trials early this year. Denise Wilson, Denel Dynamics' deputy chief executive and previously responsible for Denel's air-to-air missiles, confirmed in February 2015 that the trial results in South Africa had "exceeded expectations".

"Integration of A-Darter on the South African Air Force Gripen fighter has now been completed and the in-flight tests also confirmed the missile's exceptional performance," she said. The tests involved guidance and control, image detection, false target rejection and electronic counter-countermeasures.

"We tested for high-G manoeuvres, which proved to be better than specification. Lock-on-after-launch was likewise most successful, with A-Darter acquiring and re-acquiring the target at 90° angles as designed, and flare rejection was proven, too," Wilson explained without divulging further details. "Having now reached the critical design review phase, I believe final qualification is set down for November."

Brazilian Air Force (FAB) sources were more forthcoming. A report on the final trials, published on February 11 on the official FAB website, claimed the 2.98metre long, 90kg missile is able to withstand a force of 100 G in its manoeuvre to

intercept the target. A-Darter is thrust-vector controlled.

According to the report, the missile can also "see" in more than one infrared frequency and is, therefore, not misled by flares.

Brazilian project officer, colonel Júlio César Cardoso Tavares, said A-Darter could, in future, arm the FAB's Gripen NG fighters.

With A-Darter already integrated on the SAAF's Gripen, integration on the NG variant should prove relatively uncomplicated, said Wilson. "Integration on the SAAF's Hawk lead-in fighter trainer (LIFT) is in progress," she added.

Manufacturing will happen in both countries. Brazil became a joint development partner in 2006, a decade after Denel first revealed its 5th generation A-Darter missile at the 1997 Paris International Airshow.

Both Denel and the Brazilian Air Force have hinted at future missile cooperation after A-Darter, possibly on the beyond-visual-range (BVR) type for which South Africa has a requirement.

Wessels explained that it could be based on technology building blocks of A-Darter and the company's successful Umkhonto-IR surface-to-air missile (SAM), in service with the South African and Finnish navies. Having recently also demonstrated Umkhonto's extended range capability, Denel aims to use its generic technologies for a BVR and long-range SAM, often referred to as Project Marlin. Proof of technology readiness trials are likely to start in 2016.



Although Denel had always insisted on avoiding any controlled items with a view to offering its products with "no strings attached", Marotta Controls of Montville, New Jersey, USA, announced in February the selection of its MPACT pure air compression technology for A-Darter's infrared seeker. While more than 1,500 MPACT units have already been delivered for the Sidewinder missiles on the US Navy's F/A-18A/F jets, this was its first export order.

Wilson insisted that this represented no change in Denel's industrial strategy, as its proprietary cooling system remains available for clients who want it. It seems likely the selection of the US system has more to do with integration of the missile on the Hawk jet trainer.

Final flight trials of Denel's Seeker 400 in recent months have also brought this UAVS to production.

Denel Dynamics' general manager for UAVS, Sello Ntsihlele, explained that Seeker 400 was derived from the smaller 200, with a concomitant upgrade in overall performance. "Besides a host of tests, we tested for range and endurance, safety and functional payload – all of which proved highly successful."

Seeker 400 boasts a payload capacity of 100kg, with a dual payload for different tactical missions.

"We aligned the design with international specifications for an armed surveillance UAVS, for which Denel Dynamics can offer the new Impi-S missile," Ntsihlele stated. "In the armed configuration, this UAVS is designated 'Sniper', while the unarmed variant remains Seeker 400."

A-Darter being launched from a Gripen during in-flight trials at the Denel Overberg Test Range.



The air forces of Egypt, Sudan and Morocco all joined the Saudi-led coalition that participated in ‘operation decisive storm’ – an air campaign mounted against Houthi insurgents in Yemen. Jon Lake reports.

North African air forces join Saudi strikes on Yemen



Saudi Arabia launched ‘operation decisive storm’ on March 25 this year at the request of the internationally recognised government of Yemen, led by president Abd Rabbuh Mansur Hadi.

The aim was to restore the Yemeni Government, a key coalition ally in the fight against Al Qaeda, and prevent Yemen from completing the descent into becoming a ‘failed state’ – something that could not be tolerated by Saudi Arabia or its coalition partners.

Saudi Arabia feared that a Houthi-controlled Yemen would have power over the strategically vital Bab al-Mandeb Strait, a narrow choke point at the mouth of the Red Sea lying between Yemen on the Arabian Peninsula, and Djibouti and Eritrea in the Horn of Africa.



As such, the Bab al-Mandeb Strait lies on the main route between the Mediterranean and Saudi Arabia’s Red Sea ports, and the Indian Ocean. An estimated 3.5 million barrels of oil per day (about 7.5% of the total transported by tankers) passes through the waterway each day.

Saudi Arabia was also concerned about growing Iranian influence in the Gulf, and viewed the Shia Houthis as little more than a proxy Iranian force.

Iran’s backing of opposition forces in Bahrain, its support for the regime of president Bashar al-

Assad in Syria and its influence within Iraq’s Shiite-led government and leadership of many Shia militias in Iraq, has led to growing concern in Saudi Arabia and among its predominantly Sunni allies.

Saudi Arabia finally acted after Houthi forces pushed south into areas formerly controlled by the Yemeni Government, storming the presidential palace in Sana’a and forcing president Hadi to flee to the southern city of Aden. The Houthi push led many countries to extract their diplomats and forced the United States to withdraw its remaining special forces from the Yemen, which appeared to be on the brink of a full civil war.

In recent years, in the face of increased budgetary pressure, the US has progressively disengaged from the Middle East and north Africa in terms of permanently deployed forces, and has increasingly expected its allies to share in the burden of their own defence. This has seen growing participation by Gulf nations in coalition operations – with both Qatar and the UAE deploying forces in support of NATO’s ‘operation unified protector’ in Libya, and with the UAE contributing aircraft to operations in Afghanistan – and also in undertaking their own autonomous operations (eg the UAE’s air attacks against Libyan militias in August 2014).

Leading north African nations

were quick to follow the Gulf nations’ lead and, after a broad Arab coalition began air strikes against Islamic State (IS) targets in Syria in September 2014, it was quickly bolstered by the addition of a number of Royal Moroccan Air Force F-16s that were forward deployed to the UAE.

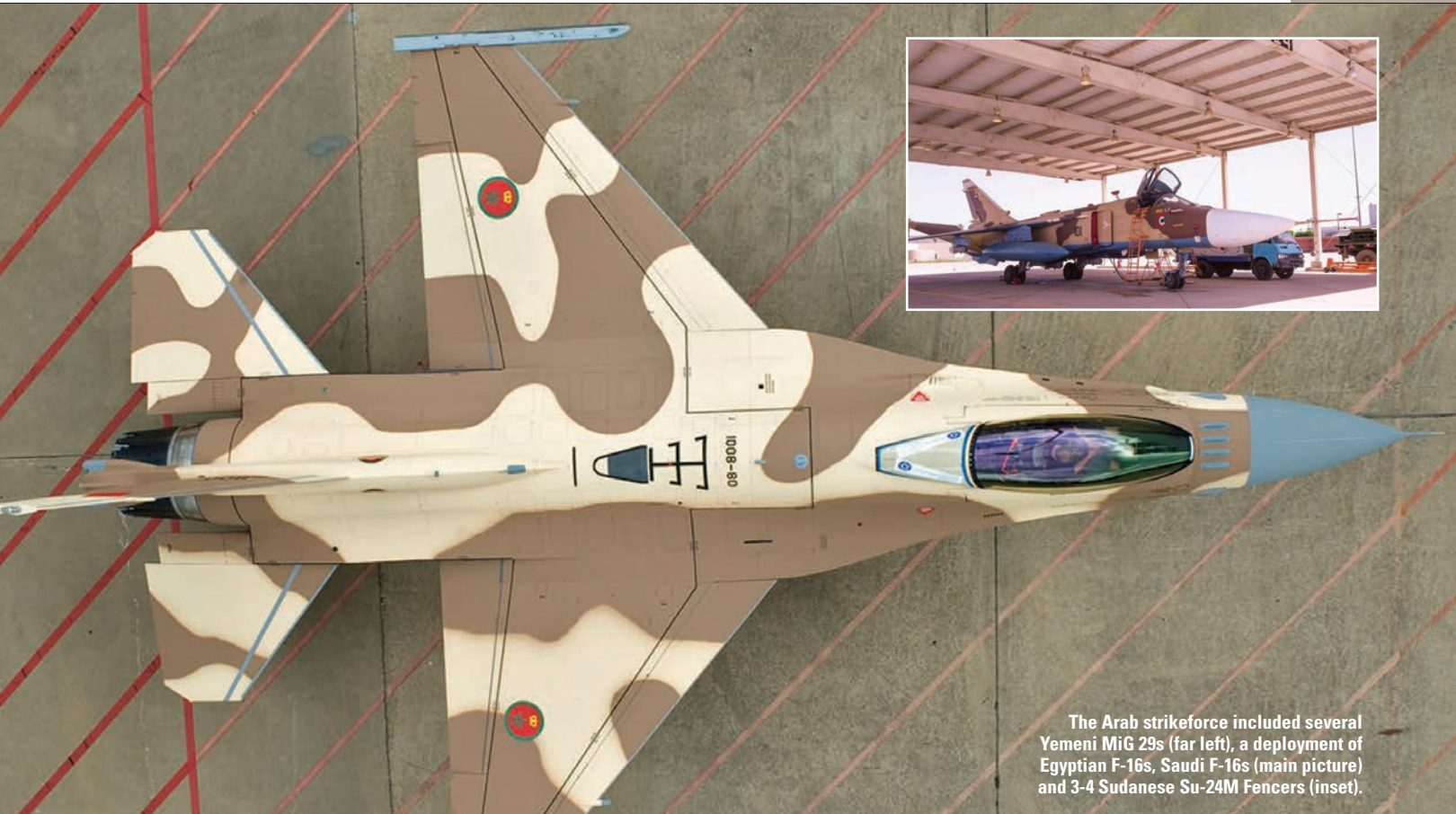
With the largest and most powerful air force in north Africa, Egypt has also joined the global fight against Islamist insurgency. When the UAE mounted airstrikes against Libyan militias in August 2014, Egypt provided a forward base at Mersa Matruh, and then, in October 2014, mounted its own air attack against Islamist militias in Benghazi.

Following the beheading of 21 Egyptian Coptic Christians in Libya in February 2015, the Egyptian Air Force mounted two waves of air strikes against training camps and weapons stores in the eastern Libyan city of Derna.

These small-scale operations proved both successful and popular with the Egyptian public, and so, when Saudi Arabia called on its neighbours and allies to support ‘operation decisive storm’, Egypt stepped up to the plate.

Egypt’s president, Abdel Fattah el-Sisi, recognised that protecting Red Sea shipping and securing the Bab al-Mandeb Straits was “a top priority for Egypt’s national security”, but

Leading north African nations were quick to follow the Gulf nations’ lead.



The Arab strikeforce included several Yemeni MiG 29s (far left), a deployment of Egyptian F-16s, Saudi F-16s (main picture) and 3-4 Sudanese Su-24M Fencers (inset).

was also keen to support the Saudi-led regional coalition as part of Egypt's wider responsibility to ensure the security of the Gulf and the Red Sea region, and to repay Saudi Arabia and the Gulf monarchies for their support.

Egypt provided both political and military support to the Saudi-led operation in Yemen, committing elements of the Egyptian air and naval forces to the operation, with a particular focus on securing navigation in the Red Sea and protecting the Bab al-Mandeb Strait.

A more unexpected partner in the Saudi-led coalition was Sudan.

Saudi Arabia originally requested that Sudan should open its Red Sea ports and airspace to support coalition air and naval operations, but Sudan's president, Omer Hassan al-Bashir, decided that Khartoum's contribution would stretch beyond logistical support, and that his country would participate in the Saudi-led campaign against the Houthis in order, he said, "to repulse the aggression against the two holy mosques".

Abdul Rahim Ahmed Hussein, Sudan's defence minister, announced: "The army will contribute to 'decisive storm' with air and navy forces."

In fact, Sudan welcomed the opportunity to end its long isolation in the region, which was a consequence of the close relations it had had with Iran since 1989, and because it had sided with Iraq when it invaded Kuwait in 1990. These two factors had made Sudan something of an international pariah for two decades.

On top of isolation, Sudan had been hit by economic woes following the secession of the southern part of the country, which declared independence as South Sudan in July 2011. South Sudan was responsible for about 75% of the original country's oil output, and the Sudanese Pound lost more than half its value following South Sudan's independence.

It was hoped that participation in 'operation decisive storm' would improve Sudan's relations with its Arab near-neighbours, and that it might lead to greater economic cooperation between Sudan and the Gulf nations. Almost immediately, Saudi Arabia lifted the banking restrictions it had imposed against Khartoum in 2014.



Sudan's contribution to the operation consisted of three or four of its 12 ex-Belarusian Air Force Su-24Ms, and a number of transport aircraft, drawn from its fleet of four C-130 Hercules and two Shaanxi Y-8s.

The Su-24Ms operated from King Khaled Airbase, Khamis Mushait in Saudi Arabia, dropping free-fall 250kg bombs.

The final African member of the coalition was Morocco, with the Royal Moroccan Air Force deploying six Lockheed Martin F-16C/D Fighting Falcon multirole fighters to support the operation. These were actually the aircraft already in the Middle East for missions against IS, and

they were reallocated to take part in the new operation.

Morocco said that it was responding to calls by Yemen's legitimate president, acting in solidarity with those supporting the legitimate rule in Yemen, and fulfilling its commitment to defend the security of the Kingdom of Saudi Arabia, and Mecca and the Gulf Cooperation Council countries with which it had strategic ties.

Morocco actually lost one of its General Dynamics F-16 Fighting Falcons during operations over Yemen. On May 10, the Moroccan Government reported that one of its aircraft (F-16C 08-8008) was missing in action together with its pilot, 26-year-old Lieutenant Yassine Bahti, of Escadron de Chasse 'Spark'. The pilot of a second Moroccan F-16 said he didn't see the aircraft crash, nor did he see the pilot of the other aircraft eject.

The Houthis claimed responsibility for shooting down the aircraft and Yemeni state TV broadcast a report, including images of the wreckage being pored over by tribal militias from the Sa'dah Governorate.

Morocco parachuted a special forces commando unit into the area to find and recover the pilot, whose body was flown home after his identity had been confirmed by a team of geneticists.

The Royal Moroccan Armed Forces said that the F-16 had been lost as a result of a technical problem or human error, and not enemy action.

Low price gives Chinese rotorcraft the edge in Africa

President John Dramani Mahama recently announced that Ghana would acquire four new Harbin Z-9 helicopters from China – understood to be armed Z-9WE versions. **Jon Lake** looks at the progress of the aircraft in Africa.

The Chinese aerospace industry has sold a wide range of aircraft to Africa, from small UAVs through commercial types to jet trainers and fighters.

However, its aircraft still remain relatively uncommon on the continent, outnumbered by those supplied as aid by the USSR and its successor states, by the USA, and by commercially purchased aircraft from Europe and elsewhere, though the low price of Chinese aircraft has given them an edge in certain African markets.

This is, perhaps, especially true of Chinese rotorcraft.

Though Russian and former-Soviet helicopters (especially the Mil Mi-8 and Mi-17) form the backbone of military and commercial helicopter fleets in Africa, Chinese helicopters have made real inroads during the new millennium, mainly in the shape of the Harbin Z-9, a licence-built derivative of the French Eurocopter (formerly Aerospatiale) AS365N Dauphin manufactured by the Harbin Aircraft Manufacturing Corporation.

Harbin acquired a production licence for the AS365N on October 15 1980 and a first prototype (which reportedly incorporated unspecified components salvaged from an unidentified Soviet helicopter) made its maiden flight in 1981.

Harbin built 28 basic Z-9 helicopters, equivalent to the AS-365N1, and then 20 improved Z-9A aircraft, equivalent to the AS-365N2, with upgraded 549kW (737shp) Arriel 1C2 turboshafts, an uprated gearbox, an enlarged tail and all-composite fenestron, as well as a 150kg increase in maximum weight (to 4,250kg).

There were also two Z-9A-100s, which incorporated more Chinese components and WZ8A engines.

Production of this initial batch of 50 helicopters was completed in 1992, with the Z-9A-100 making its first flight on January 16 1992 and gaining approval on December 30 the same year.

In September 1993, Harbin and Eurocopter agreed on the co-production of another 22 Z-9As, while development of the Z-9A-100, now re-designated as the Z-9B, continued. Z-9B production began in 1993 and the new type (which incorporated 71.9% of Chinese-made parts) entered China People's Liberation Army (PLA) service in 1994.

□ □ □ □ □

Harbin built Z-9C ASW/SAR and Z-9D ASV variants for the PLA Naval Air Force as well as a succession of armed variants for the Army, and for export.

The first indigenous anti-armour attack helicopter derived from the licence-built AS-365N was the Z-9W, which could carry four KD-8 wire-guided anti-tank guided missiles (ATGMs) and rocket or gun pods. It was equipped with a roof-mounted optical sight.

The Z-9WA was a further improved variant with enhanced night-attack capabilities, thanks to the addition of a new nose-mounted low-light TV/FLIR turret developed by the Luoyang Electro-Optics Technology Development Centre (EOTDC). A new stub wing allowed the carriage of up to eight KD-8 ATGMs or PL-90 anti-

aircraft missiles (AAMs). The Z-9WA also has a redesigned night vision goggles (NVG)-compatible cockpit, better armour protection, and chaff/flare launchers, as well as a new datalink. It was developed in 2000 and entered service in 2005.

The further enhanced Z-9WZ first flew on December 29 2004 and featured an improved fire-control system, including a laser designator, allowing the type to use the new KD-9 ATGM.

The export version of the Z-9WZ was designated as the Z-9WE and featured provision for dust filters on the engine intakes for desert operations.

Mali became the first export customer for the Z-9 in June 2000, taking delivery of a pair of Z-9As (modified to carry machine gun pods or rocket launchers) for the Mali Air Force. These aircraft may now have retired. The Mauritanian Air Force took delivery of two more similar, short-nosed Z-9As in 2003.

The Kenyan Armed Forces received four Z-9WE armed helicopters between 2010 and 2011 (locally designated as the Z-9WK).

In Cape Verde, two Z-9s (sub-variant unknown) were delivered in 2011. These serve with the Air Squadron of the Cape Verde Coast Guard, which incorporates all of the Cabo Verdean Armed Forces' aircraft and helicopters.

In 2012, two African nations received unarmed, radar-nosed H425 versions of the Z-9. Two were delivered to the Namibian Air Force in early 2012, and four (of seven on order) were delivered to the Zambian Air Force in June 2012.

Four armed Z-9WEs were delivered to the Cameroon Air Force from November 10 2014, one of these subsequently crashing on April 24 2015.

Several MiG-21MFs have been transferred from the Egyptian air force to help Libyan forces.



Neighbours come to the aid of Libyan People's Air Force

Virtually destroyed on the ground during 'operation unified protector', the once mighty Libyan People's Air Force was left fragmented and poorly equipped, with many of its bases (and aircraft) controlled by opposing militia groups.

The internationally recognised government in Tobruk could call on only a handful of serviceable aircraft at Gamal Abdul El Nasser Airbase (a military enclave of Tobruk International Airport) to support its operations against the Islamist Libya Dawn, Ansar

Al Sharia and Islamic State insurgents, with a pair of MiG-23s (a single-seat MLs and a MiG-23UB two-seater) operating from al-Watiya, and another MiG-23ML from Benina.

The Libyan Government has received some air support from allies, with the UAE Air Force and Air Defence mounting airstrikes against Libyan militias in August 2014, and the Egyptian Air Force joining the fray from October 2014, mounting air attacks against Islamist militias in Benghazi.

Egypt also transferred Mikoyan MiG-21MF fighters and armed Mil Mi-8 and Mi-35 helicopters (as well as spares and munitions) to the Libyan Air Force, to augment its dwindling fleet, while Sudan donated a pair of Mil Mi-24 helicopters.

The first three ex-Egyptian MiG-21MFs (serialised 18, 26 and 27), were spotted in early November 2014. As Libya previously only operated the MiG-21bis, and since the MiG-21MFs wore a camouflage pattern unique to Egypt, their source was obvious.

Two more MiG-21MFs (serial 22 and one other) were delivered later, together with parts, ammunition and weapons, including Egyptian 250kg NASR-250 general-purpose bombs.

The Egyptian Air Force still has three squadrons of MiG-21MFs at Aswan and Al Mansurah, and three more units are equipped with Chinese-built F-7s. It is unclear as to whether any Egyptian MiG-21 or F-7 pilots have been deployed to Libya with these aircraft, which some reports describe as having been 'leased' to the Libyans.



The Harbin Z-9 is a license-built derivative of the French Eurocopter AS365N Dauphin.

Tunisia finally replaces HH-3Es

The Tunisian armed forces are struggling to defeat Islamist insurgents and militants, who have stepped up their activities since the 'Arab Spring', which saw the removal of president Zine El-Abidine Ben Ali.

Despite a tradition of moderate Islam in Tunisia, there has been a growth of conservative and fundamentalist Islamist movements, threatening the country's (and the region's) stability.

An attack on the Bardo Museum in March killed 22 people, most of them tourists. Though the Islamic State claimed responsibility, Tunisia blamed the Okba Ibn Nafaa group, an offshoot of Al Qaeda in the Islamic Maghreb.

Tunisia has been one of the main sources of Islamist militants travelling from north Africa to fight with radical groups in Iraq and Syria.

Tunisia's armed forces are small and relatively poorly equipped, and the campaign against militants in the Chaambi mountains and elsewhere has highlighted many shortcomings, including a lack of helicopter lift and attack capability.

The Tunisian military has been relying heavily on the survivors of a batch of ex-USAF Sikorsky HH-3E Jolly Green Giants acquired from the AMARC desert 'boneyard' in about 1995. Some of these were fitted with AN/AAQ-22 Safire forward-looking infrared (FLIR) systems from 2002, but lacked armour, armament and a modern intelligence, surveillance, and reconnaissance (ISR) fit.

To replace these ageing workhorses, Tunisia has



Tunisia has been relying heavily on ex-USAF Sikorsky HH-3E Jolly Green Giants acquired in about 1995.

made a number of attempts to acquire more modern assault helicopters. In 2010, the US Defense Security Cooperation Agency (DSCA) notified Congress of a plan to supply 12 refurbished surplus Sikorsky SH-60F Oceanhawk multi-mission utility helicopters to Tunisia, which would have become the first African user of the SH-60.

In July 2014, the US State Department approved the sale of 12 Sikorsky UH-60M Black Hawk helicopters to Tunisia, together with 'Battlehawk' kits that would turn the aircraft into potent attack helicopters, armed with

M134 7.62mm and GAU-19 .50cal machine guns, precision-guided rocket systems, AGM-114R Hellfire missiles, and Wescam MX-15Di or Brite Star II EO/FLIR laser designator turrets.

In the end, a contract for eight UH-60Ms was signed on March 17 this year.

It is assumed that the armed UH-60Ms will replace the HH-3Es of 36 Squadron, based at Pointe Karoube on the northern coast. Pointe Karoube is a separate heliport connected to Bizerte's Sidi Ahmed Airport. There is also a detachment at Sfax/Thyna, further south.

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SAVING THE MIGHTY FROM FALLING

«Préserver la faune africaine» – Page 56

Africa tends to leave a life-long impression on visitors who have experienced the multitude of awe-inspiring flora, fauna and landscapes that the vast expanses of this continent's wildlife parks and conservation areas offer.

But, beyond these fleeting snapshots, lies an altogether different reality, one, which our cameras do not see, but the lenses of mini and small unmanned aircraft systems (sUAS) are beginning to capture on a regular basis – poaching and its aftermath.

According to the World Wildlife Fund (WWF), South Africa holds more than 80% of Africa's rhinoceros population and just in this country alone there has been a year-on-year increase in rhino poaching-related killings.

The South African Department of Environmental Affairs statistics make grim reading, stating that in 2009 there were 122 rhinos killed; 333 in 2010; 448 in 2011; 668 in 2012, and by August 2013 this running total stood at 587,

The term 'drone' has become synonymous with military missions but recently the use of mini and small drones (or unmanned aircraft systems) has begun to evolve into a commercial role, particularly relating to anti-poaching.

James Masey reports.

with predictions taking it to more than 800 for the year.

Mozambique's rhino population is apparently extinct!

The situation for the African elephant looks bleak, with Kenya alone reported to have lost 163 elephants to poaching in June/July last year.

In the wider African context there are estimates of as many as 40,000 elephants being killed for their ivory annually. The suggestion has been made that by 2025 the African elephant will no longer be photographed in the wilds of the continent.

The Wildlife Conservation Society estimates that the African forest elephants living in the Congo Basin have diminished by more than 76% during the past 10 years.

There is little doubt that mini and sUAS have a part to play in trying to stem the tide of killings in both Africa and Asia. However, before UAS technology is seen as an all-saving entity, there are a number of points that may need to be considered.

Continued
on Page 54

CONTINUED FROM PAGE 53

Examples, in no particular order, include:

■ In order for this mission type to even be considered the end-user/operator will need the understanding, cooperation and authorisation of government – defence and interior, at least. The respective country's civil aviation authority will need to be fully engaged in drawing up the concept of operations (CONOPS) and the execution of flights, because currently certain sUAS-classes require special dispensation to fly, which may be on a case-by-case basis. As yet, the file-and-fly routine action that manned aviation takes for granted has not been implemented throughout the unmanned sector classes.



■ Then there is the prospect of developing a CONOPS – what UAS is needed to do the mission or missions, where, when and how? As has happened before, and will no doubt happen again, a UAS is leased and/or purchased only to be found lacking in capability, or worse, totally redundant.

■ Through-life in-service logistics costs, even for a mini-UAS, can begin to spiral out of control quickly if not tied down with the OEM or service provider during the negotiation phase. Several military and paramilitary organisations have had their fingers burnt during the past three decades by not having a clearly defined maintenance and support regime from the outset. That said, most OEMs and/or service providers should offer some form of performance-based logistical (PBL) package.

■ What is the operational record of the mini or sUAS being considered? A proven capability can negate loss of time, money and resources.

The points above are merely meant to be a guide for those organisations wanting to utilise UAS for anti-poaching missions within a short time frame and within ever-tightening budgets.

The question of budgets, funds, donations, money – call it what you will – is central to any UAS-related efforts that may be undertaken in anti-poaching or conservation roles.

Therefore, it is encouraging to note that, following his trip last year



Google extended a US\$5 million grant to the WWF for the express purpose of “expanding its use of unmanned aircraft to track and deter criminals who illegally hunt endangered animals around the world”.

to Africa, the *Washington Post* reported that: “President Obama launched a major initiative aimed at curbing wildlife trafficking, creating a cabinet-level presidential taskforce charged with devising a national strategy and pledging US\$10 million in technological and training assistance to African governments so they could better combat poaching.”

In Tanzania it was reported that discussions with president Obama might have actually covered the use of UAS.

Another high-profile person taking up the cause against elephant

poaching is former US secretary of state, Hilary Clinton.

Late last year Google extended a US\$5 million grant to the WWF for the express purpose of “expanding its use of unmanned aircraft to track and deter criminals who illegally hunt endangered animals around the world”.

These, then, are some of the pledges and actions being undertaken at a high level in a bid to curtail a future potential catastrophe.

But what about the current situation as regards the actual use of UAS in the field?

Perhaps it will come as no surprise to read that UAS of one kind or another are already being used for anti-poaching, wildlife conservation and photography.

In South Africa, as of January last year, a domestic OEM – Denel Dynamics – deployed a Seeker II Tactical UAS to execute night time anti-poaching missions in the Kruger National Park (KNP), in conjunction with manned aircraft doing the surveillance during the day. This combination of manned and unmanned teaming (another CONOPS option) resulted in the arrests of 50 suspected poachers by the end of May.

Although the Seeker II is not a sUAS-class, it is reasonable to assume that these missions will lead to the introduction in due course of Denel's Hungwe sUAS, which is more cost-effective with a six-hour endurance, 100km direct line-of-sight range and a day/night capability.



The Wildlife Conservation Society estimates that the African forest elephants living in the Congo Basin have diminished by more than 76% during the past 10 years. UAVs like the Falcon (www.silentfalconuas.com) may help to turn the tide.

The ability to pursue poachers day or night is vital if the killing is to be brought under control and eventually stopped. Doing this within a country's own borders is relatively straightforward, but what if the poachers cross over an international border, such as that between South Africa and Mozambique? This frequently happens, much to the frustration of the South African game rangers and members of its defence force.



Therefore, both these governments have agreed that South African personnel may carry out 'hot pursuit' missions into Mozambican territory in required. But, as positive as this may prove to be for the KNP, there is potentially a negative escalation for the smaller privately owned conservancies in the same region.

It is precisely because of poachers redirecting their efforts to these less

well-guarded and funded wildlife parks, such as the Olifants West Nature Reserve, that a privately owned US company, Falcon-UAV, developed its Falcon sUAS, and in doing so has found a niche in the market.

Earlier this year two Falcons completed successful trials at this nature reserve, while operating in conjunction with some of its neighbouring reserves as well.

The Falcon is made from commercial off-the-shelf (COTS) parts, takes five minutes to assemble, is hand or bungee launched, lands/recovers by parachute or autonomous flaring, weighs less than 10lbs, has at least 60 minutes endurance and up to a five-mile range, which makes it ideal for fast-moving mobile operations/pursuits over short range.

In addition, no prior piloting skills are required to learn to fly and operate it.

Continued
on Page 56



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CONTINUED FROM PAGE 55

Further north in Kenya there has been another teaming of industry and conservation between Airware and the Ol Pejeta conservancy, which claims to be east Africa's largest black rhino sanctuary.

Although this particular relationship is still growing as sUAS testing and evaluation continues; the deterrent factor relating to anti-poaching by having a persistent eye in the sky is not lost on Ol Pejeta and many other small parks that might be seen as easy pickings by poachers. Furthermore, the potential of using cost-effective UAS for a multitude of other tasks, like game counting and tracking, is also of interest.

The burgeoning use of sUAS is making inroads into the wildlife film and photographic market, with such recognisable names as *National Geographic*, among others, publishing images using this technology.

□□□□□

In August Michael 'Nick' Nichols and Nathan Williamson brought to fruition a feature that had been conceived five years previously, based on the lions in the Serengeti Plain. Using a MikroKopter, as opposed to a manned helicopter with its expense, paperwork and probable disruption and disturbance, this two-man team was able to get in close to the lions and stay with them. In order to achieve his photographic aims, Nichols used a COTS Canon camera, which he adapted to allow it to receive infrared light from LED lights mounted on his vehicle.

For more than three decades the UAS industry has been evolving and carving out a place within the aerospace industry globally – South Africa being one of the first operational proponents of this type of technology.

UAS may currently be strongly regarded as the domain of the military but there is now the ability to use this "disruptive innovation" in a variety of commercial operating environments, such as wildlife conservation.

It is reasonable to assume that, as critical mass is reached, thereby driving costs down, more examples of these operations and uses will manifest themselves globally.



Selex Falco UAVs are being used in Congo by the UN. Anti-poaching operations can rarely afford such good equipment.

SOMMAIRE

Préserver la faune africaine

Les drones sont souvent associés à des missions militaires mais leurs utilisations ont récemment évolué vers un usage plus commercial, notamment en matière de lutte contre le braconnage. Une enquête de James Masey.



L'Afrique donne souvent l'impression à ses visiteurs qu'ils pourront vivre une expérience unique au contact d'une flore variée, des paysages grandioses et des parcs animaliers qui offrent un véritable refuge pour la faune. Au-delà de cette image de carte postale, il existe une autre réalité que les caméras ne filment pas mais que les avions sans pilote (UAV) commencent à saisir : celle du braconnage et de ses conséquences.

Selon la World Wildlife Fund (WWF), le braconnage est en hausse constante en Afrique du Sud. A titre d'exemple, 587 rhinocéros ont été tués en 2013 contre 122 en 2009. Le pays abrite plus de 80 % de sa population en Afrique. Le sort des éléphants est également alarmant. Une grande partie des 40 000 éléphants est exterminée chaque année pour le trafic d'ivoire. D'ici 2025, l'éléphant d'Afrique ne vivra plus en état sauvage sur le continent.

□□□□□

Les UAV ont un rôle majeur pour endiguer ce fléau qui sévit en Afrique et en Asie. Avant qu'il puisse pleinement effectuer sa mission, l'opérateur du drone devra avant tout bénéficier de la coopération et de l'autorisation des gouvernements. L'autorité de l'aviation civile devra être pleinement associée dans l'élaboration du concept d'opérations (CONOPS) et de l'exécution des vols. Il faudra également être attentif à la logistique et aux coûts d'opérations des UAV qui peuvent rapidement monter en

flèche. La problématique des budgets et des dons reste au cœur des organisations souhaitant jouer un rôle déterminant contre le braconnage.

Le Washington Post a rapporté que lors de sa récente visite en Afrique, le président Obama avait lancé une initiative majeure visant à lutter contre le trafic de la faune et à créer une véritable stratégie pour attaquer ce problème. Le président s'est engagé à donner 10 millions de dollars pour une assistance technique et une formation aux gouvernements africains pour les aider à mieux lutter contre le braconnage. En 2013, Google a fait un don de 5 millions de dollars pour que la WWF augmente l'utilisation des UAV pour décourager la chasse criminelle et illégale des animaux.

Il n'est pas surprenant qu'un drone soit employé pour lutter contre le braconnage car son usage est de plus en plus fréquent pour la conservation et la photographie de la faune.

Depuis plus de trois décennies, les UAV se sont fortement modernisés et trouvent désormais une place notable dans l'industrie aéronautique et spatiale. L'Afrique du Sud est l'un des pionniers dans l'exploitation de ce type d'avions. Les UAV ne sont plus des systèmes réservés pour les armées mais ils ont la possibilité d'opérer pour des missions commerciales comme la préservation de la faune. Les UAV et leurs technologies ont aussi atteint une masse critique, ce qui a entraîné une baisse des coûts tout en élargissant son usage à travers le monde.

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This year's European Business Aviation Conference & Exhibition (EBACE), which is held each year at the Palexpo Exhibition Centre at Geneva's Cointrin Airport, took place from May 19-21. Liz Moscrop spoke to the four debutantes, who joined regulars EAN and Bestfly, to make up the African Business Aviation Association (AfBAA) presence at the show.

AFRICA HEATS UP ITS SWISS ROLE

The 15th edition EBACE was packed with visitors and seemed easily on a par with the last event in terms of attendance, exhibitors and exhibit booths – with the added bonus of having one large, easy-to-navigate hall.

“This has been another really strong show,” said Ed Bolen, president and CEO of the American-based National Business Aviation Association (NBAA), which partners with the European Business Aviation Association (EBAA) to host the annual event. “Crowds are good, the mood is positive. We’re very pleased,” he added.

The EBAA said visitor numbers were about the same as 2013, at around 13,000, with around 500 exhibitors and almost 60 aircraft on the static display. This compared with the first EBACE in 2001, which had 3,600 attendees, 190 exhibitors and 30 aircraft on static display.

EBACE 2015 marked the debut of a number of new aircraft models, including the first European appearance of Honda Aircraft’s HondaJet and the arrival of Embraer’s Legacy 450, while Gulfstream and Pilatus announced first flights – during and just before the show – of the G500 and the PC-24, respectively.

The show also marked the announcement of senior leadership changes, including the upcoming retirement of Gulfstream president Larry Flynn and the departure of Bombardier’s business aviation chief, Eric Martel.

New Boeing Business Jets president, David Longridge, made his first appearance at EBACE, and gave a



Three production HondaJets have flown so far and 20 more are in production. This aircraft went on a European demo tour after the show.

Continued
on Page 61

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CONTINUED FROM PAGE 58

presentation to the Wings Club on the second day of the event about the importance of business aviation and how it has spurred innovation for all of aviation.

The event featured key decision-makers, including European Aviation Safety Agency (EASA) executive director Patrick Ky, and attendees were able to sit in on various educational sessions.

Established names Bestfly and EAN Aviation were joined in an expanded African pavilion by four companies making their EBACE show debuts. The pavilion was managed by AfBAA, which promotes the development of business aviation in the continent and represents owners, operators and suppliers.



New exhibitors included Astra Aviation Services, which has 10 years' experience of flight support services in Africa and currently operates in Angola, Côte d'Ivoire, Guinée, Madagascar, Mauritius, Nigeria, Rwanda, South Africa and Zambia. It has just increased staffing to allow for permanent 24/7 operations.

An Astra spokesman said: "We are not a global company, we specialise in providing services in Africa. Our aim is to improve our customers' operational and business performance. This may be through improving safety, enhancing service delivery or reducing costs."

Switzerland-headquartered Great Circle Services comprises a team of aviation experts offering a wide range of planning and management issues, as well as "customised solutions" to strengthen the position of its customers' business in the aviation market. It used EBACE to focus on the importance of aviation safety by offering services including technical writing, training courses, audits and consulting.

Spanish firm Paisajes Gallegos joined the exhibitors on the booth for the first time. The company offers aerial photography, agricultural



Top: Embraer's Legacy 450 made its EBACE debut. Deliveries are due to begin by the end of 2015. Above: Pilatus said the 1,300-plus PC-12 fleet had completed 5 million flight hours since entry into service in 1994.

The 'gateway' to Africa

First-time EBACE exhibitor African Aviation Services (AAS) showcased its flight-handling capabilities. "Our message is that we are your special gateway to Africa," said Jibo Abdoul, AAS's general manager. "We are African, we speak a lot of languages. We communicate easily. That makes us very strong."

Founded in 2012, AAS is headquartered in Dubai, UAE, which itself often serves as a gateway to and from Africa. AAS has branches in countries including Burkina Faso, Senegal, Mali, Togo, Nigeria, Niger, Congo, the Ivory Coast, Guinea, Ghana, and Burundi.

With 10 employees, AAS provides over-flight and landing permits, ground-handling services, fuel purchases, and prides itself on quick response. "We are ready to provide services in short notice," Abdoul said.

He noted the company's services aren't only for travellers going to Africa but also those who need to get out, for example due to medical emergencies – AAS also arranges medevac flights.

aircraft and surveillance for civil and military missions, including crowd control, large urban area observation, military base perimeter protection, high-value asset protection, and border security by visual observation.

Meanwhile Austria's Primus, which offers aircraft management and inspections under EASA and Bermuda approvals, said it was "able to manage virtually every aircraft type to the highest standards available and as cost-efficiently as possible".

It has clients on several registries, including Aruba, Bermuda, EASA, the Federal Aviation Administration (FAA), the Isle of Man and Malta.

Primus promoted its brand new 'parts and spare' care programme at the show, which, it says, "provides a service sourcing competitively priced parts in a timely manner for our customers".

Angola's Bestfly was marketing its wide range of aviation, FBO and maintenance services, having just achieved stage 1 of the international standards for business aircraft operations (IS-BAO) – representing the first company

Continued
on Page 62



PICTURES: MARK WAGNER - AVIATION-IMAGES.COM

Quest's Kodiak was designed from the start with humanitarian aviation in mind.

CONTINUED FROM PAGE 61

from the southern African country to achieve this status.

Before passing its IS-BAO audit, the company invested around \$75,000 in training and preparation, explained managing director Nuno Pereira.

EAN Aviation was also highlighting its range of services, including an expanding aircraft transactions division, as well as unveiling changes planned for its FBO at Lagos. The business aviation services group recently appointed Adetutu Akinyemi as its new head of sales and marketing



Forget hurricanes and desert storms, the African business aviation market has weathered the global financial crisis, and new aircraft sales performed better than in hitherto calmer markets, such as Europe and North America. In fact, Africa's business jet fleet has more than doubled in the last 10 years, although the installed fleet comprises just 2.4% of the world corporate jet population.

However, this number is set to rise. According to the latest Bombardier business aviation forecast, issued just prior to EBACE, 685 business jet deliveries are expected over the period between 2014 and 2033. This bodes well for Africa, with its poor regional connectivity and limited infrastructure, meaning air travel is still the preferred mode of transport.

Tarek Ragheb, AfBAA founding chairman, sees a great deal of potential for business aviation on the continent. He explained: "Since AfBAA was created, we have grown dramatically."

The association has become a major force in the sector's development, for example, allowing smaller companies in its membership to go to EBACE, which would otherwise have proven prohibitively expensive for them.



Tarek Ragheb: "We see African business aviation attracting investors and interest from across the globe."

He continued: "We have to believe that entrepreneurs and leaders want to improve and develop the region. That's why the vision, from day one, was to listen to the community."

Ragheb was delighted with the success of the collective at the show. He said: "This expanded African pavilion offered a prime opportunity to demonstrate the continent's dynamism, constant improvement and commitment to the industry. We see African business aviation attracting investors and interest from across the globe."

It's important to note that AfBAA, too, is swelling exponentially. Let's not forget that it only launched at EBACE four years ago with 12 founding members. Now its roster numbers 93. The association has just launched a new professional member category that allows individuals with no specific affiliation to a company to join.

The new offering is targeted at individuals that have an interest in African business aviation, but

are not necessarily part of a company or corporate structure. This means that pilots, flight attendants, private owners, freelance media, aviation educators, individual consultants, plus commercial operators with an interest in executive aviation – indeed anybody with an interest, is encouraged to join in their own name. Professional members will be entitled to discounts where available on AfBAA services, plus the networking opportunities provided at events, as well as limited access to the data and research produced by the association.

Another show announcement was the new corporate aviation database provided by Jetnet, which is the first detailed review of the sector in Africa. The report outlines the current and future landscape of the continent's business aviation industry, as well as potential opportunities, and provides readers with an unbiased overview of the complexity of the industry. It also provides a valuable directory of operators, aircraft, and suppliers in addition to information about legal and administrative frameworks.



The results will be used to form the basis of the '2020 Roadmap for AfBAA', which is the strategy that will underpin its future activities. Ragheb explained: "When AfBAA launched, we promised members that we would act on their behalf to create solid statistics and research."

AfBAA additionally increased its international reach by signing a memorandum of understanding (MoU) with Embry-Riddle Aeronautical University to develop a range of tailor-made training courses.

It has also passed a resolution to set up a safety and training committee to develop its teaching capabilities – the first fruits of which will be free training sessions at its third annual symposium in September in Addis Ababa, Ethiopia.



01

Private and Corporate
under CAR OPS 2
(General Aviation Operations)

02

Commercially under a foreign
AOC utilizing an ICAO
Article 83bis agreement

03

Commercially under a San Marino Air Operating
Certificate (AOC), under CAR OPS 1
(Commercial Air Transportation)

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At airstrips across much of Tanzania, daily scheduled flights are announced not by the approaching whine of turbofans but the growl of a Pratt & Whitney Canada PT6A turboprop as a small airline maintains links across the east African nation. Alan Dron reports.

Auric Air has been plying the air routes over Tanzania since 2001. Having started out as a charter operation, it moved into scheduled services and is now a significant carrier of businessmen and tourists throughout the country, flying into airstrips that would be unsuitable for larger, heavier aircraft.

Along the way, it has also become a lifesaver, operating medevac flights to get sick and injured people to points where they can be picked up by the emergency services.

Auric Air is very much a family affair, as managing director Nurmohamed Hussein explained.

"After I completed my private pilot licence (PPL) in 1996, my father suggested that perhaps it would be cheaper for him to invest in a small aircraft that would enable me build the much needed flying experience closer to home. So he bought me a Piper Cherokee 180. The sole purpose of this aircraft was to build hours in preparation for my commercial pilot licence and eventually an airline transport pilot licence.



"I flew the aircraft until I had well over 500 hours' flying experience. At this point we were getting requests from the general public to pay for charter services and, therefore, we decided to form a non-scheduled air charter company and employed a commercial pilot to fly the aircraft."

The company is still owned by his family – himself, his younger brother and their father. From the outset, its business it has been centred on flying into remote areas of east and central Africa.

Head office is at Mwanza Airport in northern Tanzania, with other bases at the commercial capital, Dar-es-Salaam, and Arusha, in the northeast, close to the Kenyan border.

Auric Air serves a network of 22 points in Tanzania, with 70% of its business being scheduled services, 20% charters and 10% specific tourist charters.

The scheduled services to various up-country locations are particularly popular with mineral exploration and mining companies, several of which



Tanzania's top of the props

have contracts to move personnel to sites close to their mining activities. Government officials and visiting CEOs, whose companies have interests in Tanzania, are also regular passengers.

At the start of operations, it was "extremely hard" to persuade people to pay for the convenience of a flight compared to taking a bus, said Hussein. But a core of passengers has gradually emerged and become loyal customers.

Roughly 75% of scheduled flights cater for business people or residents, with the remaining 25% of scheduled passengers consisting of tourists heading to and from holiday destinations. On certain routes – notably between Dar-es-Salaam and Zanzibar – several carriers compete for trade, but in several regions Auric Air is the sole provider of air transport.

The company's operations are daylight-only. "All our aircraft are equipped with the necessary equipment to operate at night, so we do meet the regulations," said Hussein. However, given the limited infrastructure available in its area of operation, the company voluntarily restricts itself to daylight services.

Operating into some of the more remote strips with extremely limited facilities is challenging. An obvious potential problem is wild animals wandering on to the runway, but standard operating procedures are in place to eliminate the possibility of runway incursion by wildlife. Tyre punctures are not unknown, however.

For the first few years of operation Auric Air used a mix of Cessna 402, Piper Seneca II and other small piston-engined aircraft. However, in 2008 it bought its first Cessna Grand Caravan and now operates a fleet of 10. These are all bought new, following a policy decision not to operate aircraft with a lengthy service history.

The single-engined turboprops are routinely equipped with large under-fuselage panniers to carry luggage. Maximum load is 12 passengers with two pilots, or 13 passengers with a single pilot; typical payload is 1200kg with 2.5 hours flying time and a 1.5-hour reserve. Unlike many small companies in developing countries, the fleet is a young one – the average age in 2014 was just 3.6 years.

Auric Air's aircraft have several modifications

Left: Auric Air added a 10th Cessna C208 Grand Caravan to the fleet this year, with managing director Nurmohamed Hussein (left) and operations manager Sajid Hussein taking delivery in March.

Below: Ground crew members pose with one of their charges before another service gets under way.



that distinguish them from most Grand Caravans. Among these is the aircraft payload extender (APE) III package with short take-off and landing (STOL). This allows maximum take-off weight to be increased from 8,750lbs to 9,062lbs, with the additional payload being used for either more baggage or extra fuel. The STOL kit enables the aircraft to rotate at slightly slower speed, allowing it to use runways up to 15% shorter than would otherwise be possible, depending on temperature and altitude. “This modification allows us to operate into airstrips that would otherwise be inaccessible,” said Hussein.

More notable – especially in the light of Malaysian Airlines’ missing flight MH370 over the Indian Ocean in 2014 – is the presence on board the Grand Caravans of a real-time tracking system.

This involves the installation of ‘real time flight following’ software by Canadian company Skytrac that enables dedicated flight-following staff to track each aircraft in real-time.

The system tracks the aircraft’s position, speed, altitude, heading, rate of climb or descent and weather. This enables charter clients to be updated every 30 minutes on aircraft position and estimated arrival time.

“Until around two years ago it wasn’t common,” said Hussein. “We were one of the first to start using it. It’s now becoming more common, although not because of the

Malaysian aircraft; the cost is going down and it’s becoming more affordable. It used to be \$20,000 to install; that has come down to \$4,000.” Each message from the aircraft pinpointing its position has also reduced from 35-40 cents to around 10 cents.

Also on board the Grand Caravans is synthetic vision technology that provides the pilot with an electronic view of the approach and runway in marginal visibility. This, said Hussein, considerably eases pilot workload, which directly translates to safety.

“It is our dedication to safety that has enabled us to achieve gold certifications from [the Flight Safety Foundation] Basic Aviation Risk Standards (BARS). Our operation is audited a minimum of three times each year by different organisations. Each corporate client has its own safety standards that we must meet to be eligible to transport their employees.”

Although the Grand Caravan has proved itself over the years and Auric Air is “extremely happy” with the type, it is now considering taking on the

Beech King Air 350 to cater for clients that have a requirement for a twin-engined aircraft. The higher speed and comfort of the Beech twin is particularly in demand from the country’s oil and gas industry.

With the remoteness of many towns and villages from medical aid, one of Auric Air’s most valuable services is operating basic medevac flights.

“We have a stretcher at all three of our bases. Our service is limited to flying into a remote airstrip with a nurse and bringing the patient to the closest airstrip from where they can be handed over to a professional medical evacuation team,” said Hussein.

“The most challenging evacuation we have done so far was when a senior manager at a mine needed to be evacuated due to a medical emergency that occurred late at night. Two of our best pilots departed Mwanza airport and safely landed at the remote airstrip guided by the headlights of Toyota Land Cruisers parked on the edges of the airstrip, as the strip had no runway lights.

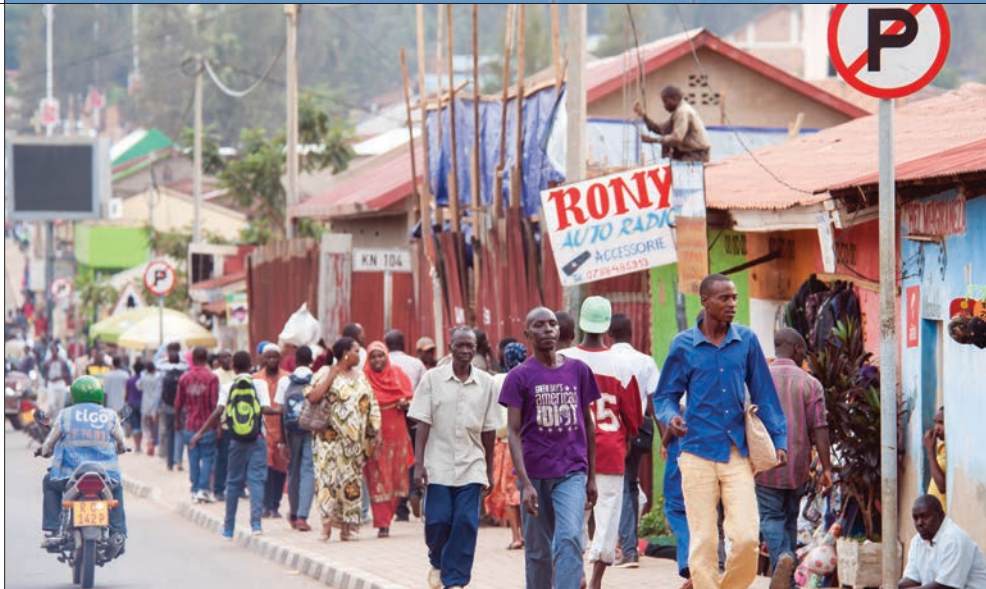


“They picked up the patient and took off, again guided by the cars’ headlights and flew him to Mwanza, where a jet was waiting to fly him to Nairobi. A few months later he had fully recovered and was back at work at the mine.”

Most of the company’s employees are Tanzanians and it makes every effort to give priority to nationals in providing jobs. “They do a great job,” said Hussein. “They’re dedicated, hard-working and the company wouldn’t have been successful without their efforts.”

As well as looking seriously at investing in new aircraft, Auric Air also has plans to launch flights to other destinations within Tanzania. The country has 30 regions and, while Auric Air operates to 11, most of the remaining 19 have no air services whatsoever.

“It is our dedication to safety that has enabled us to achieve gold certifications.”
NURMOHAMED HUSSEIN



“We know how land-locked we are. I see free skies as unlocking Rwanda.”
 SILAS UDAHEMUKA

LAND OF

Alan Peaford *visited Rwanda to find a miraculous change.*
 Pictures: **Ian Billingham**

Talk to anybody about Rwanda outside of east Africa and they will talk about the horrific genocide that split the country 20 years ago. But walk in through the welcoming immigration checks at Kigali Airport and you will feel a sense of peace and unity.

At customs, officers are concerned you may have inadvertently brought in a plastic bag – they are banned here.

And through the concourse, there are metered taxis without the hassle and grief at many other African nations.

Kigali is a revelation. People describe it as the “Switzerland of Africa” and it is easy to see why. It lives up to its name as “the country of a thousand hills” with green rolling hills surrounding the capital.

And everywhere people are smiling.

James Musoni, minister of infrastructure, believes the drive and leadership of president Paul Kagame led Rwanda from a “failed state” to one where “people can see it is possible to have a good life. You can see hope,” he said.

Rwanda has a three-pronged approach to this, almost miraculous, change – vision, practice and institutions.

Musoni said: “We have a vision of one people; we practise living the vision and our behaviours demonstrate a belief in equal opportunities, where we make a deliberate effort to address distortions. Our institutions must promote the values and have oversight.

“Cleaning the environment we live in and celebrating our culture are things that are within our means. We all do it.”

The result is the clean country – and equally a ‘clean’ culture of business practices, where setting up companies, for example, can be done online.

Continued on Page 69

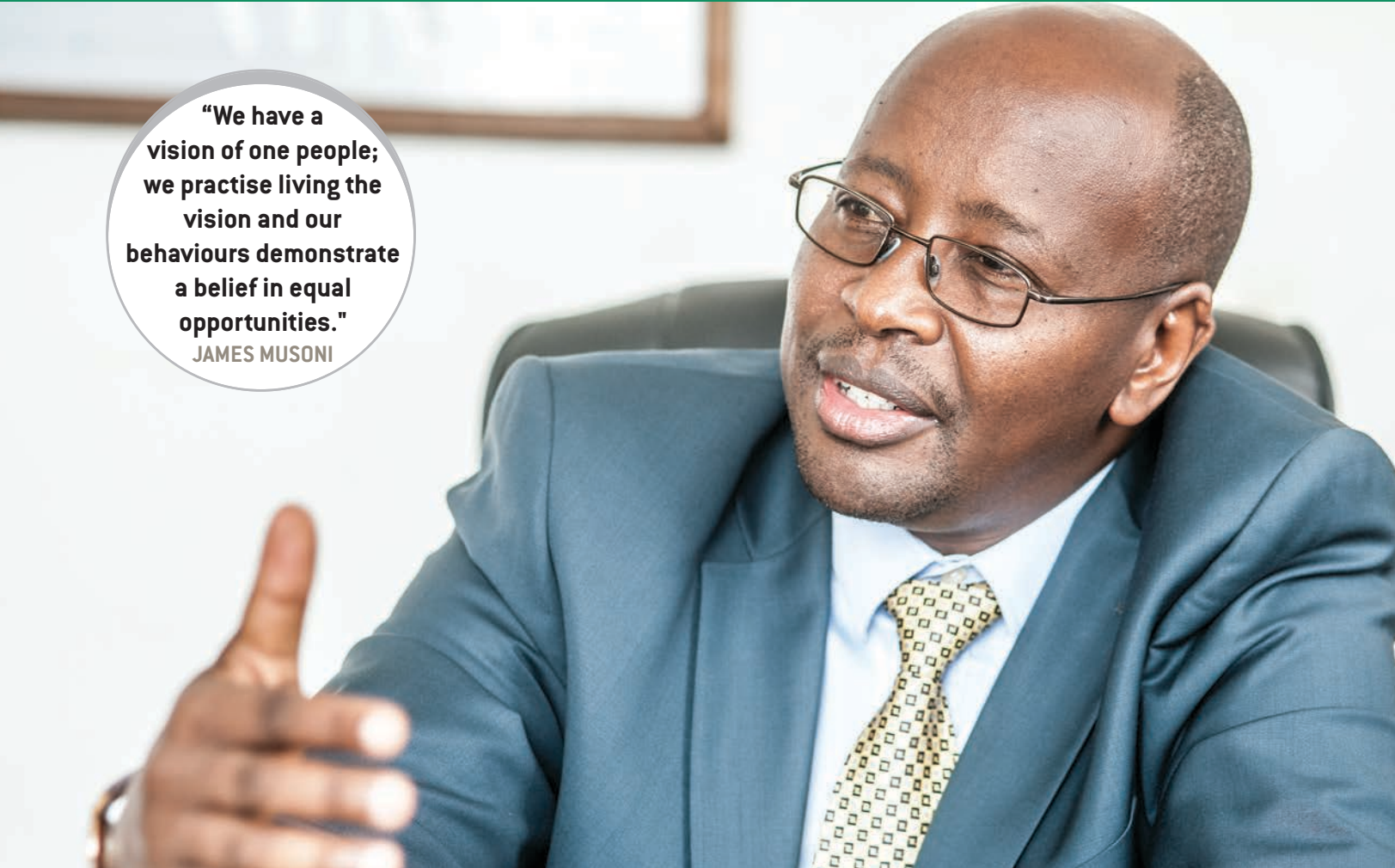


The turnaround in Rwanda is evident everywhere, with a focus on cleanliness and peace.

HOPE - NOT HATRED

"We have a vision of one people; we practise living the vision and our behaviours demonstrate a belief in equal opportunities."

JAMES MUSONI





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CONTINUED FROM PAGE 66

“Business should be accessible, secure, efficient and with an effective banking system,” Musoni said. “That’s the soft infrastructure. The physical infrastructure is the next stage, where we develop an integrated transport system with a good public system and, particularly, an air transport system.”

Musoni’s ministry has authorised the construction of a new airport at Bugesera, connected to Kigali by an express highway and a rail system. At the same time, hotels are springing up to support the growing tourism – and perhaps more importantly – the meeting and conference industry.

The African Union will meet in Kigali next year and so will Interpol. Increasingly, the capital is becoming a key crossroads for Africa, a safe and efficient hub where Africa can do business.

“We are open here,” Musoni said. “We are open to investment – strategic and equity – and we expect to see growth from our national airline and the numbers when the new airports come on line.”



By 2020, Musoni predicts there will be two international airports in the country and several domestic airports serving areas close to the Democratic Republic of Congo and Burundi.

Unlike some other African nations, Rwanda welcomes international carriers, encourages open skies and argues it is good for business.

“Our economy is driven by the private sector,” he said. “Businesses want to expand and I see us being part of a more integrated region – one single airspace block, free movement of people and capital within our region and, of course, more prosperity.”

The clear support of the Government to the aviation sector is music to the ears of the country’s civil aviation authority.

“The support for open skies is excellent,” said Silas Udahemuka, the director-general of the Rwanda Civil Aviation Authority (RCAA). “Some countries want to close their skies but we see opening ours as a ‘win-win’ situation. We know how land-locked we are. I see free skies as unlocking Rwanda.”

“Aviation is the major flagship for prosperity and productivity – not just for us but for Africa. We need to be creating a cohesive regional plan and focusing on safety too.”

Rwanda’s plans to be at the centre of the east and southern African boom was boosted by the Common Market for



Eastern and Southern Africa (Comesa) initiative to integrate airspace among member states. The project secured about \$10 million funding from the African Development Bank and Rwanda is making use of its higher ground to base a radar station to enhance safety. “We have a coalition of the willing for delivering a safer and more effective upper airspace and have entered into a memorandum of understanding (MoU) with Kenya, Uganda and South Sudan,” said Udahemuka.

The RCAA is encouraging the aviation industry to take advantage of the openness of Rwanda to set up in Kigali and be part of the growth. “It’s not just about being a hub, it’s about developing other niche areas too,” Udahemuka explained.



The regulator works closely with the national airline and shares the same vision. It is looking at the support for training for pilots, for crew, for engineers and for ground-handling and other aviation services.

The award of the International Air Transport Association (IATA) operational safety audit (IOSA) certificate and subsequent admission to membership of IATA, as well as the success in the audits for ground-handling, which should lead to certification any time now, was welcomed by Udahemuka.

“Aviation is the major flagship for prosperity and productivity – not just for us but for Africa. We need to be creating a cohesive regional plan and focusing on safety too.”

SILAS
UDAHEMUKA



“This is a great milestone that will not only aid RwandAir but play a fundamental role in connecting the country to the outside world,” he said. “If we want to be identified with quality and success, then IATA is the way to go; our only assurance is to continue focusing on safety, efficiency and sustainability.”

Rwanda has worked with internationally-renowned consultants to develop the master plan for the future – particularly with the new airport.

“We have worked with Lufthansa Consulting,” Udahemuka said. “The projections showed a 19% growth from 2013 to 2018 and a 21% growth from 2018 to 2021. The new airport will take us from 600,00 passengers a year to four million. We want to be able to handle aircraft like the A380, and B777s. We are negotiating with prospective investors right now.”

As well as open skies, Rwanda is working hard to attract more airlines – including the Gulf carriers. Qatar Airways and Flydubai are already operating into Kigali and other regulars include Turkish, Ethiopian, Brussels Airlines and KLM.

“We have been offering incentives, such as no charges for fire-fighting and six hours free parking,” Udahemuka said. “We expect Emirates and then BA and we will welcome them.”



RwandAir CEO, John Mirenge, talks to Alan Peaford about his airline's rise from the ashes to a proud beacon for African aviation.

A shining light in African aviation

If ever there was living proof that African airlines can shake off the images of chaos and disorganisation, then RwandAir is it. But John Mirenge, the flag-carrier's chief executive, still shakes his head at the uphill struggle he faces to change people's perceptions.

Shaking a press cutting, Mirenge frowns: "So often the information is wrong, way out of date, where we are still described as being part of Alliance Express or Rwanda Express or even Air Rwanda, which owned two Twin Otters and an old 707 freighter that got impounded in Egypt.

"None of those survived very long in that period of privatisation. They just got sucked into bankruptcy. Today it is all very different."

A former lawyer, Mirenge is passionate about his country and his airline and believes success for both go hand-in-hand.



"In 2009, the government had started putting together a strategy to get the country out of poverty by developing services, IT and tourism," he explained. "We were landlocked and airlocked. Success would be hampered without proper connectivity. The government had to put its money where its mouth was and it did so by revamping the old Rwanda Express and making it a fully fledged airline. We ordered two pre-owned Bombardier CRJ-200s, placed orders for a pair of Boeing 737-800s and began to look like a serious airline."

While waiting for the -800s to arrive, leasing deals with GE Capital Aviation Services (GECAS) saw a couple of "workhorse" 737-500s make their way to Kigali. "They just kept on going," Mirenge said.

RwandAir set its sights on developing its sub-region connectivity. "We had a

hub and spoke concept, where we saw people getting out through Kigali to the sub region," said Mirenge.

Now flying from Kigali into the entire eastern African region, including serving fifth freedom routes from Entebbe to Juba and to Nairobi, the airline has also established a sizeable west African network, operating to Brazzaville, Libreville, Douala, Lagos, and Accra. Abidjan is due to be launched later this year.

In southern Africa, fifth freedom routes link Kigali with Lusaka and Johannesburg. Harare is also very clearly on Mirenge's radar.

Outside of Africa, Dubai became the first of the key routes.

And, adding to RwandAir's reputation for flying one of the youngest fleets in Africa, the carrier's ambitions don't end there.

The airline will launch new links to Asia and Europe after concluding a deal with Airbus to introduce A330 wide-bodies into its fleet in the second half of 2016 – becoming the first customer for the type in east Africa.

One A330-200 and one A330-300 will support a major expansion in its network as they are deployed on medium-haul and long-haul routes to destinations throughout Europe, the Middle East and Asia.

The aircraft will be configured in a three-class arrangement seating with 261 (A330-200) and 300 (A330-300) passengers, and will be powered by Rolls-Royce Trent 772B engines.

"As we look to introduce wide-body aircraft for the first time into our fleet, with its proven economics, reliability and passenger comfort, we have found the A330 to perfectly support our plans to expand into Europe and Asia, to enhance



"There is so much more we can do when we get the new aircraft."

JOHN MIRENGE

our regional presence, to open up new routes and to grow our market share," said Mirenge.

The airline has also taken delivery of two new Bombardier Q400NextGen dual-cabin turboprop aircraft, and a third Boeing B737-800NG is on order for delivery early next year.

Dubai remains key to Rwandan plans. "Some 40% of the traffic is in transit moving beyond Dubai. Before the end of 2016, I want us to be reaching Malaysia and China," said Mirenge.

Were it not for a "long delay" in a fifth freedom request with Tanzania, RwandAir would already be serving Mumbai – another of its key markets. Mirenge sees that, and, in 2017-2018, the addition of Europe with Germany and the UK, as on his priority list.

"Tourism is our highest earner; we need volume to entice people with the right fares," he said. "At the moment, we struggle with cargo using our narrow-



SP grows as the industry grows...

As the aviation industry has started to pick-up again in Rwanda, fuel supplier SP Aviation is taking full advantage.

The company, located at Kigali International Airport, set up 14 years ago to supply fuel to airlines with RwandAir being its big customer.

“As the aviation industry in Rwanda grows, we grow,” said Awali Ouro-Koura, aviation manager. “Today, our big customer isn’t just RwandAir, but also KLM and Ethiopian Airways. We also supply other airlines and aircraft coming in.”

The source of SP Aviation fuel comes 90% from Tanzania and 10% from western Kenya, which involves some strategic logistics.

“Geographically, Tanzania is quicker for us to reach than western Kenya,” said Ouro-Koura. “We have 10 trucks and nine drivers that work on three shifts. They drive each week 1,500km to Dar Es Salaam, which takes three days. The guys then load the trucks with fuel and drive three days back to Kigali. So, the cost of transport is very high.”



The company has four fuel tanks at Kigali International to cater for aircraft, with each tank holding two million litres of storage capacity, which the company makes sure it has at all times.

Ouro-Koura said: “We have three brand new trucks to fill the aircraft. They hold 100,000 litres of fuel, which allows us to supply the aircraft in time. As an example of the amount of fuel we deal with each week, KLM will use 50,000 litres to get direct to Amsterdam, and Kenyan Airways will use 2-3,000 litres for the hour’s flight to Nairobi.”

The company is also building another facility to hold two million litres, which will be complete by the end of the year. “The tank has already been erected and is based 15km outside Kigali. It is just for back-up but will allow us to always be on the ball. Kigali International Airport is expanding its terminals to allow more space for parking. This is good news for us as we are ready to supply the increasing amount of flights and airlines coming in,” said Ouro-Koura.



bodies and have to rent space. There is so much more we can do when we get the new aircraft.”

Mirenge shrugs off the threat of competition. “Emirates has sent their child [Flydubai] to test the water. They will come but we adore what comes from without. We are happy to embrace the Gulf carriers. It is difficult to compete against the deep pockets of those carriers.”



“As an industry, we should set ground rules. It is no good if an airline enters a new market and puts fares at zero dollars. You need muscle to carry such a fare. Once everyone else is hurt, then the fares go up.”

Mirenge sees the need for more investment in the human capital of Rwanda. “We are training our own pilots now. We are getting engineers. We are working closely with Ethiopian and send Rwandans to Addis for on-the-job

training. The only way for us is to go out and train Rwandan youngsters and build on that,” he said.

Mirenge led the RwandAir drive for safety standards – a management commitment celebrated by his staff – that led to the International Air Transport Association (IATA) operational safety audit (IOSA) certification. “We are recognised as a ‘safe’ airline and that has added confidence and comfort to our customers and our partners,” he said.

The commitment of the RwandAir staff and the Rwandan Government are the twin pillars that Mirenge said has enabled the IOSA success – and the ground-handling certification.

“The future looks good. We have set ourselves targets for the next two to three years. We know where we are going and pray that our team spirit continues and that our relationship with our shareholder continues too,” he concluded.



While Akagera Aviation offers visitors to Rwanda stunning views from the sky, its managing director, Patrick Nkulikiyimfura, is on a mission to recruit more pilots. He spoke to Marcella Nethersole.

Akagera Aviation has come a long way since starting operations in 2008. Originally the company was a 99% charter-operator business aimed at tourists coming into the country to witness the breath-taking views from the sky.

“Today, Akagera Aviation is a very interesting operation and is three companies in one,” said Patrick Nkulikiyimfura, managing director. “Not only do we do charter but we also offer area surveillance for construction and energy companies, we have a medical evacuation service, and we are now a maintenance, repair and overhaul (MRO) facility and an Air Traffic Organization (ATO) centre.”

Nkulikiyimfura stresses the importance of the company’s pilot training division as he feels Rwanda has a huge lack of pilots.

“We’re very short of pilots in Rwanda, particularly after the genocide,” he said. “After the genocide, the aviation industry didn’t really exist, so we had to start from scratch again and ensure the minimum skills from the pilots on fixed-wing and rotary aircraft was addressed.”



For now, Akagera Aviation concentrates on rotary training, conducted at its facility at Kigali International Airport. Theory lessons take place in its classrooms, while practice is done using R44s. Nkulikiyimfura said the company has a big plan to expand on this. “We want to transform Akagera Aviation into a centre of excellence in Rwanda and east Africa and get pilot figures up. While we offer rotary training, the plan is to eventually offer fixed-wing training as well as maintenance and cabin crew, and, maybe, courses for some of the airport operations, such as people working in the tower.

“It’s a big plan, but an exciting one and one that is needed in the country.”

The company is currently training 16 students – all from Rwanda. Its instructors are a mixture of locals and foreign nationals, with its chief instructor being from Italy.



Patrick Nkulikiyimfura: “We want to transform Akagera Aviation into a centre of excellence in Rwanda and east Africa and get pilot figures up.”

Patrick’s pilot programme...

While Nkulikiyimfura is looking to expand on its pilot training facilities, one hurdle he faces is the challenge of mixing training with regular commercial operations.

He said: “We could have a student training when a commercial aircraft is in descent and we don’t want this to be mixed, particularly as we only have one runway at this international airport. We are trying to manage this and we have a good collaboration with the civil aviation authority on this matter.”

Akagera Aviation’s helicopter emergency medical evacuation service offers rapid response and medical care, provided by a paramedic, to everyone that lives, works or is travelling in Rwanda and who experiences a serious medical emergency.

“It transports them directly by air to the closest and most appropriate hospital. The service operates during daylight hours, 365 days a year.

“For medical evacuation we use an

AW109, which is a great helicopter for getting to a scene and saving lives. It is capable of delivering our crew anywhere in Rwanda in under 35 minutes flying time,” said Nkulikiyimfura. “We also attend medical emergencies in Burundi, where there are less medical facilities. We are more than happy to intervene and help as best as possible.”

“We provide a paramedic, who is on site every day, and we have excellent medical equipment.”

The company is looking to expand this arm of the business, too, and Nkulikiyimfura hinted that it is close to signing an undisclosed contract that will require the company to hire more paramedics.

Akagera Aviation has three hangars located at Kigali International, one of which houses a police helicopter, and a fleet of six helicopters (AW109s and R44s). It is currently looking into acquiring an AW119.

The company’s heli-safaris are still big business, offering customers a vast choice of destinations within Rwanda.

“The tourism helicopter is very popular with both corporate trips and tourism. For business, the most efficient way to get around Rwanda is by helicopter – so it is very popular,” said Nkulikiyimfura.

Tour highlights include aerial views over the lush Rift Valley and Lake Kivu, to flying over the impressive Virunga Volcano mountains.

Heli-safaris go to some of the most beautiful locations.



BEAUTY AND THE BEST

*RwandAir believes in beauty as well as brains when it comes to choosing its cabin crew, as **Marcella Nethersole** found out.*

Each RwandAir recruitment drive brings in 2,000 applicants and its HR department works from a strict criterion to make sure the right individuals are found to represent the national airline.

“Applicants must speak English, French, and our local language, Kinyarwanda,” said Maria Asimwe, manager cabin services. “Qualifications are very important to the airline, so we require university graduates only between the ages of 25-35. We feel university graduates after the age of 25 are more mature and know what they want – so they’re more likely to take the job seriously and not mess up.

“Applicants also need to look the part, as we feel it is important as an airline that passengers from around the world see the best of Rwandans. This includes choosing the most attractive looking males and females. Height is also very important; applicants must be 1metre 66cm (5ft 5ins). This might sound tall but we need them to be able to safely reach the overhead compartments.”



At the moment, the airline only recruits Rwandans as it says it wants to give its nationals a chance to represent their own airline. Perhaps, unusually, the airline also seems to attract and recruit more males than females, but this is something it is trying to balance out.

“We’re not too sure why we get more male applicants but we do find them to be very committed, which is important,” said Asimwe. “However, in our latest recruitment drive we want to recruit more females to balance the ratio.”

Training is conducted at its base in Kigali International Airport, where there are two training rooms. It also has facilities for drill practise, including fire-fighting at the airline’s mock-up, as well as a ditching facility, where the airline has a pool approved by the Rwandan Civil Aviation Authority (RCAA) located close to the airport.

Asimwe said: “We don’t have an aircraft



mock-up at the ditching centre, so trainees learn the drill on life-rafts. For on-board training, students learn on the actual aircraft, such as a B700.”

The airline trains a group of 15 cabin crew students at a time and the full programme takes around four months. During this time, all the students live in Kigali.

At the moment, there are 63 operating crew in action on all its fleet.

“We got some new cabin crew last year; they applied in 2012 but they were taken to other departments as we had enough cabin crew. Now, however, they’re being transferred back to cabin services. That shows the demand for working with RwandAir.”

Asimwe added that, once on board with the airline, staff liked to stay with the company, which is what the airline looks for during the interview process.

She said: “Cabin crew with RwandAir like what they do. They know it’s not just about smiling and serving meals, it is far more involved. Cabin crew are constantly gaining more experience with RwandAir. The airline

The airline takes on graduates who “look the part” before training commences.

provides various training and not just for cabin crew but also for pilots and dispatch staff. Eventually, some cabin crew do become pursers and then go on to become instructors, after interviews and training.”

Natacha Ingabire, head of cabin crew training, is someone who did just that. She is one of five instructors for RwandAir and she, herself, undergoes refresher training every year.

“We have software to keep records of the cabin crew and one month before the end of a year, we make sure we look at refresher training for staff,” said Ingabire.



Currently, Kenya Airways is the approved training organisation that RwandAir uses but the airline is looking to change this.

“We have a contract with Kenya Airways, so we get tips on training off each other,” said Ingabire. “We do look at how other airlines train their staff. I think all carriers want to ensure safety, as well as the perfect service, so it’s interesting to see how other airlines work.

“I have visited Ethiopian Airlines and Kenya Airways’ training facilities to see how they work. My colleague also recently visited the Turkish Airlines training facilities.

However, we are in the process of empowering our in-house instructors. Very soon we will be doing our training 100% in-house, but for now Kenya Airways is the approved training organisation that comes in to do some of the training that we require.”

With that, Ingabire headed off for her yearly refresher course.



New to Kigali International, ASL catering company is already making a tasty impact at the airport.

Marcella Nethersole spoke to its managing director.

Airline Services & Logistics (ASL) first started its catering and hospitality operations to international airlines in Lagos, Nigeria in 2004.

ASL CEO, Richard Akerele, had a vision to open more catering units in Africa and proposed Rwanda as a facility destination. His aim was to employ as many locals as possible.

Ten years on, in August 2014, the facility at Kigali International Airport was opened.

Before ASL arrived the hotels in the capital – one being the famous Mille Collines – provided catering for aircraft. Now ASL is the sole provider to international airlines coming into the airport.

“RwandAir has a 30% stake in the business, so we provide all catering for the airline. We are a 24/7 operation and greet RwandAir flights at around 6am with the last flight out being around 3am. We also provide catering to KLM, with three flights a week,” said Sohail (Lee) Ghauri, managing director.

ASL is now looking to win business from other airlines into Kigali.

“We have approached Kenyan Airways, Ethiopian Airlines, Brussels Airlines and Qatar Airways. It makes sense that being located at Kigali airport, we provide the catering, making life easier for the airlines. We have also been approached by Flydubai, as it is planning a Dubai-Kigali, Kigali-Dubai service once a week.

“It back-caters, but its management have asked us to meet the aircraft on arrival, take its catering out from the hold and put it up into the cabin with a view to eventually picking up catering from us. Turkish Airlines has also approached us to meet its aircraft as well,” said Ghauri.

ASL Kigali is now a pretty big outfit with 75 staff, which includes German executive chef Jurgen Neumann.

“Apart from Jurgen, all our staff come from Rwanda and the average age is 25,” said Ghauri.

The company provides around 1,200 meal components a day and menus are on



Food can be fun, but there are serious aspects such as hygiene and security, to ensure food is not tampered with. ASL is strict on both. Pictured are executive chef Jurgen Neumann and customer liaison officer Micheline Habineza.

HIGH CUISINE

a rotation of four a year, with a monthly cycle change,

“We work directly with an airline on choosing a menu so, RwandAir, for example, decided upon its four menus. It was the same with KLM,” said Ghauri. “Menus are different in the classes so, for instance, in business class we have fish, chicken and beef, in economy it has two choices, beef or chicken, or a passenger can order a special meal, such as vegetarian.

“If it’s an unusual request we can’t get here easily, such as lobster or crayfish, we will just ask our parent company to help us as it’s a four-hour flight from Lagos to Kigali. If they can’t help, we have contacts in Kenya and Uganda.”

In terms of food hygiene and safety, Ghauri said its food is on par with all international airports.

“We need to consolidate with the airlines. KLM is demanding in its food safety, so we have to ensure all our procedures here are of

a strict standard. All staff are given health and safety training and required to wear hygienic safety clothes, such as boots, hairnets and masks.”

Once food is prepared, it is loaded on to refrigerated vehicles and driven to the waiting aircraft.

“Not many aircraft catering companies have refrigerated vehicles. We have two high-loaders, which are capable of serving A330s. Besides a jumbo, we can provide to any aircraft,” said Ghauri.

For a company not even a year old, it is already putting into place ambitions plans.

“Besides being in talks with other airlines, we have also just been awarded business for the Thompson round-the-world charters. We started the first one on March 5 with 100 VIP passengers. The aircraft will have its own chef on board plus people to help. This will be the last leg from Kigali back to Barcelona,” said Ghauri.

“We’re taking on security personnel too because we’re located airside. Currently we can’t have direct access on to the tarmac as we need X-ray machines. So shortly we will have at least one X-ray screening machine. This will make sure absolutely nothing has been tampered with and nothing ‘alien’ is on the trucks. Once the screener is in place, the trucks will be based airside. This will save a lot of time; food will get to the aircraft very quickly, as well as saving fuel. We have an entrance and gate leading straight on to airside.”

Jon Lake takes a look at the decades-long conflict and reconciliation in Rwanda that has helped forge the country's current highly professional military aviation force.

The RAF's participation in UN missions has demonstrated the small force's military discipline and efficiency.

The Rwanda Air Force (RAF) is small but well equipped and it has benefited from regular training with western air arms, while the US and UK have assisted with capacity building and peacekeeping deployments.

Almost entirely equipped with support and attack helicopters, the frontline element is augmented by a small presidential/VIP flight.

The RAF is primarily tasked with supporting the Rwanda Defence Force (RDF) – the national army of Rwanda – in safeguarding the nation's sovereignty and defending its territorial integrity, and in cooperating with other security institutions in the enforcement of the rule of law and the maintenance of order.

The RAF is also tasked with participating in national development and with responding to disasters, and in recent years has also deployed helicopters and personnel as part of international peacekeeping forces outside the country's boundaries.

The RAF's participation in UN missions in Liberia, Sudan/Darfur (UNAMID) and South Sudan (UNMISS)

Reborn RAF heads in a peaceful direction

has demonstrated the small force's military discipline and efficiency, impressing the UN and the international community, and resulting in praise for the Rwandan force elements, despite the presence of other nations' forces on the same missions.

The RDF consists of the high command council, the general staff, the Rwanda Land Force, the RAF, and a number of specialised inter-service units that report directly to the ministry of defence.

The RAF can trace its origins back to the Force Aérienne Rwandaise that was formed with Belgian help after the nation achieved independence in 1962. Early equipment included SOCATA Guerrier

armed light aircraft, Britten-Norman Islander light transports, Nord Noratlas tactical transports and seven Alouette III helicopters, later augmented by SA 342L Gazelles and AS 350B Ecureuils.

During the early years of independence, land forces consisted of a 2,500-strong National Guard and the 1,200-strong National Police.

The Hutu-dominated National Guard had a headquarters, an intervention group (effectively an infantry battalion), five more rifle companies, and five independent rifle platoons. It gained experience by repelling small-scale invasions and incursions by displaced Tutsi militias in 1963 and 1964, and grew

The RAF has deployed helicopters and personnel as part of international peacekeeping forces outside the country's boundaries.

Continued
on Page 76



CONTINUED FROM PAGE 75

into the Forces Armées Rwandaises (FAR) and Gendarmerie, which were 5,000 and 1,200 strong by the 1990s.

The FAR included the elite Presidential Guard, which was estimated at 1,000-1,300 troops, as well as battalion-sized paracommando and reconnaissance units.

More than 336,000 Tutsi had left Rwanda to escape Hutu purges during the Rwandan revolution, which started in 1959. They had settled primarily in the four neighbouring countries of Burundi, Uganda, Tanzania and Zaire, and these launched attacks into Rwanda over the next few years.

□□□□□

Rwandans began building a covert network of Rwandan Tutsi refugees within the Ugandan Army's ranks, playing a major part in the Ugandan bush war that saw the overthrow of the Obote regime and establishing the Rwandan Patriotic Front (RPF) in 1987. This was committed to returning the refugees to Rwanda by any means possible.

In 1990 the RPF launched an invasion of Rwanda, with about 2,500 of Uganda's 4,000 Rwandan soldiers taking part.

Belgium, France and Zaire sent troops to assist the Rwandan forces against the invading Tutsis, eventually forcing the RPF to withdraw and begin a campaign of classic hit-and-run style guerrilla attacks, before launching another major offensive on February 8 1993. This was more successful, and led to a fragile ceasefire.

Unfortunately this did not have the intended consequence of pressuring the Rwandan government into making concessions that would strip the Tutsis of their largely 'second class' status. It was, instead, seen as an attempt to bring the Tutsi ethnic group back into power, dramatically escalating tensions and laying the groundwork for the Rwandan genocide, which saw Hutu forces, militias and civilians turning on Tutsi civilians and massacring them. The genocide stopped only when the RPF defeated the Rwandan government forces, eventually taking over complete control of the country.

After the rebels ousted the Hutu government, the RPF formed a government of national unity and split itself into a political division and a military division, which became the new official army of the Rwandan state, and which incorporated elements of the former Rwandan FAR, including some senior officers.

Few of the FAR aircraft survived the fighting in the 1990s. Most were shot down, or destroyed on the ground, while others were abandoned outside the country (like the Noratlas transport that ended up in Dar Es Salaam).

Especially after the end of the long-running war in the neighbouring Democratic Republic of the Congo (in which Rwandan and Ugandan forces fought on the rebel side) Hutu refugees slowly returned to the country, and remarkably Rwanda today is widely regarded as one of Africa's most

The RAF has nine Mil Mi-17s. But it needs far more aircraft to support the army.

successful and stable countries and is a regular participant in UN peace-keeping missions, though Hutu militia groups based in the Congo continue to mount sporadic attacks against Rwanda.

Today's RDF consists of four divisions, each deploying three brigades. The 1st Division is headquartered in Kigali, covering the Central/Eastern regional command, with the 2nd Division at Byumba (Northern/Eastern regional command), the 3rd Division at Gisenyi (Northern/Western regional command) and the 4th Division at Butare (Southern/Western regional command).

□□□□□

The reborn RAF is inadequate to support an army of this size and extent, consisting, as it does, of attack and transport helicopter squadrons at Kigali (with about five or six Mi-24s, four armed SA342L Gazelles and nine Mi-17s). There are also single examples of the Gulfstream G550, Bombardier Global Express, Boeing 707-320 and, perhaps, a single surviving BN-2A Islander.

The new air force has tried to expand the scope and extent of its activities. There is an aspiration for fast jet fighters, and it is believed that in 2007 the RAF approached South African company Paramount to purchase an undetermined number of Mirage F1AZs, though in the event, these went to Gabon and Congo.

More recently, in February 2014, South Korean sources reported that Rwanda had shown an interest in acquiring the KAI KT-1P turboprop trainer and light attack aircraft.



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Bay watch in Namibia

The Namibian Airports Company (NAC) says major works on the on-going upgrading of airport infrastructure and passenger-handling facilities at Hosea Kutako, Walvis Bay, Luderitz and Ondangwa airports will be completed this month. Oscar Nkala reports.

NAC chief executive, Tamer El-Kallawi, announced the July work completion dates as he welcomed the first flight into the Namibian capital, Windhoek, by German airliner Condor.

Kallawi said the country was upgrading the four facilities to enable new airlines to fly to more local destinations beyond the major centres of Windhoek, Luderitz and Walvis Bay.

He said a bigger airport terminal, a new apron for an aircraft parking hangar and the reconstruction of a 4km long runway were the major structural additions to Walvis Bay Airport.

NAC hopes that with an increased passenger and aircraft-handling capability, Walvis Bay can be transformed into a regional aviation hub for cross and mid-Atlantic flights to destinations including the island nation of St Helena, the United States, Brazil, Argentina and more countries in South America and The Caribbean.

New perimeter fences are being built around Walvis Bay and Luderitz airports to ensure the safety of passengers, aircraft and airport infrastructure.

Kallawi said security at the four airports would be further enhanced in mid 2016 when the company takes delivery of a consignment of airport scanners, surveillance cameras and 11 new fire-fighting trucks.

“In line with the NAC turnaround strategy, we have committed ourselves to providing world-class airport services. In this regard, we will ensure that all our airports abide by the highest safety and security standard so that our clients have an exhilarating experience on arrival in Namibia. These projects and others demonstrate our commitment to make Namibia an international air transportation hub.”

NAC, he added, had over the past few months trained its staff in aviation safety following the July 2014 downgrading and suspension of big aircraft flights to



Tamer El-Kallawi: “These projects and others demonstrate our commitment to make Namibia an international air transportation hub.”

Hosea Kutako International Airport (HKIA) by the International Civil Aviation Organisation (ICAO) because of a lack of adequate fire-fighting and emergency services equipment.

“In line with the key lessons learnt during the ICAO validation mission audit, we are delighted to announce that our staff have undergone intensive training in aviation safety and security to boost the depth and scope of our operations,” he said.

The ICAO audit led to the downgrading of HKIA from category 9 to category 5 after its emergency rescue and fire-fighting services were found to be inadequate for the take-off and landing of the Airbus 330 and other large aircraft.

All Namibian bound-flights were re-

directed to Gaborone, Botswana and Lusaka, Zambia.

The ICAO audit also found that HKIA lacked enough trained fire-fighters, while the only fire truck had broken down.

NAC marketing officer, Dan Kamati, said the company was confident that the upgrading of Walvis Bay Airport would produce “a magnificent product” when the construction phase ends in July. “Something great is coming. We should look forward to a magnificent final product. We are looking at technology and modernisation for the Walvis Bay Airport and we plan to serve passengers in a timely and efficient way,” he said.

“At the Walvis Bay Airport, airlines looking to do business in Namibia will find NAC as an ideal partner to establish a successful long-term partnership. Adequate parking for the public, car rental and buses, as well as indigenous and appropriate landscaping, are some of the benefits of the project.”

NAC is a parastatal organisation charged with running the country’s eight major airports – Hosea Kutako International, Keetmanshoop, Luderitz, Eros, Walvis Bay, Ondangwa, Katima Mulilo and Rundu.

The Namibian Government has allocated N\$50 million (US\$4m) to fund the training of locals in various civil aviation trades so that they can staff the newly established Directorate of Civil Aviation (DCA). Part of the budget will be used to fund the training of 26 Namibian civil aviation students, who will undergo ICAO-accredited training courses in-country and externally for six years. Trades offered in the training package include information technology, quality assurance, air safety management, air traffic safety oversight, licensing and other aviation inspectorates.

Hosea Kutako and Walvis Bay: upgraded to world-class facilities.



Le nouveau terminal de l'île Maurice à l'épreuve



L'aéroport international Sir Seewoosagur Ramgoolam de l'île Maurice était en effervescence le 5 novembre dernier lors du test des différentes procédures d'interventions en cas d'urgence.

Un compte rendu de Vincent Chappard.

L'exercice de simulation dit « Full test crash simulation » a mis en scène le crash d'un avion A330-200. Tous les observateurs et les organismes liés au transport aérien étaient impliqués pour mettre à l'épreuve les différentes procédures d'interventions. Cette simulation était placée sous l'égide d'Airports of Mauritius Limited (AML).

« Le plus important est de pouvoir tester les procédures d'urgence et de voir la coordination entre les différentes agences qui doivent réagir suite à un tel accident au niveau de l'aéroport », a déclaré Girish Appaya, porte parole d'AML.

Cet exercice de simulation avait pour scénario le crash en bout de piste d'un A330-200 ayant eu des problèmes de freinage. L'avion avait à son bord 95 passagers et 10 membres d'équipage.

La tour de contrôle a immédiatement déclenché la « Full Emergency Notice », qui implique l'ouverture immédiate du centre d'opération d'urgence. Les principaux acteurs (police, Special Mobile Force, sapeurs-pompiers, ...) ont circonscrit l'incendie émanant de l'appareil rapidement pour évacuer les blessés vers l'hôpital le plus rapproché de l'aéroport.

Cet exercice reste un élément primordial pour jauger le système de sécurité et de sûreté d'une infrastructure aéroportuaire. Il fait partie des recommandations de l'OACI. C'est aussi une étape obligatoire qui mène au renouvellement de la licence d'opération de l'aéroport chaque deux ans.

« Il s'agit aussi d'évaluer la communication de crise en cas d'urgence à l'aéroport (SSRIA) », rappelle Girish Appaya.

Le « Full test crash simulation » revêt une importance particulière car c'est le premier exercice de ce type pour le nouveau terminal depuis sa mise en opération. Il démontre la volonté d'AML de répondre aux normes internationales.

L'exercice vient également en complément du programme « Airport Excellence in Aviation Safety » (APEX) de l'Airport Council International (ACI). Selon Girish Appaya, Maurice a profité des meilleures pratiques internationales grâce au programme APEX. « Il a permis de faire un constat de 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 d'aller vers l'excellence. »



AML a fait une évaluation positive notamment en termes d'amélioration continue de son système de sûreté et de sécurité ainsi que de ses opérations.

« Nous avons seulement reçu quelques recommandations que nous mettons en place. Cela nous a également rassuré sur le niveau de notre infrastructure et la qualité de nos services et de nos procédures », précise Girish Appaya.

Par ailleurs, les travaux de modernisation de l'aéroport se poursuivent. Selon AML, ils visent à faire de l'aéroport SSRIA un hub régional avec quatre composantes : le cargo, les passagers, les services de maintenance d'avions et la formation.

AML finalise la modification des passerelles pour accueillir de nouveaux gros porteurs. L'aéroport compte déjà six passerelles dont une pour l'A380. A noter qu'Emirates a lancé le 26 octobre 2014 son deuxième vol quotidien en A380 vers l'île Maurice. La première phase des travaux de la zone cargo a pris fin. AML travaille également sur la conception de la nouvelle tour de contrôle de l'aéroport. Enfin, les travaux de modernisation de l'ancien terminal ont débuté début 2015. Des passerelles seront également adaptées pour accueillir les gros porteurs, ce qui va considérablement améliorer la capacité d'accueil de l'aéroport dans sa globalité.

Plusieurs compagnies aériennes ont en effet manifesté leur volonté d'opérer des A380 sur Maurice et l'arrivée d'un 3ème avion de ce type pourrait poser problème. Selon plusieurs sources, L'aéroport de Maurice pourrait accueillir de nouvelles compagnies aériennes au second semestre 2015 à savoir Lufthansa, Austrian Airlines ou encore des vols du groupe TUI.

SUMMARY

BLAZING A SAFETY TRAIL...

Emergency services swung into action when an Airbus A330-200 aircraft "crashed" at Sir Seewoosagur Ramgoolam International Airport in Mauritius after experiencing braking problems.

Fortunately, the event was a simulation, carried out under the auspices of Airports of Mauritius Limited (AML) to test emergency procedures and see the coordination between different agencies.

The simulated plane was carrying 95 passengers and 10 crew members. The control tower immediately triggered a full emergency, which meant the immediate opening of the emergency operations centre. The fire department extinguished the blaze and quickly evacuated the injured to the nearest hospital.

The exercise was part of International Civil Aviation Organization (ICAO) recommendations and is a necessary step leading to the renewal of the operating licence for the airport every two years.

This simulation was of particular importance because it was the first exercise of its kind for the new terminal since it began operation.

The exercise also complemented the Airport Council International (ACI) excellence in aviation airport safety (APEX) programme.

"APEX has allowed us to make a statement of what we are doing, to measure the level of our performance, respond effectively and find fields of action that would enable us to move towards excellence," said AML spokesperson Girish Appaya.

"We have only received a few recommendations that we put in place. The exercise also reassured us on our level of infrastructure and quality of our services and of our procedures."

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African governments are being urged to adopt new measures to close legal loopholes that allow unruly passengers to evade punishment for their actions on board airliners.

Alan Dron reports.

RULES

FOR THE

UNRULY

Even experienced travellers can be alarmed when a passenger becomes violent at 35,000 feet. The effect on the more nervous can be terrifying.

Abusive language, drunkenness, even physical assaults, are bad enough on the ground, where people nearby usually have the option of moving away from the incident. In a metal tube six miles up, there's nowhere to go.

In recent years there have been increasing numbers of incidents where bad behaviour above the clouds has resulted in cabin crew having to restrain troublemakers.

Sometimes the captain has had to divert to another country to offload the culprit. But the guilty party in such cases has often walked free because local law enforcement offers did not have jurisdiction over the incident.



Some airlines around the world make a point of claiming damages from passengers whose behaviour forces a pilot to divert to another airport. They can also ban the passenger from flying with them again. But this policy is not uniformly applied.

African carriers are as concerned as any about the problem – which seems to be worsening.

“Disruptive passenger incidents are a very real and serious threat to both safety and security,” Dr Elijah Chingosho, secretary-general of the African

Airlines Association (AFRAA), told *African Aerospace*.

AFRAA does not maintain a database recording the frequency of such incidents. However, said Chingosho, “We get more and more reports of such incidents. So it appears the problem is growing.”

The biggest single factor behind the problem is alcohol. “These incidents, which include violence against crew and other passengers, harassment and failure to follow safety instructions, largely arise from intoxicated passengers.”

The abuse of both prescription and illegal drugs is also a contributory factor.

However, said Chingosho, problems could flare up for a wide variety of reasons, many of them seemingly trivial.

These could be as basic as poor climate control at some airports, with hot and humid conditions in terminal buildings contributing to irritation. Add sometimes cumbersome security procedures, lack of communication from airlines to explain the reason for delays, or anxiety over missing a connection and tempers could rapidly flare.

Once onboard, he said, another problem reported by member airlines was excessively long waiting times to use the economy-class toilets. Frustrated by the wait, some passengers tried to

use the business-class toilet, only to be turned back by cabin crew. The result: abuse of staff.

AFRAA members follow IATA's guidance on Unruly Passenger Prevention and Management. As it is difficult to predict every possible permutation of factors, AFRAA suggests that airlines use the guidance as a basic format, then apply industry best practices.

“Currently,” noted Chingosho, “African airlines are not able to recover costs from unruly passengers, because the regulatory regime does not facilitate this.”

However, following a diplomatic conference attended by around 100 governments at the International Civil Aviation Organization (ICAO) in Montreal last year, that unsatisfactory situation may be about to end. ICAO members agreed revisions to the Tokyo Convention, which provides the legal framework for dealing with

passengers whose behaviour leads to physical assault or poses a threat to the safety of a flight.

The Convention dates back to 1963 and says jurisdiction over offences committed on board aircraft should reside with the aircraft's state of registration. In recent years, this regulation has become increasingly confused; with many airliners now leased, the country in which the

“Disruptive passenger incidents are a very real and serious threat to both safety and security.”
DR ELIJAH CHINGOSHO



aircraft is registered is often neither the state of its operator nor the country in which the aircraft lands in the event of a diversion.

If a captain offloads a passenger in a country other than that of his airline's home base for an incident that occurs in international airspace, the police in that country usually lack jurisdiction. The passenger is simply released, even if he (or she) has been responsible for a serious incident, such as assaulting a crew member.



Under the agreement reached in Montreal, governments plan to close this loophole by extending the jurisdiction from the country of aircraft registration to the state where an aircraft lands.

The agreed changes also give greater clarity to the definition of unruly behaviour. Additionally, there are new provisions to deal with the recovery of costs arising from unruly behaviour – if, for example, an airliner has to divert to offload the passenger.

The next step is to get 22 ICAO member states to ratify the measure. That will allow it to come into effect. This is likely to take two to three years.

With this in mind, AFRAA is actively lobbying governments on the continent to ratify the Protocol: "We're keen to ensure that it comes into force as soon as possible after the required ratification by 22 states," said Chingosho.

IATA RESOLVES TO CONTROL BAD BEHAVIOUR

Mid-air incidents involving unruly passengers used to be virtually unheard of. Today, with social conventions and respect for authority in decline, they are becoming all too frequent.

Since 2007, IATA has been collating statistics on disruptive behaviour in a database incorporating 170 airlines' experiences. In the latest figures available, the number of incidents rocketed from 5081 in 2012 to 8217 just a year later. That means that in 2013 there was an incident every 1370 flights, says IATA.

However, reporting such incidents is non-mandatory and the true scale of the problem is therefore likely to be under-represented.

Last year's IATA AGM in Doha unanimously adopted a resolution calling on governments and industry to work together on measures to deter and manage unruly passengers.

"Many airlines have trained both ground staff and cabin crew in procedures not only to manage incidents of unruly behaviour but also in measures to prevent them. But a robust solution needs alignment among airlines, airports, and governments," said IATA's director-general and CEO Tony Tyler.

"It's a very significant challenge that airlines and cabin crew have to deal with on a daily basis," added Tim Colehan, IATA assistant director of external affairs, who has been heavily involved in the issue. "The small minority of unruly passengers are impacting on safety, which is the industry's number one priority."

They also potentially disrupt the travel arrangements of hundreds of other passengers on the flight, not to mention airlines' operations. The cost of diverting a flight can reach \$200,000, taking account of factors such

as having to dump fuel to make an emergency landing plus ground handling fees.

"We don't know why the number of incidents is increasing," said Colehan. "Whether it reflects societal changes where anti-social behaviour is becoming more prevalent could be one reason."

When an incident occurs on board, good communication between the cabin crew and flightdeck is vital, said Colehan, as the captain, isolated behind the locked cockpit door, must rely on information from the cabin crew to make a decision on what action to take. It is the captain who must authorise the restraint of a passenger.



IATA wants airline ground staff and airport personnel to play their part in watching out for embarking passengers displaying unusual or agitated behaviour. Gate staff should be able to decide whether a passenger is fit to travel.

It also wants airport concessionaires such as bars and restaurants to play their part in not serving more alcohol to passengers who are becoming obviously intoxicated before their flight.

"This Montreal agreement is good news for everybody who flies – passengers and crew alike," said Tyler. "The changes, along with the measures already being taken by airlines, will provide an effective deterrent for unacceptable behaviour on board aircraft."

"Unruly passengers are a very small minority. But unacceptable behaviour on board an aircraft can have serious consequences for the safety of all on board."

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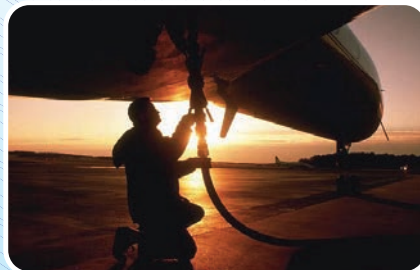
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The first Aviation Africa conference & exhibition, held at Le Meridien Hotel at Dubai International Airport on May 10-11, was well received by all. Ian Sheppard looks back at the event.

Sheikh Ahmed bin Saeed Al Maktoum's support of the conference was essential; Africa has much to learn from Dubai's success.

AFRICA, LET'S WORK TOGETHER

Without any doubt, Aviation Africa helped to bring the continent's aviation sector together, allowing delegates to meet and explore common issues. Attendees came from all over the world – 432 key individuals from 43 countries – and there were 40 exhibitors in the hall.

A total of 33 airlines were represented, along with a wide selection of the continent's business aviation operators. There were delegates from China, the USA, Australia, India, Russia and across Europe.

The event was opened by Sheikh Ahmed bin Saeed Al Maktoum, the chairman of Dubai Civil Aviation Authority, Dubai Airports and Emirates, before a panel of industry experts discussed the challenges and opportunities facing the African aviation industry.

The panel consisted of Hussein Dabbas, the International Air Transport Association (IATA) vice president, Africa and Middle East; Girma



Hussein Dabbas: "There are more than 50 countries in Africa. Do they all need airlines? There will have to be some consolidation and there is a need for airlines to work together."

Wake, chairman, RwandAir; Hon Dzifa Aku Attivor, minister of Transport, Ghana; John Kassis, vice president sales, Africa and Middle East, Bombardier; and Tawanda Gusha, director airports, Civil Aviation Authority, Zimbabwe.

African aviation has historically been seen as the underdog in global growth predictions, with a poor reputation for safety, an ageing fleet and a lack of cooperation between governments. It also suffered from lack of investment in its infrastructure. But are these just a matter of perception or is it reality?

Wake said that training is key, as is good government support, but not interference. "The ability to deliver good service comes from preparing new staff and training them to make decisions," he said. "It also needs commitment from staff and full commitment and support from government."

"I have seen many countries where CEOs want a big salary.

Continued
on Page 86

CONTINUED FROM PAGE 85

But do that and you have to pay your staff big salaries too. There has to be an element of sacrifice to make it work.”

Attivor added: “We have two airlines already that have collapsed. The government owned one and there was a lot of interference. The second one had private investment but it, too, collapsed.” She said Ghana is currently in the process of setting up a national carrier.

Dabbas said Africa faces a lot of challenges. He said 23 African countries have full open skies agreement with the US, but not a single open sky agreement with other African countries.

He added: “A recent study showed that if 12 African countries opened up their skies there would be more than five million passengers travelling, more than 150,000 jobs and gross domestic product (GDP) could increase by \$1.3 billion.

“There are more than 50 countries in Africa. Do they all need airlines? There will have to be some consolidation and there is a need for airlines to work together. There are 1.2 billion people in Africa. There is a great potential, but the governments need to better understand the aviation sector,” he said.

African ministers of transport recently declared their full support for the African Union Commission’s proposal for the establishment of a single African air transport market by 2017.



Yet no open skies agreements have been signed between African countries; while several have been signed between African countries and other regions. The consequence has been a limitation on the growth of Africa’s airlines, efficiency reductions and higher costs, leading to a negative impact on economic development.

On this basis, a panel discussed delays to the implementation of the Yamoussoukro Declaration (YD) and the challenges facing regulators in the growing market.

The YD, signed in 1999, called for the liberalisation of African skies for African airlines, and aimed to establish a single African air transport market by avoiding market restrictions imposed by bilateral air service agreements.

The panel comprised Dr Mohammed Rahma, undersecretary international and internal affairs, Ministry of Civil Aviation, Egypt; Juan Carlos Salazar, air transport advisor, UAE General Civil Aviation Authority; Hennie Marais, executive ATM, ATNS-Air Traffic and Navigation Services, South Africa; and Abdulai Alhassan, director general, Ghana Civil Aviation Authority.

Alhassan said that the intention is to implement standards across many countries in Africa. “We are appealing to all countries to adopt these and sign up to the agreement,” he said.

Rahma added: “We recently had a meeting about open skies and very few attended. If more states had been there we would have been better placed to move forward. Many countries want to sign but their heads of states have not been



Hon Dzifa Aku Attivor: Ghana is currently in the process of setting up a national carrier.

briefed and they are afraid to sign. We know that a lot of states wish to join and there is an imminent need for more open air traffic. This would inevitably result in more air traffic in Africa, which must be a good thing.”

The airline panel comprised Vinu Abraham, head of sales, Africa and Middle East, ECAir, Congo; captain Sandy Bayne, head of flight operations, South African Airways; Sanjeev Gadhia, CEO, Astral Aviation Ltd, Kenya; and Milco Rappuoli, sales director Middle East and North East Africa, ATR, France.

The session started with Gadhia saying that Astral’s business was growing by 20% per year with cargo business coming from all corners of the globe. “We are setting up a new hub in Lagos,” he said. “Africa is a very large continent and you really need a number of hubs. We expect to have three in the next few years.

Bayne said that the airline had been through a period of turbulence. “You may have a strategy but you need to set tasks to make that strategy happen. The overall business solution isn’t as simple as privatisation versus government involvement. Once we are set up with the airline responsible for its business, and government just responsible for governance, we will be on our way.

“South African Airways is in a strong place. My task is to ensure that the implementation works. Going forward, we have to look at how

we can bring down our unit costs.”

Bayne added that, with a continent like Africa, where a large proportion of the population cannot afford to fly, many ask whether you really need African airlines? “My view is that only African airlines create growth within the continent,” he said.

Abraham said that it was not easy for a private company to come into some smaller African countries to start an airline. “A government can facilitate the start-up of an airline, help define routes and get the enterprise up and running,” he said.



Gadhia added that news of terrorist attacks has hit tourism badly in the region. “The government of Kenya has launched a campaign to show how safe tourist resorts actually are,” he said.

The overall view of the panel was that Africa is not a dangerous continent and suffers a lot of bad press, which is mostly unjustified.

For African aviation to meet its true potential the continent’s airports will require massive investment in land, construction and technology. But how feasible is it for this investment to take place and what technology and services can change the whole passenger experience? These were just two of the questions posed at a panel session on airport development.

Charles Asare, CEO of Ghana Airports, said



Captain Sandy Bayne: we have to look at how we can bring down our unit costs.

its infrastructure was not designed for the growth figures it has in mind. “Most flights come from Europe and they all arrive at the same time in the evening, which creates issues. We have a \$25 million project in hand to improve our infrastructure,” he said.

Consultant Manny Kanabe added: “I am a big fan of the private/public partnership model but Africa is different. We need more airports and there is an appetite for more private sector investment in airports. There has been a lot of investment from China, but African governments need to look at new ways to make airports look more attractive to investors. There is a big argument for a new framework.”

Hassan El-Houry, CEO, National Aviation Services, Kuwait, said: “Our company is one of the fastest-growing airport services companies on the continent. Our challenge is to make sure that funding is getting to the right places, where it can have the most impact. We have seen a lot of projects that bring no real benefit.

“The whole passenger experience also needs to be improved. About 70% of investment in the region goes into airport construction, compared with 40% for the rest of the world. Investing more in catering, car parks and ground-handling would make a big difference to the overall passenger experience. I also think that airports

Continued on Page 89



“We are developing safety management systems but we can’t force people to use them. However, we can encourage operators to adopt them and get a seal of approval.”

TAREK RAGHEB

How business can develop throughout the continent

Despite the positives for business aviation across Africa, there are still a number of challenges.

The business aviation panel comprised Achuzie K Ezenagu, CEO, Toucan Aviation, Nigeria; Nuno Pereira, managing director, Bestfly Flight Support, Angola; Wynand Meyer, regional director, Africa, UAS, International Trip Support, UAE; and Tarek Ragheb, chairman, AfBAA.

Ragheb said: “The view most governments have throughout Africa is that private aviation is for rich people. That couldn’t be further from the truth.

Ezenagu added: “One of the core issues is that we need to engage with policymakers. Growth of general aviation goes hand-in-hand with rising GDPs. “There can be an ‘us and them’ attitude, when we are, in fact, driving the economy. Aircraft are serious business tools, so the more they levy taxes on us the more they stifle the economy.”

Pereira said: “It is all about perception. Decision-makers don’t want to engage with the business aviation community for fear of being seen as ‘fat cats’.

“One business person can affect the lives of one million others, so why are they perceived so badly? In Angola more than 100 people are employed within my company – that’s the reality of business aviation and its effects on the economy.”

Pereira added that, in Africa, a two-hour

business meeting can take four days to complete using commercial airlines once overnight accommodation is taken into account. “But with a private jet it can take less than half-a-day,” he said.

In terms of safety, Ragheb said: “We are developing safety management systems but we can’t force people to use them. However, we can encourage operators to adopt them and get a seal of approval.”

□□□□□

Pereira agreed, but said this isn’t something that will happen overnight. Ezenagu added that just meeting basic aviation safety regulations is not enough. “What we find in Africa is that oil companies conduct their own safety audits so we have to meet their much higher criteria. They wouldn’t fly any type of grey charter, so we are being held to their very highest standards.”

Meyer said that another problem is that there is a shortage of staff with specific business jet skills, highlighting a specific incidence where a ground-handler had no experience of a corporate version of a commercial airliner with potentially disastrous results.

Ragheb said that specific business aviation training is often not available. “But that is changing,” he added. “This is going to be our training year.”



The Kenya Airways Maintenance Organization Journey Takes off

OUR VISION

To be the Center of Engineering and Maintenance excellence.

Kenya Airways Values are:

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- Customer First
- Respect
- Integrity
- Trust

To achieve greatness, we have benchmarked ourselves on four key pillars as follows:

1. People – Get the right people in the team.
2. Processes – Develop the right processes to deliver value
3. Performance – Metrics drive a performance culture with incentives aligned to the business objectives
4. Growth – Scale up and conquer the world!

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- B777 Series
- B787 Series
- Embraer 170
- Embraer 190
- Aircraft Components Repair and Maintenance

As well, we offer other services such as Non-Destructive-Testing, Continuing Airworthiness, Seat Covers Production, Cabin, Maintenance and Spares Support.

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**“Liberalisation
is a must.”**
DR HAMDI CHAOUK

CONTINUED FROM PAGE 87

should be privatised – governments have no place in running them.”

Kanabe added that Africa must look at how more income could be generated from airport retail spaces.

The next panel discussed a number of questions about aviation finance.

Leonard Favre, managing director of 1Blue Horizon Group, moderated the session with Graeme Shanks, vice president sales, Middle East and Africa, CIT business aircraft finance, USA; Oliver Tebbit, partner Clyde and Co, UAE; Firoz Tarapore, CEO, Dubai Aerospace Enterprise (DAE), UAE; and Moulay Omar Alaoui, president, Palma Holding and International Airfinance Corporation, UAE.

Favre started with a famous joke: “If you are a billionaire and want to become a millionaire, how do you do it? Start an airline!”



So why would anyone invest in the aviation industry?

He said Africa’s economic growth was accelerating. GDP has increased 4% annually over the last decade, compared with 2.2% per annum in the 90s, and by 2020 the total African workforce would exceed that of China.

But he added that there is still an impression that is difficult to get financing for aircraft in Africa.

Shanks said that finance is out there for companies and individuals who want to buy aircraft. “There is money available, depending upon an organisation’s assets and liquidity,” he said.

Tebbit said banks look at credit risk as well as asset risk. “New airlines look particularly risky for financiers,” he said. “The Cape Town Treaty... offers a much more predictable approach to asset security and it really helps to quantify an asset’s risk.”

He said that countries that have ratified the Cape Town agreement generally have strong aviation industries. “More countries are ratifying Cape Town each year and benefits can be gained very quickly,” he said.

Alaoui said that SAA has a fleet age average of nine years. But Air France has an average fleet age of 13 years and in the USA it is even older. “What

is important is not the age of an aircraft but the number of cycles and the way it is maintained.”

Alaoui said. “It is not just the asset that is important but the quality of the airline and its management are equally important – it is a package.”

Former Lebanon CAA director, Dr Hamdi Chaouk, now managing partner, Aviation Minds, opened the second day by explaining how African nations needed to take a close look at themselves before they could put together an aviation strategy that had any chance of success.

He stressed: “Liberalisation is a must,” and said the kind of questions that states needed to ask before doing anything included:

- Why are most airlines not profitable?
- Why are only some airports making money?
- Which freedom is appropriate for me and why?
- Why might airline interest conflict with the state interest (citizens) and which one should have priority if this happened?
- Unproductive political environment and corruption are detrimental to aviation progress. What to do?

His company completed an in-depth study of 120 countries and found 14 policy scenarios out of 18 that were “theoretically possible”. Many are failing totally, he asserted – “but why?” He said that it was essential to look at institutional governance (CAA), and liberalisation (non/semi/full).

The six scenarios for success were labelled SC1 to SC6, ranging from ‘autonomous CAA, semi-liberalised, no privatisation’ to ‘autonomous CAA, full liberalisation, full privatisation.’

“The African Union and the African Civil Aviation Commission (AFCAC) should develop a strategy that works for Africa.”

He said CAAs should lead partnerships with airlines and airports and be autonomous, and skies should be liberalised “without premature boundary constraints”. He also said that all related ministries should support the common goal and that Africans should be trained to lead the change.

■ An eBook with further details of the 2015 event, including summaries of each session, can be viewed at www.african aerospace.aero. The location (which will be in Africa) and date of the 2016 conference are due to be revealed later this year.

The vital need for training

A panel session looking at the shortage of human capital in the region, and the need to train young people to make sure the industry thrives, prompted lively debate.

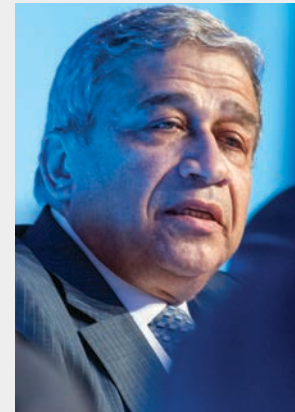
The panel comprised Dr Othman Al Khoori, chief human resources officer, Abu Dhabi Airports Company (ADAC); Amer Fakhoury, VP, Ayla Aviation Academy, Jordan; Hussein Massoud, president ALSAFWA; Patrick Nkulikiyimfura, managing director, Akagera Aviation, Rwanda; and Abdulai Alhassan, director general, Ghana Civil Aviation Authority.

Al Khoori gave a presentation outlining the problems relating to human resources. The audience learned that there would be a huge demand for pilots and engineers over the next 10 years to meet the growth projections.

“We are spending billions of dollars on aircraft and infrastructure but are we spending enough on training? We talk about shortages but at the same time we sometimes cut the means of providing training,” said Al Khoori.

“We need to move from reactive to strategic proactive planning. We have to change to strategic HR, making sure we know what it means to get the right people in the right roles – we need to be more scientific.”

Fakhoury said that pilot and instructor shortages were starting to become a problem.



Hussein Massoud: “We need to plan for the next 20 years.”

Massoud agreed and said that the gap between the requirement for the future and what is available is growing. “We need to plan for the next 20 years or so if we are to fill that gap,” he said.

Nkulikiyimfura said Boeing’s recent report on pilot needs showed that 14,500 new pilots will be required over the next 20 years. “How do we provide the training to do that?”

Alhassan said that in Ghana the industry tries to cast its net as widely as possible when it comes to recruitment. “But how do you retain people?”

He added you may even need to look at other aspects of their package, such as providing housing, if you wish to retain staff.

Dr Al Khoori concluded the session by saying you have to grab youngsters’ attention when they are young. “You have to get them interested in aviation at kindergarten. By the time they are at university it is too late.”

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**SOUTH AFRICAN AIRWAYS
TECHNICAL**

Zemene Nega holds a BSc in mechanical engineering from Addis Ababa University and joined Ethiopian Airlines in September 1982 as a trainee engineer. He progressed to become a power plant engineering supervisor in April 1990 and then, in 1994, he was appointed as director of the engine maintenance division, where he served for 10 years. In September 2004 he was appointed director of the sales and marketing division and then, in November 2010, he became MD Ethiopian MRO services. Here, he answers questions about his company.

ETHIOPIAN ON THE ROAD TO TOMORROW

Q. Tell us about Ethiopian MRO?

A. We are one of the business units of the Ethiopian Aviation Group. We were established in the 1960s and, since inception, have been providing maintenance service to our parent company, Ethiopian Airlines, as well as to other operators in the region.

We have full maintenance capability for airframe, engine and components, as well as line maintenance services. We have a full airframe maintenance capability for all the aircraft that we operate – starting from Boeing 737 all the way to B777 and B787. We also have full maintenance capability for the MD11 and Bombardier products, Q100, 200, 300 and 400.

We do all the A to C checks on all these aircrafts.

On the engine maintenance side, we have full overhaul capability on the CFM56-3 -7 variants. We have modular maintenance capability for PW4000 and 2000 engines. Currently, we are building our capability on the PW150, which powers the Q400 airplanes.

In addition, we have a full overhaul capability on the Honeywell 331-200 auxiliary power unit (APU). Currently, we are working on expanding our capability on the engine side. We are also working on the APUs installed on the B777 and B787.

When it comes to component maintenance, we have extensive repair and overhaul capability on hydraulics, avionics, electric components etc. We also have a sheet metal shop and composite repair maintenance workshop to support the airframe maintenance.

In addition, we have full line maintenance capability and currently we are providing

Continued
on Page 92




CONTINUED FROM PAGE 91

services to other operators in the region. Furthermore we have maintenance teams dispatched to various operators in Africa supporting the customer needs.

Q. Who are your major customers in Africa?

A. We have a big portfolio in Africa including Camair, ASKY Airlines, RwandAir, LAM Mozambique, TAAG Angola, Cape Verde Airlines, Sol Air in Angola – you name it, we provide MRO services to all these and other airlines in Africa.

Q. How much is your market share in Africa?

A. We have not made that study yet. The overhaul centres in Africa are very limited. In general we have a very good market share.

At the moment, because of some facility constraints, we are not aggressively pursuing on the third-party maintenance work. But now we have commissioned additional hangar space and we are building two more hangars to be finalised next year. When these hangars are up-and-running we will have more capacity to aggressively work on third-party business. We will definitely have a better market share.

Q. How much is your annual turnover?

A. I do not have the right figure at hand but it is more than \$20 million. As I said, due to the fast growth of Ethiopian Airlines, we are not working aggressively on third-party work.

Q. How many technicians and engineers do you have?

A. We currently employ 2,800 people and the majority are technicians and engineers.

Q. In the past couple of years you have made a huge investment on expansion projects. Can you tell me about programme?

A. As part of our strategy, Vision 2025, we want to be the leading MRO service provider in the region by 2025. And we want to generate \$520 million from third-party work. So, in line with that, we are expanding our facilities. As I mentioned earlier, we are building hangars, which will be up-and-running in 2016. Right after completing these facilities we will be building another big multi-bay hangar.

We are also going to build a component maintenance complex, which will be used to overhaul most of the components installed in our fleet. This will be a state-of-the-art modern facility. Currently, we are doing the feasibility study. It is more or less done so next year we will go the construction phase.

We are also planning to build additional capability on PW150 and on the APUs, and are planning some modular maintenance work on the GENx engine, which powers the B787 aircraft. In all the streams, we are making aggressive expansion to fulfil our Vision 2025 plan.

Of course, we need skilled manpower, so we

There is a tough competition and the best way to tackle the competition is to get yourself ready for tomorrow.

are now expanding our aviation academy. We are training more technicians to support the expansion. The school is being expanded to handle 4,000 students at a time. Currently it has an intake capacity of 1000 year.

Q. What are the challenges that you are facing? What about brain drain?

A. As far as brain drain is concerned, we are doing fine these days. We have made significant salary adjustments and provided other benefits to our employees and managed to reduce staff turnover. We do not have a major issue with brain drain these days.

Of course, the big challenge is to support the fast growth of Ethiopian Airlines. The airline is growing magnificently and introducing new fleet. Supporting that growth and at the same time doing third-party business is a big challenge. But we are upgrading our capacity to overcome this challenge.

Q. How do you see the competition coming from other MRO service providers?

A. There is always a competition. One thing for sure is Africa needs more MRO centres. More African operators are now ordering new aircraft. When you look at the projection, we need more MRO centres. Until then there will be competition but competition is good. The market is far from saturation. We compete and take our market share.

Q. How do you evaluate the MRO industry in Africa and the challenge ahead?

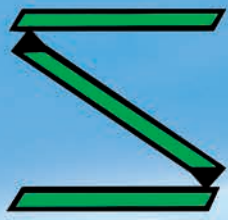
A. In Africa, to start up a new MRO centre on a green field is very expensive. You have to have a minimum customer base to go into that venture. The major players in Africa are South African Airways, EgyptAir, Ethiopian Airlines and Royal Air Maroc (RAM). All of these have their own MRO centres and do their own maintenance work.

As more and more aircraft are coming to this part of the world, Africa needs more MRO centres. The existing ones have to expand to accommodate the growing market. It will be difficult for new entrants because they do not have that critical mass required to start up operation. Unless, a new MRO centre is affiliated to an airline, it is very challenging.

Probably what we will witness is the expansion of these major players in the coming years.

When you look at the industry as a whole, and especially in the Middle East, of course there is more MRO capability and again these are more affiliated with the major carriers and they have the critical mass to begin the MRO services. Definitely these MRO centres in the Middle East have excess capacity and they have business from the region to fill it up. There is tough competition and the best way to tackle the competition is to get yourself ready for tomorrow.

If you position yourself for tomorrow, then the competition will be easier.



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Canary Islands (Near The West Coast Of Africa)
Spain





Nick Fadugba, whose company organised the event, has long been a champion of MRO in Africa.



Egyptair's Sherif Al-Kammash: "We are expanding in the region."

Africa bids to win the

The African MRO market is valued at \$2.2 billion. This is projected to grow to \$4 billion by 2024. Leading African MROs are expanding their maintenance facilities.

Kaleyesus Bekele reports from Addis Ababa.

«L'Afrique compte profiter de la croissance du marché de la MRO» – Page 96

African MROs are expected to speed up their expansion projects to meet the continent's growing market demand.

If they don't, experts are warning that the majority of the market could be captured by MRO centres from eastern Europe, the Middle East and China.

That was very much the backdrop last March, when the big players of the global aviation industry gathered at the 24th annual Africa MRO Conference and Exhibition in the Ethiopian capital, Addis Ababa, to discuss the thriving MRO industry.

The event, which attracted more than 200 delegates, was organized by London-based African

Aviation Services, which annually runs both MRO Africa and the Africa Air Finance conference.

Manufacturers such as Boeing and Airbus, major engine manufacturers including General Electric, Pratt and Whitney and Snecma/CFM, along with prominent MRO centres like Turkish Technik, Lufthansa Technik and Ameco of China were in attendance.

Top African MRO centres, including Ethiopian MRO, South African Airways Technical (SAA Technical) and EgyptAir Maintenance and Engineering, participated at the two-day MRO conference and exhibition, held from March 16-18 at the Sheraton Addis.

According to ICF International, the current

global air transport MRO market is valued at \$62.1 billion and Africa accounts for approximately 4% of global demand. At the moment, there are around 1,300 aircraft in Africa with turboprops and regional jets representing half of the continent's fleet. Africa's fleet growth, at 4.8% compound annual growth rate through to 2024, is regionally the second fastest in the world.

In his presentation, Richard Brown, principal ICF International, said that with 289 operators, Africa was a very fragmented market. According to Brown, engine maintenance represented 40% of the MRO market, components 22%, line 16%, airframe 16%, and modifications 5%.

Eight airlines accounted for 50% of the \$2.2 billion MRO spend in Africa. They included EgyptAir with 12%, South African Airways, 11%, and Ethiopian Airlines 9%.

By country, South Africa 22%, Egypt 15%, Ethiopia 9% and Nigeria 9% were the major MRO spenders.

The global MRO market is expected to grow to \$90 billion by 2024 at 3.8% per annum. The African MRO market should increase at 6.1% per year.

Nick Fadugba, CEO of African Aviation Services, wondered whether African MRO



SAA's Mike Kenny: "We are developing relationships with central African countries. There is a huge potential in the west Africa region. Our biggest customer base is Africa."



Ethiopian's Zemene Nega: "We will definitely have a better market share."

growing MRO market

centres were ready to cope up with the forecast growth, asking: "How much of this market will African MRO centres capture?"

The leading African MRO centres – SAA Technical, EgyptAir Maintenance and Engineering and Ethiopian MRO – are significantly expanding their facilities and the services they provide.

Mike Kenny, SAA Technical executive manager technical sales and marketing, said his company was committed to capturing more MRO business in Africa.

Over the last three years, SAA Technical revenue from third-party business grew from 15 to 30%. Its annual turnover is three billion Rand (\$238 million). "We have 17% market share in Africa," said Kenny.

SAA Technical was established as a technical support division of the airline 80 years ago. In 2000 it became a separately registered company, wholly owned by SAA and focused on third-party business.

SAA Technical is primarily engaged in airframe maintenance work. In its latest strategy, SAA Technical is trying to develop a footprint in Africa. "Our focus is on the African market," Kenny said. "That is typically our focus from line maintenance all the way through to the heavy

maintenance check structure, modifications, and retrofits. Currently, we are in the process of developing an engine shop. The original was closed 15 years ago, so we are re establishing a jet shop."

He added: "We are also increasing the capability in our extensive workshops. We have 8,600 test machines and we've got a lot of supporting workshops like plating, welding etc. We overhaul B737 and A320 family aircraft and we sincerely hope to expand our portfolio of services to not only aircraft operated by SAA but also non-SAA operated aircraft."

SAA Technical recently obtained a licence for up to C check level heavy maintenance on B777 aircraft, which are not operated by SAA.



Its list of customers includes the local British franchise, the Comair Group, which operates the Kulula brand; Air Namibia; Air Zimbabwe; LAM; Air Mauritius; TAAG Angola; Air Austral; and other African airlines.

"We are developing relationships with central African countries," said Kenny. "We do airframe work for Air Nigeria. We want to further penetrate into the Nigerian market. There is a

huge potential in the west Africa region. Our biggest customer base is Africa."

According to Kenny, strong competition is one of the challenges SAA Technical is facing. "We are down south and it is difficult to compete with east European and Chinese MROs. The east Europeans offer competitive prices and they are closer to the north African market.

Some of the major airlines in north Africa have their own in-house maintenance capabilities. Ethiopian Airlines, EgyptAir and Air RAM constitute the biggest market share but they have their own maintenance centres. "So you not going to get that market," lamented Kelly. "We need to go to the small operators. But we still have to capture a greater market share in the coming years."

One of the major challenges for African MROs is training engineers and technicians. "Your good engineers are hunted by the big airlines in the Gulf. That is a challenge going forward," said Kenny. "We identified the challenge and we need to accelerate our training programme. We are taking 200 trainees a year currently for the demand we see in the future. Training is going to be the biggest challenge in the African continent."

Continued
on Page 96

CONTINUED FROM PAGE 95

Brain drain is a major problem, not only for SAA but also for all the African MROs. Even for the small operators that do only line maintenance it is a challenge. SAA Technical has about 2,700 staff, with 2,000 involved on the technical side.

The oldest MRO centre in Africa is EgyptAir Maintenance and Engineering. It is expanding its services in Africa and the Middle East.

Marketing manager, engineer Sherif Al-Kammash, said his company was adding three maintenance hangars to its existing three.

“We are expanding in the region. We are building our capabilities in the line maintenance service, base maintenance, and component workshops,” Al-Kammash said.

Established in 1932, EgyptAir Maintenance and Engineering provides MRO services in Africa and the Middle East.

Approved by the European Aviation Safety Agency (EASA) and the Federal Aviation Administration (FAA), it delivers maintenance services from nose to tail for all Airbus family aircraft in the region, like the A320, 321, 330 and 340, and most Boeing aircraft (737, 777). It provides base maintenance from A-D check.

EgyptAir Maintenance and Engineering has more than 120 customers in Africa, the Middle East and Europe. “We support avionics components and engine components. We have very big workshops where we maintain engines, brakes and wheels. We have a certified calibration lab,” Kammash said.



The maintenance arm has been supporting EgyptAir for many years but started focusing on third-party work after it was certified by EASA and the FAA in 2006.

Egypt Maintenance and Engineering, which became a separate business unit in 2002 under EgyptAir holdings, has 5,000 employees, out of which 1,600 are engineers and technicians. According to Kammash, the company has an annual turnover of \$300 million and 11% market share in Africa.

The political instability in the Middle East in general, and in Egypt in particular, affected EgyptAir Maintenance and Engineering’s business. It significantly reduced the number of tourists visiting Egypt and this has affected both the parent company and the maintenance and engineering division.

Now, Kammash said, the political situation is improving. He believes that this year the business will grow very well. “Egypt is on the way to political stability. The economy is recovering. Business will be better,” he said.

According to Kammash, the African MRO market is growing quickly. “Many new aircraft are being delivered to Africa. Many new operators are coming. Most of the players should adapt to this growth to be able to capture it. To fulfil the increasing demand is a challenge,” he said. Fluctuating fuel price, brain drain, trained

SOMMAIRE

L’Afrique compte profiter de la croissance du marché de la MRO

Le marché africain de la MRO est évalué à 2,2 milliards de dollars et devrait passer à 4 milliards de dollars d’ici 2024.

Tour d’horizon de Kaleyesus Bakele d’Addis-Abeba.

La MRO en Afrique doit accélérer ses projets d’expansion pour répondre à la demande croissante du marché du continent. Sinon, la majorité du marché pourrait être captée par les shop MRO d’Europe de l’Est, du Moyen-Orient et de la Chine.

Cette question était au centre des discussions de la 24e conférence annuelle sur la croissance de la MRO en Afrique tenue dans la capitale éthiopienne, Addis-Abeba, en mars dernier.

Les avionneurs Boeing et Airbus, les principaux motoristes ainsi que les opérateurs MRO comme Turkish Technik, Lufthansa Technik et Ameco étaient présents.



Ethiopian MRO, SAA Technical et EgyptAir Maintenance and Engineering ont également participé à cet événement.

Selon ICF International, le marché mondial de la MRO est évalué 62,1 milliards de dollars.

L’Afrique représente environ 4% de la demande globale et affiche une croissance annuelle de 4,8% jusqu’en 2024.

Richard Brown, son directeur, a déclaré qu’avec 289 opérateurs, l’Afrique était un marché très

fragmenté ou la maintenance des moteurs y représente 40%. L’Afrique du Sud (22%), l’Egypte (15%), l’Ethiopie (9%) et le Nigéria (9%) ont été les principaux dépensiers dans ce secteur. Le marché mondial de la MRO devrait atteindre 90 milliards de dollars en 2024.

Nick Fadugba, directeur général d’African Aviation Services s’est demandé si les opérateurs MRO africains étaient prêts pour capter des parts de marché.

Mike Kenny, directeur des ventes et du marketing de SAA Technical, estime que sa compagnie s’est engagée à faire plus de business en Afrique et va élargir son portefeuille de services. EgyptAir Maintenance and Engineering, étend ses services en Afrique et au Moyen-Orient. Approuvée par l’AESA et la FAA, elle offre des services de MRO pour l’ensemble des avions de la famille Airbus dans la région.

La fluctuation du prix du carburant, l’exode de la « matière grise », la main-d’œuvre qualifiée et l’instabilité politique restent quelques-uns des principaux défis de l’industrie africaine de la MRO.

Ethiopian MRO se positionne également. Ses investissements dans de nouvelles installations vont lui permettre d’augmenter sa part du marché et ses capacités de MRO des moteurs.

manpower and political instability are some of the major challenges facing the African MRO industry.

One of the leading MRO centres – Ethiopian MRO – is aggressively expanding its facilities and list of services.

Ethiopian has four maintenance hangars in service and is building two more to cater for wide-body aircraft at a cost of \$94 million.

Zemene Nega, managing director Ethiopian MRO, said that, at the moment, because of facility constraints, Ethiopian MRO was not aggressively pursuing third-party maintenance work. “We are building two more hangars to be finalised next year. When they are up-and-running we will have more capacity to aggressively work on third-party business. We will definitely have a better market share,” Nega said.



Currently, Ethiopian MRO is struggling to meet the growing demand of Ethiopian Airlines. It makes a meagre \$20 million from third-party business but it has an ambitious plan to increase this to \$520 million by 2025.

The airline invested \$500 million during the past 10 years in building its maintenance capability. Ethiopian MRO has full maintenance

capabilities for airframe, engine and component, as well as line maintenance service.

It has a full airframe maintenance service capability for the aircraft it operates, starting from Boeing 737 all the way to 787. It also has full maintenance capability for the MD11 and Bombardier aircraft. It does all the A to C checks on these aircraft.

On the engine maintenance side, it has full overhaul capability on the CFM56-3 -7 variants. It has modular maintenance capability on PW4000, 2000 engines. Currently, it is building its capability on the PW150 engine, which powers the Q400 aircraft.

In addition, it has a full overhaul capability on the Honeywell 331-200 auxiliary power unit (APU).

Ethiopian MRO is working on expanding its capability on the engine side. It is also working on the APUs installed on the B777 and B787.

For Ethiopian MRO, the big challenge is to support the fast growth of Ethiopian Airlines. “The airline is growing magnificently and introducing new fleet aircraft. Supporting the airline and at the same time doing third-party business is a big challenge. But we are upgrading our capacity to overcome this challenge,” Nega said.



Recaro has its seats fitted to an Airbus cabin mock-up.

BAE Systems' Dave Kingstone demonstrates its IntelliCabin wireless IFE.



Take your seat for the future

«Réservez votre siège pour le futur» – Page 98

Unsurprisingly, cabin design is getting more complex, while in-flight connectivity is fast becoming a “must have” for the modern-day passenger – that was the conclusion following AIX at the Hamburg Messe.

New this time was ‘CabinSpace LIVE’, a face-to-face arena for the presentation of new concepts and the exchange of information.

This showed how light-emitting diodes (LEDs) are taking over from conventional lighting and new lightweight material technologies are becoming commonplace for aircraft interior applications

Some of the newest developments were rewarded with Crystal Cabin awards. B/E Aerospace won the ‘Greener Cabin, Health, Safety and Environment’ category with its ‘solar eclipse’ concept.

With this, a thin solar cell film is installed in the sun visor of the cabin window, providing passengers with electricity to charge their electronic devices during flight. Although the system is still under development, the manufacturer is already working on achieving production approval soon.

ViaSat also won an award for its ‘Exede in the

The annual Aircraft Interiors Expo (AIX), held in Germany on April 14-16, demonstrated just how quickly technology is changing the passenger experience.

Steve Nichols was there.

Air’ Ka-band solution that brings a 12Mbps internet connection to every seat, allowing passengers to stream films or shop online.

This time next year the whole of Africa could have access to Inmarsat’s GX Aviation Ka-band service, offering similar ultra-fast speeds to passengers.

Airbus and Recaro Aircraft Seating announced their plan to offer a “supplier-furnished-equipment” (SFE) economy-class seat option for A320-family operators.

The new seat, named 3530Swift, is based on Recaro’s BL3530, already developed for the A320 family. It is scheduled to become available

later this year, both in line-fit and retrofit. Up to now, all economy-class seats for the A320 family have been supplied as buyer-furnished-equipment (BFE).

Meanwhile, Lufthansa Technik said it is confident that even more airline passengers will be bringing their own electronic devices on board in five years’ time.

Dr Helge Sachs, head of corporate innovation management and product development, Lufthansa Technik, said he sees the wireless streaming of in-flight entertainment and connectivity (IFEC) content becoming the norm.

“We want our cabin innovations to become reality,” Sachs said. “We are currently developing even more apps for passengers’ own devices to interface with our BoardConnect product.”

BoardConnect is a wireless in-flight entertainment platform that does away with the need for screens installed in the seats and instead streams video and audio content from an on-board server to mobile devices.

The system’s app enables passengers to access a wide range of entertainment and information on their own smartphones, tablets or laptops

Continued
on Page 98

CONTINUED FROM PAGE 97

during a flight.

And bring your own device (BYOD) has an added advantage. Lufthansa Systems says that 80 tonnes of jet fuel can be saved annually on a Boeing 767 with 260 seats, thanks to the reduced weight of its BoardConnect wireless technology.

BAE Systems agrees and announced the launch customer for its IntelliCabin Wi-Fi streaming solution for IFE.

Indian airline Vistara has signed up for IntelliCabin, which will provide in-flight wireless streaming of preloaded content to customers' personal electronic devices across all three cabin classes in its fleet of Airbus A320 aircraft.



The system includes fully integrated Samsung Galaxy Tab S tablets for business class customers. The entire Vistara fleet will incorporate the IFE system, which is expected to go live in another six months.

The BYOD theme was supported by a new Gogo study that reveals interest in in-flight connectivity products and services is significantly higher outside the US, despite the fact that fewer connected aircraft are operating internationally compared with those within the United States.

It found air travellers outside the US were more likely to carry their own Wi-Fi-enabled devices on a plane and were more willing to pay



Honeywell's Jack Jacobs says testing of its antennas for Inmarsat's GX Ka-band system is going well.

for the services, when compared to travellers in the United States.

When asked about their interest in in-flight connectivity services, 83% of air travellers in regions outside the US said they were interested in using Wi-Fi, compared with just 74% of US air travellers.

When it comes to wireless in-flight entertainment, 71% of air travellers outside the US showed a strong interest compared with 59% in the United States.

Lumexis launched its iPAX system, which combines a back-seat monitor with Wi-Fi to bring entertainment and information to passengers.

The in-seat system, which weighs only 8.9 ounces (250g) per unit, will be priced at \$1,495 per seat.

It features a 6.1-inch organic light-emitting

diode (OLED) screen with 1080p HD video and offers passengers a wide choice of entertainment, moving-map, food and beverage, and catalogue shopping.

Jon Norris, Lumexis' VP of sales, said: "iPAX is aimed at the single-aisle operator with no IFE. There are around 12,000 aircraft in service with no back-seat IFE or drop-down monitors, so this is a great way to bring IFE to those passengers."

Cape Town-based Cobham also made a number of announcements regarding its antennas for satellite connectivity.

It said that trials were now under way for Inmarsat's SwiftBroadband safety services, following the first installations of its Aviator S satellite communications systems on Hawaiian Airlines' Boeing 767-300 aircraft.

Aviator S (the 'S' standing for safety) will enable safety services, or air traffic control data, as well as electronic flight bag (EFB) updates via a data pipe to the cockpit.



The Federal Aviation Administration (FAA)-supervised technology demonstration will eventually allow the fast, efficient transfer of aircraft communications addressing and reporting system (ACARS) data messages over SwiftBroadband, as well as flight deck safety voice and internet protocol (IP) connectivity.

The Aviator S system is being used for Air Traffic Control (ATC) messaging and will also be used for data transmission in support of Hawaiian's new eFLIE, EFB programme.

Cobham also announced it has now delivered more than 50 of its HGA-7001 high-gain antennas as part of the connectivity solution for the Airbus A350-900.

The low-profile antenna, plus Cobham Satcom's DAU-7060 diplexer/low noise amplifier (DLNA) and mounting plate, are standard fit on the A350 XWB through a sub-contract with communications systems provider Rockwell Collins.

Honeywell Aerospace said it is due to start airborne tests of its new antennas for the Inmarsat Ka-band GX Aviation system.

The testing of the fuselage-mounted antenna for commercial use will take place on Honeywell's own Boeing 757 from the end of May, with the aircraft doing a lot of the testing in the skies over Europe.

The first Ka-band I-5 satellite is now in position to service Europe, Africa and Asia. The second (serving the Atlantic region and the Americas) is being commissioned and a third satellite for the Pacific region is due to be launched in a few weeks. The ultra-fast Inmarsat GX Aviation service is on course to launch later this year.

The next Aircraft Interiors Expo in Hamburg will be held on April 5-7 2016, with the passenger experience conference on Monday April 4 – the eve of the show.

SOMMAIRE

Réservez votre siège pour le futur

Le salon Aircraft Interiors Expo 2015 (AIX) a démontré à quel point la technologie évolue rapidement pour le confort des passagers. Un tour d'horizon avec Steve Nichols.

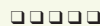
Le salon AIX d'Hambourg confirme que la conception des cabines d'avions devient plus complexe alors que la connectivité en vol est en passe de devenir incontournable aujourd'hui pour les passagers.

Parmi les nouveaux concepts, les LED, qui ont pris l'ascendant pour l'éclairage des cabines de même que les nouvelles technologies de matériaux légers qui deviennent monnaie courante. La cabine de B/E Aerospace a d'ailleurs été primée. Autre innovation en matière de développement, un film mince de cellules solaires installé sur le pare-soleil de la fenêtre de la cabine pouvant alimenter les passagers en électricité pour recharger leurs appareils électroniques pendant le vol.

La société ViaSat a également remporté un prix pour sa solution offrant une connexion Internet de 12Mbps à chaque siège, ceci facilitant la diffusion de films et l'achat en ligne. Airbus et Recaro Aircraft Seating ont annoncé leur intention d'offrir un système SFE pour les sièges en classe économique de la famille A320.

Pour sa part, Lufthansa Technik se dit confiant que les passagers de compagnies aériennes pourront apporter leurs propres objets connectés à bord dans

un délai de cinq ans. Selon le Dr Helge Sachs, cette diffusion sans fil deviendra la norme. Apporter son appareil « BYOD » sera alors avantageux. Lufthansa Systems a indiqué que la technologie sans fil BoardConnect permet d'économiser 80 tonnes de kérosène annuellement sur un Boeing 767.



Côté « Business », BAE Systems a annoncé que la compagnie indienne Vistara serait le client de lancement de sa solution IFE « IntelliCabin Wi-Fi ». Lumexis a lancé son système iPAX, qui comprend un moniteur de siège arrière et un système Wi-Fi. Cobham a également fait plusieurs annonces concernant ses antennes pour une connectivité via satellite. La FAA effectue des démonstrations technologiques qui permettront éventuellement d'autoriser le transfert efficace des données de l'avion, en particulier les informations ACARS. Enfin, Honeywell Aerospace a annoncé le début des essais de ses nouvelles antennes pour le système Ka-band GX d'Inmarsat.

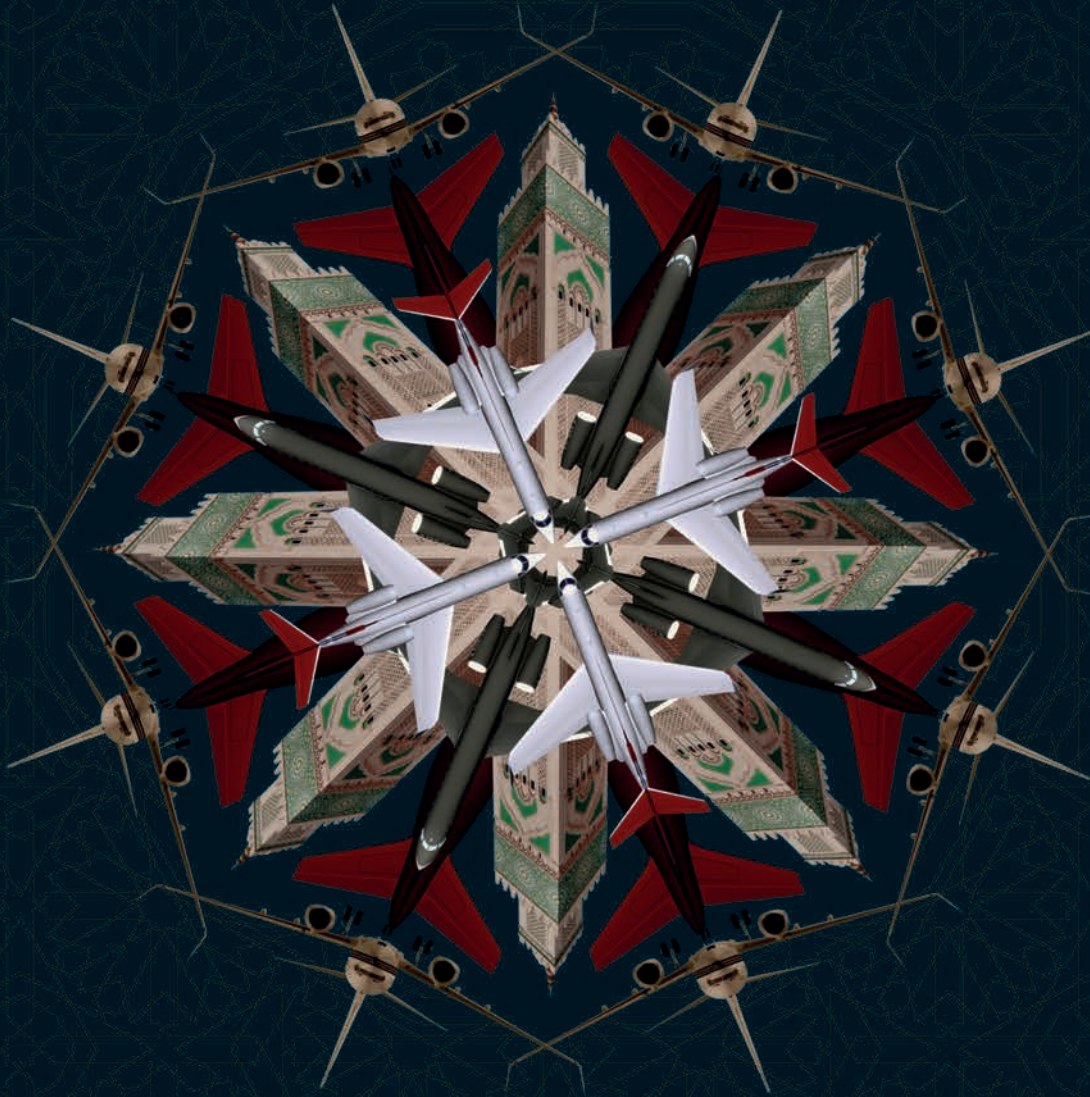
Le prochain AIX se déroulera du 5 au 7 avril 2016 à Hambourg.

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Ian Sheppard visits George in South Africa to check out a couple of interesting flight training schools.

BY GEORGE, A CHINESE DYNASTY



In many countries there is no culture of general aviation flying, where pilots get their private pilot's licence (PPL) at a local flying club, perhaps become an instructor and then work towards the European Aviation Safety Agency (EASA) commercial pilot's licence (CPL) with instrument rating (IR).

In short, the 'self-improver' route is very rare, so commercial pilots need to be trained in integrated schemes over 18 months or so.

Many countries have relied on expat pilots from Europe and North America to make up the shortfall in local pilots and this has, generally, been the case in Asia.

In China, however, there has been a particular emphasis on the need to train more nationals as pilots and to keep these ultimately lucrative career opportunities at home.

To provide pilots ready for type rating training, in 2011 China aerospace giant, AVIC, set up the AVIC International Flight Training Academy (AIFA) in George, South Africa.

"We'd been working with China for about 10 years training pilots [at Cape Flying Services]," explained training school CEO Willem Marais. "We were in flight testing through the Test Flying Academy of South Africa (TFASA), working with AVIC for a number of years before we started to discuss China's need for 2,500 pilots a year." With



Willem Marais: "We have 225 Chinese students between the three bases."

capacity to train only 1,500 annually in China, the country had tried outsourcing to the US and Australia for the rest. Then the Chinese Government came up with a rule saying that they wouldn't appoint any more foreign flight schools unless the majority shareholder was Chinese.

"So AVIC International acquired 70% of

Cape Flying Services and TFASA took the other 30%," said Marais. "Civil Aviation Administration of China, (CAAC) certification was obtained one week later," he added.

"The first cadets came to George in 2011 via an informal agreement with Nanjing University of Aeronautics and Astronautics (NUAA), where we now go to interview and select cadets three times a year. We then offered [NUAA] a share in the business, so now it is 67% AVIC, 22% TFASA and 11% NUAA."

Since then the business has built up considerably with an aim to take 150 new candidates a year.

Marais said a second training location had been established at Oudtshoorn, adding that AIFA had just acquired the airfield at Beaufort West, where it resurfaced the runway and put in a new control tower and hangar (as it did at Oudtshoorn). The company also trains its own air traffic controllers, which Marais described as "pretty unique".

The training fleet is now made up of 31 single-engine aircraft (19 Cessna 172s and 12 PA-161 Warriors), plus seven brand new Piper Seminoles and three Beech King Air C90s. "Each base also has two flight simulators, one Flight and Navigation Procedures Trainer (FNPT) I and one FNPT II," said Marais.

Continued
on Page 102



Left: Advanced instructor Michael Haasbroek is qualified to teach cadets to fly the King Air C90. One of AIFA's King Airs (pictured) has modern Garmin G600 avionics and a Blackhawk PT-6 engine performance upgrade, while the other two "may be getting a full avionics upgrade". Below: Corey Ge and Barry Xiong have been at AIFA in George for three years and are both now instructors. They were among the first group of Chinese cadets to become instructors (there are 12 in total).



CONTINUED FROM PAGE 100

Back in 2011, the school started with 29 cadets, who qualified in the 14 months allocated. "Now we have 225 Chinese students between the three bases. We have flown 54,000 flying hours without incident or accident and now the 2015 budget alone is for another 54,000 flying hours – with around 85% of the pilots being from China and destined for nine different airlines."

Marais added that AIFA is now also "the preferred training provider for Kenya Airways", and the first group of 10 pilots had just finished their training. "Now we have groups of six and 12 and we are negotiating to set up a training base in Kenya – a brand new airfield on the east coast."

In 2012, AIFA had a turnover of \$5 million. "Now it has \$22 million of capital assets invested in South Africa," said Marais.

Personnel have also increased from 77 to 141, with 46 flying instructors. "They are from all over the world – 27 are Grade 3, 21 Grade 2 and six high performance, instructing on the King Airs. We also have seven full-time ground instructors." In addition, each team has a full-time English teacher and a psychologist.

AIFA, said Marais, is "the only flight school in Africa certified by both the South African Civil Aviation Authority (SACAA) and CAAC."



Chinese cadets need a normal student visa for South Africa.

Marais said everyone in South Africa is now looking to tap into the foreign pilot training market, but added that it isn't easy when it comes to China. "The process took us close to three years to compete."

Having AVIC as a partner was, he admitted, "quite an advantage". He also said he was "pretty pleased" with the Hainan Airlines Group (HNA), which has several airlines taking pilots from AIFA.

The course, itself, takes 60 weeks and consists of 233 flying hours (the minimum required in China, rather than 200 elsewhere). "We do the normal modular training route, PPL 45 hours (with no licence being issued) then night rating as part of 20-odd additional training hours, then the cadet does hour-building with very structured cross-country navigation exercises," explained Marais. "Then they do a single-engine instrument rating, multi conversion and multi-engine instrument rating (ME IR). The licence they are issued with (at 233 hours) is a South African CPL/IR (with multi-engine rating) – so effectively a frozen Air Transport Pilot License (ATPL)."

Finally cadets do 20 hours on top of that in the King Airs, 10 hours as pilot flying (PF) and 10 as pilot not flying (NPF) – "but we don't issue a rating for this," said Marais.

ATP ground school is all done at AIFA "but in future [for the Chinese] we will do the ground school in China at the university".

Cadets with an average age of 22-23, do a three-year aviation degree at NAAA as well as the flight training, said Marais. "The whole thing is tightly

Neighbour with a different perspective

For a different, but no less professional, training experience, Flight Training College (FTC) is located in George next door to AIFA.

Walter Waldeck, the CEO and designated examiner, is also a South African Airways training captain, flying the Airbus A340.

Waldeck, an instructor since the age of 20, and his business partner started FTC in 1999 with the simple aim of "keeping current in GA".

FTC has always being a family business with Waldeck's wife helping out and also his son Jason as chief flying instructor (CFI). Waldeck's brother was also CFI for a while and his nephew instructed there too – so it's very much a flying family.

"It's grown a lot over the years to the point where we could extend and add a second hangar. So a hobby turned into a nice business," said Waldeck pointing to a board in the reception area and adding: "It's really interesting to see where all our students end up."



FTCs fleet consists of Cessna 152s and 172s, a Piper Cherokee Arrow complex single and a Piper Seneca for twin training. "We can train all the way to the ATP," Waldeck said. "We also have a Seneca III simulator, an FNPT II, so we can do IR re-evaluations too and the visuals are as good as a Level D sim."

On the move over the EASA training, Waldeck said: "It's going so fast. There are 180 flight schools in South Africa and it's incredibly difficult to administer for little one-man band operations."

He wasn't enthusiastic about the prospects for the recreational GA market in South Africa, as most people can't afford to fly.

He was also scathing about the quality of candidates coming for flying training, saying there was a lack of self-discipline and the quality of education had gone down. In South Africa you can take 'maths literacy', which is just simple arithmetic – so, he said, "the failure rate [of would-be pilots in South Africa] is quite high".

He also said that in commercial flying he'd seen many logbooks that were "untidy and inaccurate, and with so many errors".

Finally he mentioned the multi-crew pilot licence (MPL), which he said had "fallen flat" in South Africa. "We realised it was not the way to go."

structured and we bring them in [class] groups of 25 to avoid bottlenecks in the circuit. So we can accept 75 at once, across three airfields."

Asked about moves to establish the EASA system in South Africa, Marais said that the "theoretical system has already been aligned with EASA since the beginning of 2014, which 13 months downstream is going much better. The rest will move over to a system mirroring the new EASA Part FCL but Marais said: "I'm not sure when we are going over yet."

As for 2015, Marais said: "One of our primary objectives is to increase our footprint in Africa – we have individuals from Air Mauritius and quite a few private individuals. The course costs 650,000 Rand (less than \$53,000). With that comes first-rate training and organisation and all aircraft have Garmin glass cockpits."

AIFA also has its own authorised maintenance operations at George and Oudtshoorn "and we're going to set one up in Beaufort West also".

For major overhauls every 2,000 hours the engine goes to a Lycoming-approved service facility (at Wonderboom Airport near Pretoria, although there is another facility at Richard's Bay) for zero-timing.

Looking to the future, AIFA and Marais have big ambitions. "We are already the biggest flight school in Africa and our vision is to become the biggest in the world." Doing this means drumming up business and to this end he plans to travel to the UK later this year.

At the same time, Marais said that the South African Government puts "a huge emphasis on the 'previously disadvantaged'," so developing pilots locally is also a priority for the likes of South African Airways and the low-cost carriers that are spreading so fast in the country. This includes in the maintenance organisation, where AIFA sponsors and trains technicians from the local community. "We've trained four and will train another two to three a year," he said.

Marais, himself, is an ex-South African Air Force C-130 navigator. He started his own flying school in South Africa and gained a pilot's licence in 2000, followed by an instructor rating. Eventually he sold the flying school to Babcock, before heading to the UAE to set up the DAE Flight School in Ras Al Khaimah. In 2010 this "went belly up", said Marais, "and so in 2010 I joined this company – and I must say I haven't looked back since."





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PEOPLE / PERSONNES

Issa Karanja

Marcella Nethersole speaks to the commercial sales manager for Vivo Energy Uganda.



1

■ Can you tell us about Vivo Energy?

In 2010, Shell reviewed ownership of its downstream business in Africa.

Vivo Energy, a Shell licensee, took over the distribution and marketing of Shell-branded fuels and lubricants in Africa in 2011 in 16 African markets. Vivo Energy is a joint venture between Vitol Aviation (40%), Helios Investment Partners (40%) and Shell (20%).

2

■ That's an interesting partnership. What does it mean for Vivo Energy customers?

Our shareholders' capability contributions enable us to offer comprehensive solutions to our customers across the continent.

Vitol brings speed, flexibility, entrepreneurship, global reach, logistical expertise and capacity; Helios Investment Partners brings African ownership, understanding and credibility; and Shell brings experience, resources and unrivalled brand equity.

Our customers are, thus, guaranteed to enjoy innovative and quality products and services.

Vivo Energy serves all market segments and operates in both the retail and commercial arenas, which includes marine, mining and aviation through Vitol Aviation. Other products are liquefied petroleum gas and lubricants.

3

■ Can you tell us more about Vitol Aviation?

Vitol Aviation is a leading provider of jet fuel worldwide, providing about 13 million tonnes of jet fuel a year to 60 airports on four continents. It services the world's largest airlines, leading brands, oil majors, national oil companies and the military.

4

■ That seems like a huge responsibility, how has Vitol Aviation succeeded?

Firstly, Vitol Aviation has mature and robust logistical capabilities. It has unrivalled expertise in the management of global jet fuel supply chains. It has, over the years, invested in world-class infrastructure, training and testing to deliver quality product to the aviation industry.

Secondly, Vitol is committed to delivering value to the end-user and ensure product quality, which blends in well with Vivo Energy's commitment to finding innovative solutions for customers' needs. Maintaining the highest standards in health, safety, security and the environment are a key business principle.

Vitol Aviation is a member of the International Joint Inspection Group and refuelling standards are upheld across its network of airports.

Vitol also inspects airport facilities. In Africa alone, Vitol supplies 21 airports on the continent, including Entebbe International Airport, where it has a dedicated aviation depot.

5

■ What does your typical day as a commercial sales manager entail?

Every day is different as this role is fast-paced and quite exciting. Along with meeting our targets and keeping my sales team motivated, I am responsible for managing all sales efforts. I also ensure our customer service standards are high and continually improving.

It is important to meet our clients personally, to engage with them and put faces to the brand. I spend a lot of time meeting with clients in Africa and beyond to ensure they are satisfied with our service.

Back in the office, part of my role is to ensure all our clients are invoiced correctly and that payment is made on time. I'm very lucky to work alongside a committed and hard-working team. I get to meet people from all walks of life, to manage their fuel needs and to offer them the very best in customer service.

My work day usually closes about 8-9pm, but it doesn't stop there as I'm always monitoring my e-mails and liaising with our 24/7 duty operations team until I go to bed. Long days, but every day is fun.

“ I spend a lot of time meeting with clients in Africa and beyond to ensure they are satisfied with our service. ”

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