



# AFRICAN AEROSPACE

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN AFRICA

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## FREEDOM FIGHTERS

« LES COMBATTANTS DE LA LIBERTÉ »

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LIBERATE THE SKIES OF AFRICA**

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with a  
big dream

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and  
away in  
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Published by



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## Nowhere is 100% safe, but Africa feels as safe as anywhere

Last November I took the opportunity of attending the Dubai Airshow and then adding extra itinerary afterwards – turning a £380 airfare into a £775 one with three days in Johannesburg, a week in Zambia and two days in Dar es Salaam, Tanzania.

Heading off with a photographer, we had meetings in Jo'burg, with the likes of Airlink (which has just started operating return journeys from Wonderboom, Pretoria to Cape Town) and NAC at Lanseria, along with Execujet.

We also had another look at the Fireblade fixed-base operation (FBO) at OR Tambo International Airport, probably the finest FBO in Africa if not anywhere in the world.

Flying up to Zambia on RwandAir, a flight that was continuing on to Kigali, we were struck by the way things were increasingly efficient in Africa. The International Air Transport Association (IATA) has helped a lot there with its IT solutions, but getting around is becoming easier and we never had much delay at security.

From Lusaka, we headed down to Livingstone on Proflight (on a separate ticket) and went across the border to see the vast new terminal at Victoria Falls, some way out of the town. All this is being done thanks to Chinese companies loaning money.

Back in Zambia, a presidential adviser told us \$1.36 billion was being spent on new terminal facilities and airport upgrades in Zambia, again all Chinese money.

The country has long power cuts and is running out of water, so really should be building a water pipeline to pump water from the Kafue River to the capital. Many feel the priorities are wrong, as it also needs to fix the crumbling Kariba dam before it's too late.

From Zambia we took a late-night Fastjet flight via Harare to Dar es Salaam – again no problems. Emirates



Flying in a Sling 4-seater from Lusaka to Mutendele, a dirt strip near a Protea Hotels safari lodge.

seemed to be having issues with A340s breaking down in Lusaka, though, having to rescue the second of the week (Lusaka has no MRO operation).

Dar was fascinating, with backstreets of dirt roads and thriving markets. Few tourists venture into town and, instead, connect straight on to destinations such as Kilimanjaro or Zanzibar – which is what we did, taking a Coastal Aviation Cessna Caravan. The ramp at Dar is packed with Caravans and there are quite a few at Zanzibar's airport too.

Everywhere we went on the trip we felt safe, and were shocked to hear about the Paris attacks.

Africa is vast and uncrowded, apart from some cities. But strong leadership and good decision-making is lacking everywhere.

It was interesting to see a backlash in Tanzania against what some are calling “new colonialism” from China, and a realisation that big airport terminals are not necessarily the first priority – power and water are more important.

Ian Sheppard, Editor

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**COVER: Iyabo Sosina, African Civil Aviation Commission (AFCAC) secretary general.**

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«Reportage de Victoria Moores sur l'assemblée générale annuelle de l'AFRAA tenue à Brazzaville.»

#### 22 New Congo carrier

Congo Airways, the new Democratic Republic of Congo national carrier, launched operations on October 20 last year.

«Congo Airways, la nouvelle compagnie nationale de la République démocratique du Congo lancée le 20 octobre 2015.»

#### 24 Fast forward

Fastjet has launched in Zimbabwe and is set to start operations in Zambia. We speak to CEO Ed Winter to find out what's coming next.

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OAG, the specialist in aviation information and analysis, explains how African air transport could reach its potential.

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Kenya Airways CEO Mbuvi Ngunze speaks to Martin Rivers about bringing the airline back from the brink after its biggest ever loss.

#### 40 Winging away

Libyan Wings has managed to get flying despite the civil war and unexpected imposition of visas in Turkey, as Alan Dron reports.

#### 42 Island connected

The first aircraft to land at St Helena's first airport was a King Air 200 of South Africa's Flight Calibration Services.

«Le premier avion à atterrir à l'aéroport de Sainte-Hélène fut un King Air 200 de Flight Calibration Services d'Afrique du Sud.»

### DEFENCE

#### 45 Cameroon Air Force

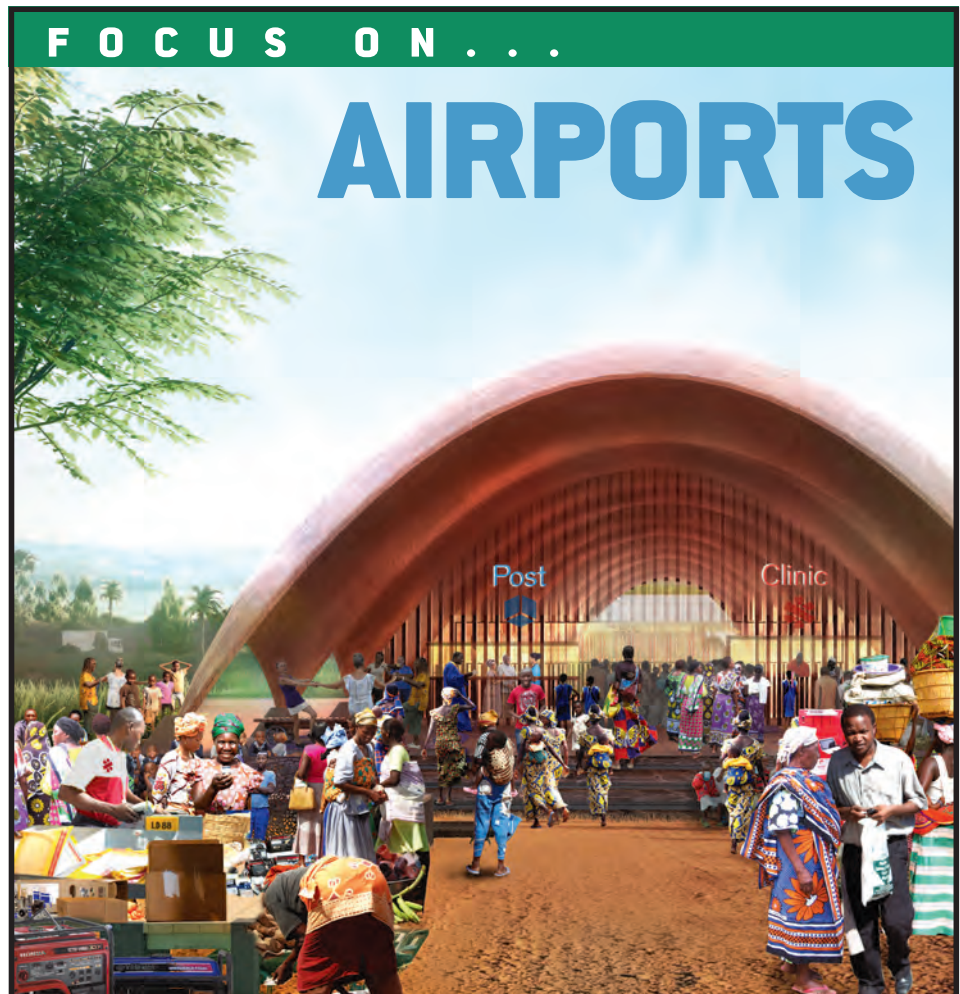
Erwan de Cherisey looks at the Cameroon Air Force as it plays its role in the fight against Boko Haram.

«Erwan de Cherisey nous fait vivre la lutte de la force aérienne camerounaise contre Boko Haram.»

#### 49 Rooivalk strikes back

We speak to Denel CEO Mike Kgobe about a possible Rooivalk Mk2, following the helicopter's success in UN operations in DRC.

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#### 80 LAGOS AIRPORT

Keith Mwanalushi speaks to Christophe Penninck, CEO of Lagos Airport's second terminal, the first privately-funded terminal in Nigeria.

«Keith Mwanalushi interroge Christophe Penninck, directeur général du deuxième terminal de l'aéroport de Lagos, le premier à être financé par le privé au Nigeria.»

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Oscar Nkala looks at some of the latest developments in airport security across Africa following the November 13 attacks in Paris.

#### 88 DRONE PORT

Vincent Chappard reports on a new drone port in Rwanda, where bypassing poor transport infrastructure has become an attractive proposition.

«Vincent Chappard enquête sur un nouveau port dédié aux drones, une solution durable pour contourner les problèmes découlant d'un réseau de transport inadéquat au Rwanda.»



## 50 Djibouti MPA

David Oliver reports on 'Operation Atalanta', the successful EU initiative to tackle piracy off the coast of Somalia.

## BUSINESS AVIATION

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Oliver King, managing director of Avinode, says that Africa's business aviation charter market is ripe for development.

«Oliver King, directeur général d'Avinode, affirme que le marché de l'aviation charter en Afrique est prêt pour le développement.»

### 57 Bestfly Angola

Angola is becoming one of Africa's key business aviation hubs, with much of that being down to Bestfly Flight Support.

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Alan Dron spoke to Michel Coulomb, CEO of Slovenian private jet company Elit'Avia, about building its West African business.

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Victoria Moores talks to AFCAC secretary general Iyabo Sosina about achieving a single African air transport market (SAATM) by June 2017.

«Entretien de Victoria Moores avec Iyabo Sosina, secrétaire général de l'AFCAC, sur la mise en place d'un marché unique pour le transport aérien en Afrique (SAATM) d'ici juin 2017.»

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The East Africa Community is moving towards creating a single bloc of airspace above FL240, to improve safety and efficiency.

## PEOPLE

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# HUMANITARIAN



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African Aerospace was invited to the World Food Programme's annual aviation conference in Geneva.



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## Patroller on duty in Egypt

Sagem has joined with AOI-aircraft factory to offer its Patroller unmanned air vehicle (UAV) to the Egyptian armed forces.

The company also plans to develop a centre in Egypt to train staff for operation and maintenance of the UAV.

Sagem has not yet sold the Patroller but has paired up with Ecarys/Stemme, which provides the aircraft, and Selex ES for the imaging radar and avionics equipment.

## South African UAV wins award

An unmanned aerial vehicle (UAV), designed for environmental research and surveying, will become the first hydrogen fuel cell-powered aircraft fully developed in South Africa. The prototype aircraft, developed by pilot and entrepreneur Mark van Wyk, won first prize at the AVI Awards.

## ExecuJet achieves African 'first'

ExecuJet Aviation Group's facility in Lanseria, South Africa, has become the first fixed-base operation (FBO) in Africa to be awarded the international standard for business aircraft handling (IS-BAH) accreditation by the International Business Aviation Council (IBAC) and the National Air Transportation Association (NATA).

Arvin Durgapersad, ExecuJet's Lanseria FBO manager, said: "The IS-BAH programme is an enhanced approach to mitigating risk and promoting safety, so naturally ExecuJet plans to implement it across all its FBOs worldwide. We believe this is a clear demonstration of our commitment to safety excellence."



## Ethiopian shows the way with all-female flight

Ethiopian Airlines is celebrating after its first all-female operated flight, standing by a core value of "women empowerment for a sustainable growth".

The November flight was operated by female flightdeck crew, as well as an all-female cabin crew and ground crew.

Tewelde GebreMariam, the carrier's CEO, said: "This is an excellent opportunity to inspire young African female students to believe in their dreams and begin to fill the skills gap for aviation professionals. Women are the continent's greatest untapped resource."

"We are fully dedicated to ensuring the increasing number of women in decision-making positions in key operational areas by consistently grooming and mentoring successor female employees for top managerial, technical and operational positions."



## Air Botswana to update fleet

Air Botswana plans to renew its fleet, as well as expand on its routes by 2017.

The airline said in October that it plans to phase out its three ATR42-500s, one ATR72-500 and two ARJ-85s, with either the A319-100 or the A320 stepping in as replacements.

The airline also plans to launch flights to Dubai International and London Heathrow, but until the new aircraft arrive, it is planning to codeshare with Kenya Airways on flights to Dubai and the UK.

## Antonov An-12 crash kills 15

An Antonov An-12 aircraft crashed near Juba Airport, killing 15 people.

The aircraft was flying to Paloch, Upper Nile State, and crashed 800 metres from the runway.

Eighteen people were reported to have been on board.

## Tellumat mounts Kilimanjaro needs

Tellumat Air Traffic Management has won a contract for the supply, installation and maintenance of navigation aids at Kilimanjaro International Airport.

The contract, awarded by the Tanzanian Civil Aviation Authority

(TCAA), also covers the training of airport personnel, performing an audit on numerous classes of equipment, providing a technical helpdesk capability to ensure continuous support and operation of air traffic management (ATM) systems, and providing an equipment repair service.

## Nile Air plans to launch into Europe

Nile Air plans to link Europe to Sharm el Sheikh and Hurgada as part of a plan that sees the airline acquiring wide-bodies by 2020.

The airline said its European routes would operate using a combination of chartered and scheduled flights.

Nile Air will be taking delivery of its fifth and sixth A320-200s in May and July of next year to help with the new plan.

## Boeing 757 could be set for Fly540

Fly540 is eyeing a Boeing 757 twinjet to join its fleet, according to CEO Don Smith. The airline currently operates a Dash 8-100, two CRJ-100s and two CRJ-200s on flights to Tanzania, Uganda and South Sudan.

Four more CRJ-200s are expected to arrive next year.

## Airbus Helicopter in stylish move

Airbus Helicopters is introducing the new H145 Mercedes-Benz Style, which offers higher performance, increased safety and improved exterior design for high-end private and corporate operation.

Frederic Lemos, Airbus Helicopters' head of private & business aviation Europe, said: "Customers wishing to further personalise their aircraft will be able to work directly with Airbus Helicopters and the creative design teams at Mercedes-Benz Style to define their unique cabin environment."

## TACV secures government loans

TACV has secured \$11 million in loans from the Cape Verde Government following huge losses and legacy debts of \$97.46 million.

The loan will shore up the airline's working capital, while paying for

aircraft repairs. Cape Verde prime minister, José Maria Neves, said that the Government would continue to protect the carrier and its staff.

## Fastjet takes on first owned A319

Fastjet has taken delivery of its first owned aircraft.

CEO Ed Winter said: "I am particularly pleased that we have purchased this aircraft from BBAM, which showed confidence in the company by leasing the first aircraft to Fastjet in 2012. This aircraft has been earmarked to be the first in the Fastjet Zambia fleet."

## Air Botswana to update fleet

Air Botswana plans to renew its fleet, as well as expand on its routes, by 2017.

The airline said it plans to phase out its three ATR42-500s, one ATR72-500 and two RJ-85s, with either the A319-100 of the A320 stepping in as replacements.

## Baby monkey rescued by Proflight



Proflight Zambia helped with the rescue of a two-week old vervet monkey in November after poachers killed its mother.

The carrier flew the primate to Chipembele Wildlife Education Trust in South Luangwa National Park.

"We know the importance of such species and the need to protect them. Tourists travel from far away to come and see them. This alone helps to boost tourism in Zambia, so ensuring that they are safe and protected is important for tourism as well as the country's development," said captain Phillip Lemba, director of government and industry affairs at Proflight Zambia.

## Southern African airlines face crisis

The southern African airline industry is facing a crisis as demand for flights decreases and profits drop.

The Airlines Association of Southern Africa (AASA) has warned that the airlines' ability to create jobs and stimulate economic growth is under threat, mirroring the lack of economic growth across the region.

AASA CEO Chris Zweigenthal said: "Most

African airlines have been unable to follow suit and remain stuck in an on average 0.8% (\$1.59 per passenger) profit margin band with the International Air Transport Association (IATA) forecasting a combined return of around \$100 million across the continent again this year.

"What is missing is an alignment of governments' policies and strategies to let airlines safely, efficiently and affordably carry more people and goods on more routes, linking more towns and cities, more frequently, across the continent."

## Legacy 500 sets two world records

Embraer Executive Jets announced in November that the Legacy 500 midsize aircraft set two new world speed records for its class, totalling six in 2015.

"These records reaffirm the Legacy 500's superior performance and its suitability for transoceanic missions, as well as coast-to-coast flights," said Marco Tulio Pellegrini, president and CEO, Embraer Executive Jets. "The Legacy 500 is also setting new standards in comfort, technology, operational cost and reliability in the midsize class."

## Rockwell Collins stays on track

Rockwell Collins has expanded its service to provide real-time flight tracking for non-ADS-B equipped aircraft.

ARINCDirect customers flying non-ADS-B equipped aircraft will be able to receive real-time position reports through an enhanced flight tracking service for business aircraft called Mode S Multilateration (MLAT).

## FlightSafety upgrades sims

FlightSafety International continues to enhance its Gulfstream G650 training programme by upgrading its simulators and adding the autobrakes system.

The normal and abnormal operation of the autobrakes will be covered during ground school and simulator sessions, allowing pilots to feel the difference in the flight controls.

## South Africa links with Munich

Airports Company South Africa has signed a 'sister airports agreement' with Munich Airport Group, agreeing on areas of cooperation and information sharing.



## FAI adds fifth Challenger to fleet

FAI Rent-a-Jet has announced the addition of a fifth Challenger 604 to its fleet of air ambulances, which are used for medevac missions worldwide, including work for the world's largest NGOs across crisis zones in Africa.

The new addition will increase the fleet to nine aircraft.

"We took the decision to add a fifth

Challenger as the model fulfils the unique requirements of long-range patient transport," said Siegfried Axtmann, FAI's founder and chairman. "With its spacious cabin, capacity for multiple missions and long-range capability, it is a valuable addition to the mix and supports our growing air ambulance activity."



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## Libyan start-up to begin regional ops

Libyan start-up, Free Falcon Air, owned by businessman Fathi Faraj Omar, is planning to start domestic and regional operations out of Beida.

The carrier already owns a Boeing 737 and has plans to acquire a second. Initial operation will cover Zintan, Tunis, Jordan's Amman and Egypt's Alexandria.

## Med-View takes a look at Europe

Med-View Airline began its first long-haul flight in November, launching its four times-weekly flight from Lagos to London Gatwick on a 767-300.

## Aspen aircraft to Liberia

Aspen Medical International has based a Beech 1900C in Liberia as part of plans to provide general aviation and medevac services to West Africa. The B1900C will operate under HALO Aviation's Part 135 and Part 138 air operator's certificate (AOC). It will be used for flights throughout Liberia, Sierra Leone, Guinea, Ivory Coast, Ghana, Senegal, Mali, Niger and Nigeria.

## No jumbo Smile on the face of Ghana

SmileAir has dropped plans to lease a pair of B747-400s from Mahan Air following a managerial decision to focus on regional West African flying. In spite of carrying SmileAir's livery, neither aircraft was taken to Ghana.

"The hub strategy will enable Smile Air to concentrate on both passenger and cargo traffic throughout West Africa and amalgamate our principal strategy to offer direct flights to China and the Far East in the future," said the carrier.



## Seychelles A330 is first with in-flight connectivity

Air Seychelles passengers will be enjoying connectivity in the air following the arrival of Airbus 'Aldabra'.

It is the national airline's third aircraft – and first Airbus A330 – to be registered on the Seychelles civil aircraft register over the last six months.

Named after one of the world's largest raised coral atolls, also one of the Seychelles UNESCO world heritage sites, 'Aldabra' is the first Seychelles-registered aircraft to offer guests in-flight connectivity.

Registered as S7-ADB, the A330 was greeted by the traditional water canon salute at the international airport at Pointe Larue, on the eastern coast of the Seychelles main island of Mahé.

It is the first Airbus A330 aircraft, previously registered in the UAE with Etihad, to be transferred to the Seychelles civil aircraft register, following the transfer of two of Air Seychelles' Airbus A320 aircraft, Amirantes in June and Silhouette in September 2015.



## Ethiopian A350 XWB takes shape

The first Airbus A350-900 for Ethiopian Airlines is taking shape on the final assembly line in Toulouse, France. Ethiopian Airlines will be the first African A350 XWB operator when it takes delivery of the aircraft.

## Zimbabwe operates all-female flight

Air Zimbabwe celebrated its first female-operated flight in November. The flight saw captain Chipso M Matimba, assisted by captain Elizabeth Smibi Petros, operate the route from Harare to Victoria Falls.

## Ahh Bristow!

Bristow Africa has signed a partnership agreement with Eastern Airways to offer multiple daily return flights between Lagos and Port Harcourt City. The company said: "This will be the first fully-branded Bristow fixed-wing aircraft in the group fleet and joins our other fixed-wing service offerings through its affiliates, including Eastern Airways in the UK, Airnorth and Líder Aviação in Brazil."

## Let – there be light

Comoros' Int'Air Îles has begun Let 410 operations following the arrival of its maiden aircraft of the type in November. The twinprop flies on regular rotations around the Comorian archipelago and to Majunga and Dar-es-Salaam.

The carrier operates two Cessna Grand Caravan 208Bs and two Cessna 404s, and aims to acquire larger aircraft to open up flights to Kenya and Mauritius.

## Skywise 737-800s

Skywise has announced plans to add Boeing 737-800s to its fleet following a similar announcement by competitor, FlySafair.



## Ethiopia mega hub in Addis Ababa

Ethiopia has announced plans to construct a \$4 billion mega airport in Addis Ababa that will serve as many as 120 million passengers annually when it opens in more than a decade's time.

The project reflects the scale of Ethiopia's economic ambitions and will form an important component in developing the country's tourism and light manufacturing sectors, as well as supporting the Government's aim to transform Addis Ababa into an aviation hub for the African region.

The new airport is planned in addition to an on-going \$350million expansion of the current Bole International Airport in Addis that is set to increase capacity from six million passengers annually to 22 million by 2018.

The two developments combined aim to transform Addis Ababa into one of the largest aviation hubs in Africa, with the new airport consisting of four runways, several passenger terminals and an airport city on the outskirts of the capital.

## Rolls-Royce signs support MoU

Rolls-Royce has signed a memorandum of understanding (MoU) with AerCap and South African Airways for TotalCare Flex.

The engine maker will support Trent 500s for three AerCap Airbus A340s



## AJW Engines powers in for Camair-Co

**AJW Engines is to provide engine shop visit management services for Cameroon Airlines Corporation (Camair-Co). A team of engineers from AJW will manage all aspects of the shop visit for two PW4060 engines.**

**Camair-Co has also signed a lease agreement with AJW Leasing for a replacement PW4060 engine, which has been fitted to its B767-300 aircraft.**

operated by South African Airways with TotalCare Flex, which is designed for owners and operators of mature engines.

## Cairo green light from ICAO

The Egyptian Civil Aviation Authority and Cairo Airport have successfully passed the International Civil Aviation Organization (ICAO) audit. It covered Egypt's aviation security oversight system and the degree of compliance with ICAO standards and recommended practices.

## Ethiopian sim on line

Ethiopian Airlines has finalised installation of a CAE-manufactured Boeing 777 flight simulator and is now ready for training.

## Air Partner steps back as threat eases

Air Partner has started to wind down its relief work in Sierra Leone as the country is declared Ebola-free.

Air Partner has worked with governments, NGOs and aid agencies to provide air charters since the outbreak, operating a total of 128 flights between the UK and Sierra Leone since October of last year.

## Fly Sax's DC-9 blows out

Kenya's private charter and safari specialist, Fly Sax, retired the world's oldest remaining DC-9-10 at the end of November.

The twinjet is nearly 50-years-old and has been in service with Air Canada, Trans Texas Airways, Texas International, Southern Airways, Finnair, British

Midland Airways, All Star Airlines, Midwest Airlines and East African/Fly540.

## RwandAir joins the connected crowd

RwandAir has become the fourth African airline to choose SITA OnAir as its connectivity provider. Its two new A330s will be line-fitted with mobile phone and Wi-Fi services. The first A330 will be delivered in October 2016.

## King Air heads East

East African Aviation has taken delivery of its first Beech KingAir 350i, managing director captain Mulat Lemlemayehu said. The first of two of the twinprops will be used for general passenger charters as well as medevac flights with operations also covering Sudan and Djibouti.

## West African bank ups stake

The West African Development Bank (BOAD) is to increase its share in Air Côte d'Ivoire with an investment of \$5.19 million. The Ivorian state disposed of a 3% stake in the airline to BOAD last year.

## Ethiopian Airlines to order Boeing 777Xs

Ethiopian Airlines is going for the Boeing 777X to cover its future long-haul needs. Chief executive officer, Tewolde Gebremariam, told *The Wall Street Journal* of the airline's plans to order between 15 and 20 777-8Xs as a replacement for the 777-200(LR) that it currently operates.

## RAM opts for GE support

Royal Air Maroc has selected GE Aviation for a five-year exclusive OnPoint solution agreement for the time and material to maintain, repair and overhaul its CF6-80C2 engines that power its four Boeing 767 aircraft.

## Air Seychelles cargo boost

Air Seychelles Cargo has launched Fast-Track, a priority air freight service for sending consignments. Benefits include faster tender times, priority loading and unloading, 24-hour tracking and early retrieval of cargo.



## Golden Wings leases Q300

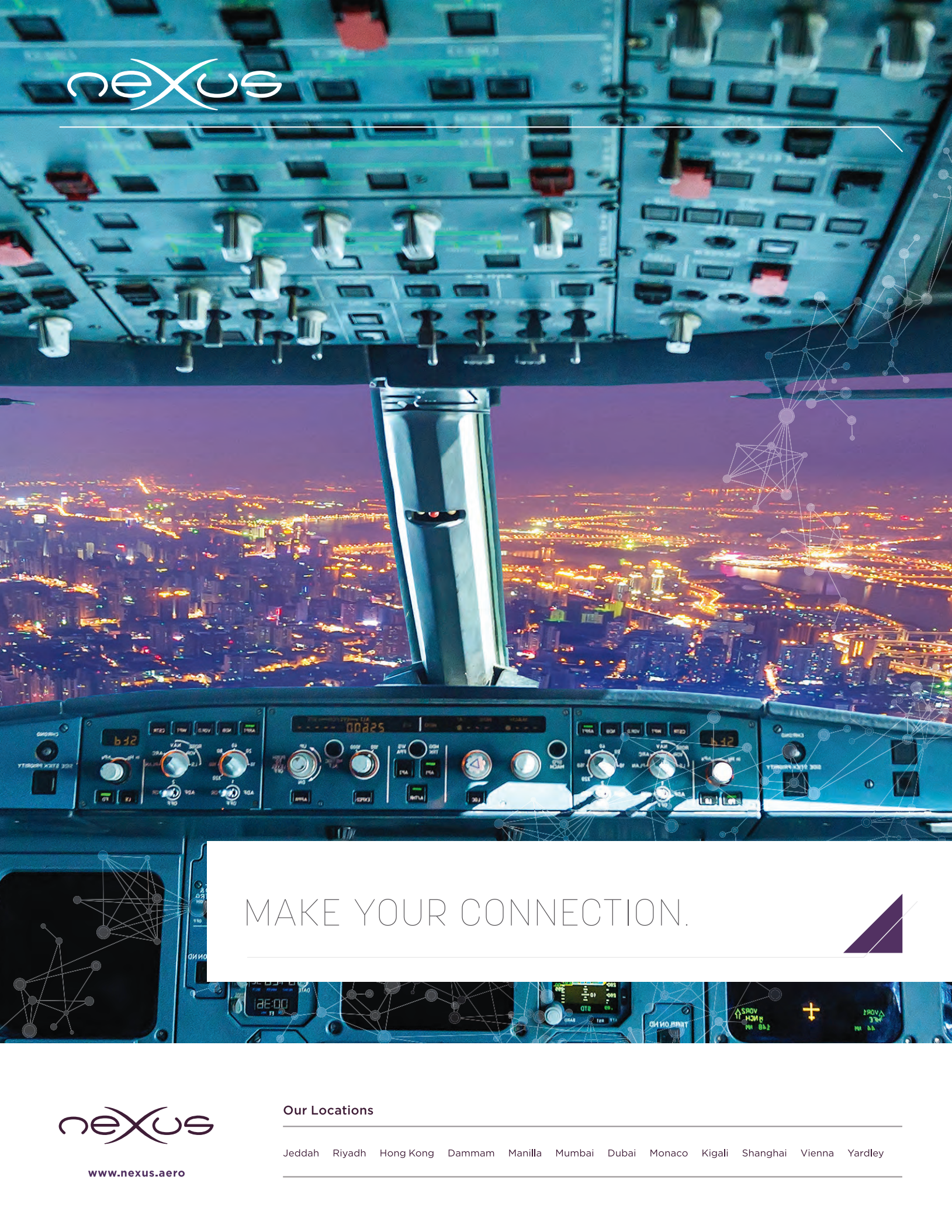
Golden Wings Aviation South Africa has added a Bombardier Q300 turboprop to its fleet for the first time.

Golden Wings also currently operates a Fokker 70 for its affiliate, Golden Wings Aviation Sudan.





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**“You cannot stop  
liberalisation.  
That stage  
has passed.”**  
GIRMA WAKE



*The Republic of the Congo hosted the African Airline Association’s (AFRAA) annual general assembly (AGA) for the first time in the meeting’s 47-year history on November 8-10. As **Victoria Moores** reports, liberalisation was the topic of the day.*

# WAKE UP TO FREEDOM

«De l’éveil à la liberté» – Page 18

**Y**our mission is to grow or die, not to survive. That was the sharp message delivered by RwandAir chairman Girma Wake to the AFRAA AGA in Brazzaville. “You are airline CEOs. If you don’t believe your airline will exist 10 years from today, you should go now,” he added.

The wheels are in motion; the intra-African market will open to free competition in 2017. So far 13 states have committed to liberalise by that deadline but this figure is expected to swell to around 20 of Africa’s 54 states by early 2016.

AFRAA’s members are now pushing for the continent to negotiate international routes rights as a bloc to strengthen its clout. “You cannot stop liberalisation. That stage has passed,” Wake said.

While the vast majority of the 35 airlines attending the AGA backed the shift, new EgyptAir chairman and CEO, Sherif Fathi, said his team’s studies had come up with

Continued  
on Page 18



CONTINUED FROM PAGE 17

surprising results. "My network people and consultants have told me, 'I'm sorry; there's nothing in it for you'. I'm currently challenging them for the third time to see what we will get out of it," he said.

"Since your consultants say there is nothing in it for you, I believe you should change your consultants," retorted Wake.

African Civil Aviation Commission secretary general, Iyabo Sosina, also flagged the benefits EgyptAir has already seen from liberalisation.

The EgyptAir chief countered that the studies were based on fact and figures, but he is pushing once again to see if his team had missed anything. "We have made good use of liberalisation so far. There is an attitude that it will bring much more [benefit] than we already have today, so we are asking whether we have already maximised that value," Fathi explained.

There was a strong consensus that the opening of the skies needed to be matched with the opening of borders. Visa restrictions hamper movement between countries and this must be addressed for intra-African connectivity to reach its full potential. One delegate called for an AFRAA resolution on the issue. "The single air transport market will be irrelevant if the visa and customer clearance issues are not sorted out," AFRAA secretary general



**"We have made good use of liberalisation so far...we are asking whether we have already maximised that value."**

SHERIF FATHI

Elijah Chingosho agreed.

Wake shared a story from his experience with RwandAir in Kigali. "We had a problem where, if you misconnected, you could not enter the country. We asked for a 24-hour visa on arrival; immigration said no. This went higher and higher and eventually reached the president. Immigration said no, it was too dangerous."

The Rwandan president went on to overrule immigration, allowing a 30-day visa on arrival. "For a policeman, the easiest thing to do is to just say no," Wake said. "I believe that, if each carrier works with their government on the visa situation, we will move a lot of traffic."

And the traffic potential is there. Africa is home to seven of the 10 fastest-growing

economies, with 4.4% average growth expected to 2034. But Kenya CAA corporate communications manager, Mutia Mwandikwa, highlighted Africa's low baseline: "Africa has a 3-6% growth forecast, depending on how optimistic you are, but you have to ask yourself 3-6% of what?"

Ethiopian Airlines CEO, Tewolde GebreMariam, said: "I don't think that any airline will fail because of a lack of market but volume matters. If you have just two aircraft flying point-to-point, that is very difficult to manage. You need a minimum critical mass for survival."

□□□□

Fathi, from EgyptAir, argued that smaller airlines with two to four aircraft can succeed but they needed to find a niche and work with bigger airlines that have a strategically located hub.

Ethiopian Airlines already has two hubs – in Addis Ababa and Lomé – and is creating a third to consolidate Africa's thin, sparse demand into a sustainable network. "Ethiopian has maximised its alliance membership to get double the connectivity that Kenya Airways has out of Nairobi," one AFRAA delegate observed, noting that both carriers are alliance members and have well-positioned home bases. "Ethiopian Airlines is a long way ahead of the pack."

But overall connectivity remains poor, with limited commercial and network coordination between African airlines.

International Air Transport Association (IATA)

SOMMAIRE

# De l'éveil à la liberté

*La République du Congo a accueilli l'assemblée générale annuelle de l'AFRAA pour la première fois en 47 ans du 8 au 10 novembre dernier. La libéralisation a été le thème principal comme nous l'explique Victoria Moores.*

« Votre mission est d'aller vers la croissance ou de mourir, non pas de survivre. » Ce message du président de RwandAir, Girma Wake, a été relayé par les participants.

En effet, le marché intra-africain sera ouvert à la libre concurrence en 2017. A ce jour, 13 États s'y sont engagés et ce chiffre devrait passer à environ 20 jusqu'en début 2016. Les membres de l'AFRAA poussent le continent à négocier l'obtention des routes internationales.

Il y a eu consensus autour du fait que la libéralisation de l'espace aérien devrait aller de pair avec l'ouverture des frontières. La question des visas empêche la connectivité intra-africaine à exploiter pleinement son potentiel. Selon le secrétaire général de l'AFRAA, Elijah Chingosho, les questions liées au visa et à la douane doivent être résolues pour

dynamiser le marché. Il a également critiqué le manque de coordination et le manque de rigueur au niveau de la capacité des compagnies africaines. Il a aussi évoqué les facteurs externes qui perturbent l'industrie comme l'épidémie Ebola qui a affecté plusieurs pays.

Le potentiel existe. L'Afrique abrite sept des dix économies les plus dynamiques avec une croissance moyenne de 4,4% prévue jusqu'en 2034.

Le PDG d'Ethiopian Airlines, Tewolde Gebremariam, a souligné la nécessité d'avoir une masse critique minimale pour survivre.

Pour sa part, le CEO d'EgyptAir, Sherif Fathi a déclaré que les petites compagnies aériennes doivent trouver des niches ou des partenariats avec des compagnies plus grandes dotées de hubs stratégiques.

Ethiopian Airlines compte déjà deux hubs, Addis Abeba et Lomé. Elle projette de créer une troisième pour assurer un réseau durable. La compagnie est déjà en tête du peloton.

Mais la connectivité reste médiocre avec une coordination commerciale et de réseau limitée entre les compagnies aériennes africaines.

Le responsable des relations extérieures pour l'Afrique et le Moyen-Orient de l'IATA, Adefunke Adeyemi, a déclaré que deux compagnies aériennes africaines - Ethiopian Airlines et Kenya Airways - offrent une connectivité vers plus de la moitié des pays d'Afrique. « Une amélioration est nécessaire à ce niveau », soutient-il.

□□□□

Les compagnies aériennes africaines continuent de lutter financièrement, étouffées par les coûts d'exploitation élevés comme l'a expliqué le directeur général de l'IATA, Tony Tyler.

De plus, elles paient le carburant jusqu'à trois fois plus que la moyenne mondiale et n'ont pas ressenti la baisse en raison du hedging et des taux de change bas.

Cependant, l'AFRAA œuvre en faveur d'une baisse

regional head of member & external relations for Africa & Middle East, Adefunke Adeyemi, said there are only two African airlines – Ethiopian Airlines and Kenya Airways – which offer connectivity to more than half the countries in Africa. “This is what needs to improve,” she said.

Two of the drivers behind this lack of connectivity are thin traffic flows and overcapacity. “There is a mismatch between supply and demand. Most flights in Africa carry fewer than 100 passengers and operate at a low load factor. You don’t need to be a Harvard professor to see that there is a mismatch between supply and demand,” Embraer Africa and Middle East market manager Stephan Hannemann said.

This capacity imbalance plays out in Africa’s weak load factors. In 2014, African carriers

added 3% capacity, but traffic rose by just 0.9%, pulling the average loads down 1.4 points to 68.2%. Chingosho blamed this decline on “uncoordinated expansion and a lack of capacity discipline”.

The knock-on effect is that African airlines continue to struggle financially, hindered by high operating costs. “The cost of doing business here is too high,” said IATA director general Tony Tyler. “Africa is responsible for 15% of all aviation taxes worldwide. It all adds up to a very costly burden.”

While the rest of the world is expected to see unprecedented profits in 2015, Africa’s share is almost negligible at \$100 million, or \$1.59 per passenger, compared with a world average of \$8.27.

African airlines are paying up to three times the world average for fuel. They have not felt the price drop because of hedging and weak exchange rates; a painful blow when fuel makes up 29% of airline operating costs.

However, AFRAA is working to push costs down. Its latest joint fuel purchasing tender concluded in November, with 14 participating airlines. Its network coordination project now spans 19 carriers and 11 members have united on a joint ground-handling tender.

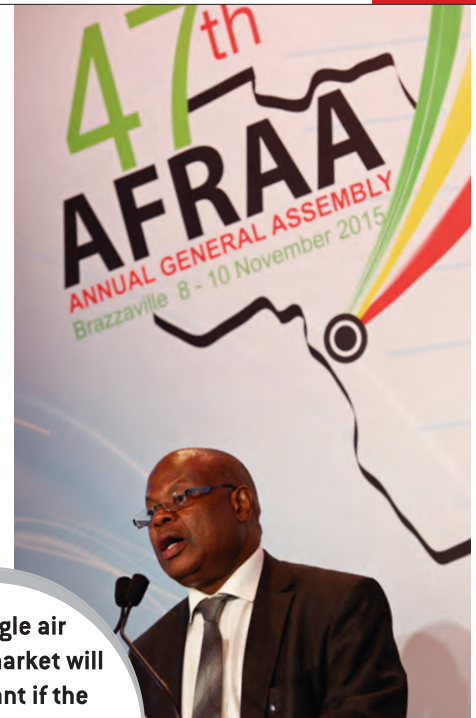
Furthermore, AFRAA has teamed up with IATA in areas such as training and safety, with 41 African airlines now listed on the IATA operational safety audit (IOSA) register and more expected to join by the close of 2015. The two bodies are also working to bring down airport charges, with success in Lusaka and ongoing campaigns in Douala, Ethiopia, Gabon, India and Uganda.



However, Airports Council Africa (ACI) secretary general Ali Tounsi countered that African infrastructure is expensive because the continent lacks sufficient traffic to spread upkeep costs. He added that ACI is also doing its bit towards African cooperation, bringing together a group of 16 airports to do free “friendly audits” on one another. This is particularly relevant as a significant number of African airports do not meet International Civil Aviation Organization (ICAO) standards.

Then there are external factors to tackle. “The African aviation industry is very fragile and subject to shocks,” Chingosho said, giving the Ebola epidemic as an example. “The disease is now under control and has largely been eliminated. It is now safe to travel, including the countries which were affected by the epidemic.”

Since claiming its first victim in December 2013, Ebola has killed thousands. The World Health Organisation (WHO) placed the death toll at around 11,300, but the actual number



“Africa has a 3-6% growth forecast, but you have to ask yourself 3-6% of what?”

MUTIA MWANDIKWA



“The single air transport market will be irrelevant if the visa and customer clearance issues are not sorted out.”

ELIJAH CHINGOSHO

could be three times higher. Just as the AFRAA conference opened, there was a key milestone with Sierra Leone being declared Ebola-free. However, WHO medical officer, Dr Peter Gaturuku, cautioned:

“We are not out of the woods yet.”

AFRAA host airline, ECAir, is working to overcome many of these wider challenges and, crucially, has a government that understands the benefit of the country’s air links.

During his keynote address, Republic of the Congo president, Denis Sassou N’Guesso, laid down a vision for a “united, dynamic Africa” where airlines cooperate, pool their resources and maximise the benefits of the single African market.

The Republic of the Congo has invested in its infrastructure, building and upgrading nine airports, including Brazzaville’s ultra-modern Maya-Maya Airport. “Our strategic vision is to raise Maya-Maya Airport to become a hub for the central African region,” he said.

Within four years, ECAir has extended its network to 12 destinations, including Paris and Dubai, served by a fleet of seven aircraft.

ECAir CEO Fatima Beyina-Moussa is working to establish Maya-Maya as a mini sub-Saharan hub, and then synchronise ECAir’s network with partner airlines. During the conference, she unveiled a new interline partnership with Kenya Airways, joining existing partnerships with Air Algerie, Asky, Ethiopian Airlines, South African Airways and Trans Air Congo (TAC).

The next AFRAA AGA will be held in Victoria Falls, Zimbabwe on November 20-22, 2016, after Air Zimbabwe CEO Edmund Makona assumed the AFRAA presidency at the close of the 2015 AGA.

des coûts à travers un projet de coordination du réseau.

Par ailleurs, l’AFRAA et l’IATA travaillent étroitement dans les domaines de la formation et de la sécurité. Les deux organismes conjuguent également leurs efforts pour faire baisser les redevances aéroportuaires.

Tout en répliquant un argument autour de la cherté des infrastructures en raison d’un manque de trafic, le secrétaire général de l’ACI, Ali Tounsi, a affirmé que l’organisme ajoute sa pierre à travers une meilleure coopération au niveau des aéroports africains. Un projet pertinent car plusieurs aéroports du continent ne répondent pas aux normes de l’OACI.

Dans son allocution, le président de la République du Congo, Denis Sassou N’Guesso, a évoqué sa vision d’une « Afrique unie et dynamique » où les compagnies aériennes mettent en commun leurs ressources et optimisent les atouts du marché africain.

Le pays a investi dans son infrastructure aéroportuaire et veut que « l’aéroport Maya-Maya devienne un hub pour la région d’Afrique centrale ».

Le PDG d’ECAir, Fatima Beyina-Moussa a dévoilé un partenariat interligne avec Kenya Airways.

La prochaine AGA d’AFRAA se tiendra au Zimbabwe en novembre 2016.





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*Congo Airways, the new Democratic Republic of Congo (DRC) national carrier, launched operations on October 20 and is hoping to avoid the mistakes that led to its predecessor's demise, as Victoria Moores reports.*



## Congo Airways flies the flag

**A**fter several incarnations, DRC national carrier Lignes Aériennes Congolaises (LAC) was liquidated in September 2014, setting the scene for the creation of Congo Airways, which was formed a month earlier in August 2014.

The new airline will be “fiable et viable,” which roughly translates as “reliable and sustainable,” according to Congo Airways commercial director Norbert Sengamali Lukukwa.

While the government and state-owned companies hold the majority shareholding in the Kinshasa-based carrier, Congo Airways will be run as though it were a private company. “The government wants to avoid the mistakes it has made in the past. This comes straight from the president and the prime minister,” he said.

Sengamali Lukukwa has learned his lessons from first-



**Norbert Sengamali Lukukwa:** “In 2018, we want to go intercontinental.”

hand experience. He originally joined the former national carrier as a young executive, working his way up to become marketing director, commercial director and then – ultimately – CEO. Following LAC’s demise, he became president of the liquidation committee. He has also spent time in government, including a few years as minister for planning and foreign affairs.

Congo Airways CEO, Claude Kirongozi, a university professor and former member of the prime minister’s cabinet, heads the new airline’s management team. Deputy CEO, Jerome Maillat, was with Air France Consulting, which advised on the start-up project.

Around 350 staff, including ground-handling workers, form the remainder of the team.



The DRC Government has bought a pair of Airbus A320s from Alitalia, configured with 10 business and 250 economy class seats, so Congo Airways can offer a traditional two-class product. These will initially be used to open domestic flights to Goma, Lubumbashi, Kindu, Kisangani and Mbuji Mayi. “The aim is to serve eight destinations by end of this year,” Sengamali Lukukwa said.

At the end of 2015, another A320 is slated to join the fledgling carrier’s fleet, along with a Bombardier Q400 turboprop, taking it to four aircraft. This extra capacity will be used to expand Congo Airways’ domestic network and to open its first international routes, linking Kinshasa with Johannesburg in South Africa, Luanda in Angola and Pointe-Noire in Republic of the Congo (Congo-Brazzaville). Sengamali Lukukwa is confident that these destinations will succeed, as they were previously served by LAC.

Towards the end of 2016, Congo Airways’ fleet will swell once again, with the arrival of another pair of A320s, extending its total capacity to six aircraft. These will pave the way for further route openings in 2017, including Addis Ababa in Ethiopia, Nairobi in Kenya, Lagos in Nigeria and Abidjan in Côte d’Ivoire.

“In 2018, we want to go intercontinental. We are looking at wide-bodies,” Sengamali Lukukwa said. These would be used to add services to Dubai and Guangzhou in China.

### SOMMAIRE

## CONGO AIRWAYS DÉCOLLE

*Congo Airways, la nouvelle compagnie nationale de la République démocratique du Congo (RDC), a été lancée le 20 octobre dernier. Elle espère éviter les erreurs ayant conduit à la disparition de son prédécesseur comme le montre Victoria Moores.*

Après plusieurs incarnations, la compagnie nationale Lignes Aériennes Congolaises (LAC) fut liquidée en septembre 2014, préparant ainsi la création de Congo Airways.

La nouvelle compagnie aérienne sera « fiable et viable », selon son directeur commercial, Norbert Sengamali Lukukwa.

Même si le gouvernement et les entreprises publiques sont actionnaires majoritaires, Congo Airways sera gérée comme une société privée.

Le CEO de Congo Airways, Claude Kirongozi, dirige l’équipe de gestion. Il a pour adjoint Jérôme Maillat.

La compagnie compte 350 employés. Le gouvernement a acheté deux Airbus A320 pour opérer des vols domestiques vers huit destinations d’ici la fin de l’année. Un autre A320 va rejoindre la flotte de même qu’un Q400 de Bombardier pour étendre le réseau domestique

et ouvrir les premières routes internationales.

Vers la fin de 2016, la flotte de Congo Airways sera étoffée par deux autres A320 pour desservir de nouvelles routes en 2017. Congo Airways projette des vols intercontinentaux en 2018.

Durant sa première année d’exploitation, la compagnie compte transporter 450 000 passagers. Ce nombre de passagers devrait passer à 1,3 millions durant la troisième année. Le gouvernement envisage d’ouvrir Congo Airways aux investisseurs privés durant cette période.

Selon Sengamali Lukukwa, Ethiopian Airlines et Kenya Airways seraient intéressées par la start-up qui « souhaite travailler avec tout le monde ».

Congo Airways est également en « discussions avancées » avec Air France Industries sur un contrat de maintenance.





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THE NEW SPIRIT OF AFRICA



# Winter's discontent beginning to thaw

*Fastjet has finally launched its second airline, in Zimbabwe, and, as African Aerospace was going to press, was on track to begin in Zambia. Victoria Moores spoke with CEO, Ed Winter, to find out what's coming next.*

**F**astjet CEO Ed Winter has become understandably reluctant to “put dates on things” outside of his control, after facing a stream of external barriers in his bid to turn Fastjet into a pan-African low-cost carrier.

The plan was simple: create a network of nationally branded Fastjet airlines across the continent. But reality is never that simple; Fastjet is having to build a new airline in every African market that it wants to enter.

“It’s been a big learning curve,” Winter said, describing the three years since Fastjet Tanzania’s November 29, 2012 launch. “I can’t remember how many aircraft we said we would be operating after the first three years but we’re at significantly fewer than that.”

A quick look back through the archives reveals that Fastjet was planning to have at least five A319s operational within six months of its launch, growing to as many as 15 aircraft in its first year. Three years down the line, it started 2015 with three aircraft and is about to grow to six.

After a tough fight for international flight permissions during its first year, Fastjet Tanzania ultimately won through and operated its first regional flight on October 18, 2012. The Dar es Salaam-based carrier now flies to Entebbe, Harare, Johannesburg, Lilongwe and Lusaka, in



**Fastjet's presence is growing. It can now fly domestically in Zimbabwe and is awaiting approval for Fastjet Zambia.**

Fastjet A319 arrives at Dar-es-Salaam after a late-night departure from Lusaka and a short stop in Harare in the early hours. Right: CEO Ed Winter said: “It’s been a big learning curve.”



addition to its Kilimanjaro, Mbeya and Mwanza domestic services. “It’s been painful on occasion, but there you are,” Winter said, hinting at some of the battles he has weathered.

After years of frustration, Fastjet’s model is now rapidly taking shape. If everything goes according to plan, it will have grown from one to three airlines in 2015, with Fastjet Zimbabwe and Fastjet Zambia joining its original Fastjet Tanzania operation. The group’s fleet has also doubled, scaling up from three to six Airbus A319s. “It’s not been a wasted effort,” Winter said, referring to the company’s trials so far. “I think that’s pretty good progress.”

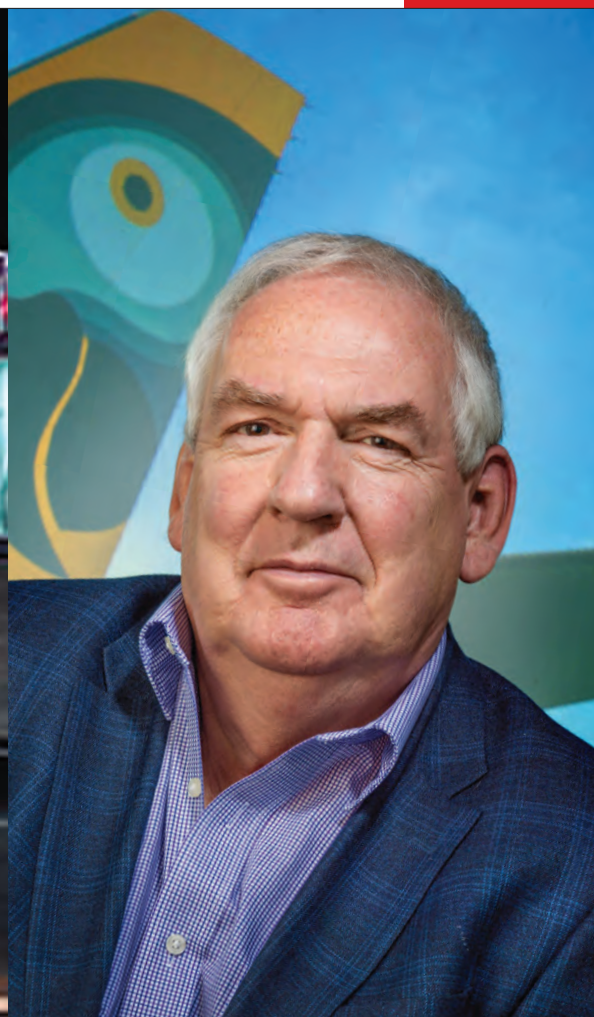
## ■ ZIMBABWE

Fastjet Zimbabwe finally took to the skies on October 28, 2015, launching thrice-weekly services between its Harare home base and Victoria Falls.

The start-up is backed by private Zimbabwean shareholders, who are “not airline or aviation people”, said Winter. The Government has not taken a stake, as it is already involved with Air Zimbabwe.

True to form, Fastjet Zimbabwe’s launch took “a little bit longer than we originally





thought” but the Zimbabwean Government has already designated the start-up on routes to Botswana, Malawi and South Africa.

Fastjet Zimbabwe is also seeking permissions to fly to Democratic Republic of Congo (DRC), Kenya, Mozambique, Namibia and Zambia.

#### ■ ZAMBIA

In parallel with the Zimbabwe launch, the management team has been working to get Fastjet Zambia up and running.

“In Zambia, the roadblock was that they had never had an Airbus aircraft on their register and they are also restructuring their civil aviation authority (CAA) because they are very keen to get off the European blacklist,” explained Winter.

Zambia turned to the South African CAA, which has experience of Airbus operations, to help it add Fastjet’s A319 to its register.

Fastjet has held its Zambian air services licence for more than a year; it has already been renewed once. The airline has completed “virtually everything” that is non-Airbus specific and Winter was, at the time of writing, optimistic that the launch may still be possible before the end of 2015. “It’s all ticking away. We’ve signed a letter of intent for our first purchased aircraft, which is earmarked for Zambia. I am absolutely

confident that by the end of this year we will have both operations up and running.”

Initially, the Zambian and Zimbabwean airlines will operate just one aircraft each, although this will grow as they secure further route rights. “I would see both Zimbabwe and Zambia requesting maybe three aircraft by the end of next year, but let’s wait and see how the market develops.”

#### ■ PAN-AFRICAN PLAN

Now things are pointing in the right direction, Winter is hoping to see speedier progress with Fastjet’s wider African roll-out. “We found our feet fairly publically but over the next three years – through to the end of 2018 – our objective is to create a significant network, covering Tanzania, Zimbabwe, Zambia, Kenya, South Africa and Uganda. Across those six countries, we’ve set a target to link up to 40 unique destinations.”

Those six countries represent about 210 million people, roughly 20% of the African population, and slightly more in terms of gross domestic product (GDP). Assuming 10% of those 210 million people can afford to fly if the price is low enough, that equates to 21 million people.

“If I could capture just 2.5 million of those as

regular customers – and by that I mean people who fly two round trips a year – that’s 10 million seats. With a \$100 per seat average ticket price, it comes out at a billion dollar turnover. That would fill 34 aircraft. It sounds like a lot, to go from six to 34 aircraft in three years, but logistically it’s quite easy to do and I think we are now at the point where we’ve got enough traction politically to make that happen. Of course, during those three years, there are still a lot of traps and hurdles of get over.”

With Tanzania already well established and the two start-ups in Zimbabwe and Zambia now finding their feet, Fastjet’s efforts in 2016 will be focused on Kenya, South Africa and Uganda.

However, Kenya has already proven a tough nut to crack. Fastjet originally hoped to use the Kenyan air operator’s certificate (AOC) of Fly540, a regional airline that it acquired as its launch platform in Angola, Ghana, Kenya and Tanzania. However, while this worked as the foundation for Fastjet Tanzania, the other operations have proved too difficult to transition. Fly540 Ghana was grounded in May 2014 and sold for \$1 in June 2015, while Fly540 Angola has been grounded for more than 18 months, awaiting sale or closure.

Fly540 Kenya was sold for a

Continued  
on Page 26



CONTINUED FROM PAGE 25

token amount in June 2014 following a bitter legal dispute with Five Forty Aviation CEO Don Smith. “Kenya would have taken far too much money and management time to turn into a strong, reliable base operation that matched up to our standards,” Winter explained.

Fastjet’s alternative plan for Kenya was to form a joint venture with local carrier Jetlink Express, which launched in 2004 and was grounded in 2012. Crucially, Jetlink held rights to serve Kenyan domestic and regional destinations. The two airlines signed a memorandum of understanding (MoU) in January 2013, but they never reached a full agreement and Jetlink Express has not resumed operations.

Plan C for Kenya is to create a new airline. “We decided it was far easier to start with a clean sheet of paper there, so we applied for an air services licence and we will develop an airline within Kenya ourselves,” said Winter.

However, the Kenyan authorities have refused Fastjet bilateral route rights from Tanzania and repeatedly deferred its air service licence application, which was finally granted in October. Fastjet Kenya plans to launch domestic flights in 2016.

■ SOUTH AFRICAN FRUSTRATION

South Africa has also created its fair share of frustrations. In late 2012, Fastjet struck a provisional deal to acquire failed low-cost carrier 1time Airline as its South African launch platform, but Winter said its debts were ultimately “beyond the point where we could save it”.

Instead, Fastjet switched its attention to a partnership with local companies Blockbuster and Federal Air. It was hoping to launch services between Johannesburg and Cape Town in May 2013 but this was pushed back to July 2013 and then ultimately abandoned when Fastjet secured its vital international rights from Tanzania.

Fastjet is now engaged in “a number” of partnership discussions in South Africa, although these talks remain confidential. “There are no applications in the door at the moment but it is a stated objective of ours to have the Fastjet brand operating domestically in South Africa,” Winter said.

Meanwhile, Uganda is looking promising after Fastjet Tanzania secured fifth freedom rights from Entebbe, allowing it to deploy Tanzanian aircraft between Uganda and third-country destinations including Juba, Nairobi, Kigali and Johannesburg. This is particularly significant following the demise of Air Uganda in 2014. “We just haven’t had the management time to concentrate on that but it is very much on the agenda for next year. Uganda is an interesting country because it has quite a big population and is large, but there are only really five airports that will take a reasonable-sized jet aircraft.”

Uganda’s people are well dispersed across the continent, giving them a reason to travel. The landlocked country also has quite an active economy, trading with coastal cities. “I see that as quite an exciting opportunity,” Winter said.



Sign on the road to Lusaka's Kenneth Kaunda International Airport.

Beyond Kenya, South Africa and Uganda, Fastjet remains interested in the Nigerian market. The country is home to 165 million people, making it the seventh most populated country in the world.

In 2013, Fastjet signed a MoU with Abuja-based holding company Red 1 Airways, which was finalising plans to start a low-cost carrier, although it did not have an AOC. These talks also came to nothing.

“We were trying to find a partner in Nigeria. That is still an objective at some point in the future. It’s not high on our priority list, but it’s there. That has fallen by the wayside for the moment,” said Winter.

■ FINANCIAL BALANCING ACT

Expansion costs money and Fastjet has already burned through a lot of cash. However, it went through a successful fund-raising exercise in the spring of 2015, raising \$74 million in fresh equity from investors like pension fund M&G, emerging markets specialist Hexam and JO HAMBRO.

“We’ve got plenty of cash at the moment. Our market capitalisation at the time [of the fund raising] was probably \$20 million, so it was a massive percentage increase. These blue-chip firms clearly have great confidence in what we’re trying to do. We’re not trying to raise money at the moment – we are funded, we’ve got that cash – and that’s partly being used as working capital and also partly being used to fund aircraft acquisitions.”

With this injection in the bag, Fastjet has no plans to dilute its stakes in its existing airlines. “There will be the opportunity, as we go forward, of introducing more countries to bring in more investors but clearly we’d rather do that when the companies are bigger, more profitable and more valuable.”

In the first half of 2015, Fastjet nearly halved

its interim losses to \$10.1 million, but it has warned that the second half will be worse than forecast due to slower than anticipated route development and African currency weakness. “The net effect of the delays in the opening of new routes has resulted in all of the start-up costs for Zimbabwe and Zambia, plus the costs of doubling the Fastjet fleet, being incurred in 2015, with little of the corresponding income now expected to flow before 2016,” Winter said.

The lack of intra-African liberalisation has meant Fastjet has to create a new airline in every market, or acquire existing operators, to grow. While things are moving in the right direction, with liberalisation among 13 states anticipated by 2017, Winter is not convinced the theory will be turned into practice.

“The reality on the ground is that, in most of these areas, there is a huge amount of protectionism. Whatever anybody says about liberalisation, they don’t put it into practice,” he said. “It will happen one day. I’m just not sure that anybody would put a timeline on it. It’s a great shame, but it’s got to happen eventually.”



Winter is a great advocate of liberalisation and will do everything he can to help move it forward, as he believes it is a big hindrance to African growth.

“None of these countries have loads of spare money – they don’t have the schools, hospitals, roads and infrastructure they need – so why would they spend that money on an airline? It just doesn’t make sense. I’ve had discussions where ministers have said they need a national airline to support tourism. If they spend a fraction of that money on a really good tourism marketing campaign, then use a big multi-national carrier to bring the customers in, that makes far more sense than trying to create your own airline.”

However, what doesn’t kill you makes you stronger, and all the obstacles and hold-ups that Fastjet has faced have created a determined inner strength within the group. “We now have three years’ experience of dealing with regulators and politicians; we’re getting to really understand who the decision-makers are. When we started, we thought we’d have it all locked up by now, but we are making progress.”

Towards the end of the interview, Winter reminisced back to his days as chief operating officer with British Airways’ budget carrier, Go!, which grew to eight aircraft within its first year of operations. Timelines were much clearer and easier to predict.

“You could actually see what was happening and judge things, but obviously it’s earlier days in terms of the development of aviation bureaucracy in Africa; things will take the time they take,” he concluded. “You now have a company here that has that knowledge and I think that it will stand us in huge stead to take it forward.”





AVIATION  
STAKEHOLDERS  
CONVENTION



# AVIATION STAKEHOLDERS CONVENTION

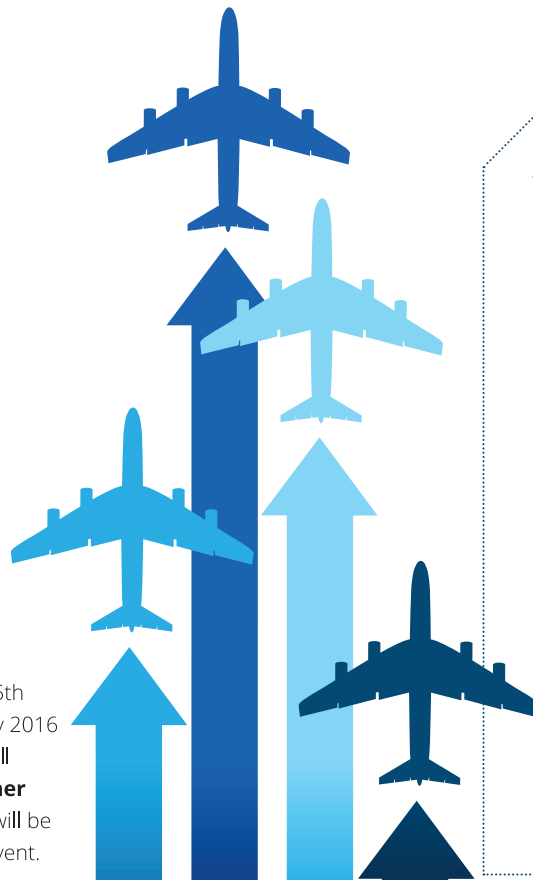
AFRAA is pleased to announce that it will hold its 5th Aviation Stakeholders Convention from 08-10 May 2016 at the Serena Kigali Hotel in Rwanda. The event will be convened under the theme: **“Winning Together through Innovation and Collaboration”**, and will be cohosted by RwandAir, the official carrier of the event.

The Aviation Stakeholders Convention (ASC) is an initiative of AFRAA to bring together operators and service providers with the view to foster dialogue, build sustainable networks in supply chain management, create a competitive environment for business and improve the aviation support base in the continent. The main objective of this event is to bring together the suppliers of the whole range of aviation products and services and the potential customers of these products and services at one venue annually.

Now in its fifth year, the Convention provides outstanding profile building, networking, and direct sales opportunities for suppliers of equipment, goods and services who are interested in engaging with top corporate buyers in airlines, airports, civil aviation authorities, Air Navigation Service Providers (ANSPs) and training establishments. Delegates at this convention will benefit from innovative strategies, proven solutions, best practices and information on a win-win supplier-customer relationship.

## WHO SHOULD ATTEND?

The Convention is aimed at attracting Chairmen/CEOs, top executives and managers from airlines, CAAs, Airports and other service providers in the aviation industry



In addition the Convention will attract the following industry suppliers:

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- Engine manufacturers
- Aircraft/engine leasing companies
- ICT solution providers
- Airport handling equipment suppliers
- Air traffic navigation product suppliers
- Metrological product suppliers
- Security equipment suppliers
- Financial institutions
- Aviation training institutions – pilot, engineer and general training
- Aviation recruitment agencies
- Air Navigation Service Providers (ANSPs)
- Consultants and academics
- Airports handling and catering companies
- Cargo Operators and cargo equipment providers
- E-Commerce and e-payment Solution providers
- Investors and financiers
- IT Services/Solutions providers
- Travel & Hospitality

## SCHEDULED APPOINTMENTS

There will be scheduled one-to-one minute meeting sessions to meet with representatives of participating airlines and airports.

## SPONSORSHIP AND EXHIBITION OPPORTUNITIES

Besides the presentations, panel discussions and master classes by renowned industry professionals, there will be opportunities for sponsoring events at the Convention and also for exhibition. With the profile of anticipated participants, sponsoring or exhibiting at this Convention will provide your company brand visibility and an opportunity to network and do business with the over 300 African Aviation top decision makers and leaders.

**Mark your diaries and endeavour to be part of this event in 2016.**

For more information, please contact the AFRAA Secretariat

**African Airlines Association (AFRAA)**

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*There has been a lot of talk about the challenges facing African aviation over the years – but rarely solutions. Now the team from OAG, the specialist in aviation information and analytical services, has put forward its proposal to get the industry to meet its potential.*

# THE BIG FIVE

## DISRUPTIVE STRATEGIES FOR AFRICAN AVIATION

**A**frican aviation punches below its weight. Although 15% of the world's population resides on the African continent, just 3% of all departing scheduled airline seats leave from there.

Furthermore, despite higher economic growth in sub-Saharan Africa than among Organisation for Economic Co-operation and Development (OECD) member countries – 4.2% vs 1.7% in 2014 – airline seats to and from Africa have only grown by an average of 2% annually since 2011.

For all the talk among African leaders of encouraging competition, there is still resistance to opening aviation markets. States have protected their home markets from other African carriers but the threat is now perceived as being greater from non-African airlines.

In September 2015, Emirates will operate scheduled services to 20 destinations in 17 African countries from its Dubai hub.

Similarly, Turkish Airlines now operates to 29 destinations in 19 African countries from its Istanbul hub, though total capacity is just over half of that of Emirates due to fleet differences. Emirates averages 367 seats per aircraft, while Turkish, with a more varied fleet, has an average of 178.

For some of Africa's thinner routes, the Turkish model appears a better fit, although Emirates' network east of Dubai, and the latent power of Flydubai, mean it is likely to be more of a threat in the long term than Turkish Airlines.

It is easy to understand the threat, perceived or otherwise. After all, Emirates is five times larger than Ethiopian Airlines or South African Airways, based on seat capacity. However, the reality is that the share of airline seats to, from and within Africa that are operated by non-African

carriers has remained fairly static at between 29% and 32% in each of the past 15 years.

For a continent of 54 countries, a population of 1.1 billion and air traffic growth projections of 4.7% per year by the International Air Transport Association (IATA), Africa has only one airport, Johannesburg, among the world's top 100 airports in September 2015, as measured by departing seats.

It ranks 85th, due in part to the size of the South African domestic market, which is the largest in Africa.

There are only two African airlines ranked among the world's top 100 airlines by the same measure, and they are South African Airways and Ethiopian Airlines, ranked 87th and 89th, respectively. Total seats operated by all African airlines together are fewer than the number flying into London airports in September 2015.

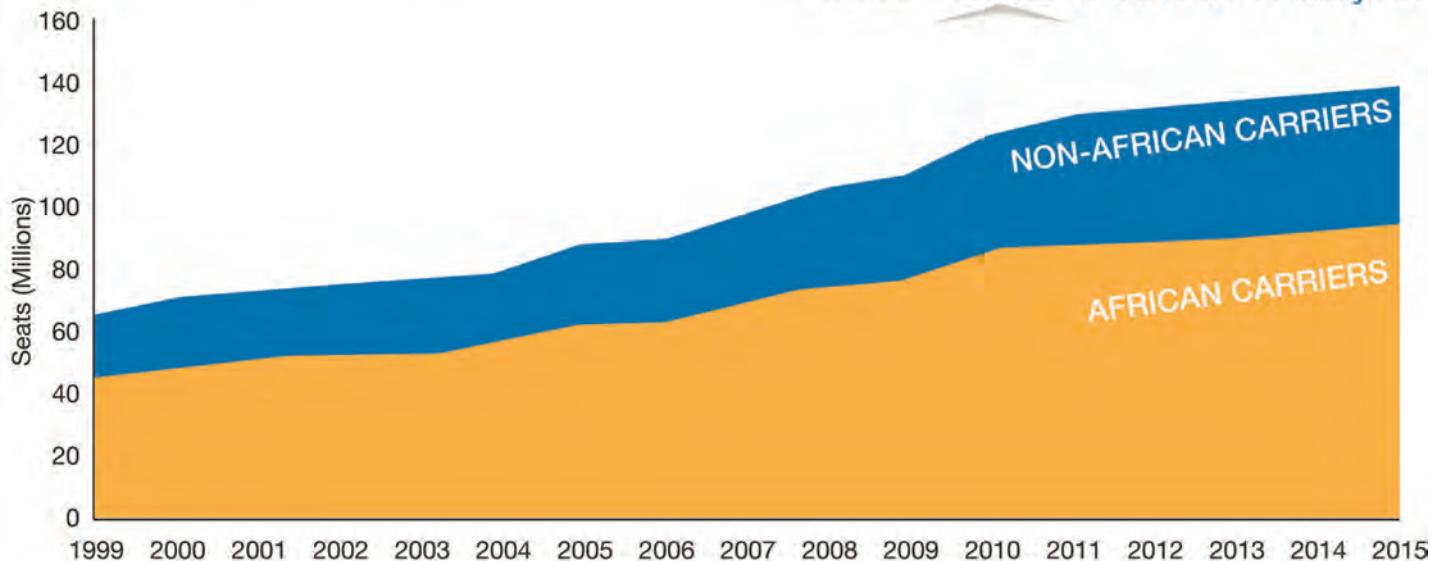
The reasons for underperformance among African carriers are well documented – the slow pace of liberalisation, protection of national companies, high taxes and fees, and even safety issues. The result has been poor development of intra-regional air services, high airfares and citizens and businesses that are not afforded the opportunities that air travel could bring.

So how can African aviation fulfil its potential?

In this report, we suggest it would benefit from a sense of positive disruption and, as a result of that, we propose our own 'Big Five' disruptive strategies, which could be undertaken by individual airlines, airports and countries, giving Africa the potential to reshape its aviation industry.

## GROWTH OF CAPACITY TO/FROM AFRICA

Source: OAG Schedules Analyser



## 1

**Could South African Airways do 'an Air New Zealand'?**

The South African aviation market is the largest in Africa and South African Airways (SAA) is Africa's largest carrier, with 1% more capacity than EgyptAir and Ethiopian Airlines.

Airways (SAA) is Africa's largest carrier, with 1% more capacity than EgyptAir and Ethiopian Airlines.

SAA grew capacity by 3% in 2014 but, the year before, capacity declined by 1%. In September 2015 its capacity is 2.4% lower than September 2014, while the South African market as a whole has grown by 9.9%.

The airline has been slowly reshaping its route network to focus more on regional flying within southern Africa as well as the rest of Africa. Its latest turnaround strategy is focused on optimising the route network with loss-making long-haul routes to Beijing and Mumbai getting cut, while new daily services to Abu Dhabi have been introduced, allowing it to serve India through its strategic partnership with Etihad.

Mango, SAA's low-cost carrier (LCC) subsidiary, has been growing strongly with seats up 18% this September versus last. Collectively they operate more than 50% of domestic capacity in South Africa and have done so for several years.

Should SAA be looking at a more radical strategic re-think? In markets where LCC presence is increasing, the continuation of a full-service profitable product offering is difficult. Perhaps for SAA, Mango represents the alternative long-term option for domestic and regional markets?

A radical and disrupting move might be to take a lesson from fellow Star Alliance member, Air

New Zealand. Like SAA, New Zealand is located at the geographical edge of a region and had a chequered financial performance, eventually being renationalised as part of a government rescue plan in 2001.

In contrast to SAA, however, Air New Zealand has been celebrating three consecutive years of earnings growth and a rising share price following the launch of its 'seats to suit' product a few years ago; an innovative mechanism designed to enable it to compete with both legacy carriers and LCCs.

Air New Zealand could have chosen to face the competitive landscape by taking smaller incremental steps but its willingness to take a radical and innovative one at the right time has paid off.

So what if South African Airways were to develop its own equivalent product, allowing the airline to cut costs while maintaining a market-appropriate product? Could Mango be part of the move? It seems it is time for SAA to let go of the past as its history is preventing its future.

## 2

**Air Africa? Branding future for Ethiopian Airlines?**

Ethiopian is probably the most successful airline in Africa right now. In contrast to SAA, it has been growing its share of African aviation. It boasts 7.3% of African capacity compared to 4.4%

just four years earlier. Its capacity has grown in strong double-digits for several years and the airline is profitable.

It has recognised its market opportunity as a gateway for air services between China and

Africa, creating an effective hub at Addis Ababa Airport, which attracts 55% of the nonstop capacity between Africa and China.

A recent OAG report identified that China is Africa's largest trading partner and services between Africa and north east Asia have more than doubled since 2010. Ethiopian Airlines has been instrumental in that growth, with services from Africa to Shanghai, Beijing, Guangzhou and Hong Kong.

Airports such as Panama City and Lima in Latin America similarly recognised their potential based on an advantageous geographic position for certain traffic flows. A comparison of the capacity growth at Lima (LIM), Panama City (PTY) and Addis Ababa (ADD) since 2000 shows that the trajectories are not dissimilar. In fact, given the lower level of air services at Addis Ababa in 2000, the relative performance at ADD has been stronger.

While Addis Ababa is clearly well placed geographically to connect travellers from China and other parts of Asia to Africa, could Ethiopian be setting its sights higher to become a pan-African brand?

This is not a novel concept – in the United States, the major carriers all have a west, east, central and southern hub. Could Ethiopian replicate that sort of approach in Africa?

Local ownership rules have always been a blocking tactic for ambitious expansive airlines. However, carriers such as AirAsia have disrupted this tradition by creating joint ventures (JVs) based in different countries. This is enabling the airline to create a virtual network of hubs.

There is some evidence emerging that Ethiopian could

Continued  
on Page 31



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**CONTINUED FROM PAGE 29**

have its sights on a similar regional expansion using JVs to create a virtual network.

It already has a 40% stake in Togo-based Asky, which uses some aircraft owned by Ethiopian. Ethiopian also has a 49% stake in Malawian Airlines, which was launched in January 2014 as a JV with the Malawian Government, with Ethiopian owning the aircraft there too.

Other options that have been discussed include a share in RwandAir and JVs with two African governments.

It may be that some of these JVs are simply pragmatic solutions to expanding into new markets and alternative vehicles for protecting national interests, but were all these JVs to prove successful, it would give Ethiopian a strong presence across eastern, central and southern Africa.

To be truly disruptive, could Ethiopian create a single brand identity for its network of JVs? Could the Ethiopian of today be the 'AirAfrica' of tomorrow?

**3** **Connecting Africa's biggest cities**  
One of the reasons that OAG recognises the potential of Africa is that both the economy and the population is growing strongly, even if the current level of economic output is, on average, relatively low. However, many of the air services reflect the economic ties of previous times, with better connections to western European capital cities than other parts of the continent.

What if airlines within Africa refocused on connecting the major cities on the continent?

Each of the 10 largest urban conurbations has a population of around five million or more. If a nonstop air service were available between each one of them, there would be 45 routes connecting these cities.

However, only 22 of the 45 possible routes have nonstop air service today.

That leaves 23 routes between these cities

**EMIRATES ROUTES TO AFRICA**



**ROUTE NETWORKS FOR ETHIOPIAN AIRLINES, ASKY, MALAWIAN AIRLINES AND RWANDAIR (SEPTEMBER 2015)**

Source: **OAG Schedules Analyser** **OAG Mapper**



unserved, the smallest of which, Abidjan, has a population of nearly five million but only has scheduled services to two of the other top 10 urban areas.

OAG Traffic Analyser shows that the actual volume of passengers using one-stop services to travel between the top ten cities in Africa without nonstop air service is small, numbering around 35,000 in the 12 months to April 2015. In addition, 14% of these were connecting at an airport outside Africa.

However, whereas routes are usually operated where demand is evident, in this instance might the lack of air service be holding back economic development across the continent?

**4** **Open skies for Nigeria?**  
The need for a hub airport to serve west Africa has been around for some years but has yet to materialise. Southern Africa has an award-winning hub at Johannesburg, especially

**TURKISH AIRLINES ROUTES TO AFRICA**



following the refurbishments undertaken ahead of the 2010 FIFA World Cup.

Eastern Africa has a hub airport emerging at Addis Ababa, which will be boosted by plans for a new airport able to handle as many passengers as London Heathrow.

While the region has a reputation for poor transport links, there is investment taking place in west African airport infrastructure. Burkina Faso is building a brand new airport 40km northeast of Ouagadougou, and Sierra Leone has also announced construction of a new airport.

A few years ago, a new 'green field' site for an airport was proposed north of Lagos but it has not materialised, and a few months ago it appeared that proposals for a new airport at Lekki, just outside Lagos, could finally become reality.

Ghana is moving ahead with public-private partnerships, such as the one funding investment at Tamale, and another at Kotaka, Accra's international airport.

Indeed, Accra has been mentioned as a potential hub airport for west Africa with possible investment from China.

Consequently, what would be gained if such a hub were created? In September there were 2.8 million seats arriving at central and western African airports, up 13% from September 2010. Nearly two in every five seats – just over a million seats – were on a domestic route with Nigeria and Ghana accounting for the majority of these (573,000 and 104,000, respectively).

The market for international air services within the region makes up 24% of capacity but is only slightly more than to the whole of the rest of Africa.

Nigeria is an obvious choice for a west African hub as it is the most populous country in Africa and home to 170 million people.

The population is set to continue growing and the economy has seen

Continued  
on Page 33



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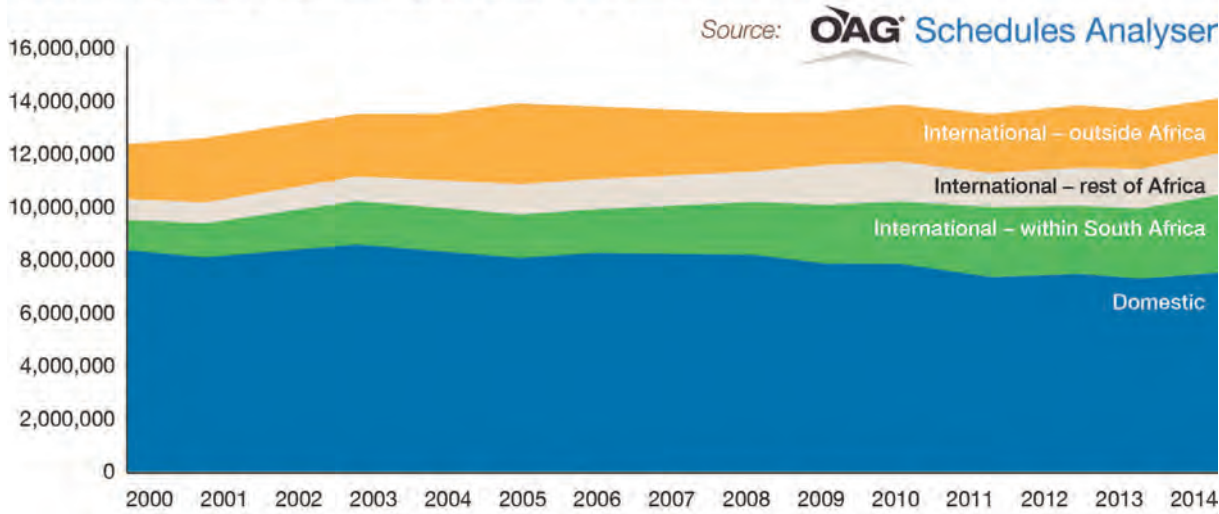
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**SOUTH AFRICAN AIRWAYS CAPACITY BY MARKET REGION**



CONTINUED FROM PAGE 31

average real gross domestic product (GDP) grow at 6.3% between 2006 and 2014, according to the African Development Bank.

Lagos is the largest urban area on the continent with a population of close to 17 million but the airport itself is congested and without room to grow.

Obviously, the need for the right infrastructure is important but it is only part of the task. Airlines need to be willing to use the hub airport.

One of the policy decisions made by governments elsewhere, which have helped hubs such as Amsterdam Schiphol Airport and Singapore International Airport to develop and thrive, has been an open approach to air services.

Nigeria has more than 70 air service agreements but only 21 of these are used and only five reciprocated with Nigerian carriers able to match services provided by foreign carriers.

What if the Nigerian Government adopted a more open approach to airlines, allowing any carrier to operate as long as it met safety requirements?

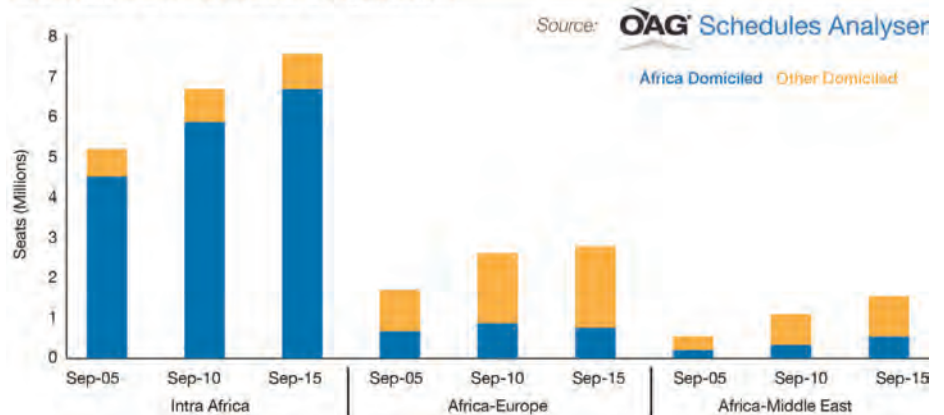
Maybe this would be the incentive needed for investors to back a hub airport and for foreign airlines to take an active stake in a Nigerian airline.

Nigeria has not had a nationally-owned carrier since the liquidation of Nigeria Airlines in 2003 and Lagos-based Arik Air is now the largest. The Nigerian Government has suggested it is looking to create Nigeria One, a new Nigerian flag-carrier and could partner with other carriers, such as Ethiopian Airlines.

However, is a flag-carrier really what is needed to make a hub airport work?

An operating environment, which positively encouraged new air services and did not undermine existing privately-owned airlines, through government support for others, could be just the disruptive strategy needed to get regional aviation – and the regional economy – shifting up a gear.

**CAPACITY BY DOMICILE OF CARRIER**



**5**

**Time for serious foreign equity in Africa's airlines?**

For an international industry, one of the strangely defining characteristics of aviation has been the tendency of national governments to protect airlines and traffic rights.

The web of bilateral air

service agreements and airline ownership rules that maintain this has been disrupted in recent years by airline owners, who have taken equity stakes in airlines based in other countries, and created JVs, which are 'locally owned'.

There are numerous examples now. Etihad has equity stakes in Alitalia, Jet Airways, Airberlin, Niki, Air Serbia and Air Seychelles. It also has a partnership with SAA that extends beyond just code-sharing but stops short of an equity stake.

In Latin America, Avianca Holdings now owns a series of Avianca-branded subsidiaries across the continent. In Europe IAG is building a

network, which includes British Airways, Iberia and Vueling.

Could the next disruptive strategy affecting African aviation be from foreign ownership and equity stakes? There are several that seem plausible.

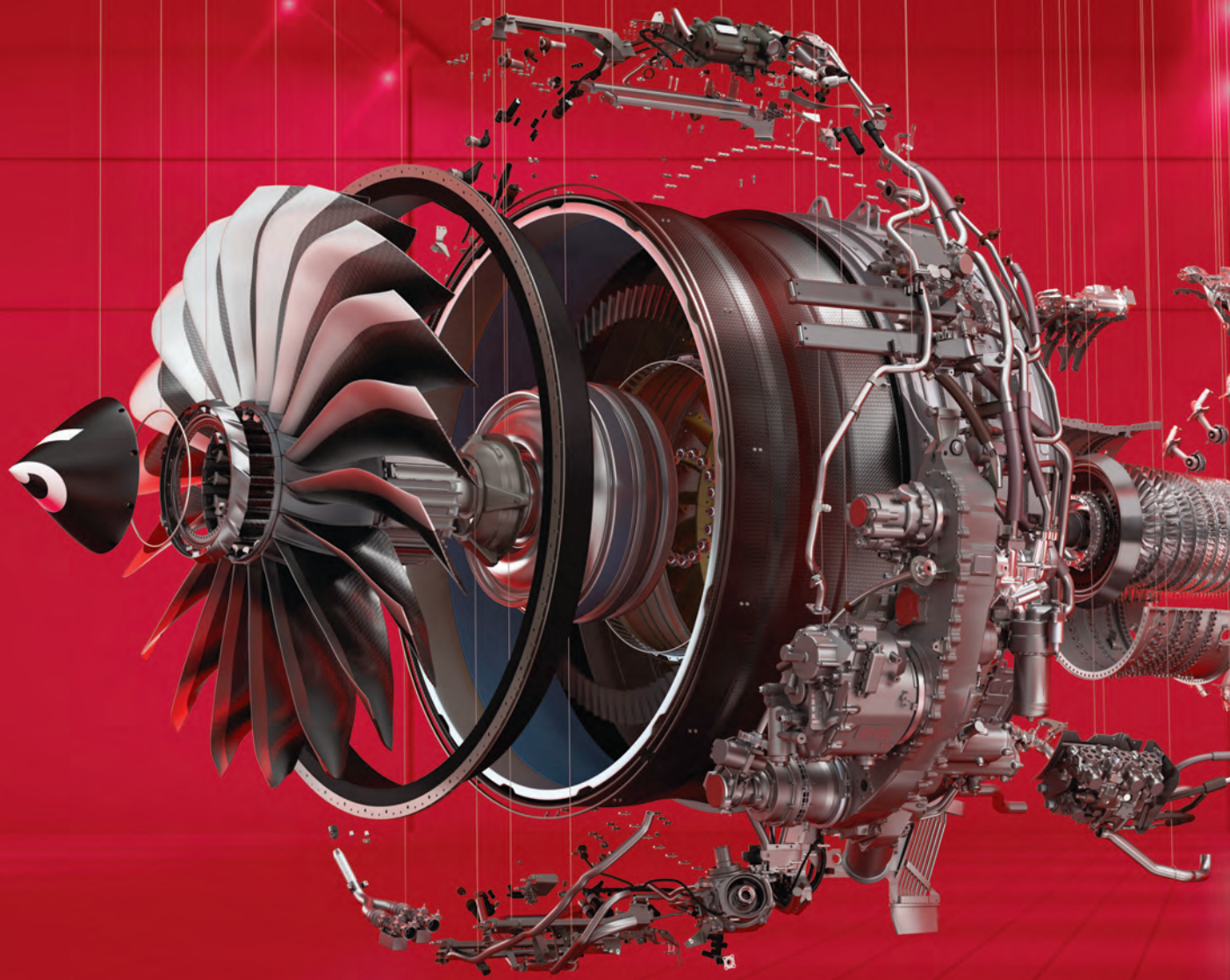
What if IAG were to tempt SAA away from Star Alliance to Oneworld, changing the nature of the SAA long-haul network in the process?

Could Etihad add an African partner to its network of equity associates, which increasingly looks like a global alliance? An influx of equity might be good for Kenya Airways just now but partnership with Ethiopian would provide connectivity across Africa from Addis Ababa.

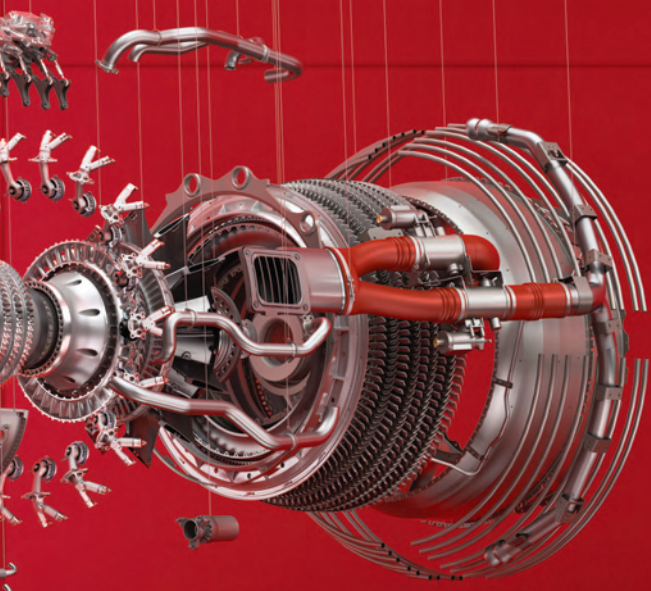
Are there Chinese airlines that are looking for a stake in an African carrier?

Hainan Airlines recently acquired Swissport, demonstrating that it is in expansion mode. Hainan Airlines has been public about wanting direct air services to Africa and recently announced an equity stake in British Airways franchise and full-service carrier, Comair, in South Africa, as well as the South African LCC Kulula.









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*A young pilot and entrepreneur established National Airways, one of the fledgling private airlines in Ethiopia, in 2007. Nine years on, Kaleyesus Bekele talks to that man – captain Abera Lemi – about his company’s progress.*

# THE SPIRIT OF A RISING NATIONAL

**W**hile Abera Lemi was serving with Ethiopian Airlines, he started thinking of establishing a private airline.

“I studied at college in Kenya and Australia and that gave me the opportunity to see how private airlines operate in those countries,” he said. “I have seen how general aviation is developed in other countries. When I returned to Ethiopia I saw a big opportunity. It is a big country but there are few private airlines. So I started thinking of establishing my own airline.”

To realise his dream, in 2007 Lemi resigned from Ethiopian Airlines and registered his company under the name Air Ethiopia, which became operational in 2008 with one Beech 1900C aircraft. However, the name Air Ethiopia raised controversy with Ethiopian Airlines and, after a long discussion with the management of Ethiopian Airlines, Lemi changed the name to Addis Airline. Even this didn’t satisfy the Ethiopian Civil Aviation Authority and Lemi was told to change the name again.

Finally he came up with a new name, National Airways, with a logo that says ‘The Spirit of a Rising Nation.’



“Ethiopia is a big country with a population of 90 million. It is registering a fast economic growth so I saw a big opportunity, which is why I selected this logo,” said Lemi.

At the beginning, National Airways used to provide charter flight and air ambulance services. However, back in 2010, Lemi suffered a sad experience. There was no air ambulance aircraft in Ethiopia so, when there was a need for medical evacuation, private airlines providing charter flight services used regular passenger aircraft with a stretcher to transport a patient in critical condition.

Lemi recalls that he once received a call from a tour company to transport a patient from the southern part of Ethiopia to the capital, Addis Ababa. “There was a married couple visiting Ethiopia and the man was suddenly taken ill. We flew with a Cessna Caravan to the remote town



**Abera Lemi: “I want to revamp the air ambulance service.”**

of Jinka to rescue him. The aircraft was not equipped to provide emergency medical care. While we were heading to Addis Ababa the patient passed away. We had a doctor but there was not the required level of medical equipment. The man’s wife cried bitterly. She took out his wedding ring and put it on her finger. It was a very sad incident and we were all emotional. That was when I decided to establish an air ambulance division in our airline.”

National Airways forged a partnership with the South African Red Cross Society Air Mercy Service (AMS) and started providing an air ambulance service. The company had two leased Pilatus PC-12s and a Eurocopter EC-130-B4

helicopter equipped with stretchers, oxygen and all other required medical equipment. “We sent doctors to South Africa and trained them on the medical evacuation service,” said Lemi.

At that time the biggest problem was low demand for an air ambulance service. “The challenge is that we incur cost. We have to pay the lease fees for the fixed-wing and rotor aircraft every month. We tried to promote the service but there was little demand. We saved many lives but, from financial point of view, we could not succeed. We could not keep the aircraft on the tarmac and wait for injured people. We were losing money fast so we returned the aircraft.

“We still do provide the service, but not with internationally-recognised standards. The Air ambulance service is something that I do with a passion. I want to revamp the service by acquiring modern suitable aircraft that meet international aviation regulation. However, for the time being we are focusing on passenger flights.”

Today, National Airways provides charter flight services for VIPs, international aid organisations, construction companies, and mining and oil exploration firms. Currently, the company operates two Beech 1900D and one Fokker 50 aircraft.

National Airways wants to add another aircraft to its fleet soon. “It could be a Dash 8 or Fokker 50. We have not yet decided,” said Lemi.

National Airways provides charter flight services in Ethiopia and to neighbouring countries including Djibouti, South Sudan, Sudan, Kenya, Somaliland and Somalia.

National's fleet includes two PC-12s (left) and two 1900Ds (main picture).



Currently, there is no private airline that provides scheduled domestic flight services. Ethiopian Airlines is the only carrier that operates domestic services.

In 2009 National Airways briefly operated scheduled flights to regional towns and Hargeisa, Somaliland, but could not continue the service as it was hampered by the seat limitations imposed by the Ethiopian Civil Aviation Authority. Last year another private airline, TNA, also tried to operate domestic flights but suspended the operation.



The Ethiopian domestic aviation market is not liberalised. Foreign airlines cannot operate domestic flight services. Foreign investors cannot invest on local private airlines. The sector is reserved only for Ethiopian nationals.

Local airlines could not operate an aircraft with more than 20 seats. “We could not be profitable with 20-seater aircraft. So we were compelled to interrupt the service,” explained Lemi.

After long arguments with private airlines in 2013, the Ethiopian Civil Aviation Authority and the Ministry of Transport pushed the seat limitation to 50 seats.

There are 16 registered private airlines in Ethiopia but only six of them are operational. The private airlines complain that the seat limitation is imposed by the government to protect the state-owned Ethiopian Airlines, which they say is unfair.

“There is no way that we can be a threat to Ethiopian Airlines,” said Lemi. “We are too small to compete with Ethiopian. We are unfairly treated,” he lamented.

National Airways does, however, plan to provide scheduled domestic and regional flight services. In October the airline finalised preparations to begin a scheduled flight service between Addis Ababa and Gerewe in Puntland with a 19-seater Beech 1900D aircraft. It also has a plan to start scheduled flights to Somaliland and South Sudan.

“There is a huge potential in the Ethiopian domestic market as well as in the region. We want to serve both the domestic and regional market. There is an economic boom in Ethiopia,” said Lemi. “There are massive infrastructure development projects in every part of the country, mining and oil exploration projects are mushrooming. Addis Ababa is the political capital of Africa. As the Ethiopian economy is growing steadily, the demand for air travel is increasing. So the potential is immense.”

However, Lemi describes the situation of the general aviation in Ethiopia as over-regulated with little support. “The problem is that general aviation is considered a luxury. But it is not a luxury it is a necessity. It could have a great contribution to the development of tourism and investment.”

Director general of the Ethiopian Civil Aviation Authority, colonel Wossenyeleh Hunegnaw, said the authority has drafted a national air transport policy and added that the Ministry of Transport had reviewed the draft

policy. “We will deliberate with stakeholders on the draft policy and it will be endorsed. The air transport policy will address all the concerns of the private airlines, including the seat limitation,” he said.

Lemi said that if the policy is endorsed, National Airways has a big expansion plan. “We will commence scheduled domestic and regional flight services once the air transport policy is implemented. I want to make National Airways a second national carrier. We will grow big once the air transport policy is put in place.”



The fact that the domestic aviation market is closed for foreign companies does not seem to worry Lemi. “A government may protect local airlines. I have no problem with that. But the local airlines established by local professionals and business people should be supported and encouraged. The seat limitation should be removed. Our relationship with the national carrier is not healthy – that also should be averted. The Ethiopian Airports Enterprise should treat us equally and fairly.”

In 2012 National Airways established the National Aviation College, which trains professionals in various disciplines including cabin crew, airline customer service, airport operation, airline ticketing and reservation.

In addition to the existing courses, the college has finalised its preparation to start aeronautical and aerospace engineering and piloting courses combined with a BSc.



*Kenya Airways was pushed to the brink last year when it posted the biggest ever loss in the country's history. Chief executive Mbuvi Ngunze discusses the recovery effort with Martin Rivers.*

# NGUNZE BALANCING THE BUCK AT KQ...

**A**fter several months in the doghouse, management at Kenya Airways (KQ) has bounced back from their worst-ever financial performance by announcing an urgent restructuring plan.

The ailing flag-carrier now aims to restore profitability under an 18-month turnaround strategy developed by consultants McKinsey & Company.

Many analysts are reserving judgement on the plan until further details are disclosed, but chief executive Mbuvi Ngunze promises that a slew of measures will help reverse last year's devastating 25.7 billion shilling (\$254 million) loss.

Ostensibly turning his back on 'project Mawingu', the 10-year growth strategy launched in 2011, Ngunze is pursuing an urgent overhaul of KQ's finances in a bid to raise up to \$346 million. Some \$200 million of that will be generated from unspecified cost-cutting measures – job losses are widely expected – with the remainder coming from the sale of four Boeing 777-200ERs and other assets.



The flag-carrier also plans to convert \$250 million of short-term debt into longer-term financing, while abandoning its fuel hedging policy after locking itself out of the recent downturn in oil prices.

Ngunze was, undoubtedly, thrown into the deep end when he took the helm in November 2014, replacing long-standing boss Titus Naikuni. "There's nothing that prepares you for being the CEO," said the bespectacled airline chief. "The buck stops with you. It's definitely a challenging job."

Within months of his appointment, the new boss was hauled before a Senate Select Committee to explain the flag-carrier's disastrous 2014/15 financial result. Batting away allegations of corruption and criminal negligence, Ngunze was forced to defend KQ's ambitious fleet expansion and its seemingly under-performing joint venture with Air France-

**"The buck stops with you. It's definitely a challenging job."**

**MBUVI NGUNZE**

KLM. Several prominent voices in Parliament would not be swayed and called on Nairobi to withhold bailout funds.

Ultimately, however, the Government sided with its 39-year old flag-carrier, rubber-stamping a \$40 million loan to restore liquidity. The African Export-Import Bank also provided a \$200 million bridging loan, giving KQ "breathing space" to finalise its turnaround plan. Half of the Afreximbank funds have now been received.

Asked about the root cause of the airline's financial difficulties, Ngunze said rising violence by Somalia-based terror group Al Shabaab has had a "direct impact" on tourism flows to Kenya.

Al Shabaab's most high-profile attack to date – the September 2013 Westgate Shopping Mall atrocity in Nairobi – claimed 67 lives, including citizens of the UK, Canada, France, the Netherlands and South Korea. Since then, the group has staged numerous assaults near the border with Somalia and along Kenya's eastern coast, primarily targeting non-Muslim villagers. After the UK Government issued a travel advisory about the threat, traffic between London and Mombasa fell 40%.

"There has been, definitely, over time, a strong improvement in [the security situation in] Somalia... and what we see is Al Shabaab shifting their focus to soft targets," Ngunze said, highlighting the April 2015 attack on a Kenyan university college in the border town of Garissa, which killed 147.

"Business traffic into Nairobi is more resilient but, definitely, the tourism traffic which requires [travel agency] insurance has taken a hit."

The upsurge in violence came at a particularly awkward time for KQ, which has inducted 15 aircraft since the start of 2014: nine Boeing 787-8 Dreamliners, two 777-300ERs and four 737-800s. While some of the new wide-bodies were replacements for older 767s, capacity still rose 8.6% during fiscal 2014/2015.

Ngunze admits that the management team was wrong-footed by the slump in tourism but he also believes the situation has been exacerbated by sensationalist media reports.

"We are not saying that there are no risks. Terrorism risk is everywhere in the world today. But the travel advisories [issued by the British and other governments] are really focused on the coastal regions – places like Mombasa and Lamu – while the rest of the country is open for business," he said. "That's the big narrative that gets missed. So much attention is focused on a small part of the country."



"The narrative can be driven... if we allow the confines of terrorism to control us, we will be succumbing to it. Countries like Kenya and others that face a terrorist threat require support, not distancing."

Behind the headlines there is, indeed, some cause for optimism in the Kenyan market. Jambojet, the low-cost subsidiary launched by KQ in April 2014, achieved a profit of 57 million shillings (\$558,200) in the six months to September 2015.

That marked a dramatic reversal of the 237 million shilling (\$2.3m) loss it recorded during its first six months of operations, validating management's decision to transfer a portion of domestic traffic to the price-competitive, no-frills offshoot.

"Jambojet is really about growing the pie in Kenya on the one hand, and secondly also stimulating new flows of traffic," Ngunze said,



**Mbuvi Ngunze:** "Let's focus on growing the Kenyan market and make sure that Jambojet is reliable domestically and really forms a reputation."



**A fleet of 15 Embraer E190s makes for regular, efficient services.**

echoing the strategy adopted by South African Airways with its low-cost brand Mango.

He praised Jambojet for growing the domestic market by 25% "in a declining international environment". The subsidiary presently serves six domestic routes from Nairobi with three 737-300s and two Bombardier Dash 8 Q400s – the latter being leased on a temporary basis to deepen penetration of thin routes and gain access to airports with short runways.

"We are using the Q400s as a model to see whether there is an opportunity to bring in a different fleet type [alongside the 737s]," Ngunze affirmed, adding that ATRs are also being evaluated for thinner routes. "We've floated an expression of interest to determine what could be the possibilities, but we haven't decided what that aircraft will be."

The mainline unit, meanwhile, deploys 15 Embraer E190s for low-capacity, high-frequency services from Nairobi to three domestic airports and about two dozen foreign points.

Asked when Jambojet will also spread its wings beyond Kenya's borders – potentially encroaching on some of its parent's high-yielding regional markets – Ngunze was reluctant to give a timeframe. "First let's focus on growing the Kenyan market and make sure that Jambojet is reliable domestically and really forms a reputation," he insisted. "If you want to do something, do it well. There is no need to want to be all things to all men."

That policy may have been imposed externally by the Government. In November, the Kenya Civil Aviation Authority declined to grant either Jambojet or Fastjet – a low-cost rival that has

long sought to enter the Kenyan market – international licences.

Whatever the future holds for Jambojet, stabilising the 40-aircraft mainline operation is the clear priority. Heavy losses continued in the first half of 2015/16, with KQ haemorrhaging another 11.9 billion shillings (\$116 million).

While management blamed that result on financing costs – the figure actually represented a 79% improvement on an operating basis – time is nonetheless running out. The flag-carrier's negative equity position now stands at 33.9 billion shillings (\$33.2 million), heaping pressure on management to generate positive returns under the restructuring plan. Failure to do so will almost certainly provoke a new gauntlet of fire in Parliament; one that Ngunze may not be able to placate.



It's small wonder, then, that talk of rapid expansion is now firmly off the table. Project Mawingu's vision of 119 aircraft by 2021 is dead and buried – replaced with a more cautious focus on natural growth.

"Today, we are in a tight liquidity environment, so clearly we must do the sensible thing to settle [into our existing] capacity," the CEO concluded. "But the next step will be [to] make sure that we are also growing responsibly.

"In Europe, the thing is just to [increase the density on] our [existing] hubs... London, Amsterdam, Paris. In Asia, China Southern are now flying into Nairobi three times a week and we will look to extend cooperation with them... In America, it's not dependent on us [when KQ launches flights]. It's based on work that has to be done from a regulatory point of view. The Government is going through the [FAA's IASA] Category 1 process."

Frequency hikes, codeshare deals and safety audits may sound meagre for an airline that, until recently, planned to double in size by the end of the decade. But, having survived 2015 by the skin of its teeth, this is the new reality for Kenya's flag-carrier.



# Libyan winging ahead...until Turkey plays its visa card

*With the complexities of a civil war, plus unexpected visa restrictions, it is remarkable that Libyan Wings has managed to get airborne.*

**Alan Dron**  
*reports.*

**L**ibyan Wings' CEO Edgardo Badiali and his team thought they had overcome the final challenge; the first flight of their new airline had taken place, and the aircraft had returned from Istanbul to Mitiga, the second airport of Libya's capital Tripoli. Then Turkey imposed mandatory visas for all Libyan citizens.

"We had to stop the service for a while to allow people to get visas and they had to go to Misrata [almost 200km away] to do so, because there's no [Turkish] embassy in Tripoli," said Badiali. The service restarted in early November with a weekly flight.

The visa problem was just the latest in a series of challenges. Two leased Airbus A319-100s had been parked up in Malta since late December 2014, unable to make the short hop south because of continuing unrest in Libya.

As trouble continued Badiali, chairman Wisam Al Masri and other staff had to wait patiently to be able to launch the airline. Launch day finally came on September 21 when one of the A319s took off from Mitiga to Istanbul.

Following on from the Turkish city, Sudan's capital Khartoum is being looked at as one of the next destinations for Libyan Wings, as is Algiers.



However, the big prize for Libyan Wings is Tunis, the capital of neighbouring Tunisia. The intention is to have services to Tunis from both Mitiga and Misrata, with the latter city having three weekly services as part of a 'W' operation that will fly Mitiga-Tunis-Misrata-Tunis-Mitiga. The airline would like to increase frequencies to the Tunisian capital to three-times daily.

This reflects the size of the Libyan community in Tunisia, not to mention the considerable degree of Libyan investment there. Libyans require no visa to enter Tunisia and a 40-year-old agreement between the two countries allows Libyans to work and even establish businesses in

their smaller western neighbour. An open skies agreement between the two countries also makes for good access.

Libyan Wings has financial backing from a group of Libyan businessmen. None has a specific aviation background, but Badiali certainly has. A Swiss national, he worked for 20 years with Swissair, followed by stints with several other carriers, notably as CEO of Italian carrier Myair, Indian low-cost carrier (LCC) GoAir and, most recently, Senegal Airlines.

Libyan Wings will be a full-service carrier, operating its A319s in a 120-seat, two-class configuration, with 12 business-class seats at 39-inch pitch and 108 in the economy cabin at a generous 32 to 33-inch pitch. All seats are finished in leather.

At seven years old, the two Libyan Wings' A319s are youthful aircraft. Once the airline has established itself, it plans to bring in more aircraft, with the intention of serving destinations in the Arabian Gulf and Europe.



The full-service approach includes a cabin specially designed for Libyan Wings by the London and Singapore-based agency JPA Design.

The airline has signed an engineering and planning services contract with Lufthansa Technik Malta – LHT's Philippine subsidiary serviced the aircraft when they were flying for their previous lessee, Philippine Airlines.

The biggest problem facing the new airline, said Badiali, is the lack of distribution channels in Libya: credit cards are not widely used, which makes online booking difficult. However, penetration of mobile devices – smartphones and tablets – is very high. This means that, once Libya's banking system gets back on its feet, the groundwork is in place for electronic bookings.

"We're aware that, in the beginning, we won't have a substantial amount of transactions in that field but the idea is to show that we have a presence, an image of innovation, and to show that we are a strong player in the digital world," said Badiali.

Although Libyan Airlines and Afriqiyah are already established in the country, Badiali is satisfied that the pool of potential passengers is large enough for Libyan Wings to take a slice of the cake. "If you look at [passenger] demand between 2011 until mid-2014, before the trouble the increase in traffic was quite huge.

At present, the European Union (EU) bans Libyan airlines, so Badiali says "in the short- or medium-term, the viable solution is to get a wet leased [aircraft] from a company that is accepted by the EU, or sub-lease one of your aircraft to a qualified operator that will then operate it on your behalf, under their air operator's certificate. You dry-lease out, or wet-lease back."

At 2013's Dubai Airshow, Libyan Wings signed a memorandum of understanding with Airbus for four A320neos and three A350-900s. This order "is still going ahead", said Badiali, although delivery dates are at present uncertain.

**The big prize for Libyan Wings is Tunis, the capital of neighbouring Tunisia.**



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*It is one of the most remote spots on the globe. Its population of around 4,500 has huge problems reaching the outside world. For St Helena, however, a new airport means that life is about to change dramatically.*  
**Alan Dron reports.**



# Napoleon goes

In 2016, the tiny island of St Helena, which lies 1,200nm (2,220km) off the coast of Namibia and is just 47sqm (122skm) in area, will open up to the outside world with the inauguration of its first airport.

The five-day sea voyage from Cape Town, currently the only way of reaching the island, will be replaced by a five-hour Boeing 737 flight from Johannesburg.

St Helena is a self-governing Overseas Territory of the United Kingdom. Some 7,000km from the UK, the island was initially discovered by the Portuguese in 1502 but has been a British possession since 1659.

It is best known today as the final residence of French emperor Napoleon Bonaparte, who was exiled there after being defeated by a coalition of European nations in 1815. His home, Longwood House, is still owned by the French government and the bicentenary of his death in 2021 is expected to bring an influx of visitors.



There have been plans for an airport on the island for years but the project was delayed by the economic crash of 2007. However, work on the £200 million (\$300 million) project finally began in 2011 and it is now due to open officially in May 2016.

The airport is being built on Prosperous Bay Plain, on the east side of the island. It will have a 6,070ft (1,850 metre) runway with full airport infrastructure, plus a bulk fuel installation for six million litres of diesel and aviation fuel and a nine-mile (14km) access road.

The airport has two main buildings – a 3,500sqm terminal plus a ‘combined building’



that will house the facilities required for the airport to operate, such as the control tower and fire service.

Perhaps the most impressive aspect of the airport’s construction was the filling of a valley – Dry Gut – with more than 7.6 million cubic metres of material so the runway could be built on top of it.

In terms of markets, you could hardly find anything more ‘niche’ than St Helena. Traffic is expected to consist of a mix of ‘Saints’, as the islanders are known, taking advantage of the greatly reduced travel time (and cost), as well as family members revisiting their homeland.

There is also expected to be a certain amount of business traffic, notably with UK Government officials or contractors handling projects on the island.

However, potentially the greatest traffic flow is expected to come from tourists – not only people simply curious to explore one of the most remote spots on Earth, but also eco-tourists.

Packed into its tiny area, St Helena has desert, tropical rainforest, pastoral farmland and spectacular cliffs. It is also home to unique species of birds and flora that have developed in isolation over millennia. Visitors can swim with

huge, but harmless, whale sharks in the waters just off the island.

The St Helena Government (SHG) asked for bids from airlines interested in operating a service to the island, which resulted in Comair of South Africa winning the contract. Comair, a British Airways (BA) franchisee, will operate the service with a new Boeing 737-800 in BA livery.

It will be operated under an initial three-year contract with SHG, providing a weekly service between Johannesburg and St Helena, with an automatic renewal for a further two years.

“We’re of the view that the majority of the passengers will be travelling for tourism,” said Stuart Cochrane, Comair’s executive manager, business process. “However, we do expect to see a fair amount of visiting friends and relatives (VFR) traffic – Saints travelling to and from St Helena – with small volumes of business traffic.”

The opening up of one of the world’s last truly unspoilt locations has sparked considerable interest, said Cochrane: “We’ve had enquiries from tour operators from all over the world.” The biggest potential market is, naturally enough, the UK, followed by France because of the Napoleonic connection.

There is also considerable interest in St Helena in South Africa, as the island was used as a prison for Boers during the wars against the UK at the turn of the 20th century. “We’ve had very, very keen interest from all of those markets and, as the market matures,” added Cochrane, “you might find adventure sports becoming an attraction.”

Comair’s 737-800 will be delivered in a two-class configuration of 28 business- and 132 economy-class seats. However, the aircraft is landing weight restricted at St Helena as a result



Artist's impressions of the landside and airside aspects of the new airport. Napoleon's Longwood House. Also, the airport's terminal and 'combined services' building are seen, well into the construction process, in autumn 2015.

PICTURES: HALCROW

## SOMMAIRE

# Napoléon en solo ...

*C'est l'un des endroits les plus retiré de la planète. Ses 4500 habitants peuvent difficilement accéder au monde extérieur. Cependant, l'ouverture d'un nouvel aéroport entraînera des changements considérables à Sainte-Hélène. Des détails avec Alan Dron.*

**En 2016, la petite île de Sainte-Hélène, située à 2220 km au large des côtes de la Namibie aura son premier aéroport. Le voyage en mer de cinq jours de Cape Town, actuellement le seul moyen d'atteindre l'île, sera remplacé par un vol de cinq heures assuré par un Boeing 737 de Comair à partir de Johannesburg.**

**Découverte par les Portugais en 1502, Sainte-Hélène est un territoire d'outre-mer du Royaume-Uni depuis 1659. L'île est connue comme la dernière résidence de l'empereur français Napoléon Bonaparte, exilé après sa défaite en 1815. Le bicentenaire de sa mort en 2021 devrait attirer énormément de visiteurs.**

**Au coût de 300 millions USD, l'aéroport a été construit sur Prosperous Bay Plain, à l'est de l'île. Outre le tarmac de 1850 m, il sera doté de toutes les infrastructures aéroportuaires, d'un réservoir d'une capacité de six millions de litres et d'une route d'accès de 14 km.**

**L'aéroport dispose de deux bâtiments principaux dont un terminal et un « bâtiment combiné » pour abriter la tour de contrôle et la caserne des pompiers.**

**Même si les « Saints » vont en profiter, le plus gros flux de trafic viendra des touristes (le tourisme vert et sportif) surtout britanniques, français et sud-africains pour des raisons historiques. Selon le directeur de Comair, Stuart Cochrane, des tours opérateurs du monde entier ont démontré un vif intérêt pour cette destination.**

**Atlantic Star, compagnie basée au Royaume-Uni compte également desservir Sainte-Hélène pour des services de charter avec un Boeing 737-800 de la compagnie néerlandaise TUIfly. L'avion idéal selon le fondateur d'Atlantic Star, Richard Brown, sera le Boeing 757-200 équipé de moteurs Rolls-Royce RB211-535E4.**

**Dorénavant l'île de Sainte-Hélène ne sera plus coupée du reste du monde.**

# solo...

of the short runway, which means that a maximum of 120 passengers can be carried. The aircraft has also been certificated to 180-minute extended-range twin-engine operational performance standards (ETOPS) to operate the long sector over water.

St Helena's relatively short runway, with nearby hills and no instrument landing system (ILS) approach because of terrain (an offset localiser approach is used instead) makes it one of the more challenging destinations into which any airline is likely to operate. Comair has already installed a specific programme for the island in its simulator to allow crew to practise operations there. It will operate a proof flight in late January that will not only serve as a familiarisation exercise but also will allow the airline to have a full 'dry run' of all the airport-related processes on the island.



Another company hoping to be an early entrant in the St Helena market is UK-based Atlantic Star. The company was set up some years ago and aims ultimately to operate its own aircraft to St Helena. However, as a first step, it plans a short series of charter flights to the island from next May.

For this, it will act as a 'charter facilitator', using a Boeing 737-800 from Dutch charter company TUIfly.

The ideal aircraft for St Helena, said Atlantic Star's principal and founder, Richard Brown, is the Boeing 757-200 with Rolls-Royce RB211-535E4 engines, whose excess thrust means that: "it absolutely leaps off the ground."

However, there are few European carriers that still use the type. Brown and his team initially looked at Icelandair and Thomson Airways, but eventually settled on TUIfly, whose 737-800 was "an excellent substitute, for a couple of reasons".

One was that: "You don't have to fill it quite so full to generate yield" – 110 passengers as opposed to 140 on the 757. Secondly, TUIfly already has a base in Banjul, Gambia, which makes a convenient stopping-point for the refuelling necessary for flights between the UK and St Helena.

TUIfly also routinely positions crews in the Gambian capital, which makes it much more economical for the necessary crew changes for the long haul down to the South Atlantic. And the Dutch carrier comes with the bonus of being a highly respected brand, said Brown.

Depending on the success of the initial programme of flights, Atlantic Star would decide whether it remained as a charter facilitator, or developed its business model, perhaps with its own aircraft, he added.

The airport was initially planned to open in late February 2016. Following calibration flights – the first aircraft to land at the airport was a Beechcraft King Air 200 of Flight Calibration Services Limited from South Africa – some modifications to electronic equipment were required and the opening will be slightly delayed, but it is still intended to be open for business well before the official opening in May.

At that point, the island will enter a new chapter in its existence. For St Helena, the rest of the world will never again seem quite so far away.



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# Cameroon's skilling fields

«L'armée de l'air camerounaise en action» – Page 47

*The Cameroonian armed forces have been in bitter conflict with Boko Haram (now Islamic State's west Africa province) since 2014 in a bid to prevent the terrorists from expanding their foothold in the country's northern territory.*  
**Erwan de Cherisey reports.**

**W**hile the elite soldiers of the Bataillon d'Intervention Rapide (BIR – Cameroon's special forces) spearheaded initial combat with only limited support from conventional forces, the situation has evolved. Nowadays, all components of the Cameroonian Defence Forces (CDF) are involved in anti-terrorist operations.

Among these is the Cameroonian Air Force, which has experienced a significant expansion over the past few years – Cameroon has gone out of its way to provide its ground forces with additional air mobility and support assets.

With just over 30 aircraft on strength, the Cameroonian Air Force (CAF) is not a plethoraic air arm. It does, however, more than make up for its limited fleet with its skilled personnel (most of the CAF's pilots and mechanics are trained in

France) and maintenance capability, something unique in central Africa, where long-term military aircraft serviceability is usually an issue.

The CAF comprises a headquarters in Yaoundé, which is also home to the BA 101 (Base Aérienne 101: Air Base 101), and its two helicopter units: the 11ème Escadron (11 Squadron), which flies two Bell 206B Jet Ranger IIIs and the 12ème Escadron (12 Squadron) and its two SA330s Pumas.

Further east, not far from the border with the Central African Republic (CAR), is Bertoua and BA 102, which houses the CAF's 13ème Escadron (13 Squadron) and its five Mi-17s.

Cameroon's largest city and the economic capital of the country is the port of Douala, sitting on the country's western coast. Douala has its own air

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Over  
the past few  
years, the CDF has  
embarked on an  
accelerated  
modernisation  
effort

**CONTINUED FROM PAGE 45**

base, BA 201, where all the air force's transport aircraft are positioned.

The 21<sup>ème</sup> Escadron (21 Squadron) flies a single Xian MA60 (a Chinese-manufactured aircraft) along with an Airbus DS CN235-300 delivered in 2013, while the 22<sup>ème</sup> Escadron (22 Squadron) has two C-130Hs, delivered in 1977, and a single C-130H-30 received in 1982.

Northwest of Douala, facing neighbouring Nigeria, Bamenda's BA 202 and its 23<sup>ème</sup> Escadron (23 Squadron) operate Cameroon's most recently procured helicopters: three new Harbin Z9WE attack aircraft, freshly delivered in November 2014, which are capable of carrying HJ-9 antitank missiles.



A fourth Z9 is not currently operational, having suffered extensive damage following a crash landing on April 23, 2015, but should be replaced in the near future.

The northern city of Garoua and its BA301 are home to the 31<sup>ème</sup> Escadron, Cameroon's sole fighter unit, which currently fields five Dassault Dornier Alphajet MS2s. Six of these aircraft were originally delivered in 1984 to the then newly built

BA301 and latter supplemented by a seventh aircraft, as attrition replacement. The 32<sup>ème</sup> Escadron is also based at Garoua. It is a surveillance unit equipped with eight Humbert Tétrás 912 BSM/CSM ultra-light aircraft and two AeroSynergie J300 Joker, which are mainly employed in patrol flights over Cameroon's natural reserves and national parks, as well as along the country's extensive borders. A pair of FK Lightplanes FK9 ELA ultralights are directly attached to the BA301's command for the same purposes.

The Tétrás are also used by the Pôle Aéronautique National à Vocation Régionale (PANVR), an aviation school used to train ultra-light pilots, observers and mechanics, sometimes as a prelude to additional preparation abroad, which was set up in 2000 under the auspices of the French military cooperation mission in Cameroon.

South of Garoua, is N'Gaoundéré and BA 302, the newest air base in the CAF and the only one which has yet to be assigned an operational squadron. With more aircraft to be delivered over the coming months, it is very likely that the base will soon be provided with a permanent flying unit.

For now, Cameroon's extreme north is devoid of any air base, although air force detachments are frequently deployed at Maroua, or wherever their presence might be required.

Over the past few years, the CDF has embarked on an accelerated modernisation effort, procuring new patrol ships, armoured vehicles and infantry weapons, as well as several aircraft types.



Between 2012 and 2013, the transport fleet was boosted by the arrival of a single MA60, donated by China, and a CN235-300.

A second aircraft of this type, configured for maritime patrol, is expected shortly and will provide a much-needed boost to Cameroon's naval surveillance capability in the midst of the increasing number of acts of piracy in the Gulf of Guinea.

Similarly, after purchasing a total of five Mi-17s and four Z9s, the CAF is now set to receive four Mi-24s Hinds from Russia, while the BIR's aviation component will add two Mi-24s of its own to the two Bell 412EPs it already flies in counter-piracy



The Cameroon Air Force (CAF) operates some 30 aircraft of all types, from ultralights to helicopters (such as the Mi-24 pictured left) to fighters (below left is one of its five Alphajets) to transports (such as the C130 Hercules, main picture).

**SOMMAIRE**

**L'armée de l'air camerounaise en action**

*Les forces armées camerounaises sont engagées depuis mars 2014 dans une lutte frontale contre Boko Haram afin d'empêcher ce groupe terroriste de s'implanter durablement au Cameroun. Un reportage d'Erwan de Cherisey au cœur des troupes camerounaises.*

Les premières actions de combat contre Boko Haram ont principalement mobilisé les hommes du Bataillon d'Intervention Rapide (BIR). Les Forces de Défense Camerounaises (FDC) sont aujourd'hui impliquées dans les opérations militaires dans l'extrême nord du pays.

L'Armée de l'Air (AdA) joue un rôle essentiel au niveau du soutien logistique et de l'appui-feu aux troupes. Elle dispose d'environ trente aéronefs répartis dans six bases aériennes à travers le pays. Sa flotte est constituée d'hélicoptères (Mi-17, Z9, SA330 et Bell 206), d'avions de transport (C-130, CN235-300 et MA60) et d'avions de chasse (cinq AlphaJet MS2 situés sur la BA 301 de Garoua). Ces derniers ont notamment mené une mission d'attaque contre Boko Haram à Ashigashia, le 28 décembre 2014.

L'extrême nord du Cameroun est dépourvu pour l'instant de toute base aérienne, bien que des forces soient déployées à Maroua.

Les FDC ont entrepris une modernisation rapide au cours de ces dernières années avec l'acquisition de nouveaux navires de patrouille, de véhicules blindés et des armes d'infanterie ainsi que plusieurs avions. Elle doit prendre livraison de quatre Mi-24 début 2016. Le BIR a récemment pris réception d'un Cessna 208EX Grand Caravan et devrait recevoir deux Mi-24 et un système de drones de surveillance Boeing INSITU ScanEagle en 2016.

L'apport des forces aériennes reste un maillon primordial dans la lutte contre Boko Haram et en particulier pour le soutien des forces camerounaises au sol.

Cependant, il y a une réelle nécessité de créer une école d'aviation pour la formation des pilotes et des mécaniciens de l'AdA au Cameroun pour qu'ils ne soient pas systématiquement envoyés à l'étranger, en particulier en France.

operations from its base in Man O' War Bay, near Limbé.

Unlike these, however, the Hind will be used in combat sorties against Boko Haram.

The BIR has also boosted its surveillance capabilities with the procurement of a single Cessna 208EX Caravan and is now expecting the delivery of a Boeing Insitu ScanEagle unmanned air vehicle (UAV) surveillance system.

The CAF has longer-term projects as well. There is a real understanding of the need to establish a dedicated military aviation training school in Cameroon, where air force pilots and mechanics could receive schooling instead of systematically being sent to France. Yaoundé also has a desire for a long overdue supersonic air defence capability.

While it had provided some limited logistics support to ground forces involved in the armed dispute with Nigeria over the Bakassi peninsula in the 1990s, until 2014 the CAF lacked any real combat experience against a foreign foe.

Boko Haram's cross-border operations gave it an opportunity to fire in anger and, on December 28, 2014, a patrol of Alphajets from BA 301 struck enemy forces occupying the military outpost of Ashigashia, on the border with Nigeria. Boko Haram had sent a strong party of its

fighters to attack it, forcing the Cameroon forces there to carry out a tactical withdrawal while requesting air support. The air strike proved devastatingly effective and forced the terrorists into a hasty withdrawal.

Airstrikes haven't been the CAF's only contribution to the war in the north and its Mi-17s have been committed time and again, carrying out logistics and troops transport flights as well as medevac sorties.



While Bell 206s from the 11ème Escadron are employed in liaison flights, transporting commanders from one place to another, C-130Hs and the CN235-300 provide a vital link between the country's southern bases and the operational area in the north and a constant logistics chain in a part of the country where the road network remains insufficiently developed.

The delivery of new air assets will allow the CAF to increase its commitment in the extreme north and eventually support, not only the Cameroonian military but also the multinational joint task force (MNJTF), which is being activated in a bid to bring a definitive end to the Boko Haram insurgency.



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The Rooivalk may get a chance to spread its wings further following its success in African peacekeeping missions.



## Another chance for Rooivalk to make its Mark?

*The success of South Africa's home-grown Rooivalk attack helicopter on United Nations peacekeeping tasks in the Democratic Republic of Congo (DRC) has spurred interest in an upgraded version – even a Mark 2. Alan Dron spoke with manufacturer Denel.*

**D**enel's Rooivalk (Afrikaans for 'red kestrel') came close to achieving several export orders – notably to Malaysia and Turkey – but never quite got there. Production ended with just 12 examples built for the South African Air Force.

But now, its performance on combat missions in the DRC, has spurred what Mike Kgobe, CEO of Denel Aviation, describes as both informal and formal interest in the aircraft.

The Rooivalk was instrumental in the demise of the M23 rebel group in the eastern DRC. Cannon fire and unguided rockets destroyed its headquarters, which contributed to the disappearance of the group from the region.

"The Rooivalk was developed in the late 1990s and finally got qualification in 2011 to international helicopter standards," said Kgobe. However, its recent operational performance had led South Africa's Department of Defence to state that it foresaw a life for Rooivalk beyond the current baseline programme.

"Based on our own analysis, the platform is still sound," he said. Given the amount of time since its development, there are obvious enhancements to the aircraft that can be carried out, notably to its avionics.

With whatever enhancements are eventually incorporated into the aircraft, it should be possible to get to a next generation model that would meet the interest being expressed by several countries. Kgobe was unable to divulge any identities for confidentiality reasons.

"Primarily, the upgrade would be to the avionics and weapons systems and, on the back of that, we would have the infrastructure and would look at the feasibility of a Mk2," he said. Wherever possible, existing industrial equipment would be used or modified: "We have no intention of re-inventing the whole production process."

The upgrade would be a building block towards a Mk2, which would have further technological improvements. Denel would also look at areas such as the 'producibility' of the aircraft.

However, said Shalan Chetty, executive manager, engineering and flight-test: "In terms of the aircraft's

appearance, I don't think you would be able to tell the difference between a Mk1 and a Mk2. The only difference you would notice would be the weapons-carrying capability. You might see integration of different weapons, depending on customer requirements."

Production of a Mk2 would probably use the existing jigs, but also incorporate the past 15 years' advances in manufacturing technology.

The upgrade to the existing fleet could be undertaken in somewhere between three to six years, said Kgobe, while Chetty said he believed a Mk2 could be with a customer in 4.5 to five years. It was possible the upgrade and Mk2 could be produced at the same time, he added.



The Rooivalk's existing Turbomeca Makila turboshaft engines were "more than adequate" for a new version, said Chetty, although new powerplants could be integrated if a customer favoured a different type.

The combat helicopter market is considerably more crowded now than it was 15 years ago, both with dedicated machines and utility helicopters converted to the gunship role, but Denel believes a new Rooivalk can still find a niche in its 8.5tonne category.

Finding the resources for such a sizeable project is obviously a major factor. However, state-owned Denel is confident that, for any South African requirement for an upgraded or Mk2 Rooivalk, the necessary money would be forthcoming. Beyond that: "I think we'd be required to be creative in terms of funding for the export market and so forth," said Kgobe.

He made the point that, while the Rooivalk represented a military capability, a project of that complexity also acted as a stimulus on the wider economy: "We know some of the government's developmental plans and we see it as touching on key points of benefiting the economy." That could help the chances of receiving funding from the government.



A Detachment Orion C-235 D4 on an 'operation Atalanta' anti-piracy patrol over the Gulf of Aden. Below (from left): A German Navy P-3C Orion taxiing at Base Arienné 188B at the start of an 'operation Atalanta' mission; Spanish C-235 D4s are being used to airdrop equipment and supplies to 'operation Atalanta' warships at sea; the Falcon 50M is used by the French MPRA detachment to 'operation Atalanta' at Base Arienné 188 at Djibouti.

PICTURES: EUNAVFOR, DAVID OLIVER, DASSAULT







*The European Union launched the EU Naval Force's 'operation Atalanta' in December 2008 as part of its comprehensive approach to Somalia. David Oliver reports from Djibouti on its progress to date.*

# PIRATE PATROL

**T**he mission of the 'operation Atalanta' forces is to deter, prevent and repress acts of piracy and armed robbery off the Somali coast, an area of some 2,000,000 square nautical miles.

EU Naval Force (EU NAVFOR) also protects World Food Programme (WFP) vessels delivering aid to displaced people in Somalia, as well as shipping for the African Union Mission on Somalia (AMISOM).

The EU NAVFOR composition changes constantly due to the frequent rotation of units and also varies according to the monsoon seasons in the Indian Ocean.

However, it typically comprises four to six surface combat vessels, and two or three maritime patrol and reconnaissance aircraft (MPRA) that have come from as far afield as New Zealand, as well as Europe.

In the last quarter of 2015, the maritime air contingent of 'operation Atalanta' based in Djibouti comprised a single Spanish Air Force CN-235, a German Navy P-3C Orion and a French Navy Falcon 50M.

The Spanish detachment at the French Base Arienné 188 at Djibouti International Airport is the only one that has remained deployed uninterrupted since the beginning of 'operation Atalanta' in 2009; 802 Squadron from BA Gando, in the Canary Islands, has been participating in the operation since 2010 with its Airtech CN-235 D.4

VIGMA maritime patrol aircraft (MPA). Six Spanish Air Force CN-235 transport aircraft were converted to D.4 standard to perform maritime search and rescue (SAR) missions in 2009.

The conversion to D.4 standard included the installation of an EADS/CASA fully integrated tactical system (FITS), a maritime radar, plus FLIR Systems' sensor and ship automatic identification system (AIS). The radar give 360-degree coverage and can track the distance, bearing, and geographic position of up to 200 marine surface and airborne targets.

Communications include the TX-ARQ integrated system for data transmission via Inmarsat, and high-frequency radio. A digital camera with a 70-200mm zoom lens, digital video recorder capable of recording up to 10 hours and a datalink/satellite communication system that can transmit and receive pictures, data and text, is also carried.

A search and rescue kit, made up of two rafts and three survival equipment containers, can be dropped to people in distress from the rear ramp of the CN-235. A flare is launched from the aircraft to determine wind direction before the kit is dropped into the sea.

Lieutenant colonel Jose Miralles was the commanding officer of the Spanish Air Force Orion detachment operating from Djibouti at the time of *African Aerospace's* visit. Forty-five

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The MPRA mission support centre at Base Arienné 188 manned by Spanish Air Force personnel.

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personnel staffed the detachment drawn from different Spanish Air Force units. This included four pilots, three fully-integrated tactical system (FITS) operators, one tactical coordinator, two observers/camera operators, five air maintenance mechanics, and two electronics engineers. The aircrew were on a two-month deployment, while command staff were on four.

The Orion detachment was responsible for coordinating all the missions carried out by 'operation Atalanta' MPRA's. Personnel man a 24/7 mission support centre and are tasked by EUNAVFOR HQ at Norwood in the UK, and coordinate with the combined maritime forces (CMF) HQ in Bahrain to ensure there is no conflict with other air traffic over patrol routes in an around Somalia, which has no active air traffic control.

The Spanish aircraft flies an average of 100 flight hours on 12 missions per month, with two or three flights a week. Depending on weather, Atalanta patrols are usually flown at around 2,000 feet above sea level, at 140-150 knots for best surveillance. Missions typically last 8-10 hours and cover up to 1,800nm. The normal crew is two pilots, a tactical coordinator, two sensor operators and two observers.

The primary task of the 'operation Atalanta' MPRA missions is to provide intelligence, surveillance and reconnaissance (ISR) in support of Atalanta vessels. This involves not only monitoring the Somali coast but also pirate bases.

The secondary task is sea surveillance to monitor normal shipping activity. Last year there was almost no pirate activity due to precautionary measures taken by ship operators and the strong naval presence in the region. As a result, the deployed MPRA's are increasingly being used for ground surveillance, looking out for drug and people smuggling activities.

Also, if a ship is seen to be in trouble, the standard procedure is to orbit to avoid detection

by the pirates, report activity and circle the area to report the position and heading of the vessels. CN-235s are usually deployed for two-month periods, but every other year P-3 Orions take over the task.

In October 2015, a CN-235 carried out the first airdrop to a surface combat vessel deployed to 'operation Atalanta'. The patrol aircraft flew out to the Spanish Santa Maria-class frigate at sea off the coast of Somalia to deliver a vital piece of equipment for its on-board Sikorsky SH-60B Seahawk helicopter. Flying 100 feet above sea level, the equipment was dropped from the rear ramp of the aircraft into the water close to the warship, where it was retrieved.



Receiving equipment and supplies by air or by rendezvousing with supply ships at sea enables 'operation Atalanta' warships to keep vital capabilities fully operational and, importantly, allows the ships to stay at sea to conduct their counter-piracy patrols and to protect vulnerable shipping transiting the area.

The Orion detachment has been part of 'operation Atalanta' since the start of the mission in December 2008. In October, a 802 Squadron CN-235 flew its 1,000th mission, during which the detachment had taken more than 130,000 photos, and identified over a thousand suspected vessels.

However, the celebrations were muted when news was received that one of the squadron's AS332B Super Pumas had crashed into the Atlantic off Morocco en route to Gando, with the loss of its three crew.

A Grupo 22 P-3M Orion from Moron Air Force Base replaced the CN-235 detachment in 2016.

A German P-3C Orion MPRA joined 'operation Atalanta' in September 2015. Flight operations had been suspended at the beginning

of July due to the monsoon season, which severely hinders any pirate activity.

The Naval Air Wing 3 (Marinefliegergeschwader 3) 'Graf Zeppelin' Orion, which used the call sign 'Jester', flew from its home base of Nordholz to the French Base Arienné 188, with a stopover in Sicily, preceded by members of a 50-strong support contingent, which re-established the necessary ground infrastructure.

Led by commander Bodo Ahlers, the German contingent of P-3C Orion patrolled the coast of Somalia, providing a detailed picture and up-to-date information of the coastal region. It averaged 20 flights a month, 160 flight hours, visually confirming some 1,900 ships.

The German Navy has a mid-life upgrade (MLU) package approved for its fleet of eight former Netherlands Lockheed P-3C Orion MPAs. In 2015 it announced that a comprehensive €500,000 (\$546,000) upgrade programme to keep them in service until 2025 will be carried out by a consortium of Airbus Defence and Space and Lockheed Martin.

The contract includes the production of eight MLU-kits – outer wing, centre fuselage and horizontal stabiliser. Airbus Defence and Space will be responsible for integration, installation and check out of the kits for the P-3C aircraft at Manching, Germany.

In November 2015, the Spanish and German detachments were joined by a French Navy MPRA, a Falcon 50M from Escadrille 24F, based at BAN Lann-Bihoué. This is the second Falcon 50M air detachment based in Djibouti.

The French detachment commanding officer said: "The Falcon 50 is perfect for this type of operation, in that it is quick to react to a situation and has a highly-trained crew to analyse the information that it collects to support the EU's counter-piracy mission."

In November 2014, the Council of the EU extended the Mandate of 'operation Atalanta' until December 2016.





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*Can the Avinode Marketplace help the development of the African air charter market?*

**Oliver King**, managing director, Avinode, thinks it can.

## New wave can change the tide in the charter business

**C**hanges are afoot in Africa's business aviation market. While the overall demand for private aviation in Africa is steady, there has been a significant increase in domestic flight requests through the Avinode Marketplace in the past year.

We have seen a 36% increase in domestic air charter requests in Africa in the last 12 months and an 81% increase in aircraft numbers within the Avinode system in the region. We have added more than 20 new aircraft to our fleet in South Africa alone.

Unstable conditions across Africa, politically and geographically, mean air travel is the natural option for business travellers needing to connect between countries but local commercial airlines are often unreliable and have limited frequency and scheduling. With flexibility and safety paramount, private aviation in Africa has, therefore, always been a popular option for business executives, politicians and heads of state.

However, the African private aviation market has, until recently, remained largely an impenetrable environment, widely regarded as a niche market closed to growth or improvement.

Avinode's charter sales team for Africa holds regular discussions with brokers and operators in the region. Greg Ermes at Elite Jet tells us: "A few countries in Africa do not



**Oliver King: we need to build trust in Africa's charter product.**

allow outside charter companies to operate aircraft within their own borders, trying instead to force the client to utilise their own charter companies. This 'cabotage' is a growing concern in Africa which, if approached correctly, can really only be managed and overcome if you are dealing with a reputable charter operator."

There are clear challenges in operating in Africa but the use of charter flights for business purposes is certainly on the rise. By Greg's reckoning, 95% of people who begin to use charter continue to do so. That's a big claim, but justifiable in an environment where business aviation is a necessary means to an end.

At Avinode, we see the landscape of Africa's business aviation market changing and aim to support those changes. The challenge is to build awareness of air charter transportation as an option in the region.

An enormous continent, with a poor commercial airline infrastructure compared to many parts of the world, represents a great opportunity for private aviation. Africa is resource-rich and needs the means to transport business executives and landowners to important, often remote, locations. To date, word of mouth has been a great driver of air charter in the region but all parties involved in the industry – from operators and brokers to fixed-base operations (FBOs) – can work to promote the charter option.

### SOMMAIRE

## Changer la donne du business des avions charters

*Avinode peut-elle contribuer au développement du marché d'aviation charter en Afrique ?* **Oliver King**, son directeur général, pense que c'est possible.

**Le marché de l'aviation d'affaires évolue en Afrique. Alors que la demande globale est stable, Avinode a enregistré en 2015 davantage de demandes pour des vols domestiques.**

**Le contexte politique et géographique en Afrique montre que le transport aérien reste un moyen incontournable pour les voyageurs d'affaires. Les compagnies aériennes locales sont souvent peu fiables avec une fréquence limitée. L'aviation privée a donc toujours été prisée car elle offre davantage de flexibilité et de sécurité.**

**Pourtant, ce marché est difficile d'accès en Afrique. Selon Greg Ermes d'Elite Jet, certains pays en Afrique ne permettent pas aux compagnies charters externes d'opérer sur leur territoire.**

**Il existe certes des défis évidents pour opérer sur le continent, mais les vols privés sont à la hausse. Selon les estimations de Greg Ermes, 95% des passagers qui ont eu recours à**

**l'aviation privée, continueront de le faire.**

**L'Afrique est riche en ressources naturelles et a besoin de moyens de transport pour ses dirigeants d'entreprises et les propriétaires fonciers. Le bouche à oreille a été à ce jour un grand facilitateur pour le secteur des avions charters. L'ensemble des acteurs du secteur (opérateurs, courtiers et FBO) peuvent travailler ensemble pour le promouvoir. Avinode souhaite les regrouper et soutenir leur développement.**

**La majorité des activités d'Avinode proviennent de clients réguliers. De nouvelles opportunités existent comme le conseil aux tour-opérateurs qui veulent planifier des voyages en Afrique et trouver un avion ou encore fournir des solutions « clés en main » pour l'Europe et les Etats-Unis. Londres, Paris et Genève sont d'importants points d'entrées en Afrique et de nouvelles passerelles pourraient booster les affaires dans la région.**



At Avinode, we can help to bring much-needed exposure to players in the region, to help them grow as well as providing the tools to support that growth. With that increased exposure brings demand for charter to the African operators.

As an industry we also need to build trust in Africa's charter product. The facts are on our side. A number of African operators based across the continent have invested heavily in building world-class operations, often with international accreditation. And there are many European or US-registered aircraft flying into the region to meet local needs. The standards of private aviation services in Africa are undoubtedly rising.

The majority of Avinode's business is from repeat customers but more and more new business is coming in. We can help new travel buyers in Africa find the aircraft their customers need. We can plan safe and efficient travel into the region from Europe and the US.

London, Paris and Geneva are already key gateways into Africa and, as well as strengthening operations from those locations, we can look to add new gateways. With an increase of aircraft in the region and higher visibility of air charter, Avinode is determined to bring more business to the growing number of operators and brokers in the region.



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Nuno Pereira, with wife Alcinda: "Due to my background, I knew what could be done and knew I could do it, so Bestfly Flight Support was born."



# Angola's Best friend

*Angola has steadily become one of Africa's most prominent business aviation hubs and that is down to one couple – Nuno and Alcinda Pereira, the founding partners of Bestfly Flight Support. Marcella Nethersole reports.*

**F**rom a history of slavery and civil wars, Angola has been through a lot. But the southern African nation has been putting itself back together after suffering a 27-year civil war that ravaged the country after independence.

Today, the former Portuguese colony is rich in natural resources and enjoying a general sense of redevelopment and progress, including a surge of business travellers and a slow but steady growth of tourists.

One man who cannot be prouder of his heritage and is testament to the Angolan success story is Nuno Pereira, managing director of Bestfly Flight Support.

Established by Pereira and his wife Alcinda – the company's executive director – in 2009, the VIP handling agent has Angola's first and only fixed-base operation (FBO) terminal.

"My background is in aviation," said Pereira. "I have been in the industry for the last 18 years – mainly flying. I have about 14,000 hours of flying time and have flown most jets, from the Boeing 777 and 747 to business jets and cargo."

Angola's national carrier, TAAG Angola Airlines, is state-owned and based in the capital, Luanda. It serves much of Africa, as well as international routes. Pereira flew for the carrier.

Due to his aviation background, passion for flying and pride of his country, Pereira felt that Angola's aviation industry would become even more economically successful with its own FBO.

"I thought there was something missing," said Pereira. "I thought of the idea to open the FBO as Angola needed it. It had needed it for a long time and I could see that. Due to my background, I knew what could be done and knew I could do it, so Bestfly Flight Support was born."

□ □ □ □ □

Pereira was conscious that, while it is good to make money, it was really a project he and his wife, an ex-NetJets Europe customer service representative, wanted to make into a success story for their country.

"We started out as a VIP ground-handling agent with no facility, so used the airport in Luanda," he explained. "For us to be approved it took two years. We finally opened in 2012.

"Of course I want a successful business, but, for us, we wanted to help change the perception of Angola and get people to think of it in a positive way rather than the negative history of slavery, wars, landmines and poverty.

Continued  
on Page 58



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“Yes, many Angolans live on less than a \$1 a day but the country is now one of Africa’s leading oil producers and it is experiencing a post-war reconstruction boom. It is also a beautiful country – especially in the south – and more hotels are being built and more tourists are arriving.”

Today, the FBO is the most recognised brand in business aviation handling in Angola, with a market share of close to 80%.

“The first money we received, we made sure we invested in the company. Now we have a hangar that fits eight aircraft, we have 15 aircraft in operation, and we handle 15-20 flights a day,” Pereira said.

“We offer everything from basic aircraft handling and aircraft charter and management to fuel services, maintenance, flight planning, over-flight and landing permits, crew services and transfers, passenger assistance, and hotel reservations.

“Our facility in Luanda is state-of-the-art and it takes guests only five minutes from leaving the aircraft to be outside of the airport. We offer VIP catering from nearby five-star hotels and we are currently planning on opening our own catering facility.”



The team comprises highly experienced professionals with more than 20 years’ experience, capable of organising both domestic and international flights.

“All our operational staff are duly certified. That allows us to create a dynamic and pro-active organisation. Our goal is to anticipate any possible problems, not allowing them to actually occur,” said Pereira.

BestFly also serves four other airports in the country – Lubango, Benguela, Catumbela and at Cabinda, where it is the sole and designated handling agent for both private and commercial aircraft.

Since April 2015, Bestfly has been recognised as the first ground-handler/FBO in Angola to have its own dedicated fuel bowser.

“With this, we can assure that quality and efficiency of service will increase significantly,” said Pereira. “We provide fuel at the best possible price; although price is always dependent on the suppliers. This service will assure a superior level of efficiency where the coordination with the fuel supplier company, Sonangol, will be completed by one of our agents to ensure on-time fuelling in order to avoid unnecessary delays.”

Pereira said the bowser has already fuelled aircraft up to Airbus Corporate Jet ACJ320 in size. For larger aircraft, Sonangol will provide a second bowser as needed.

“Our customers have an improved experience as a result of the deal and we are delighted to be one of the few FBOs in Africa that can supply aviation fuel direct to the aircraft. It’s still unusual on the continent for an FBO to control its fuel supply but we hope this is the start of a trend.”

The company was recently selected by



Nuno and Alcinda Pereira, with BestFly CFO Nelson Carvalho, on a Lektro aircraft tug which BestFly use.

Chevron, through its subsidiary, Cabinda Gulf Oil Company (CABGOC), to provide all ground-handling and flight support services to its entire aviation-related operations in Angola. The three-year contract covers the complete Chevron fleet of four Bombardier Dash-8 Q400 aircraft, and 10

## Bestfly awarded Angolan AOC by country’s CAA

**Bestfly announced in early December, as *African Aerospace* was about to go to press, that it had been awarded an Angolan Air Operator Certificate (AOC) by the Angolan Civil Aviation Authority (Instituto Nacional da Aviação Civil INCVI).**

**The certificate, which was issued on October 10, enables Bestfly to offer third party charters out of Angola with its managed fleet of seven Angolan-registered aircraft – all of which are covered by the AOC.**

**The company completed its first charter flight under the new certificate on October 13.**

**The company’s managed fleet of seven Angolan-registered aircraft are all now available for charter and include a Hawker 400XP (which has the capability to be rapidly changed to a medevac configuration), a Bombardier Challenger 600, two King Air 350s, a King Air 200, King Air 90 and a Cessna Grand Caravan EX.**

**The company is in the process of working with the authorities to establish its international AOC, which it is anticipated will be in place by the end of the first quarter of 2016.**

**Until that is achieved, Bestfly’s managed fleet of Aruba and Bermuda registered aircraft will continue to operate under private rules.**

Bell Helicopters, which serve its offshore operations at its oil-producing base in Malongo.

BestFly does come across the odd hurdle though.

The Angolan Government has put in place tough financial restrictions, which has affected all foreign exchange transactions.

So how do Pereira and his customers cope with that?

“We operate in Angolan currency and US dollars – but the difficulty is due to the banking restrictions and the oil crises. To make transfers abroad is the biggest hurdle we face for sure,” said Pereira. “We can receive dollars but, if we need to pay out, then we have a problem. We can’t see this changing as yet due to the Angolan economy, as the cash reserves are depleted. So this needs to be addressed, but we are confident something will be done in time.”



Looking to the future, Pereira was excited to announce BestFly Flight Support has been FBO-approved for the new Luanda International Airport.

“The airport is due to open in 2017 and we are currently inviting proposals from builders to construct the FBO. It will be an excellent service, with more ramp space and more capacity,” said Pereira. “It’s been hard work for all the team to get where we are. Angola has received such bad news at times, which has not always been justified. But I am happy to sit here and say we have seen the change of perspective in recent years and we believe Bestfly Flight Support has helped with that change.”



# Russian rotary VIP variant targets Africa

**T**he Russian Helicopters presence in Africa could be increased with the approval of a new VIP variant of the Kazan Ansat helicopter.

The Ansat had been designed as a fly-by-wire aircraft but, in order to bring a model to the market in good time, the state-owned Rostec Corporation – owner of the Russian Helicopter brand – developed a hydromechanical variant instead.

As a result, the aircraft has received two main amendment approvals for its VIP cabin and air-conditioning system from the Russian Federal Air Transport Agency, which, as of January, took over duties as Russia’s aviation certification authority, opening the way for commercial operations.

A Russian Helicopters spokesman said the new hydromechanical-controlled light multi-role commercial Ansat has the largest cabin in its class, with up to seven passenger seats. This makes possible maximum levels of comfort in the passenger VIP version.

In the five-seat variant, the cabin can accommodate a wardrobe and fully fledged baggage section with built-in mini-bar.

The passenger cabin comes with ventilation and air-conditioning, as well as individual lighting and air controls. The cabin has shock-absorbing seats and vibration-reducing armrests. For additional passenger comfort there are also flight kits with active noise reduction.

“We never stop working to improve our helicopters and proof of that is the unique Ansat,” said Russian Helicopters CEO Alexander Mikheev.

According to Kazan Helicopters CEO Vadim Ligai, work is currently on-going to upgrade the helicopter’s fuel system and

install additional 200kg capacity fuel tanks to increase its range. Also in development is a 750kg capacity failsafe fuel system and improved operational capabilities.

Kazan Helicopters designs and produces the Ansat. Work on achieving certification of the hydromechanical Ansat began in 2011.

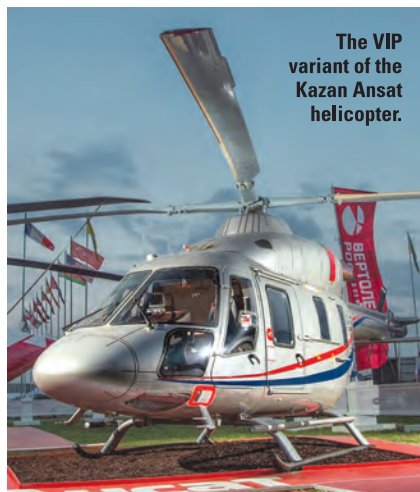
Previously Kazan Helicopters had produced a fly-by-wire Ansat that was ahead of its time – no commercial model with a similar control system had been certified anywhere in the world, and the key requirements for this innovative system had not yet been determined.

Russian Helicopters has also received type certification for the Mi-38 transport helicopter, designed by its Mil subsidiary in Moscow.

The Mi-38 is expected to enter into serial production next year and the first fuselage for the serial-production model has already been assembled.

Flight certification testing utilised two prototypes fitted with TV7-117V engines.

The Mi-38 features the largest cabin in its class and can carry a variety of cargo as well as promising capability for medevac missions.



The VIP variant of the Kazan Ansat helicopter.



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# HOW THE WEST WAS WON

*Slovenian private jet operator and manager, Elit'Avia, is building up its business in the west African marketplace, despite the challenges facing business aviation in the region.*

**Alan Dron reports.**

It's a long way from the cool grey stone and red tile roofs of the Slovenian capital of Ljubljana to the heat and energy of Accra, but Elit'Avia made the transition several years ago and is gradually expanding its activities in the Ghanaian capital.

The Slovenian operator, which runs a mixed fleet of Gulfstreams, Hawkers, Challengers and Falcons, moved into west Africa after responding to a tender to create an air transportation service for a client who wanted to operate an aircraft in the region.

"Due to the lack of fixed-based operation (FBO) facilities in Accra, we decided to open our own facility with an Elit'Avia team, located in offices a few minutes away from the airport in East Lagon," said president and CEO Michel Coulomb.

"The Ghana operation started in February 2012 and allowed us to build on the charter market there," although the company had been active in the aircraft sales market in the region for some time beforehand.

The company has a five-strong team in Accra, which has proved to be the optimum size of operation for the current level of activity in Ghana.

"Business aviation in west Africa has grown consistently over the last 10 years, especially in Nigeria and Angola," said Coulomb. "In context, it is a smaller overall business aviation presence than more mature markets like the US and Europe. However, it is growing steadily. We are also starting to see more opportunities in neighbouring countries, which is a good indication that business aviation requirements will continue to grow in the continent."

□□□□□

Elit'Avia bases a Hawker 800XP in Accra to operate charter flights, but also provides crews for clients who have their own aircraft but prefer not to maintain a permanent staff to fly them. At present, usage is biased towards the business sector, with companies with outposts across the continent favouring business aviation over



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commercial flights because of the flexibility and safety offered by executive aircraft.

As well as utilising its own aircraft, Elit'Avia also manages others. When it set up in Accra, it had four aircraft – two Nigerian Global 6000s, 1 Global XRS and a Ghanaian Falcon 2000. The collection of aircraft under management has now expanded to six, with a seventh expected shortly.

Some of these are available for charter, while others are held permanently under private management.

Although Elit'Avia bases one of its aircraft in Accra, there are problems, particular to the region that limit the scale of its own operations there, said Coulomb. "One of the on-going challenges to business aviation's growth in the region is the difficulty in getting banks and leasing companies to offer financing solutions. This adversely affects the number of aircraft based there."

At present, most destinations served by Elit'Avia, either with its own or managed

aircraft, are within the central west African region and intra-country locations. The remainder of its services – flights to Europe, the Middle East and North America – represent no more than 20% of the duties performed by the fleet.



Coulomb has the advantage of having worked in Nigeria for five years in the 1990s, so he is familiar with the quirks and hurdles of operating in west Africa: "There are a number of challenges, as with any emerging market environment, but overall the industry is constantly improving and we are seeing a higher level of professionalism," he said.

Nigeria, in particular, has improved a great deal over the past few years in terms of infrastructure and operations. Nevertheless, it is still not the easiest region to be in for business aviation operations. Crewing and basing can be problematical.



Elit'Avia CEO Michel Coulomb has the advantage of having worked in West Africa before.

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*Ideas around ballooning in Ethiopia were all just hot air until a Dutch company backed a local venture in 2012. Now the new company is hoping to hit the heights. **Kaleyesus Bekele** reports from Addis Ababa.*

# The balloon goes up in Ethiopia

**N**etherlands-based Sky Balloon Flights established Abyssinia Ballooning in November 2011 along with a local partner in Ethiopia. General manager and chief pilot, Bram van Loosbroek, runs company.

The company organises recreational hot air balloon flights and tours near the capital city, Addis Ababa.

“Ballooning is a purely recreational aviation activity as we cannot steer horizontally,” explained van Loosbroek. “We follow the wind and cover distances with an average speed of 15kmh. We land in farmers’ fields and then drive back to the take-off location.

“Balloon pilots can control the flight in centimetres vertically. They are trained according to the highest international standards and only fly in safe weather conditions.”

Well-known local company Adika, represented by prominent businessman Awad Mohamed Alamin, is the Ethiopian partner in the business, which operates the flights from Holetta, 30km west of Addis Ababa.



According to van Loosbroek, the company made an initial capital investment of €100,000 (\$105,793) and then raised its investment to €250,000 (\$264,440). It plans to make an additional investment of €250,000.

“More will be invested in balloon materials and chase vehicles – minivans for passengers and chase cars to carry the balloon basket and fabric,” van Loosbroek explained.

The company has one balloon (basket, burner, gas cylinder, fabric) produced in the United Kingdom by the renowned balloon manufacturer Cameron Balloons. The balloon, which carries 10-12 passengers, cost €100,000.

Most of Abyssinia Ballooning’s customers are expats, although the word is spreading. “We are happy to see that more and more Ethiopians are booking our balloon trips for wedding celebrations and business and family outings,” van Loosbroek said.



He plans to work closely with national flag-carrier, Ethiopian Airlines. “We want to offer our recreational balloon trips to business travellers and tourists,” he said.

After four years of operation, Abyssinia Ballooning is not yet profitable. “We understand that pioneering takes time and are committed to make a successful company. We hope that many people will find their way to us because we would love to let them experience the serenity and beauty of ballooning. We expect that we will make some amount of profit in 2016 for the first time,” he added.

Ethiopians knew little about ballooning before the establishment of the company. The Ethiopian Civil Aviation Authority (ECAA) was not familiar with it. Colonel Wossenyeleh Hunegnaw, director general of the ECAA, said the authority did not have a balloon-licensing manual when van Loosbroek first approached the authority seeking a permit. “Since Abyssinia Ballooning was the first company, we had to prepare the ballooning licensing manual. We had to read about balloons and other country’s

licensing procedures to produce our own licensing manuals. Abyssinia Ballooning brought to us some reading materials about ballooning,” Hunegnaw said.

“We work in close cooperation with the ECAA in developing a safe and controlled ballooning standard in Ethiopia,” said van Loosbroek. “In this cooperation we exchange ballooning flight manuals, maintenance manual, pilot training programmes, licensing procedures and more. These ballooning manuals and procedures originate from European Aviation Safety Agency (EASA) and International Civil Aviation Organization (ICAO) regulation. The cooperation goes smoothly. It is a continuous process of sharing knowledge and we have the same goal of setting a safe ballooning standard in Ethiopia.”

Back in 2012, Abyssinia Ballooning took 20 air traffic controllers from ECAA on demonstration flights.

In order not to disturb the busy Bole Airport, the company only flies in the Holetta area and some resort towns like Hawassa, Awash Park and Langano.





From October to May each year you can enjoy spectacular scenery from the best vantage point: a 10-12 person balloon produced by the UK's Cameron Balloons.

**Taking pictures in many places in Ethiopia could put you in prison. Photographing from the air is prohibited.**

The road has not been easy, according to van Loosbroek. Attracting more customers to help the company to break even is a big challenge. "We want to boost our revenue and hopefully start making a profit. We need to establish more partnerships with Ethiopian and international tour operators to offer our service to tourists."

Taking pictures in many places in Ethiopia could put you in prison. For instance, photographing from the air is prohibited. This frustrates tourists, who pay for the ballooning flights. "We conform to the Ethiopian regulations on national security. Ethiopia is a very safe country in the Horn of Africa – one of which the government and its people can be proud," said van Loosbroek.

"Of course, on Google maps, the same or more can be seen than from our balloon but still we respect the rules and regulations of the country. We explain to our passengers and sometimes it frustrates them, but they

understand and respect our position."

Abyssinia Ballooning plans to expand its services to other parts of Ethiopia. "We hope to set up a branch with one or two balloons in Hawassa, a popular resort town 270km south of Addis Ababa. If it is possible, we also hope to set up a base of one or two balloons in the Bahir Dar area, a city in northwest Ethiopia.

"From these places we can drive to other areas like Aksum (a historical city in north Ethiopia) and other locations to make early morning flights. Of course, we should discuss the expansion and get approval from all the relevant authorities. First we need to make our operation in Addis profitable before we can set up any other branches."

Abyssinia Ballooning has a future plan of branching out to other African countries. However, for the time being, van Loosbroek wants to focus on Ethiopia.

The company has five Ethiopian staff members. All the pilots are foreigners, as there



are no Ethiopians who hold the ballooning pilot licenses. "The training programme is quite long and costly. But it is one of our key objectives to start training Ethiopian balloon pilots. I am convinced that, in a few years' time, we will have trained the first Ethiopian balloon pilot," van Loosbroek said.



Abyssinia Ballooning does not fly during the rainy season – June-September – for safety reasons.

"Ballooning is completely safe, given that the balloon is being flown in stable weather conditions only," said van Loosbroek. "As a balloon cannot steer a [thunder] shower will suck in the balloon and then it can be dangerous. We will not take any risk and, therefore, we don't fly in the rainy season."

According to van Loosbroek, during the rest of the year early morning balloon flights can be conducted in Ethiopia. Late morning, afternoon and evening balloon flights are impossible as wind turbulence starts growing after 8.30am.





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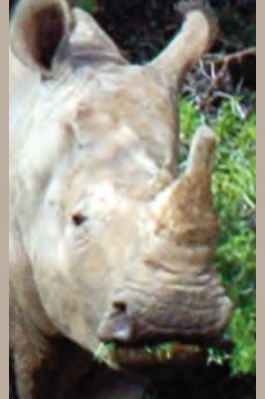
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**Mark Mansfield** reports on the latest 'Race for Rhino' air race which raises awareness of the on-going illegal slaughtering of rhinos, on which the Botswana Government takes a very firm stand.



**B**otswana's minister for the environment, wildlife and tourism, Tshekedi Khama II, had a straight-forward, from-the-shoulder message to deliver to competitors, officials and guests when he officially launched the recent Race for Rhinos at a gala dinner.

"If you cannot dream it, you will never do it," were his opening words for arguably what turned out to be one of the best air races ever held in Africa.

The Race for Rhinos was staged under the auspices of the Race of Champions, in partnership with Botswana Tourism, Gaing-o Community Trust and the Matsieng Flying Club.

The dream was conceived by well-known South African aviator Chris Briers, CEO of Airteam (based at Wonderboom Airport, Pretoria). It started out as the Race of Champions a few years back with the Letaba Flying Club, Tzaneen, South Africa, hosting the event. To date five races have been flown.

The decision to move the race to Botswana came about when the KwaZulu-Natal Government withdrew its sponsorship for the KZN Winter tour. The Botswana Government jumped at the opportunity to host the race.

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on Page 66

# Rhino race is a thundering success





CONTINUED FROM PAGE 65

The two-day event took place at the National Heritage site of Lekhubu (Khubu) Island, Makgadikgadi Pan, which was a world first in three ways. It was not the only first race of its kind, but also the first time that aircraft were allowed to land on the salt pan, and the first time an air race was hosted in Botswana.

The aim of the Race for Rhinos was to raise awareness of the on-going illegal slaughtering of rhinos, on which the Botswana Government takes a very firm stand.

“God will be the judge of the poachers; our job is to set up the meeting,” said Khama II.

One of the major sponsors, Dewet Drilling, donated a rhino to the Botswana Government. An auction was held at the gala dinner and a further 450,000 Pula (\$41,000) was raised for the cause.

Setting up an air race is a strenuous task, even when it is hosted at an established location. But the major challenge was to set up an entire make-shift city, including an international airstrip, in the Makgadikgadi pan at Lekhubu Island which is a dry granite rock island.



The nearest town is around 70km away – two hours by road. There was no water, no electricity, no runways, no infrastructure.

However, in the space of a week, an entire city – named ‘Khubu City’ – sprung up, including two 2,000-metre runways, a temporary air traffic control, a customs and immigration facility, 235 tents, and catering facilities for around 400 people. There were nearly 70 aircraft in attendance and a total of 30,000 litres of sponsored race fuel was trucked in from Durban. Toilets and showers were brought by road from Pretoria and all at a cost of around three-million Pula (\$276,000). This contributed to the enormous success of the race.

Like at all aviation events, safety is of the utmost importance and the Race for Rhinos had no major incidents with all the competitors returning safely.

Air races tend to border on the boring if you are a spectator, as all the action happens along the course. But for the spectators on the ground this time, the action was non-stop, thanks to the Capital Sounds team that broadcast daily at the venue, keeping the spectators informed and entertained.

Afternoon activities included tandem



**Main picture: Menno Parson's P-51D Mustang; Above: Almost 70 aircraft gathered at the temporary 'Khubu City' salt-pan airfield; Hopkins and Beamish dive their RVs; Left: Camera ship (a film of the event by ATV Productions can be viewed at [www.airrace.co.bw](http://www.airrace.co.bw)) and, below left, parachute jumping, including tandem jumps, went on throughout the event.**

parachute jumps, canopy piloting, as well as Menno Parson, from Master Power Technologies, flying his immaculate P51-D Mustang, an aerobatic display by Nigel Hopkins, and Jason Beamish flying two RV aircraft, as well as a flypast by Air Botswana.



A very surprising highlight was an impromptu display flown by the president of Botswana, lieutenant general Seretse Khama Ian Khama, who is not only a motorised glider pilot, but also a fixed-wing and helicopter pilot.

The president attended the two-day event and was regularly seen walking around and taking part in the activities. To the surprise of one of the Cirrus pilots, who had flown in on the Friday afternoon only to get bogged down in a soft part of the pan, one of those who came to his rescue to help pull the aircraft free was none other than the president himself.

The race was won by family team of pilot Hennie and navigator Dandre Bisschoff, flying a Beech F33A Bonanza.

Race for Rhinos will be held in 2016 at the same venue, with the dates to be confirmed.



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*Belgian MRO specialist Sabena Aerospace has linked up with Equatorial Congo Air (ECAir) to create a central African MRO centre. As Alan Dron discovered, this will help instil an aviation culture in a new generation of local technicians.*

## Sabena alliance takes the Congo MROs to a new level

**The companies will create a facility that meets European Aviation Safety Agency (EASA) standards. Currently, the Republic of the Congo is on the European Union's aviation blacklist.**

**T**he signing, in July 2014, of the agreement to set up a new MRO facility at the Republic of the Congo's Maya Maya International Airport in Brazzaville was a long-held goal for Stéphane Burton, Sabena Aerospace's CEO and main shareholder.

For many years he had believed there was a need in Africa for a facility that would not only offer good-quality, cost-efficient maintenance services, but also play a role in training local people in the complexities of aircraft servicing.

ECAir, the Congolese flag-carrier, shared this vision of training local people, said Burton. It resulted in the two organisations deciding to establish a joint venture (JV).

The companies will create a facility that meets European Aviation Safety Agency (EASA) standards. Currently, the Republic of the Congo is on the European Union's aviation blacklist because of concerns over its maintenance and regulatory standards (EC Air is able to fly into Europe because its crews and technical support are provided by Swiss airline PrivatAir.)

The JV – called sa@ec, for [sabenaerospace@ecair](mailto:sabenaerospace@ecair) – will be majority-controlled (51%-49%) by the Belgian company. “We have the majority. That's normal, because we will run the operation. We will be the accountable manager to the EASA authorities,” said Burton.

Sabena Aerospace already has considerable experience in Africa. It supports low-cost carrier Fastjet in Dar-es-Salaam, Harare and Kinshasa and, as well as the new Brazzaville operation, it operates in the Congolese city of Pointe-Noire and aims to establish two further African line stations in 2016.

There were several reasons for linking up with ECAir, said Burton. Firstly, it meant that it had the best chance of winning the maintenance business for ECAir itself and, for any MRO operation, it was important to have that type of reliable revenue stream.

Secondly, whenever Sabena Aerospace set up an operation in Africa, it tried to link up, either commercially or through a shareholding, with a local partner that had

good connections with the authorities in the country. This was the case with ECAir, in which the Congolese Government is majority shareholder.

The new organisation will start work by undertaking line maintenance up to 'A'-checks, followed by a wheel repair shop, then by repairs on small components, such as batteries and oxygen masks – “Not too highly technical items.”

The initial premises at the international airport in Brazzaville will be a refurbished 500sqm building, but the JV intends to build a hangar of roughly 6,000sqm that will be capable of taking a Boeing 787. Work on this two-year project is due to start in the first half of 2016.

ECAir is acquiring two Boeing 787-8s; its fleet currently consists of one Boeing 767-300ER, two 757-200s and four 737s – two 737-300s and two -700s. With the 787 arrival in mind, the MRO will add a sheet metal and composites repair facility.



Sabena Aerospace's Brussels facility already has a composites capability, as it provides support to the 787s of Belgian airline Jetairfly: “We will extend this capability into Brazzaville,” said Burton.

A training centre will also be established to create new staff and help build a safety-oriented aviation culture in Congo.

At the Paris signing ceremony setting up the JV, ECAir CEO Fatima Beyina-Moussa commented: “One of our priorities is training and we are confident that this partnership will play a key role in our moving to the next level.”

Initially, a small number of European personnel will be stationed in Brazzaville. “Over time, they will be replaced by locals and we are already recruiting,” said Burton. “We expect, within three to five years, that the Congo operation will have 30-40 staff, of which the majority will be aircraft technicians or component technicians.”

Congolese staff will be trained from scratch, initially in Brussels. It typically takes four to five years to train an aircraft technician. During the theoretical part of the training course, local trainees “might start working with us, not touching the aircraft, but just seeing how it's done. There's a certain culture to learn in aviation.”

The aim of the new facility is to siphon off some of the maintenance work from central African carriers that currently goes to South Africa, the Middle East or even Europe.

Burton noted that the Republic of the Congo had the stability necessary for investment and stressed that Sabena Aerospace was not looking for a quick return. The company was there for the long term, he said.

**The new MRO facility will service the ECAir fleet, including this Boeing 737-700.**





# VIA aims for the summit at Kilimanjaro

*Multi-skilled Susan Mashibe is bringing MRO to Tanzania. Marcella Nethersole reports.*

**V**IA Aviation is aiming to achieve its maintenance part 145 certification for its Kilimanjaro International Airport base.

The operator's president and CEO, Susan Mashibe, is both a commercial pilot and an aircraft maintenance engineer.

"We have been supporting the ground-handling for several years but now we see the need to support our customers with maintenance as well," said Mashibe.

"The original equipment manufacturers (OEMs) might be selling in Africa, but the support just isn't there for turbojets, business aviation and general aviation.

"Our maintenance service will include scheduled and non-scheduled A and B checks, but with C checks it will take a couple of years to build the capability as it is extensive."

Mashibe said there was a lack of local maintenance and engineering skills in Tanzania, so the company is forming a joint venture with US-based maintenance, repair and



**Susan Mashibe: "We want to bring in the skills of Duncan Aviation to support us for now but in five or 10 years' time we want to see locally skilled engineers."**

overhaul (MRO) company Duncan Aviation to provide VIA Aviation customers with C checks or heavy checks.

"We want to bring in the skills of Duncan Aviation to support us for now but in five or 10 years' time we want to see locally-skilled engineers," said Mashibe.

The company's services range from handling coordination and handling supervision, to full aircraft ground support.

It provides or arranges for fuelling, ground power supply, aircraft interior and exterior cleaning, oxygen, water and lavatory servicing.

It has 80,000sqft of hangar space that can comfortably fit in six Gulfstream 550s and 70,000sqft of private apron. It is the largest hangar for business aviation use in East Africa.

Mashibe said that while the FBO wasn't always busy, as it tended to be seasonal with people flying in for holidays, she believed providing maintenance would up its operation throughout the year.

"It is important to train local people and for us at VIA Aviation, our team are multi-talented – not only trained as ground-handlers but many have maintenance or a pilot background."

In fact, Mashibe herself was formally a maintenance engineer with Duncan Aviation and is also a Federal Aviation Authority-certified commercial pilot – making her the first female with both qualifications in Tanzania.



The company was at the recent African Business Aviation Association (AfBAA) annual regional symposium in Addis Ababa to "participate in the African aviation business industry to enable it to move forward".

"It's important that we all pull together to help support the industry here in Africa," said Mashibe.

"We need to help African governments to understand the importance of business aviation as there is still that lack of understanding.

"Governments are used to airlines coming in and business aviation seems to be a new animal for them – so we need to change this. Actually, for us, we work closely with the government and tell them when business jets are coming in to keep them up-to-date and show them how fundamental business aviation is to the economy."

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Addis Catering COO Tomas Jamtander: "I am privileged to work here."

# Company with a big

**Kalesyesus Bekele** profiles the first privately owned flight catering company in Ethiopia.

The first private flight catering company in Ethiopia – Addis International Catering (AIC) – was established in 2006 by Saudi-born Ethiopian billionaire, sheik Mohammed Hussein Ali Alamoudi.

AIC's \$24 million catering facility, designed to produce between 10,000 to 15,000 meals per day, was built in 2007 on 6,000sqm of land at the Addis Ababa Bole International Airport.

The three-storey building is equipped with state-of-the-art catering equipment and the company, which boasts 190 employees, also has special loading vehicles.

Tomas Jamtander, AIC chief operating officer said: "I have worked in many catering companies in Europe, the Middle East and Asia but I am privileged to work here."

The facility is highly secure. It is well fenced with razor wire and there are security cameras all over the place. CCTV cameras monitor the entire compound.

Cargo scanning machines are in place where supplies are unloaded and only authorised personnel can open the doors inside the buildings.

Keeping everything neat and tidy is vital. "We give a very high priority to hygiene," explained sales and customer service manager Makeda Yohannes. "Our employees undergo regular medical check ups. There are also random hand swab checks." AIC has a number of

microbiologists and a fully equipped modern laboratory.

The company's catering facility became operational in October 2008. The first customer was KLM. Unfortunately, AIC lost this connection in April 2013 when KLM stopped its flight to Addis Ababa for commercial reasons.

AIC currently provides services for seven international airlines flying to Addis Ababa: Emirates, Qatar Airways, EgyptAir and Kenya Airways are the regular customers, while Lufthansa, Turkish Airlines and Gulf Air require occasional catering.

"Sometimes they may need extra meals and beverages. It could be for a technical reason or because of short load at their bases," Jamtander explained. "We do not cater all the airlines coming to Addis Ababa. It depends on the proximity of their home base. If you see Saudia and Turkish Airlines, they bring their own supplies."

AIC produces an average of 1,000 meals per day for airlines. "We operate 24 hours a day and seven days a week with three shifts. We do not turn off the lights," Jamtander said.

AIC also provides catering services for local private airlines, such as Abyssinian Flight Services, Zemen Flying

Services, Trans Nation Airways (TNA) and National Airways. The company also caters for events hosted by embassies, international organisations and private companies.

It operates bakery services for renowned local cafes and hotels, as well as snack and lunch services at international schools canteens.

In addition, AIC prepares meals for thousands of delegates for major conferences at the headquarters of the African Union and other major convention centres, such as the United Nations Economic Commission for Africa (UNECA).

"First we had restrictions on providing a catering service for the domestic market because our investment licence allowed us only to export our products – to deliver meals to international airlines," explained Jamtander. "So, initially, we were prohibited from catering for embassies, international organisations and private companies in Ethiopia. We were even forbidden from selling to local private airlines. But a major breakthrough happened in June 2014, when we made amendments to our business licence. Now we are legally allowed to serve the local market."

AIC produces up to 5,000 meals per day when there are major events in Addis Ababa.

The company also caters for VIP flights coming from around the world. It delivers food and beverage for the presidential fleets from other African countries and different parts of the world. Jamtander is proud that his company has served

**"We give a very high priority to hygiene. Our employees undergo regular medical check ups."**

**MAKEDA  
YOHANNES**



# appetite for growth

heads-of-state visits from India, South Korea and Japan, among others. “We also cater for VIP flights and other special flights. It can be for tourists and business people,” he added.

In addition to catering, AIC also provides aircraft interior cleaning services as a separate business.

In the global aviation industry, ground-handling companies normally do aircraft cleaning. But, when AIC started operation in 2008, it was only Ethiopian Airlines that provided ground-handling services. Jamtander saw the market opportunity and decided to fill the gap.

“Since we had the capacity – manpower, equipment and trucks – we established the aircraft cleaning division within our catering facility. The first customer to join us was Saudi Arabian Airlines in January 2010. Later on we added Emirates and Flydubai.

An AIC sister company – International Cargo and Aviation Service (ICAS), a ground-handling company, has recently become operational. We hope to have few more customers in the coming months through them,” Jamtander said.

AIC’s aircraft interior cleaning section has specially dedicated vehicles and equipment. “We have vacuum cleaners and other equipment clearly coded with colours for the lavatories, galleys, and cabin. They are strictly separated,” he said.

Two years ago there was massive exodus of Ethiopians from Saudia Arabia when the Saudi Arabian Government deported more than 100,000

people to Addis Ababa. The deportations started in November 2013 and lasted until January 2014. There was up to 18 flights a day. “We did all the aircraft cleaning. We were extremely busy. Most of them were [Boeing] 747s.”

Jamtander who has been COO at AIC since its inception said: “When I first came we had only one flight every second day. We only had KLM thrice-weekly flights. Four days we did not have flights. So my focus was to find new customers and generate business. We got more customers and have consolidated the business. We established the cleaning business and got new customers. We received international awards and recognitions for our services.”

Qatar Airways started to serve the Doha-Addis Ababa route in September 2013. AIC secured the business from day one. “The first year in 2014 we were awarded the best African Caterer in Qatar Airways flight network. There were 20 catering companies in competition in Africa. That is a proud achievement,” Jamtander said.

AIC has been facing several challenges since day one. “We only began making profit in the 2014-2015 financial year after we secured the domestic sales licence and established the domestic catering service division,” he said.

There are about only 15 international airlines that have scheduled flights to Addis Ababa. “We have a very limited market when it comes to the airline catering service. That is why we established our domestic catering division.”

Jamtander hopes to see more international airlines coming to Ethiopia when the African open skies agreement (Yamoussoukro Declaration) is fully implemented all over Africa. “When this is implemented in Africa, I expect business to flourish,” he said.

High staff turnover is a big challenge for AIC. As many new star-rated hotels are being established in Addis Ababa, seasoned chefs and other AIC professionals are leaving. “Since our staff are highly trained they are marketable. Whenever a new hotel is opened we lose some of our best chefs. It is good for the country but, for us, finding and recruiting a skilled labour is a challenge.”

Getting a consistent high-quality product from local suppliers is another challenge. “We have to follow the airlines’ menu. But we have a challenge in the local supply chain. We import quite a lot. We import products like beef from South Africa and many other products from Europe. Our golden rule is we use local products, preferably from the local market. We encourage local producers but if we can’t find the desired quality and quantity we are forced to import. We cannot compromise quality.”

Sometimes Jamtander finds the import regulations challenging. He faces delays in imports and, at times, the introduction of new regulations is frustrating.

However, he says his work in Ethiopia is exciting. “I want to capture the international market (carriers coming to Ethiopia). But, since that has limitations, I also want to expand our local market. I want to put AIC on the top of the local catering market.”

**“Whenever a new hotel is opened we lose some of our best chefs.”**  
TOMAS JAMTANDER





“I’m looking forward to doing things as we’re supposed to do them by global standards. We will do away with bilaterals and simply exchange rights.”

IYABO SOSINA

*After 26 years with little progress, can Africa finally see Open Skies in 2017? That's the plan, and it's being shepherded through by AFCAC secretary general Iyabo Sosina, who spoke with **Victoria Moores** at November's AFRAA general assembly in Brazzaville.*

## Hurry, catch the high-speed train before it's too late...

**L**iberalisation is a moving train – you either get on board, get left behind, or get knocked down.

“How many people get hit by a train and survive?” observed African Civil Aviation Commission (AFCAC) secretary general Iyabo Sosina, the formidable lady who is responsible for making intra-African liberalisation happen by June 2017.

Despite her pivotal role and the Herculean task still ahead, Sosina remains friendly and approachable. She is quietly self-assured, underpinned by an air of strength and determination that shows she means business. That business is creating a single African air transport market (SAATM), enabling the continent’s airlines to fly freely from one point to another.

“It is the airlines in this room that acted against the Yamoussoukro Declaration (YD),” she told delegates at the African Airline Association (AFRAA) annual general assembly in Congo-

Brazzaville. “We have seen a change of attitude, apart from one or two. I’m looking forward to doing things as we’re supposed to do them by global standards. We will do away with bilaterals and simply exchange rights.”

Back in 1988, a group of African states agreed deregulating intra-African flights would be a good thing, leading to the YD, which became fully binding for 44 African countries in 2002. Sosina has been given just two years to deliver that vision, which has faltered for 26 years.

She told a story of how it costs more for her sister to travel across Africa to visit than it does to go to London. “To fly from west Africa to Dakar, it costs \$1,500. Why shouldn’t we fly to the UK instead, giving us another \$500 to spend while we’re there? If your product is not up to standard, you are cheating your people. Why should you pay for mediocrity?”

But change is happening. In January 2015, 11 African heads of state – representing Benin, Cape

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**“Funding is a major issue. If it is not in place, it might slow us down. AFCAC has a limited number of staff – just a director of air transport, an air transport officer and legal advisers – and that is not enough.”**

IYABO SOSINA

CONTINUED FROM PAGE 75

Verde, Republic of the Congo, Cote d’Ivoire, Egypt, Ethiopia, Kenya, Nigeria, Rwanda, South Africa and Zimbabwe—signed up to deliver intra-African open skies by the June 2017 deadline. Since then, another two – Ghana and Sierra Leone – have come on board.

However, Sosina wants more. By the next African Union (AU) heads-of-state summit, to be held in Addis Ababa in January 2016, she wants 20 countries signed up. “I have a good feeling. Fifteen is the number we are looking for but I am more ambitious. I have been talking to the national civil aviation authorities (CAAs) and I know quite a lot are close, so we are working to get ministerial approval. I would not be surprised if, by January, we actually exceed the 20-state target.”

AFCAC has been given legal powers to police intra-African liberalisation, acting as an arbitrator between states. It has come up with dispute settlement, competition and consumer protection rules, and signed up the 13 countries, but there is plenty more to be done.



The AU ministers have given AFCAC a roadmap and series of deadlines, which Sosina is translating into a detailed action plan and budget. She also needs to prepare a progress report ahead of the AU meeting.

This will involve coming up with a detailed organogram, establishing how many people and how much money are needed to get Africa’s open sky operational. She needs to train up AFCAC staff, investigators, national inspectors, a whole continent of CAAs, along with people in each of Africa’s eight regional economic communities (RECs).

“Training and awareness are extremely important, to make sure we are all on the same page,” she said.

AFCAC is working together with AFRAA, the AU, RECs and the International Air Transport

Association (IATA) on an intensive awareness campaign to educate countries on the “urgent need” to fully implement YD. The body is also proposing that November 14 should be designated as YD Day, to be celebrated by all AU member states and stakeholders.

Beyond this, Sosina’s team is working on secondary regulation, outlining the implementing steps for countries that have already signed.

Is June 2017 too fast? “I confess it is,” she replied, “But if we don’t have an ambitious deadline, we won’t move at the speed we need to get there.”

Sosina is almost on schedule and remains confident of hitting the 2017 deadline, although this will depend on funding.

“Funding is a major issue. If it is not in place, it might slow us down. AFCAC has a limited number of staff – just a director of air transport, an air transport officer and legal advisers – and that is not enough,” she said.

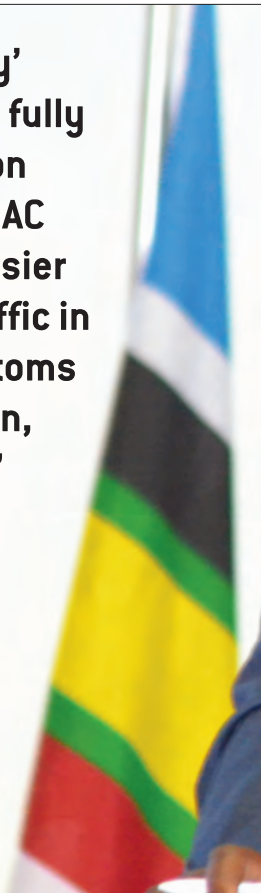
AFCAC is hoping to minimise duplication by tapping into existing national and regional resources where it can. With that in mind, it has drafted a memorandum of understanding with the RECs, proposing a training schedule for 2015 to 2018, along with a draft framework for enhanced “cooperation, collaboration, coordination and harmonisation” of roles. This draft has been sent to the AU Commission for consideration and immediate implementation.

Once 2017 comes around and the framework for liberalisation is in place, AFCAC will deal with the ‘nitty-gritty’ such as disputes and legal tribunals. But, in the meantime, Sosina has her work cut out.

“It may seem as though the pace of implementation is slow but if the proper paperwork is not done well and properly implemented, it will create chaos and undermine the system. We have waited a long time for this; when the process takes off, it must be smooth,” Sosina said.

**“The ‘single sky’ would anchor a fully fledged common market of the EAC by making it easier for regional traffic in matters of customs and immigration, among others.”**

PHILIP WAMBUGU



**T**he East African Community (EAC) is the regional intergovernmental organisation of the Republics of Burundi, Kenya, Rwanda, the United Republic of Tanzania, and the Republic of Uganda, with its headquarters in Arusha, Tanzania.

In 2007, it adopted the upper flight information region (UFIR) project, which aimed to create a single united bloc of upper airspace in the region.

The first phase of a feasibility study covering the Republics of Kenya, Uganda and Tanzania was completed in 2010.

The 2010 report had recommended additional proposals to conduct a detailed analysis of the sustainability of the lower airspace below 24,500ft and the inclusion of Rwanda and Burundi, which had just joined the EAC, into the study.

Then, in 2014, a follow-up report was commissioned comprising, among other things, the roadmap towards the implementation of the UFIR. This was expected to be delivered as *African Aerospace* was going to press.

According to Philip Wambugu, EAC director of infrastructure: “The UFIR is the creation of a single bloc of airspace above 24,500ft to ensure



# EASTERN BLOC

*The East Africa Community is moving towards creating a single bloc of sky above 24,000ft to improve safety and gain air traffic control efficiency and performance advantages. **Hillary Muheebwa** reports.*

«Pourquoi l'Afrique de l'Est pourrait bientôt voler bien haut» – Page 78



Aircraft will be busier once African skies are harmonised. Here a business jet sleeps at Dar-es-Salaam's domestic terminal (with the original tower).

efficient levels of safety and advantages in capacity, efficiency and performance in air traffic facilitation.”

The present system is fragmented into states, he pointed out.

The ‘single sky’ may have two main advantages, according to Wambugu.

“The first is the treatment of all EAC regional aviation traffic as domestic travel for purposes of airport taxes.”

In most of the EAC countries, passenger travel attracts different airport fees, dependent on whether it is domestic or international travel. “In Kenya, for example, international travel attracts \$40 per ticket, whereas domestic travellers pay around \$58, explained Wambugu. “If EAC had a ‘single sky’ these fees would all be harmonised.

“It would also anchor a fully fledged common market of the EAC by making it easier for regional traffic in matters of customs and immigration, among others.”

The study reports have been funded by the member states. Once adopted by the relevant EAC organs, the partner states, coordinated by the EAC

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secretariat, will begin the roadmap implementation phases.

The aviation industry plays an important part in the EAC transport sector, given the challenges of large geographical distances in the region, coupled with inefficient and risky regional roads and railway networks. For international trade, the sector offers transport for tourists, horticultural produce and international merchandise of high value.



According to Wambugu: "Over the past five years, the region has maintained an average aviation market growth of 6%, compared to the global average of 5.8%."

In order to fast track the establishment of a common airspace, the partner states will need to invest in interoperable systems to prepare for the establishment of a control centre.

This, according to Wambugu, has resulted in serious challenges.

"The partner states are currently at different levels in terms of improving their air navigation services, levels of efficiency and capacities, both in infrastructure and human resource," he explained.

The other challenge involves the cost of



Staying ahead in Dar is about how much you can carry. But the truth is few international passengers do more than pass through the airport to tourist destinations such as Mt. Kilimanjaro, Zanzibar and the Ngorogoro Crater.

**SOMMAIRE**

# Pourquoi l'Afrique de l'Est pourrait bientôt voler bien haut ?

*La Communauté d'Afrique de l'Est va vers la création d'un espace aérien commun au-dessus de 24 000 pieds pour améliorer la sécurité, la performance et l'efficacité en matière de contrôle aérien. Des détails avec Hillary Muheebwa.*

La CAE est l'organisation intergouvernementale régionale regroupant le Burundi, le Kenya, le Rwanda, la Tanzanie, et l'Ouganda.

En 2007, elle a adopté le projet UFIR visant à créer un espace aérien supérieur commun. L'étude de faisabilité couvrant le Kenya, l'Ouganda et la Tanzanie fut achevée en 2010. Entre-temps, le Rwanda et le Burundi se joignirent à l'étude.

En 2014, un rapport de suivi fut commandité pour établir la feuille de route pour l'application du projet UFIR.



Selon Philip Wambugu, directeur de l'infrastructure de la CAE, il comporte deux principaux avantages.

Premièrement, l'ensemble des vols effectués dans cette région seront considérés comme des vols intérieurs.

Deuxièmement, il permettra d'assouplir et d'harmoniser les questions douanières et d'immigration entre autres.

Le transport aérien joue un rôle important dans le secteur du transport au sein de la CAE en raison de son étendue géographique et de ses

infrastructures routières et ferroviaires régionales qui sont inefficaces et risquées. Il facilite également le commerce international et soutient le tourisme.

Durant les cinq dernières années, cette industrie a maintenu une croissance moyenne de 6% dans la région par rapport à une moyenne mondiale de 5,8%."

Il y a de sérieux défis à relever explique Philip Wambugu : juguler avec le développement inégal dans le secteur aérien dans chacun des pays ainsi que des infrastructures et des ressources humaines disparates, le coût et la localisation du centre de contrôle.

Sur le plan technologique, il exhorte les États à mettre en œuvre des lignes directrices de navigation de l'OACI.

Même si un espace aérien commun pour l'Afrique n'est réalisable qu'à long terme, l'interopérabilité et la coopération entre les différentes régions peuvent être concrétisées dans les 5 à 10 prochaines années. Tous les partenaires de l'aérien devraient cependant se focaliser sur ce projet.

Le CAE collabore avec le COMESA, la SADC et la CEDEAO pour harmoniser les initiatives de l'UFIR.

transforming the current disaggregated control to a single centre control for the whole region. Technology interface is a further problem.

The final challenge will be determining the location of the single control centre.

The UFIR road map recognises the challenges and outlines responses.

On the issue of technology it urges states to implement the International Civil Aviation Organisation (ICAO) navigation guidelines, in order to enhance their systems interoperability.

It also identifies the required financial outlays per state to realise the project and proposes the establishment of a technical working group, at director of air navigation level, to oversee the project.



The secretariat will develop the draft template for the negotiations on the protocol establishing the location of the control centre.

Different Africa Regional Economic Communities (RECs) are at different stages of creating unified airspaces and this will contribute to eventually having a unified airspace for Africa.

"A single sky for Africa may be a long-term achievement but interoperability and seamlessness between the different flight information regions in Africa can be achieved in the next 5-10 years and all African aviation stakeholders should focus on that," added Wambugu.

The EAC is collaborating with other Africa regions, especially the tripartite of EAC, Common Markets for Eastern and Southern Africa (COMESA) and Southern African Development Community (SADC), plus the Economic Community of West African States (ECOWAS), for the harmonisation of the on-going UFIR initiatives.



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# HIGH-TECH TERMINAL RISES FROM THE ASHES

«Un terminal high-tech au Nigeria » – Page 82

**M**MA2 rose from the ashes of a terminal that was engulfed in flames back in May 2000. After the inferno, the Nigerian Government made a decision to redevelop the airport using private sector investment under a public-private partnership (PPP) scheme.

The plan completely transferred all development and operating risks to the private sector, specifically on a build-operate-transfer (BOT) arrangement.

The new terminal eventually began operations in May 2007, designed to cater for domestic traffic operating alongside a much older and technologically challenged international terminal.

“There were competitive bids by several companies for the project,” recalled Christophe Penninck, CEO at Bi-Courtney Aviation Services, which operates MMA2.

Royal Sanderton emerged as the preferred bidder, while Bi-Courtney Limited, a wholly indigenous conglomerate and the parent company of Bi-Courtney Aviation Services Limited (BASL), was the reserve bidder.

“Owing to the prolonged delay in starting the project, the federal government invited Bi-Courtney to take up the responsibility,” Penninck explained. Consequently, in 2005, the Nigerian Government awarded the concession to design, build and operate MMA2 and ancillary facilities to Bi-Courtney Limited.

*Murtala Muhammed Airport Terminal Two (MMA2), in Lagos, is the first and only privately-funded terminal in Nigeria.*

*Keith Mwanalushi spoke to the terminal’s chief executive to see how new technology has transformed operations.*

“We changed all the check-in counters and scales and increased their number from 31 to 45. The design and manufacturing was done by INTOS, the same company involved with Amsterdam Schiphol and various other major international airports. We chose them for their quality of workmanship and product,” Penninck said.

New technology innovations include the common-use passenger processing system (CUPPS), the self-service check-in kiosks, automated access gates and the baggage reconciliation system (BRS).

“MMA2 is the only airport terminal in Nigeria to have solely installed the latest version of a computer system that enables the passengers and terminal users to experience a fast, secure, and safe customer-friendly way to board a flight,” Penninck said.

Check-in desk computers have all changed and each is now connected to

new boarding pass and baggage tag printers.

Each airline has a ticket barcode scanner to accelerate the check-in process. “For passengers travelling without bags, we have installed four self-check-in kiosks. We have also increased the security features at MMA2 by installing e-gates before the security screening point,” Penninck reported.

Based on extensive research, BASL selected RESA as the system provider. “The system we have is the same as that installed in major international airports like Charles De Gaulle, Bangkok International, the new airport terminal in Mauritius and more than 200 airports worldwide,” Penninck added.

Introducing new technologies to old airports in Africa takes more than just installing new systems. “We had to get the critical stakeholders to understand and appreciate the technology,” explained Penninck, adding that a further challenge was obtaining a steady and uninterrupted supply of power.

“Also, because of the peculiar regulatory environment, where the main actors have very little appreciation of these innovations, we didn’t get the desired level of regulatory support that would have made our job easier. Such support could have guaranteed lower tariffs on imports, as well as discretionary visa approvals for visiting technicians.” Another stumbling block was

**“Passengers and terminal users experience a fast, secure, and safe customer-friendly way to board a flight.”**

CHRISTOPHE PENNINCK





Nigerian travellers can utilise a modern terminal.

**“We are compelled to bring in expatriates for routine repairs and maintenance.”**

CHRISTOPHE PENNINCK

getting some of the airlines to adapt wholly to the new innovations, with most unwilling to make the extra, but ultimately profitable, investment required to bring their systems and processes up-to-date.

“Because the technology is new, local engineers have no expertise in handling this equipment. We are, therefore, compelled to bring in expatriates for routine repairs and maintenance. This sometimes takes a while. We also continue to incur costs on training and retraining our staff,” he added.

Changing the mind-set of staff to embrace the new technology was initially a challenge. He said the majority of airport staff were comfortable with the old system because it had loopholes for fraud and inefficiency. “So, naturally, they resisted but were eventually convinced of its overall and long-term benefits.”

The domestic airlines needed some convincing too. “Our airlines needed to understand that we had to modernise and we had to invite RESA to Lagos to explain to the airlines the advantages they’d have.

“Airline staff were also not keen and it took a long time to convince them it was a positive evolution,” Penninck recalled.

Cost is certainly a major consideration for all airports, especially in Africa and particularly for those that are looking to attract major international carriers. “Those airlines have an expectation that common-use facilities will be available,” commented Matthys

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Serfontein, VP for airport solutions at transport communications and information technology specialist SITA.

In the past few years, SITA has introduced a number of cloud-based services to minimise or negate the start-up costs associated with larger systems deployed directly into budget or financially constrained airports. "For example, we have done this with our baggage reconciliation and our common use (CUTE/CUPPS/CUSS) solutions.

"In fact, large airports can also benefit from our cloud services and we are currently in discussion with several to incorporate cloud-based services into their IT infrastructure," Serfontein continued.

A number of airports globally are turning to cloud-based common-use platforms to provide a cost-effective approach to customised and flexible passenger processing. Whereas previous solutions ran off local servers, cloud-based systems leverage resource pooling and are typically hosted in a single centralised data processing facility, therefore eliminating the need for costly on-site hardware.



Yannick Beunardeau, director, global head of sales and marketing, airport IT, at Amadeus, said outsourcing IT and using cloud environments could be a good choice for many airports, pointing out that airports would pay for what they consume, rather than paying to maintain a potentially excessive number of services.

"What's more, dedicated cloud providers can typically obtain and operate a server with the latest technology much more affordably than airports. A real world example of this is Amadeus' airport IT systems, which can also be priced on a transaction-based model, meaning customers only invest more when their businesses are progressing," explained Beunardeau.

Similarly, by outsourcing IT to the cloud, costs and responsibilities relating to system maintenance and upgrades lay with the cloud provider rather than the airport. "Software-as-a-service solutions enable airports with lower IT budgets and limited IT staff to bypass high license and installation costs, thereby enjoying the same high-level of IT services as larger airports," he said.

Some airports look to update applications and infrastructure fairly often, which can be a time-consuming and expensive process when dealing with inherited hardware systems.

"However, the ease of updating cloud-based resources, which can be done remotely at the push of a button, is a significant benefit and cloud providers also often have plug-ins that allow them to easily integrate with other providers," Beunardeau added:

## SOMMAIRE

# Un terminal high-tech au Nigeria

*Le terminal N°2 de l'aéroport Murtala Mubammed (MMA2) de Lagos est la première et l'unique infrastructure aéroportuaire financée par le secteur privé au Nigeria. Le point avec Keith Mwanalushi.*

**Le MMA2 renaît de ses cendres après le terrible incendie survenu en mai 2000. Le gouvernement nigérian avait par la suite décidé de réaménager l'aéroport en injectant des investissements du secteur privé. Le nouveau terminal a finalement repris ses activités en mai 2007 pour répondre au trafic domestique avant de devenir progressivement un terminal international. C'est la société Bi-Courtney Aviation Services Limited qui opère le terminal.**

**« Nous avons changé tous les comptoirs d'enregistrement et avons augmenté leur nombre de 31 à 45 », explique son directeur général Christophe Penninck.**

**De nouvelles innovations technologiques y ont été installées comme le CUPPS (Common Use Passenger Processing Systems), les bornes d'enregistrement en libre-service, les portes d'accès automatiques et le système BRS (Baggage Reconciliation System).**

**Le MMA2 est le seul au Nigeria à fournir les étiquettes de bagages et de cartes d'embarquement mises en place et pilotées par une équipe locale. Le terminal a récemment été nommé « meilleur terminal aéroportuaire » au Nigeria avec, selon une enquête, plus de 60% de satisfaction.**

**Christophe Penninck et son équipe cherchent des moyens de reproduire ce succès dans d'autres grands aéroports au Nigeria et en Afrique de l'Ouest.**

**Les aéroports africains font face de nombreux défis technologiques et dans l'application de la transition écologique. Plusieurs d'entre eux ont une infrastructure inadéquate. Les ingénieurs locaux ont également peu d'expertise dans la gestion de ces nouveaux systèmes et équipements.**

**« Changer l'état d'esprit du personnel à l'égard des nouvelles technologies a également été un défi », souligne Christophe Penninck.**

**Le cloud est une alternative mais son coût est certainement un facteur déterminant pour tous les aéroports surtout en Afrique, qui cherchent à attirer les grands transporteurs internationaux.**

**Certains aéroports dans le monde prennent le virage du cloud pour utiliser une plateforme commune et rentabiliser la gestion des passagers.**

**L'adoption de nouvelles technologies provoque naturellement beaucoup d'hésitations. Le passage au cloud n'en fait pas exception.**

So what are the challenges of deploying new technologies in old airports, especially in Africa?

Firstly, Beunardeau is hesitant to refer to them as 'old airports'.

"I am not sure what an 'old airport' means in our Amadeus IT world," he said.

"Most of the legacy airports reside in an environment where Wi-Fi or 3G and 4G are already available. If internet is available in a so-called 'old airport', then our solutions are possible to operate. As a matter of fact, the 'old airports' do not need to modernise by implementing expensive local servers. In terms of IT, they can directly leapfrog from being an 'old

airport' to being an advanced airport."

However, Beunardeau acknowledged that whenever an industry began to consider new technology adoption there would be natural hesitations "and this is particularly true regarding a reticence to move to the cloud".

Back at MMA2, the terminal is the only one in Nigeria providing baggage tags and boarding passes and the equipment was installed by the local team using a system wholly owned by the airport.

Penninck admitted that the installation of the system was expensive and a challenge for the teams involved.

Typically, in other Nigerian domestic terminals, the airlines install their own printers and provide their own consumables. "When the traffic is not high enough to equip the airport, usually where they have only one flight a day, they sometimes issue manual boarding passes and baggage tags. This is like travelling back in time," he said.

He was eager to do things differently from the norm in Nigeria. "Our philosophy was to bring the available technology in our terminal to the benefit of all the stakeholders. The aim was to have a passenger experience at the same level of service and have similar technology as airports in more developed regions."



Recently, MMA2 emerged from a survey by Phillips Consulting as the best airport terminal in Nigeria. The survey, described as the first in the domestic aviation industry, examined the state of the industry with a view to identifying the gaps in the provision of adequate services to customers.

In the area of airport experience and most frequented airports, MMA2 scored 43%; with Nnamdi Azikiwe International Airport, Abuja, scoring 21%, followed by the General Aviation Terminal (GAT), Lagos with 14% Port Harcourt International Airport had 10%.

In terms of accessibility, including adequacy of parking facilities, customers of Benin Airport and MMA2 expressed the highest levels of satisfaction, rating the terminals 64.00 and 63.33% respectively. Nnamdi Azikiwe International Airport in Abuja scored 51.11%.

On ground transport to and from airport, frequent users of Benin Airport and MMA2 emerged the most satisfied, with scores of 63.03 and 62.17% respectively.

Other criteria include shuttle services to and from aircraft and availability of baggage carts and trolleys. In this regard, customers of the six airports provided lukewarm scores, indicating that trolleys are either not readily available to passengers or are in poor condition. Only MMA2 received a score above 60% according to the survey.



The crash site of a Nigerian Air Force Dornier-228 maritime surveillance aircraft in Kaduna, in September 2015.

# SAFETY MUST COME FIRST

**Oscar Nkala** looks at some of the latest developments in airport security across Africa, which have taken on increased significance following the November 13 attacks in Paris.

The International Air Transport Association (IATA) says Africa should invest more in aviation safety and security amid revelations that only 17 out of 54 countries on the continent can claim to be compliant with 60% or more of the International Civil Aviation Organization (ICAO) airline safety and security regulations.

Addressing delegates at the 47th African Airlines Association (AFRAA) annual general assembly (AGA) in the Republic of the Congo capital, Brazzaville, in November, IATA director general and CEO, Tony Tyler, said recent airline tragedies require Africa to do more to create safe, efficient and economical air transportation networks.

“World-class safety and security is a prerequisite for a thriving aviation industry,” he said.

“Africa needs safe, efficient and affordable air transport links to make the most of its people and resources.

“We have recently had two sad reminders that there is still work to be done in this region to reach the averages [attained] elsewhere in the world.

“I am not going to speculate on the causes of the tragedies of [Russian] Flight KGL 9268 or the Allied Services cargo flight from Juba, but we

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Tony Tyler: “World-class safety and security is a prerequisite for a thriving aviation industry.”



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are following the developments closely,” Tyler said at the time.

Preliminary investigations into the Allied Services Antonov-12 aircraft crash, which killed 41 people in South Sudanese capital, Juba, a week after the Russian aircraft crashed, have raised questions about the airworthiness of the 52-year-old aircraft.

According to Tyler, Africa should never understate the importance of airline safety and security, despite some notable safety achievements made in recent years: in 2014, in terms of jet hull losses, the African rate was zero. “But we cannot relax as the all-accident rate for the region last year [2014] was 11.18 for every one million flights, which is far higher than the global average of 1.92.”

He suggested that Africa should allocate more resources and grant operational independence to national civil aviation authorities, while considering the use of regional pooling initiatives to promote aviation safety and security.

Further, he said only 29 African airlines had registered themselves with the IATA’s operational safety audit (IOSA) system, which conducts regular, rigorous checks to determine aircraft safety and flight fitness.



Airlines that are not eligible for IOSA can still be assessed using the IATA standard safety assessment (ISSA), which gives small carriers an opportunity to benchmark their safety performance.

Tyler added: “The cost of doing business here [in Africa] is too high. Fuel, which accounts for approximately 30% of airline operating costs, is 20% more expensive than elsewhere in the world. African states tax fuel sales and restrict competition in the market, including here in Brazzaville.

“In fact, governments across Africa levy some 15% of all the aviation taxes worldwide.

“In addition to jet fuel taxes, there are passenger taxes, solidarity taxes, tourism taxes, fiscal stamp taxes, value-added taxes, sales taxes and transportation taxes.

“It all adds up to a costly burden on airlines in this region. And that is before we get to the issue of African airport charges, which are among the highest in the world.”

According to IATA, 6.9 million people are employed in the African aviation industry, which was generating more than \$80 billion in gross domestic product (GDP) by the end of 2015.



Pictured at the handover of the explosive trace detectors in Nairobi are British High Commissioner to Kenya, Dr. Christian Turner (third from right) and next to him (third from left) Mbuvi Ngunze, Kenya Airways group managing director and CEO.

## COUNTER-TERRORISM PROJECT TAKES SHAPE

In 2015, the British Government stepped up efforts to equip east African countries to deal with terrorism at airports by donating three explosive trace detector (ETD) machines and training aviation security officers from Kenya, Ethiopia and Uganda.

The heightened threat of terror attacks by regional armed rebel groups and trans-national jihadists, has spurred east African nations into seeking new technologies to secure the aviation industry.

Britain donated the first ETD machine to Kenya Airways early in 2015. It was handed over by British ambassador Chris Turner, who said airport security is a vital component of the bilateral security cooperation agreement that commits both countries to shared officer training and collaboration in the fight against terrorism in east Africa.

Kenya faces internal threats from local armed groups and a bigger external security challenge from the Somali-based Al Qaeda affiliate, Al Shabaab, which has killed more than 100 Kenyans in at least three bloody cross-border incursions over the past three years.

The Islamists say the attacks are meant to avenge the deployment of the Kenyan Defence Force (KDF) to Somalia, where it has largely routed the insurgency and liberated most of the southern and coastal areas since joining the African Union mission in Somalia (AMISOM) force battling the group in October 2011.

British army bomb experts designed the detection kit specifically for aviation security

operations. It has since been installed at the Kenya Airways hub at the Jomo Kenyatta International Airport for screening passengers, baggage and on-board consumables for bombs and improvised explosive devices (IEDs).

Turner said the security kit would broaden the capabilities of Kenya Airports Authority (KAA) and Kenya Civil Aviation Authority (KCAA) security officers at the airport. The machine has capabilities to detect a range of explosives in less than 10 seconds.



In addition to the donation, a team of five aviation security compliance inspectors, drawn from the airports authority and the civil aviation authority, have received British training on the conduct of counter terrorism operations. The programme covered the use of explosive trace detectors, X-ray screening and the conduct of physical searches of baggage and travellers for aviation security supervisors.

The group returned to the JKIA in December 2014 after spending six months on counter-terror training and practical attachment at Glasgow International Airport in Scotland.

The UK has also held a series of local counter-IED and recognition of firearms and explosives courses for aviation security officers at the East African Aviation School in Nairobi.

Kenya has also received inert explosive training aids and walk-through body scanners capable of detecting non-metal items hidden in clothing.



By early 2015 these IBM scanners had been installed at Hosea Kutako International, Ondangwa, Eros and Walvis Bay airports, but they are not able to detect small traces of explosives.

## NAMIBIAN AUTHORITIES IN ROW OVER SCANNERS

The Namibian Airports Council (NAC) and the Namibian Police Services (NPS) locked horns last year over police demands for the removal of 20 allegedly defective airport scanners, which were recently installed at five major airports.

The airport authority acquired the scanners from US-based airport surveillance system manufacturer, IBM Military Services and Accessories Suppliers, in September 2014. The scanners were alleged to be defective soon after installation at the Hosea Kutako International, Ondangwa, Eros and Walvis Bay airports early last year.

The scanners include cargo, personal baggage and walk through metal detectors for passenger screening.

The war of words between the two aviation security agencies erupted last year following a newspaper report, which quoted a senior aviation security official saying the scanners cannot detect explosive traces and metal objects weighing less than 300gm. He said because of this limitation, they are not compliant with basic International Civil Aviation Organisation (ICAO) safety and security regulations.

IBM Military Services director,

Muhamed Omar, was quoted by the same paper saying his company cannot be blamed for supplying sub-standard equipment because the Namibia Airports Company (NAC) never gave specifications of the detection capabilities of the system it sought.

Further, he said, even the alleged failure to detect metals and explosive traces weighing 300gm or less would not expose the airports to potential terror attacks.



Omar said the equipment sale was approved after live pre-delivery capability demonstrations witnessed by Namibian Directorate of Civil Aviation (DCA) representatives found them suitable for the security screening roles set by the Namibian team.

He said because of its proven efficiency in Namibia, some banks, the prison and police services have bought the system and will deploy it starting in January 2016.

“The (scanner) system was tested in America by our teams and representatives from NAC and they

were all satisfied with their performance. NAC had the right to reject the equipment then if it did not meet their specifications,” Omar said.

Following the report, the Namibian Police Explosives Unit conducted its own investigations and found that the IBM scanners cannot detect metal and explosive traces weighing 300gm or less.

Namibian Police inspector, general Sebastian Ndeitunga, followed up with a call on the Namibia Airports Company (NAC) to remove the scanners, as their limitations pose national aviation security threats.

He said the police were never told about the specifications of the new scanners, although they are in charge of airport security.

“As police, we have always known that the scanners are defective. However, we cannot discuss this any further now given the sensitivity of such national security matters to avoid advertising our vulnerabilities. We will meet all aviation industry stakeholders shortly to find possible solutions to this security breach, even if that means removing the defective scanners,” Ndeitunga said.

**“As  
police, we have  
always known that  
the scanners are  
defective.”**

**GENERAL SEBASTIAN  
NDEITUNGA**





IED training kits donated by the British High Commission to Uganda.

## UGANDA ORDERS MORE X-RAY SCANNERS FROM UAE

On November 9, 2015, the Civil Aviation Authority (CAA) of Uganda took delivery of improvised explosive device (IED) training kits from Britain as part of a counter terrorism security assistance package that involves the training of officers from the Entebbe International Airport (EIA).

Meanwhile, the Uganda CAA has contracted United Arab Emirates-based Restrata Solutions to supply X-ray machines, body scanners, escalator systems, binoculars, night-vision goggles, intelligent camera systems, spare parts and accessories to replace the obsolete security screening system presently deployed at EIA.

The urgent order was made in September, two years after the publication of a confidential intelligence report that warned president Yoweri Museveni that the EIA was a soft target for potential terror attacks because its old body and cargo scanners could not detect metals, bombs and IEDs.

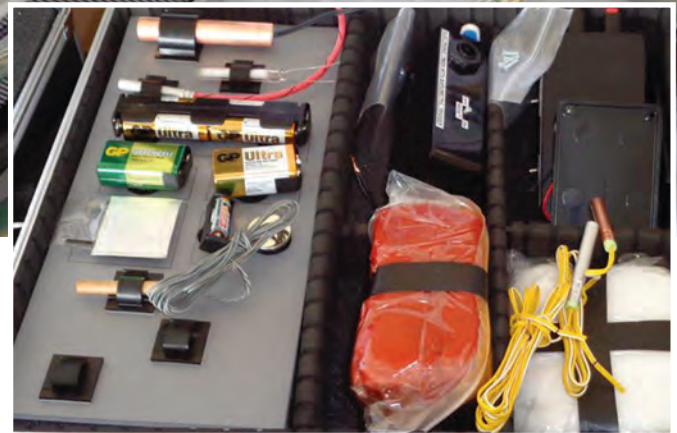
Last year, US intelligence services and the embassy in Kampala issued three serious warnings of a high potential for terror attacks at the EIA by Al Shabaab. The militants have struck Uganda twice in the past five years in attacks meant to

avenge the deployment of the Uganda People's Defence Force (UPDF) to the African Union mission in Somalia (AMISOM) counter-terrorism war against the group.

On June 25, 2015 Restrata Solutions general manager Ian Todd, and Ugandan police under-secretary General Rogers Muhwira, signed an agreement for the supply of \$5 million worth of new aviation security equipment. Restrata is acquiring the equipment from Rapiscan, which has also won previous UPDF contracts to supply, install and maintain military aviation security systems for the Air Force at the Entebbe, Nakasongola and Gulu air bases.

The civil airport security upgrades are being funded from a security levy of \$10 per person, which has been charged to all travellers using Entebbe since July 2007.

In another development, the Uganda Wildlife Authority (UWA) has appealed to the Uganda Revenue Authority (URA) to urgently consider installing a container cargo scanner at Entebbe to stop the rampant trafficking of ivory and other game products through the airport. According to the wildlife authority, Entebbe is one of the major exit points for elephant and rhino ivory trafficked from east and central Africa to Asia because it has inadequate security screening systems.



Entebbe International Airport.







Uganda Transport minister Stephen Chebrot speaking at the handover of IED training kits in November 2015.

## SECURITY STAFF TRAINING AT BOLE INTERNATIONAL

In August 2015, the British embassy in Addis Ababa donated East Africa's second explosive trace detector (ETD) machine to the Ethiopian Civil Aviation Authority.

It has since been deployed to passenger and cargo screening duties at the Bole International Airport.

The equipment includes an ETD machine and test pieces for X-ray machines, which will be used to expand the detection capability of airport security officers.

Ethiopia's drive to secure one of Africa's three main regional aviation hubs is motivated by fears that some home-grown secessionist armed groups and the Somali Islamist militant group may be targeting the aviation industry in terror attacks.

Al Shabaab has repeatedly threatened to attack Ethiopia to avenge the deployment of its security forces to the ongoing African Union mission in Somalia (AMISOM) counter-insurgency campaign.

Militant groups may be targeting the aviation industry in terror attacks.

## GERMAN-MADE ATC SYSTEMS FOR TANZANIA

By the end of 2015, the Tanzania Civil Aviation Authority (TCAA) was in the process of installing a new Quadrant automated dependent surveillance broadcast (ADS-B) system and an AIDA-NG aeronautical message-handling system (AMHS) at the Julius Nyerere International Airport (JNIA).

The development will empower the airport flight tracking systems to identify and communicate with all aircraft flying over the entire eastern and Indian Ocean airspace of the country.

The systems were acquired from German air traffic management solutions provider, Comsoft, in a move that makes Tanzania one of the few African countries to have the capability to track air traffic movements through its airspace in order to ensure flight safety.

The system was received by TCAA director general, Godfrey Chacha, in May and is being installed in phases.

Adoption of the new system also makes Tanzania compliant with International Civil Aviation Organization (ICAO) safety and security regulations.

## GHANA AND NIGERIA STEP UP SECURITY

The Ghanaian Ministry of Transport has announced plans to acquire advanced digital ground communications systems and passenger and baggage security screening systems to improve safety and security at Kotoka International Airport (KIA).

The move is part of a drive to make KIA an African regional aviation hub by 2017.

Officially opening the 2015 International Federation of Air Traffic Safety Electronics Associations (IFATSEA) annual meeting in the capital, Accra, early in November, Transport minister Dzifa Attivor said the rapidly growing local aviation industry required the implementation of safety and security measures which meet global standards.

To this end, she said the Ghanaian Government would soon acquire more sophisticated passenger and baggage security systems to augment the current 24-hour closed-circuit television (CCTV), which was installed around the airport earlier this year.

□□□□□

New operational equipment to improve the efficiency of passenger and baggage-handling services will also be purchased to solve the long-running problem of congestion at KIA.

"The Government will continue to support the expansion of KIA with the acquisition of new equipment to improve operations and to maintain our excellent record of safety and security. There is need to ensure that we continue to meet global [safety and security] standards," Attivor said.

Meanwhile, the Nigerian Civil Aviation Authority (NCAA) has issued new air traffic safety electronic personnel (ATSEP) licences to 18 engineers from the Nigerian Airspace Management Agency (NAMA) as the country pushes ahead with staff training to ensure airport safety.

The engineers graduated from the Nigerian College of Aviation Technology in Zaria after undergoing extensive training in air safety disciplines.

The programme is designed to complement the use of new passenger and cargo safety systems recently installed at Murtala Mohammed International Airport (MMIA), the country's main port of entry. The new X-ray security system includes cargo and carry-on screening machines, hand-held explosive and metal detectors, 3-D body scanners, baggage hold screening machines and walk-through metal detectors.





# DRONES GIVE AIR CARGO A NEW BUZZ

«Le fret aérien en Afrique : La révolution des drones » – Page 91

*Africa is one of the fastest-growing markets in the world. But, while the rise in trade is boosting airfreight, infrastructural problems remain. Studies show that drones will be able to cater for 10 to 20% of regional cargo transportation in the future. Vincent Chappard reports.*





Data released by the International Air Transport Association (IATA) for global airfreight markets show a very modest increase in September. On a continental basis, African carriers experienced demand growth of 2.5% and capacity rose by 8.1%. Regional trade generated increases in the volumes.

There is huge scope for cargo, even if only 15% of trade is inter African. Many people believe drone cargo will prove to be the sustainable answer because of Africa's sparse road networks.

"Throwing time-dependent goods into the sky and moving them about with a flying robot is a good idea in Africa and beyond," said Jonathan Ledgard, director of the future Africa initiative at the Swiss Federal Institute of Technology and founder of the RedLine project. The first commercial cargo drone port will be operational in 2016 in Rwanda. The route will be about 80 kilometres long and will connect several towns and villages. The first cargo drones will carry small payloads of two kilos and will serve hospitals and humanitarian emergencies.

Other early adopters will use them to deliver payloads to government offices, mines, oil and gas installations and ranches.

According to Ledgard, they will quickly evolve into larger and heavier craft until they can lift 20 kilos, or more, over several hundred kilometres.

Ledgard is not only a novelist but also a leading thinker on risk, nature and technology in near future Africa. He spent

the last decade as Africa correspondent for *The Economist* and reported the continent's mobile phone revolution.

As founder of the RedLine project, he is convinced that "we will make more intensive use of air sky using flying robots to move goods faster and more accurately". Now it's time for the drone revolution.

"The first routes presage the future railways in the sky but they are also equivalent of the donkey paths that wind up through wooded mountains in some parts of the world, cresting at a remote village, then winding down the other side."

Ledgard underlines that "cargo drones are a supplementary transport system, not a disruptive one".

Cargo drones will fly in what Ledgard calls the "lower sky" (roughly the height of the Eiffel Tower) and in an air corridor about 200 metres wide and 150 metres high. The routes will be geo-fenced.

And, for this futuristic challenge, he has the collaboration of Lord Norman Foster, who is the lead architect on the concept for an affordable RedLine droneport powered by solar energy. This entirely connected station, the petrol station of the future, will manage the ballet of drones forming the fleet.

Africa is a fast expanding continent with geographical and social problems. But high-technology can help bridge the gap and bring efficient solutions to lack of adequate infrastructure and remoteness, while creating jobs and boosting local economies.

Architects at Foster & Partners have designed 'RedLine', a drone port. The first such drone ports are due to be completed in Rwanda later this year, linking villages some 80km apart. They could start springing up all over Africa.







## UnderLining the need for drones



*RedLine is poor-friendly, environmentally sound, and overtly futuristic said Jonathan Ledgard (above) director, Afrotech-EPFL and founder, RedLine, when he answered questions put by Vincent Chappard.*

**Q: According to you, the technology choices Africa makes in the next decade will help determine whether it becomes competitive or unmanageable. Does that explain the genesis of the RedLine project?**

A: The genesis of RedLine was the realisation that Africa is taking off as robotics is taking off.

It is inevitable that we will push some precious cargo into the lower sky and move it about with flying robots.

But it is not inevitable that these cargo drones or the droneports they require will be designed to be cheap and tough enough for Africa and other emerging economies.

That is the challenge RedLine is focused upon.

**Q: What are its main objectives and how is it being implemented?**

A: The main objective is to develop an open source cargo drone for the planet – faster, smarter, safer and an order of magnitude cheaper than anything yet seen.

In addition, we want to build the first cargo drone route in the world in Africa, populated with low-cost droneports built by Norman Foster.

**Q: It must be quite a challenge for a country, which faces political and social problems. How about the role played by and the input of local people?**

A: It is critical that RedLine is executed in such a way as to allow local young talent – engineers, entrepreneurs, logisticians, digital fabrication guys, mechanics, medics – to take ownership of the project. RedLine wants to define the vision and make sure it is poor-friendly, environmentally sound, and overtly futuristic.

**Q: Why does Africa need flying drones for freight and how can this technological prowess help boost the local economies?**

A: Cargo drones – ‘RedLiners’ – are only going to be a supplemental transportation system. You are not going to put your mangoes in the sky. Roads will still matter a lot. But cargo drones can improve health and emergency services, connect markets and grow industry in Africa at a critical moment in its history.

**Q: Will the use of drones be extended to other fields?**

A: RedLine is only interested in cargo.

**Q: Africa is an emerging continent. What are the prospects for drones in the field of freight in Africa?**

A: If we, and others, can reach the safety standards and engineer to a low price

point, I fully expect many parts of Africa to benefit from a network of cargo drone routes.

**Q: Do you think that the use of drones is viable in economic terms on a short-term and long-term basis?**

A: Yes, our initial economic studies show that even first generation cargo drones are competitive with existing delivery systems and will eventually be as little as 25% of the cost.

**Q: Are there any other countries or companies interested in the drones as a useful tool for freight?**

A: I would point to Nigeria, Côte d’Ivoire, Ethiopia and Congo as countries that can and should move on to the technology, once first-movers like Rwanda and Angola have tested it and tabled an effective law code.

**Q: There are more and more multinational companies operating in Africa but lack of adequate infrastructure is a hindrance to their expansion. How do you convince them that flying drones can be a positive answer to their problem?**

A: Logistics is purely about optimising your warehouse and your fleet.

Cargo drones will make sense in a minority of cases, including healthcare, spare parts, and especially e-commerce. If they are fast and cheap enough, companies will use them.





Droneports are being assembled from kits, and are designed to blend in with the landscape.

## SOMMAIRE

### Le fret aérien en Afrique : La révolution des drones

*Des études montrent que les drones pourront bientôt assurer entre 10 à 20% du transport régional de marchandises en Afrique. Vincent Chappard explique comment «les technologies de pointe sont capables de réorganiser le temps et l'espace».*

**Selon l'IATA, en septembre dernier, le fret aérien mondial a enregistré une légère hausse alors que sur le plan continental, les compagnies aériennes en Afrique ont connu une croissance de 2,5% en matière de demandes et de 8,1% de leur capacité.**

**Les perspectives sont énormes pour le fret même si seulement 15% des échanges de marchandises sont intra africains. Les drones peuvent être une réponse durable face au manque de réseaux routiers fiables desservant l'Afrique.**

**« Faire déplacer des marchandises dans le ciel comme des robots volants est une bonne idée en Afrique et au-delà. Nous allons faire une utilisation plus intensive du ciel en utilisant des robots volants pour transporter les marchandises plus rapidement et avec plus de précision », explique Jonathan Ledgard, directeur de l'initiative du futur pour l'Afrique à l'Institut de technologie fédérale suisse et fondateur du projet RedLine.**

**Le premier port accueillant les drones pour le transport commercial sera opérationnel en 2016 au Rwanda. Le parcours sera d'environ 80 kilomètres et connectera plusieurs villes et villages. Les premiers drones de fret porteront de petites charges utiles de deux kilos et serviront les hôpitaux et les urgences humanitaires. Les premiers utilisateurs seront les services gouvernementaux, les mines, les installations pétrolières et gazières et les ranchs. Selon Jonathan Ledgard, ils vont rapidement évoluer vers des structures plus grandes et pourront transporter des charges allant jusqu'à 20 kilos ou plus sur plusieurs centaines de kilomètres.**

**« RedLine est un projet visant à améliorer les conditions de vie, respectueux de l'environnement et très futuriste ».**

**Et pour relever ce défi futuriste, il bénéficiera de la collaboration de Lord Norman Foster, l'un des représentants de l'architecture high-tech, connu à travers le monde pour ses designs novateurs et durables. L'architecte en chef a conçu un port alimenté par l'énergie solaire pour faire opérer les drones. Cette station entièrement connectée, la « station d'essence du futur » gèrera le ballet des drones formant la flotte.**

**Les drones pourront ainsi améliorer les services de santé et d'urgence, connecter les marchés, encourager le commerce en ligne, faire croître l'industrie et stimuler les économies en Afrique à un moment critique de son histoire.**

## Lord of the droneports

*At 80, Lord Norman Foster is an architectural phenomenon, known globally for his innovative and sustainable approach to architecture and design.*

**Q: What makes the design of the droneport so distinct?**

A: The droneport is essentially a kit-of-parts that enables the locally available material to be processed into an emblematic form.

A set of components containing formwork, machinery and basic instructions needed for the construction will be delivered to site.

The kit-of-parts includes a brick-press machine and, together with binding agents, they enable individual brick tiles to be created locally on-site. Using fast-drying adhesives and minimal formwork, they are combined to create beautiful shell-like structures.

The formwork is erected according to the templates supplied with layouts for lighting, wiring and assembly.

The form of the droneport has been conceptualised as vaults that 'belong to the terrain', matching the colour of the landscape. They touch the ground very lightly and are highly permeable in terms of cross-ventilation, access and community.

We are still exploring the shape of the droneport but, at a larger level, it is about the spirit of the architecture, the social agenda behind the building, and the beauty of the drones themselves.

**Q: What about the "petrol stations of the future"?**

A: The 'fuel station of the future' will integrate smart design and new technologies to showcase the future potential that a redesign of the fuel station offers, not only in terms of refuelling, but also in terms of community development and integration with other technology systems.

Foster & Partners has dealt with the design of traditional fuel stations for Repsol in the 1990s and has, since, worked on a number of projects for the automotive industry.

Its work on the project also draws upon their extensive experience in urban planning, infrastructure and cutting-edge sustainable technologies, which are crucial forces that will determine the place of a 'fuel station of the future' in the urban environment.

\*Norman Foster is chairman and founder of Foster & Partners, based in London, UK. Since its inception in 1967, the company has received more than 685 awards for excellence and won over 140 national and international competitions.



*David Oliver reports on the vital role of airdrops as the World Food Programme delivers assistance to the people in South Sudan.*

# DROP GOALS

**T**he United Nations World Food Programme (WFP) has provided lifesaving food assistance and nutrition support to more than 750,000 people in South Sudan since the latest crisis began a year ago.

This includes aid to more than 430,000 people displaced or directly affected by conflict, as well as to another 335,000 people from pre-existing caseloads, who are either refugees or members of other vulnerable groups.

The WFP aims at scaling up its assistance to support 2.5 million conflict-affected and food-insecure people in South Sudan over the coming months.



In order to achieve this objective, it is airdropping food into areas that are unreachable because of flooding and a lack of security. This method of air delivery is usually avoided because it is costly, but many people in isolated refugee camps need food urgently as stocks have dwindled.

When areas are inaccessible, WFP Aviation may consider using helicopters to deliver food. But they are expensive and their payload is limited. A more cost-effective option may be delivering food by large cargo aircraft. However, this requires the availability of an airfield that can accept them. Often airdrops are the only realistic answer.

The WFP has a history of food drops that goes back to 1999, when many were completed successfully in East Timor. This saw the delivery by two C-130 cargo planes of desperately needed



**A WFP II-76 being loaded with 18 tonnes of dry food at Juba Airport to be airdropped into Jonglei State in South Sudan.**

PICTURE: WFP/MOHAMED SIDDIG

food and blankets to tens of thousands of people hiding in the mountains from political violence. The Australian Defence Force lent the aircraft to the WFP.


The WFP also executed the first ever 'snow drop' delivery of food, a unique system developed in conjunction with the South African aviation company, Safair. A C-130 was deployed to drop 350,000 plastic 200gm packets of high-energy biscuits. They were packed in such a way that they floated and circled as they fell to ensure a soft landing. It is a less dangerous operation than the conventional airdrop and does not require a special drop zone.

In November 2009, the WFP began to parachute food aid into isolated areas of conflict-

ridden southern Sudan with the aim of reaching more than 155,000 people cut off from road access by heavy rainfall. The airdrops lasted two-and-a-half months, providing some 4,000 tonnes of food to people hit by conflict, high food prices and poor harvests in three of the 10 states in southern Sudan – Jonglei, Upper Nile and Warrap.

The few roads that exist in this vast area were impassable during the rainy season and a spike in tribal fighting also blocked road and river access to some areas.

The WFP chartered an Ilyushin II-76 cargo aircraft from Transaviaexport Airlines, a Belarusian national airline based at Minsk, with a hub at the Sharjah International Airport, in the UAE. They made airdrops on 22 different



The WFP is airdropping food into areas that are unreachable because of flooding and a lack of security.

locations across the three states, where trained teams collected the food from the drop zone and organised distribution.

Pochalla was one of the 22 locations where the WFP airdropped food in response to the urgent needs of 5,000 people living in six villages.

Yida sits near the northern tip of South Sudan's Unity State, near the border with Sudan. It is a remote region in one of the world's least developed countries, where a refugee camp was completely cut off by road during the rainy season in 2012.

Before the rains began, the WFP pre-positioned food stocks in Yida to assist 36,000 refugees until the end of the year, which, at the time, was nearly twice the camp's population.

However, just as the rains were beginning, a sudden influx of refugees tripled the camp's population in less than three months. The sharp rise meant those food stocks were being exhausted faster than expected.

To overcome the camp's inaccessibility by road, the WFP used a combination of airdrops and airlifts with a Mi-26 cargo helicopter using an airstrip near the camp.

To replenish cereal stocks, the WFP also began a series of airdrops, which lasted for two months, to allow uninterrupted food distributions to the refugees. By the end of the operation, the Il-76 cargo aircraft had unloaded up to 3,000 tonnes of food that should have fed more than 60,000 people for three months.

At the height of the southern Sudan operation, daily sorties were being flown from Nairobi and Lokichoggio in Kenya, as well as Khartoum and El Obeid in Sudan.

Aerial drops require a well-prepared and safeguarded dropping zone under supervision of at least one monitor, who can communicate with the aircraft.

Airdropping is only suitable for dry food, unless more expensive parachute systems are used to stabilise and decelerate the load before impact. Not all air carriers can perform these types of parachute operations.

In most cases, considering all the associated costs of airlifts, normal airdrops will turn out to be the

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most cost-effective option for food transport if large quantities are to be transported.

WFP Aviation charters aircraft from the list of accredited carriers, which are licensed for this type of operation by the Civil Aviation Authority of the country of aircraft registration.

Preparation is the responsibility of the carrier and the aircraft used are normally equipped with roller system to allow loading and gravity extraction of pallets in flight. The aircrew and cabin drop team are required to hold necessary training and flight experience to be able to perform air drop operations. Both air carrier and WFP personnel adhere to related applicable manuals and standard operating procedures.

The ground team marks a large area with a giant white cross, made from old WFP grain sacks, to show emergency aircraft where to drop the food.

Two banners are also set up at either end of the drop zone, which the pilot uses to line up the aircraft on his final approach.

The size of the drop zone (DZ) depends on the type of aircraft making the drop, but generally it's 200 metres by 1,000 metres, marked out by white food bags, with a cross dead centre. The area is secured – with a 200-metre perimeter outside the DZ – at least one hour before the scheduled drop, and it's the ground controller who clears the aircraft to release its cargo.



Airdropping is specialised; it is normally only former military pilots that have the training and experience. They generally drop from just over 200 metres above the ground to reduce impact on the food bags.

Two loadmasters supervise the cargo and release on the pilot's command. The dropping system used is down to the operator, with the cargo arranged in either a single or double row configuration. If it is single row, it is released in a single drop.

On final approach to the DZ, the pilot keeps speed down to around 185kph and lifts the nose by 8 to 10 degrees. When the loadmasters release the bands holding the food in place, gravity takes over and the bags drop to the ground.

In November (2015), the United Nation relief wing announced that continued violence in South Sudan, with clashes in southern and central Unity State, had "intensified with grave consequences for civilians", leaving at-risk populations food insecure and vulnerable to diseases.

"Civilians have also suffered the grave consequences of killings, sexual violence and forced displacement," the report said. "Food insecurity in these hard-hit regions has deteriorated and has seen an 80% increase compared to the same period last year."

In order to address this ever-worsening problem, emergency airlifts of food, and airdrops in particular, are set to continue for the foreseeable future.

**Marcella Nethersole**  
*attended the World Food Programme's conference in Geneva in October 2015, where topics included the importance of aviation in humanitarian missions, pilot fatigue and pilot mental illness.*



**Nicklas Dahlstrom:** "There needs to be more effective training across the board, including in ground-handling."

# WFP's hunger

**A**viation plays a vital role in providing humanitarian relief and Africa has been no stranger to a great number of non-governmental organisations which have recruited air operators and supporters to particularly join their efforts in the fight against hunger.

At the heart of this effort is the United Nations World Food Programme (WFP), organiser of the Global Humanitarian Aviation Conference (GHAC).

WFP is the world's largest humanitarian agency fighting hunger globally, and it's something that all GHAC participants were passionate about.

"All of us here want to try to end global hunger," said Cesar Arroyo, chief, aviation services for the WFP at the opening ceremony.

In emergencies, the WFP delivers food to where it is needed, saving the lives of victims of war, civil conflict and natural disasters. And when it comes to delivery, the fastest way of transport is by aircraft.

"In times of natural disaster and conflict, communities can easily become displaced, isolated and left without access to food, water and shelter. A rapid response can save lives and air transport is often the only way to quickly move humanitarian supplies and personnel to where they are needed," said Arroyo.

"As aviation is critical in missions, we need to make improvements where we can within the field, from the ground-handling to general safety. Of course, the right pilot training and the way we take care of them is a large factor in making our

missions seamless too."

Nicklas Dahlstrom, human factors and crew resource management researcher and instructor for Emirates Airline, echoed this.

"The challenges we face in commercial aviation are challenges we share across the board in aviation," he said. "There is a definite trend change – we seem to be getting things wrong en-route, which is something we need to address.

"For pilots, experience used to be the holy grail of flying, but now we are seeing that exposure is important. If you don't have exposure, you don't have experience. And, generally, safety is a priority – so there needs to be more effective training across the board, including in ground-handling."



LMQ managing director, Carey Edwards, added that attitude and behaviour of pilots was something that should be monitored.

"Complacency can be a big problem," he said. "I will tell pilots 'always do your checks, always take the malaria tablets recommended in malaria-stricken areas you are travelling to, and impulsiveness is really just bad behaviour and unsafe'."

One company that knows only too well the pilot challenges on humanitarian missions is Nairobi-based 748 Air Services – just one of many air charter service companies providing services to the humanitarian and natural disaster sector.

It currently flies to Somalia every day to provide



The WFP has provided lifesaving food assistance and nutrition support to more than 750,000 people in South Sudan since the latest crisis began a year ago.

Cesar Arroyo: “Air transport is often the only way to quickly move humanitarian supplies and personnel.”

# to end starvation

support and food to the non-governmental organisations (NGOs), and to Chad to support displaced communities, delivering food, aid, and support workers.

“Our aircraft and the way we operate are designed for remote and very harsh environments. Aircraft provide the capacity to deliver the food and the humanitarian personnel to service the most disadvantaged communities,” said Ahmed Rashid Jibril, managing director.

The company has a fleet of ten aircraft—five Dash8-100s, two Q400s and three Cessna Caravans.

“All our aircraft have short take-off and landing capability, so our pilots must be trained to understand the conditions in which the aircraft lands,” said the MD. “Most airstrips we land in are not tarmacked, or might be freshly made, making for an awkward landing or take-off.

“The terrain is also vast in Africa, which requires our pilots to have expert knowledge. So we send our pilots for specialist training to adopt the skills needed. That training takes time—our pilots need at least 250 hours of flying time to start with.”

Two other topics at GHAC were pilot mental health and fatigue. “Mental illness is a very neglected area in aviation,” said Trang Dao, an aviation psychiatric specialist working in Montreal, Canada.

“Around 6% of pilots will go through a mental illness of sorts at some stage and a large percentage of these will avoid treatment and carry on flying. This, obviously, is very unsafe.

“When you go through a mental illness, various functions don’t operate as well – so there is a lack of alertness, memory and concentration. Reflexes can also be affected, as well as awareness and judgement.

“Airlines need to be more aware about pilot mental health and offer therapy, treatment and general support. It is something that really can’t be overlooked. Mental health is no joke and shouldn’t have a stigma attached to it.”

## ■ FIVE DAYS WITHOUT ALCOHOL

Dao went on to say that some pilots suffer from addictions, such as alcohol.

“At the moment, pilots must abstain from alcohol eight hours before flight. This is just not long enough as alcohol remains in the system for much longer. I would recommend at least five days of abstinence – for all pilots,” she said.

“Overall, there are a number of factors that need addressing, from the right training – such as captains being trained in crew distress management – to offering the right support and care needed for a pilot affected.”

She added: “We have to ask ourselves, would Andreas Lubitz, who flew the Germanwings aircraft into the French Alps earlier this year, have done what he did if his mental illness had been recognised by the airline and he had been able to receive the correct help?”

Being at altitude and boxed up in the flight deck for a number of hours can bring on pilot mental

fatigue and Douglas Mellor, CEO of Fatigue Risk Management Science, was keen to address this as a very real safety issue.

“Mental fatigue is an inevitable consequence of disrupted sleep schedules and circadian rhythm disruption. For pilots this can mean many things from inaccurate flying and missed radio calls to loss of situation awareness and poor communication with crew members,” he said.

“It is estimated that fatigue contributes to approximately 15-20% of commercial aviation accidents alone.”



He added that for fatigue hazards specific to humanitarian operations there was added pressure, as pilots needed to fly to difficult remote areas where poor facilities for fuel and rest came into play, as well as dealing with small difficult airports, high altitudes, and, at times, single-pilot operations.

“This may be a rather obvious thing to point out but, quite simply, if you don’t get enough sleep, mental fatigue will creep up,” said Mellor. “While this applies to all of us, it’s paramount that mental fatigue should be measured in pilots, from being fully aware and alert to completely exhausted and unable to function. Airlines need to educate pilots and managers about the scale of mental fatigue to stay safe in the air.”



## Josh Cohen

**Marcella Nethersole** *speaks to the commercial manager of Puma Energy in South Africa.*

1

■ Can you tell me about Puma Energy?

Trafigura, one of the world's largest commodity traders, is a strategic 48% shareholder in Puma Energy. Its purchase of the Argentinian Puma Energy brand in 1997 included several South and Central American assets.

Through both organic and acquisition growth, the company has expanded its footprint across the mid and downstream sector, mainly focusing on high-growth markets.

On the aviation side, in 2010, Puma purchased BP's fuel marketing businesses in Namibia, Botswana, Zambia, Malawi and Tanzania, while also purchasing ExxonMobil's businesses in Belize, El Salvador, Guatemala, Nicaragua and Panama a year later.

Puma Energy's aviation business has grown significantly. We currently supply aviation fuels at more than 50 airports globally to all the major airlines, with several more expected to open shortly.

2

■ To whom do you supply fuel?

Puma Energy supplies JET A-1 and AVGAS 100LL throughout our locations, adhering strictly to the most rigorous international fuel quality standards.

In almost all the locations where we supply fuel, we provide full into-plane services, owning both the depots and refuelling equipment, which is operated by Puma in-house staff.

Overall, such operations are simply the culmination points of our global supply chain, incorporating 85 bulk storage terminals globally.

Puma Energy supplies aviation fuels at eight airports in Central and Latin America, 28 in Africa and 12 in Asia.

Apart from aviation fuels, we supply ground fuels, including gasoline and diesel, heavy fuels and bitumen, as well as lubricants, to more than 23,500 customers in more than 45 countries globally.

4

■ How do you see the next five years for Puma Energy?

We like to think that our growth trajectory will continue, particularly as many of the major oil companies continue to dispose of assets and move upstream.

Puma Energy has invested heavily in its mid and downstream supply chain and, therefore, holds a strong advantage in growing in this regard. On the aviation side, we're certainly looking to expand our footprint significantly in the coming years.

5

■ What does a typical day involve for you?

I manage the commercial aspects of Puma Aviation's African business, working out of our regional head office in Johannesburg, South Africa. This entails customer management, sales, contract negotiations, overall business management and our expansion into new markets.

I work closely with our respective commercial managers in each country where we operate to ensure our regional business runs smoothly at all times. This includes close interactions with our operations teams, both in Johannesburg and in-country, while also engaging regularly with my counterparts in the Americas and Asia.

“We see opportunity where others may be reluctant to invest.”



3

■ What challenges does Puma Energy face in Africa?

Each country and region presents its own specific challenges, with those in Africa often including lack of infrastructure, lack of integration of markets and high taxes and duties.

That said, Puma prides itself on its ability to negotiate such obstacles better than anyone else, having true emerging market expertise and focus. We see opportunity where others may be reluctant to invest.

Fuel quality standards must be upheld at all times without question and, so, while Africa and other emerging markets may prove more challenging in this regard, Puma Energy invests as required to ensure international standards are met at all times.

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