



AFRICAN AEROSPACE

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN AFRICA

www.africanaerospace.aero



OPEN SESAME

HISTORIC SINGLE SKIES AGREEMENT FOR AFRICAN AVIATION

« UN MOMENT HISTORIQUE POUR L'AVIATION AFRICAINE »

- PAGE 17

AIR TRANSPORT

Why SAA has a new ring of confidence

PAGE 35



GENERAL AVIATION

UAVs and the human factor in Africa

PAGE 68



FOCUS ON NIGERIA

Local airlines fight for survival

PAGE 89





POST FLIGHT

Following traveller
Location & Preferences



ON-BOARD

Over our new
WiFi – IFE solution



PRE FLIGHT

During booking stage
and until check-in



Insurance



Marketing



Consulting



Ancillaries

Published by



TIMES Aerospace Limited
3-4 Rumsey House, Locks Hill, Rochford
Essex, SS4 1BB, UK
Tel: +44 (0)1702 53 0000
Fax: +44 (0)1702 53 3088

Website: www.africanaerospace.aero

Directors:
Mark Brown & Kevin Sammon

Publisher:
Mark Brown
mark.brown@africanaerospace.aero

Display Advertising:

David Evans Winship
david.evans@africanaerospace.aero

Grant Lee
grant.lee@africanaerospace.aero

Production Coordinator:
Ethan Cobbing
ethan.cobbing@africanaerospace.aero

Circulation Dept:
Clare Brown
clare.brown@africanaerospace.aero

EDITORIAL
news@africanaerospace.aero

Editor-in-Chief: Alan Peaford
Deputy Editor: Marcella Nethersole
Francophone Editor: Vincent Chappard
Air Transport Editor: Victoria Moores
Air Transport: Martin Rivers, Alan Dron
Defence: Jon Lake, Alan Warnes,
Business Aviation: Dave Calderwood
Space & Technology: Steve Nichols
Airports & ATM: Keith Mwanalushi
Contributors: Chuck Grieve, David Oliver,
Erwan de Cherisey.
News Briefs: In partnership with ch-aviation

REGIONAL CORRESPONDENTS
South Africa: Mark Mansfield, Sam Basch
Namibia, Zimbabwe: Oscar Nkala
Zambia: Humphrey Nkonde
Nigeria: Chukwu Emeke
Ethiopia: Kaleyesus Bekele
Kenya: Githae Mwaniki
Uganda, Rwanda: Hillary Muheebwa
North Africa: Mohamad Al Ahli, Vincent Chappard
Cameroon: Romuald Nguéyap

Picture Editor: Ian Billinghurst
Photographers: Mark Wagner, Jamie Hunter,
Tom Gordon
Design: Chris Murray, Allsortz Ltd
Sub Editors: Steve Knight, Kathie Jones
Editorial administration: Petya Ivanova

Editorial head office:
Aerocomm Ltd, Norths, Rectory Road, Orsett
Essex RM16 3JU, UNITED KINGDOM
+44 (0) 208 133 3420

Disclaimer
The views expressed in *AFRICAN AEROSPACE* magazine are not necessarily shared by, nor should they be taken as the views of TIMES Aerospace Limited (the publishers) or Aerocomm Ltd. Any views expressed are those of the individual contributors.
No responsibility or liability is accepted by the editor or the publishers for any loss occasioned to any person, legal or physical, acting or refraining from action as a result of any statement, fact, figure, expression of opinion or belief contained in *African Aerospace*.
The publication of advertisements does not in any way imply endorsement by the editor or the publishers of the products or services referred to therein.
The entire contents of this publication are protected by copyright, full details of which are available on request. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission from TIMES Aerospace Limited. Printed in the UK by Park Communications Ltd.

Single Skies is not the limit – it should go further than that

The historic African single skies agreement, signed at the African Union (AU) meeting in Addis Ababa in January, really could be the start of something big for the continent's airlines and for national wealth.

It was fitting that Rwanda's president, Paul Kagame, took over the chair of the AU on the same day as the milestone agreement was confirmed. Last year, at the Aviation Africa summit in his capital, Kigali, Kagame reinforced the argument in support of the greater liberalisation, even at the cost to his own government's national carrier.

There are still fewer than half of African countries that have signed up for the latest stage in a process that dates back to the early 1960s, when many newly independent African states created national airlines, in part, to assert their status as nations.

Now, however, most have recognised that the strict regulatory protection that sustains such carriers has detrimental effects of air safety records, while also inflating fares and dampening traffic growth.

African ministers responsible for civil aviation themselves acknowledged this in 1999, when they adopted the Yamoussoukro Decision (YD), named for the Ivorian city in which it was agreed. It commits its 44 signatory countries to deregulate air services and promote regional air markets open to transnational competition. But it went no further.

In recent years, the International Air Transport Association (IATA) argued that if just 12 key African



countries opened their markets and increased connectivity, an extra 155,000 jobs and \$1.3 billion in annual gross domestic product (GDP) would be created in those countries.

In January, 23 countries, agreed. In this month's Aviation Africa summit the agreement will come under the microscope and will explore why the remaining 30-plus nations are not on board.

The benefits have been proven in Europe, where the single skies process has led to infrastructure improvements, reduced regulatory barriers, reduced costs, and increased routes for European airlines.

The agreement could also benefit intra-continental travellers, who are often bound to illogical and time-consuming routes via Europe and the Middle East when flying between African countries.

The total population of Africa accounts for around 17% of the global figure, but the continent's proportion of air travel passengers varies between 2-4%, leaving supporters of the move saying it will increase Africa's global share of the aviation industry.

"Greater connectivity will lead to greater prosperity," according to IATA.

For many years I have listened to African carriers complain about European and Middle Eastern airlines eating their lunch. Protectionism is not the answer and now Africa has the chance to beat this and start cooking a new feast.

Safe landings,

Alan Peaford, Editor-in-Chief

COVER: New AU chair, Rwanda president Paul Kagame (centre), Moussa Faki Mahamat, and Faure Gnassingbe unveil the SAATM Plaque in Addis. PICTURE: DANIEL GETACHEW

Advertisers

Africa Aerospace & Defence 2018	57
AFBAA	95
Africair, Inc.	71
Air France Industries	9
Airbus	31
AJW Group	36
Aphrodite Management	IFC
Astral Aviation Limited	33
ATR	OBC
Aviaco GSE	64
Badr Airlines	79
Bestfly Flight Support	62
British International Industries Ltd	8
CAA International	84
CFM International	19
DAS Handling Ltd	6
Davenport Aviation Inc.	38
EgyptAir	IBC
Embraer Commercial Aviation	34
Eways Aviation	93
Farnborough International Airshow 2018	48
FlightPath International	2
FODBOSS	33
Gulfstream	67
Hahn Air	47

Joramco	45
Lufthansa Technik AG	13
MEBAA Show 2018	83
MH Aviation Services	16
MTU Maintenance	87
Nexus Flight Operations Services	14, 15
Rolls-Royce	5
South African Airways Technical (SOC) Ltd	42
Sprung Instant Structures	41
TCR International	72
The Boeing Company	23
TP Aerospace	27
Universal Weather and Aviation, Inc.	10
Willis Lease Finance Corporation	41



African Aerospace magazine is published in partnership with AFRAA



African Aerospace magazine is published with the support of AFBAA



African Aerospace magazine is published with the support of CAASA

Bringing world-class training to **AFRICA** since 2003



● SERVICE LOCATION
 🇨🇦 TRAINING CENTRE

FlightPath

international

BOMBARDIER **BOEING** **AIRBUS** **EMBRAER**

TRUSTED EXPERIENCE.

TORONTO • DUBAI • COSTA RICA • PORTUGAL • JOHANNESBURG • LATVIA • KENYA

www.flightpathinternational.com • +1-705-434-0058



07 **business brief**

A round-up of the news across the continent.

AIR TRANSPORT

17 Africa's single sky

Action has finally been taken with the African Union launching the single African air transport market.

«Des mesures prises par l'Union africaine avec le lancement du marché unique du transport aérien.»

20 Can Tunisair turn the corner?

An interview with the new chief executive of Tunisair, Ilyes Mnakbi.

«Une interview avec le nouveau DG de Tunisair, Ilyes Mnakbi.»

24 Raising the standard for Air Algérie

Air Algérie's new boss, Bakhouche Alleche, is determined to set the troubled flag-carrier on a better path.

«Bakhouche Alleche est déterminé à remettre Air Algérie sur une meilleure trajectoire.»

28 Nile runs a new course

Nile Air explores several avenues to ensure its continued growth in the challenging economic climate.

30 Hope for Sudan Airways

Sudan Airways has struggled to maintain services in the face of US sanctions but those sanctions have now been eased.

32 Weight of expectation

Bassim Gohar explains how EgyptAir cargo division is meeting expectations.

35 A plan for SAA

South African Airways' new CEO has begun to implement a multi-year turnaround plan that will restore the airline's fortunes.

37 Mango fruits

Mango acting CEO, Nic Vlok, discusses what life has been like since the former CEO jumped ship.

39 The man behind FlySafair

Elmar Conradie on why he enjoys leading South African aviation firm, Safair, and its low-cost carrier, FlySafair.

43 Man on a mission

Philippe Bohn discusses the plans to revive Air Senegal thanks to financial input from the Senegalese authorities.

«Philippe Bohn prépare la relance d'Air Sénégal grâce au soutien financier des autorités sénégalaises.»

46 Fast track

Silverstone Air is the latest low-cost carrier to enter the east African market space.

Continued
on Page 4

DEFENCE

49 SPOTLIGHT ON THE TANZANIAN AIR FORCE.

52 ARMED TURBOPROPS IN KENYA.

54 FLYING THE FIGHT AGAINST BOKO HARAM.

«Immersion dans la lutte contre Boko Haram.»

58 MYSTERY OF ALGERIA'S ISR GULFSTREAMS.

«Le mystère Gulfstream ISR en Algérie.»

60 NEW US HOME FOR THE CHEETAH.

61 NEW PURCHASES FOR ZAMBIA AND UGANDA.







BUSINESS AVIATION

63 Smart moves

Captain Mohamed Roshdy Zakaria looks to turn around Smart Aviation.

64 Tiger feat

Why the Tiger Aviation Services boss hopes the Russians are coming.

65 Ivory tower

New business aviation terminal at Ivory Coast's Félix Houphouët-Boigny International Airport.

«Nouveau terminal dédié à l'aviation d'affaires pour l'aéroport Félix Houphouët-Boigny.»

66 East Africa looks to the future

The inaugural Kenya Business Aviation Conference.

GENERAL AVIATION

68 Africa's drone zone

Why the African unmanned aerial vehicle market is different to other regions of the world.

«Pourquoi le marché africain des drones est-il différent des autres régions du monde?»

GROUND HANDLING

78 ZAS focuses on Africa

Egypt's ZAS looks to expanding Africa operations.

HELICOPTERS

80 Rotary club

A detailed look at north Africa's rotary assets.

REGULATORY

85 ICAO call for unity

Airspace, safety and security are key issues.

MRO

86 EGME opens its doors

EgyptAir's MRO targets third-parties

SECURITY

92 Let us Osprey...

A pioneering flight-risk management system.

FINANCE

94 Open discussion

The vision of the African Development Bank on air transport in Africa.

«La vision de la BAD sur le transport aérien en Afrique.»

PEOPLE

96 All in a day: Kevin Evans, Rolls-Royce.

AIRPORTS

73 MADAGASCAR'S GREEN AIRPORT

The Malagasy airports project is under way.

«Des projets aéroportuaires en cours à Madagascar.»

74 PRESIDENT OPENS DAKAR AIRPORT

Inauguration of new Blaise Diagne International Airport in Senegal.

«Inauguration de l'aéroport international Blaise Diagne au Sénégal.»

75 ZAMBIA FIREFIGHTING

Zambia improves its fire and rescue services.

76 CALIBRATING AFRICA'S AIRPORTS

Flight Calibration Services (FCSL) wins airport inspection deals in Africa.

«FCSL remporte des contrats de calibration des aéroports en Afrique.»

77 LIVINGSTONE SEES GREAT FUTURE

Zambia invests in its airport at Livingstone.

FOCUS ON NIGERIA



89 SURVIVAL BATTLE

Nigeria passenger airline status and overview.

90 ACCIDENT INVESTIGATIONS

Nigeria accident investigation probe.

91 UNION DISPUTE

Nigeria airport concessions controversy.

TRENT 1000 TEN

Our Trent 1000 TEN is now flying on the Boeing 787 Dreamliner. TEN stands for Thrust, Efficiency and New technology. And it's specifically designed for this remarkable aircraft.

TRENT 1000
The perfect TEN



www.rolls-royce.com/trent1000



www.Rolls-Royce.com/Trent1000



Your aviation services partner

specialflights@dashhandling.com

DAS
at your service



www.dashhandling.com

SPECIAL SERVICES

Open:- 24hrs a day, 7 days a week, 365 days a year
+256 312 320 670 | specialflights@dashhandling.com

ADMINISTRATION

+256 312 320 600 | +256 414321296 | admin@dashhandling.com
P.O. Box 744, Entebbe | UGANDA

Memberships and Certifications

ACC3

aviance 

 | Ground Handling Partner

 | **ISAGO**
IATA Safety Audit for Ground Operations

ASA member 
airport services association



Rooivalk shows its flare at South African display

South Africa's annual Armed Forces Day, traditionally held in February, actually extended over one week, culminating in an impressive mock battle and a military parade, writes Sam Basch.

The country's new president, Cyril Ramaphosa, sworn in only days earlier, took the salute in the city of Kimberley.

On display at De Brug army battle training ground, near Bloemfontein, was an array of air assets in support of ground forces.

With 23mm and 35mm anti-aircraft blasting away, Gripen fighters and Hawk jet trainers pounded the 'battlefield' ahead of the South African Air Force's (SAAF's) venerable C-130BZ Hercules airdropping cargo and paratroops.

Additional special forces were inserted using Oryx and Agusta A109 helicopters, while two Rooivalk attack helicopters kept watch overhead. SAAF doctrine dictates that the attack helicopters operate in pairs.

In late afternoon, the Rooivalks once again showed off their firepower against 'enemy' ground forces, using 70mm rockets and chin-mounted 20mm cannon.

One of the aircraft was still painted white, designating its service in the force intervention brigade (FIB), part of the UN's peace support operations in Africa. The display ended with a spectacular release of flares in the clear night sky.

Embraer E190-E2 certification

Brazil's regulator, ANAC, along with the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA) have certificated the new Embraer E2 regional jet.

Manufacturer Embraer describes the E2 as the most efficient single-aisle aircraft on the market. In fuel consumption, the E190-E2 proved to be 1.3% better than originally expected, a 17.3% improvement compared to the current-generation E190, the company said.

Jet MS approved by Nigerian authorities

Jet Maintenance Solutions (Jet MS) has been contracted by the Nigerian Civil Aviation Authority to provide line and base maintenance services in Nigeria.

"Entering the Nigerian market is a huge milestone for us," said Jet MS CEO Darius Saluga. "We went

through an extensive auditing process and this approval will now provide operators with the possibility of receiving a quality and rapid service. I am certain that the certificate will facilitate our expansion in the so-called 'giant of Africa'."

RwandAir increases routes

RwandAir has announced flights to Abuja in Nigeria and Cape Town in South Africa. It will operate four weekly flights from Kigali to Cape Town with a stopover in Harare. The Abuja flight will be tagged to the existing Accra route, where the flight will stop in Abuja before heading to Accra and it will also be operated four times a week.

Ethiopian sim is an African first

Ethiopian Airlines has achieved yet another milestone, becoming the first A350 XWB simulator operator in Africa and among the few in the world.

Emirates' Zambia country manager

Emirates Airline has appointed Mohammad Bin Hafiz as country manager to Zambia. Bin Hafiz joined Emirates in February 2010 as a commercial support manager and was then appointed as district manager Riyadh in 2013.

In March 2014, he was promoted to manager Morocco. He then joined the national military service in January 2016, where he served his term until January this year.

Cape Town runway receives green light

Cape Town International Airport has received final approval from the South Africa Department of Environmental Affairs for the construction of the airport's new realigned runway.

This project marks a ZAR3.8 billion (\$319.5 million) investment into the economy of Cape Town and the Western Cape.

The airport will realign

the primary runway and construct parallel and rapid exit taxiways. The realigned primary runway will be 3,500 metres and will be built to international specifications. The new runway and associated infrastructure will facilitate greater air access into Cape Town and the Western Cape and will enable growth of passenger and cargo traffic.

Guinea Airlines ready for take-off

Plans for Guinea's new airline, Guinea Airlines, are progressing. Guinea Airlines is working with the country's civil aviation authority (AGAC) and it has now applied for an aeronautical operating licence (AEP) to begin domestic and regional flights.

LT provides MRO for Mango

Lufthansa Technik AG and Mango Airlines have signed an exclusive contract for the maintenance of CFM56-7B engines, which power the

airline's fleet of 10 Boeing 737NG aircraft.

Lufthansa Technik will provide overhaul services for the engines at its German locations until 2022.

Robert Gaag, Lufthansa Technik vice president corporate sales Europe, Middle East & Africa, said: "We have a long-standing presence in this region and this agreement is further proof that our services can be tailor-made to the different needs of this market."

Son of AHRLAC unveiled in US

A newly created company, Bronco Combat Systems (BCS) USA, has launched the Bronco II aircraft, which is based on Paramount Group's Advanced High-Performance Reconnaissance Light Aircraft (AHRLAC).

The Bronco II is a two-crew C4ISR and precision strike aircraft, capable of carrying a wide range of weapons, sensors and systems in extended airborne mission operations.

Zero fatal losses for Africa

The International Air Transport Association (IATA) has released data for the 2017 safety performance of the commercial airline industry showing continued strong improvements in safety.

IATA member airlines experienced zero fatal accidents or hull losses in 2017 with either jet or turboprop equipment.

Airlines in Africa had zero jet hull losses and zero fatal accidents involving jets or turboprops for a second consecutive year.

Both the turboprop hull loss rate and the all-accident rate declined against the average of the previous five years. However, the turboprop hull loss rate increased compared to 2016 (5.70 vs. 1.52). In turn, this largely was responsible for causing an increase in the all-accident rate compared to 2016 (6.87 vs. 2.43).

EgyptAir and RAM code-share

EgyptAir and Royal Air Maroc have announced the launch of their new code-share partnership.

"This new stage of commercial cooperation will offer passengers, who wish to travel between Morocco and Egypt, more facilities and new transport possibilities in terms of schedules and frequencies, shorter connections, with the objective of sustaining and developing the traffic



Dassault has 6X appeal

Just months after killing off plans for the Falcon 5X, following the on-going failure of the Safran Silvercrest engine, French manufacturer Dassault Aviation has unveiled the Falcon 6X, featuring many of the design attractions of the 5X but with a larger cabin and more powerful engines.

The new 5,500nm aircraft will make its first flight in early 2021 and begin deliveries in 2022.

Pratt & Whitney Canada's PW800 engines have been selected to power the aircraft, which offers more cabin volume than any other Falcon ever designed. It is largely based on aerodynamics and system features validated during the 5X preliminary flight-test programme.

flows between our two countries" said Abdelhamid Addou, Chairman of the board and CEO of Royal Air Maroc.

Swaziland reaching out for SA carriers

Following the collapse of the Swazi Airways venture before it ever launched flights, the Swazi Government is now courting South African

carriers about connecting Manzini King Mswati III International Airport to various cities across South Africa and even Zimbabwe, reports ch-aviation.

Peace move for the under-served cities

Air Peace has taken delivery of its second Embraer 145 jet in a bid to end the travel difficulties of Nigeria's unserved and under-served

cities. The airline will operate into the Nigeria Air Force (NAF) Base, Port Harcourt and connect routes such as Enugu-Kano-Enugu, Benin-Port-Harcourt-Benin, Port-Harcourt-Kano-Port-Harcourt.

In three years, Air Peace has increased its fleet to 24 aircraft.

The new Embraer 145 is the fifth the airline has received in the last 12 months alone.

Elong takes drones to new heights

Cameroon start-up company, Will & Brothers – led by entrepreneur William Elong – intends to put the country on the map as a drone manufacturer. It has raised \$200,000 to fulfil Elong's dream.

Elong ranks seventh among *Forbes* magazine's top 30 most promising young African entrepreneurs. After graduating, aged just 20, from the Paris School of Economic Warfare, he returned home intending to gain the shareholders and partners that his company sought.

Drone Africa is the result and it now counts premises in the country's economic capital of Yaoundé and a 22-strong team among its assets. These dedicated enthusiasts represent four nationalities speaking eight languages from two continents.

GKN signs contract for SA Gripen

GKN Aerospace has signed a three-year contract extension worth more than \$8 million (initial order value ZAR 89 million), covering the technical product support, maintenance and parts supply for the South African Air Force Gripen RM12 engines.

The contract, signed with the Armaments Corporation of South Africa (ARMSCOR) runs through to October 2020. It will be expanded to the customer's requirements during the agreement period.



Discover an independent and flexible approach to aircraft spares support for Boeing 737, 737NG, 747, 757, 767 & 777

linzi@bii.aero



CONNECT YOUR A350 TO OUR MRO-AIRLINE ADAPTIVENESS®



AFI KLM E&M is the only MRO to form part of an airline group that has ordered A380s, 787s and A350s. On the strength of this unique expertise, AFI KLM E&M has been shaping its industrial development program ever since the A350's maiden flight. As a result, your own A350 can now reap the benefits of AFI KLM E&M ADAPTIVENESS®. ADAPTIVENESS® is our response to the changing MRO business environment. It means partnering with you and providing vital support through change and daily challenges, in a spirit of continuous improvement. If you seek efficient MRO solutions for your A350 leading to optimized MTBRs and overall performance, talk to us about ADAPTIVENESS®.



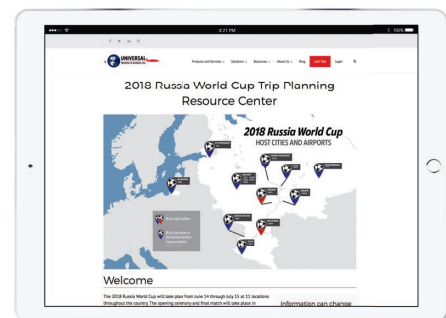
Count on us to make your mission to the 2018 Russia World Cup a success.

We're on the ground, talking with Russian authorities daily to stay on top of the latest operational information and changes—so you can make the best decisions for your trip and set expectations with your stakeholders.

And beyond supporting you with planning and coordination, we'll be there when you arrive to provide the extra on-site attention needed to take the stress and risk out of operating to Russia during this high-traffic period.

Speak to an expert at **EBACE2018, Universal[®] Exhibit #090**, or **russia2018@univ-wea.com**.

GET THE LATEST OPS UPDATES



universalweather.com/russia2018



Moving organizations that move the world.[®]

All of the trademarks referenced are property of their respective owners. Universal Weather and Aviation, Inc. is not claiming to be associated with or endorsed by the owners of the respective trademarks and mentions the trademarks for informational purposes only. 2018 Russia World Cup and Confederation Cup are trademarks of the Fédération Internationale de Football Association ("FIFA"). Universal Weather and Aviation, Inc. is not associated in any way with FIFA.

Bamako receives EASA certification

ASAM SA, the Airport Assistance Company of Mali, has announced its certification as an approved maintenance organisation with the ability to offer line maintenance services in west Africa for Boeing 737 aircraft.

The Bamako station was approved and added to the list of line maintenance sites with Part 145 approval on December 12.

ASAM SA chief executive officer, Dominique Dreuil, said: "A new terminal has just been completed at the Bamako airport and the establishment of a rigorous environment with international standards will further increase the attractiveness of this hub."

RAM orders four 787 Dreamliners

Boeing and Royal Air Maroc (RAM) announced orders for four 787-9 Dreamliners – valued at \$1.1 billion at list prices.

"With more than 850 flights per month to Africa, RAM has the broadest presence across the continent of any airline," said CEO and chairman Abdelhamid Addou.

"Our vision is to be the leading airline in Africa in terms of quality of service, quality of aircraft and connectivity. Ordering new-generation Dreamliners puts our airline on the right track to fulfil our vision."

SAA in code-share with TAAG

South African Airways (SAA) has entered a code-share agreement with TAAG Angola Airlines.

TAAG will code-share with SAA on its direct services between Johannesburg and Luanda



The AHRLAC and Mwari together.

AHRLAC in the Paramount picture

Paramount Group and its partners have announced that its new factory is fully operational and ramping up for full production of the Advanced High Performance and Reconnaissance Light Aircraft (AHRLAC) and its military variant, the Mwari.

Located at the Wonderboom International Airport complex, North of Pretoria, the vertically integrated and modular factory has been designed by drawing on the extensive manufacturing experience of the team in the

large-scale-production of components for Boeing and Airbus. It incorporates the latest flow-processes and computerised shopfloor management systems, which track and monitor every part throughout the production process.

This comes at a time when the second AHRLAC aircraft (PDM) has been demonstrated to complete production standards and includes important new features, such as retractable undercarriage and ejection seats

and will include Johannesburg and Harare, Johannesburg and Lusaka, and Johannesburg and Hong Kong in the near future.

"We are confident that this code-share opportunity will bring our countries closer together and contribute to the development of our respective economies and tourism industries," said William Boulter, TAAG chief commercial officer.

AviaDev heads to Cape Town

AviaDev, the African aviation development conference, will take place in Cape Town in June 2018.

Bench Events, AviaDev's organiser, expects to welcome 250-300 delegates and 30 airlines to the only forum that is dedicated to advancing Africa's connectivity right across the continent.



Richard Goodhead: engines will be totally connected.

Engine, go heal thyself

British technology giant, Rolls-Royce, is developing an intelligent engine which, it said, would be able to "heal itself". The company launched the pioneering 'IntelligentEngine' vision at the Singapore Air Show.

Based on the premise that engines will be increasingly connected via data links to their operational environment, senior vice-president, Richard Goodhead, said the concept represented a mindset change that is "as big a shift as going from the piston engine to the gas turbine engine".

Goodhead said engines will not just be connected to the manufacturer's support organisation – but will also be linked to the operator's infrastructure and every other engine across the fleet in a "totally connected, internet-of-things-type environment".

"Whereas, in the past, automatic data downloads from the engine would provide information about conditions inside the powerplant, ultimately we could see an engine that has diagnosed what's wrong and is able to fix itself," Goodhead said.

Daher inaugurates Tangier plant

Daher has inaugurated its new plant in Tangier.

The site represents an investment of more than €15 million (\$18.6) as part of Daher's ongoing development in Morocco.

Didier Kayat, Daher CEO said: "Training, job quality, strict compliance with relevant process and production standards, geographic proximity and overheads were all deciding factors in choosing to expand our industrial footprint in Morocco. Our business development policy also provides support for our employees in the country, who benefit from a programme to build skills and provide training in Daher quality and safety."

Precision Air on time

Precision Air leads 34 other airlines in Africa in on-time performance. During the period reported, Precision Air operated a total of 9,050 flights and 8,672 (95.8%) were on time.

Precision Air managing director and CEO, Sauda Rajab, said: "Air transport is all about time. People choose to travel by air to save time and here, at Precision Air, on-time performance is our top priority.

"We calculate our on-time performance from zero minutes, our commitment is not to waste even a single minute for our valued customers."

Asky another

An interline agreement has been reached between Dana Air and Asky airline. Dana Group managing director, Jacky Hathiramani, said: "We want to assure our guests of our commitment towards providing safe, reliable, affordable and world-class air transport services in Nigeria."

Ethiopian cools down

DoKaSch Temperature has provided its Opticooler to Ethiopian Airlines.

The Opticooler is equipped with battery-powered cooling compressors and heaters, as well as a self-regulating temperature control. Thus the temperature of sensitive goods, in particular pharmaceuticals such as insulin and vaccines, stay well within range at any point in the storage area.

"We are very glad to offer our customers a highly reliable packaging solution to transport temperature-sensitive shipments with DoKaSch's Opticooler," said Fitsum Abady, MD Ethiopian Cargo & Logistics Services.

"In this fast growing and strongly competitive market, it is important that we offer our customers the best packaging solution for their sensitive cargo."

Mozambique operations restart

Everett Aviation has announced the re-start of operations in Mozambique with the deployment of a locally registered BK117-C1.

The aircraft is a twin-engined medium utility transport helicopter jointly developed and manufactured by Messerschmitt-Bölkow-Blohm (MBB) of Germany and Kawasaki of Japan.

It has evolved into the Airbus H145.

"Everett has operated in Mozambique for many



Ethiopian teams up with Guinea

Ethiopian Airlines and Asky have jointly signed an agreement with Guinea Airlines for a strategic partnership in management, maintenance and training.

Ethiopian Group CEO, Tewolde GebreMariam, Cheick Dem, from Guinea Airlines, and Guinea's Minister for Transport, Oyé Guilavogui (both pictured above), signed the agreement in February.

Tewolde said: "As part of our Vision 2025 and with a view to enable African airlines to regain market share for travel to, from and within the continent, we are establishing strategic partnerships with many African countries. This partnership is in line with the recently launched African single air transport market at the African Union Heads of State Summit in Addis Ababa."

years and now holds an air operator's certificate there," said Simon Everett, CEO. "We have configured the aircraft so that it can fulfil a range of missions, including passenger transport, medical evaluation and utility work."

Scheduled cargo ops for Yemen

Air Djibouti is set to begin scheduled flights to the Yemeni city of Aden, one of the few foreign airlines to do so. Yemen's Ambassador to Djibouti, Abdulla Al-Sakhtari, has discussed the plan with the chairman of Air Djibouti, Abdourahman Ali Abdillahi.

Al-Sakhtari expressed his company's readiness to competitively price the flights in addition to the transfer of relief materials

and medicines to all airports across Yemen if so requested by the Saudi coalition-backed alliance and the Aden-based Yemeni government. Operations are on-board a B727-200 chartered from Kenya's Safe Air.

New lounges at Marrakech

National Aviation Services has launched its two Pearl Lounges at the Marrakech-Menara Airport in Morocco.

Hassan El-Houry, NAS Group CEO, said: "Our Pearl Lounges are the perfect addition to the eclectic facilities offered at the airport, rated by SkyTeam as the most beautiful airport in the world. All passengers, arriving, departing or in transit, can access the

lounges to relax and rejuvenate or get work done in a comfortable environment."

Congo commits to ARJ21-700s

The Republic of Congo Ministry of Transport has signed an order for two ARJ21-700s.

The commitment was placed by Minister, Fidèle Dimou, following a showcasing of the twinjet by its only commercial operator, Chengdu Airlines.

In preparation for the delivery of its first pair of ARJ21s later this year, the Congolese Government has already granted the aircraft a type certificate. The country is also due to add a VIP-configured ARJ21-700, set for delivery in 2023.

January traffic rise for African carriers

A traffic report from IATA has shown African airlines saw January traffic rise 4.9% against a mixed backdrop for the region's largest economies. In Nigeria, business confidence has risen sharply while in South Africa, political uncertainty continues to inflict an economic toll. The region's capacity rose 4.2%, and load factor edged up 0.5 percentage point to 70.3%.

Pretoria-Cape Town service suspended

Airlink has announced the suspension of air services on its Pretoria-Cape Town route.

"This was not a decision taken lightly, but after almost three years, the route has not developed as we expected it would and in order to stem losses, we will suspend services from the 8th of May 2018," said Airlink CEO, Rodger Foster.

"Sadly, the route has not become profitable, despite our collaborative best efforts.

"The combination of operational constraints on the size of aircraft that can be used on the route and the poor state of the economy have not helped."

Going Green

William Shaw, founder and former CEO of VivaColombia, has joined the Green Africa Airways board of directors.

ETA welcomes Ghana delegation

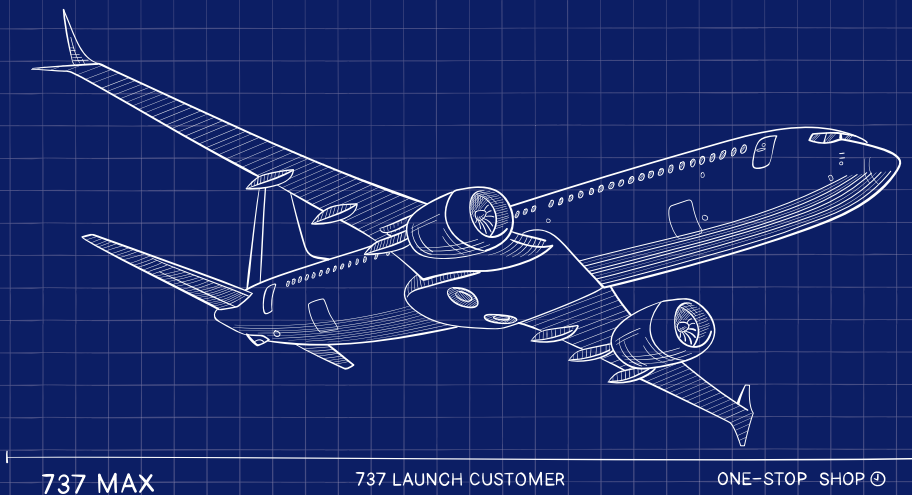
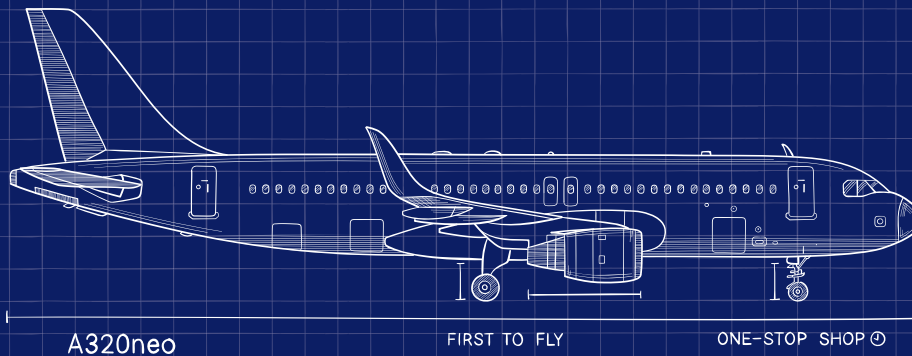
EgyptAir Training Academy (ETA) received a high-level delegation from the Civil Aviation Authority of Ghana in order to discuss ways of joint cooperation for the training of pilots and maintenance engineers.

The delegation had a detailed presentation of all the academy activities and the latest simulator training

programmes, which include the Airbus A330-A340-A320 and Boeing B777 / B737-800 types. Also discussed were the emergency training equipment and training services for cabin crew, as well as all training programmes for commercial activities, such as fares and ticketing and dangerous goods.



It starts as an idea. We make sure it doesn't stop there.



Unique service – in the air and on the ground. That's how we've been looking after the 737 and the A320 as an airline, providing component support since the very first aircraft were delivered. It's also why we can offer you a smooth entry into service for every model of the A320neo and the 737 MAX – along with a highly cost-efficient one-stop-shop solution. You benefit from major in-house capabilities, global logistics and fast provision of spare parts. In other words: we keep you in the air.

Lufthansa Technik AG, marketing.sales@lht.dlh.de
Call us: +49-40-5070-5553



lufthansa-technik.com



Lufthansa Technik
More mobility for the world



Our Locations

Jeddah
Riyadh
Dammam
Dubai
Yardley
Shanghai
Monaco
Kigali
Manila
Mumbai

nexus

www.nexus.aero

So rapid is the flight of **DREAMS**
upon the wings of **IMAGINATION**

Our Services

 info@nexus.aero



Flight Planning
Services



Flight Dispatch
Services



Security
Solutions



Crew
Services



Ground Handling
Arrangements



Refueling
Arrangements



Landing Permits
Arrangements



Overflight Clearance
Arrangements



Better solutions and services for **your World.**

Discover our Flight
Operation Solutions
24/7 Support: +27 82 940 5437
Office: +27 11 609 0123
tsopsafrica@wfscorp.com
mhaviation.co.za

From state-of-the-art trip support to payment card programmes and reliable into plane fuel delivery, MH Aviation Services, based in Johannesburg, is Africa's most innovative aviation services partner.

Join the 8,200 flight departments who depend on our bespoke global solutions and local expertise to take their success to new heights.

Fuel | Trip Support | Card and Reward Programmes | Logistics | Planning

MH AVIATION
SERVICES

A WORLD FUEL SERVICES COMPANY



New AU chairman Paul Kagame: "SAATM is a big step forward for the development of the African air transport industry." PICTURE: DANIEL GETACHEW

Thirty years after African nations decided to open up the continent's skies by passing the historic Yamoussoukro Decision, action has finally been taken with the African Union launching the single African air transport market (SAATM) on January 29. Kaleyesus Bekele reports.

AT LAST, AFRICA BUYS A SINGLE TICKET

«Un moment historique pour l'aviation africaine » – Page 18

After years of negotiation and arduous legal paperwork, the African Union (AU) officially launched SAATM from its headquarters in Addis Ababa on January 29.

Twenty-three countries have signed up to the project, which sees the full liberalisation of market access between African states, the free exercise of traffic rights, the elimination of restrictions on ownership, and the full liberalisation of frequencies, fares and capacities.

Another 10 countries have expressed an interest to join the programme.

New AU chairman Paul Kagame, the President of Rwanda, hailed the launch of SAATM as a big step forward for the development of the African air transport industry. Along with Togo President Faure Gnassingbé and Mossa Faki Mohamat, chairman of the African Union Commission (AUC), he cut a ceremonial ribbon covering the plaque at AU HQ to mark the launch.

The AU was congratulated by a number of international aviation bodies, including the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA), which said enhanced connectivity would stimulate demand, improve the competitiveness of the African airline industry, and make air travel more accessible.



Moussa Faki Mahamat, Paul Kagame, and Faure Gnassingbé President of Togo, a champion state of SAATM, unveiling the SAATM Plaque in Addis.

According to IATA, this will enable higher volumes of trade, expanded tourism and growing commerce between African nations and with the rest of the world.

"The SAATM has the potential for remarkable transformation that will build prosperity while connecting the African continent," said IATA vice president for Africa, Rapahel Kuuchi.

"We commend the 23 states that have signed up to SAATM. It is an important step. But the benefits of a connected continent will only be

realised through effective implementation of the programme – firstly by the countries already committed and then by the remaining 32 AU member nations still to come on board."

According to ICAO's long-term traffic forecast, passenger and freight traffic for the African region is expected to grow by around 3.8% and 2.1% per annum up to 2032.

"The launch of SAATM should be viewed as a critical step towards addressing the sustainability and

Continued
on Page 18

CONTINUED FROM PAGE 17

connectivity issues now confronting African citizens, societies and economies,” said Dr Olumuyiwa Benard Aliu, president of the ICAO Council.

Ethiopian Airlines Group CEO, Tewolde Gebremariam, said January 29, 2018 would be an historic day for the African aviation industry. “This is obviously a huge milestone for the continent,” he added.

RwandAir CEO, Chance Ndagano, said every country was going to benefit from SAATM. “More routes will be opened and waiting time will be reduced. It will be an advantage for tourism and trade development. It will be good for the overall economy,” he said.

But not all Africans are celebrating. Ugandan President, Yoweri Museveni, expressed a fear that SAATM would lead to the domination of African skies by a few airlines. He said he would prefer that African countries form regional airlines first before liberalising their skies so that no country would be left out.

Kagame assured Museveni that his concern would be addressed by the AUC.

However, the Ugandan president was not the only one with reservations. Airline Operators of Nigeria (AON), denounced the policy and said it would short-change the industry.

AON argued that there was no level playing field where Nigeria could compete with other African carriers, which, it said, still enjoyed some protectionism, lower interest rates on loans, and waivers on import duty for aircraft and spares. The association requested the Government of Nigeria not to implement SAATM.

□□□□□

Some African airlines protesting the implementation claimed the initiative would benefit only the big airlines, such as South African Airlines, Kenya Airways and Ethiopian Airlines, and it would hit smaller and weaker carriers.

African aviation authorities reject the assertion. Sossina Iyabo, secretary general of the African Civil Aviation Commission, the executive agency for SAATM, said it would benefit every African country and airline regardless of their size by improving air connectivity, boosting passenger traffic, and spurring economic development.

“When you live in fear you do not make progress. But you can overcome your fear by coming out and looking at what is in it for you and taking your share from the market,” she said. “It does not matter whether you are big or small. Even if you do not have an airline, every state will benefit. There will be increased passenger movement, your airport would benefit, air navigation services will benefit, your downstream sector, the aviation value chain will benefit, your every entity that works in the airport environment will benefit.”

African Airlines Association (AFRAA) secretary general, Abderahmane Berthe, the former CEO of a small African airline, suggested that smaller players should cooperate with the bigger carriers. “If the big airlines serve the long-haul routes, the small airlines



Tewolde Gebremariam: “We are all small airlines. It is like two bald men fighting for a comb.”

can operate short-haul,” he said. “As AFRAA, we promote cooperation between African carriers through our route network committee, inter airline agreement, and code share agreements. The train of liberalisation is there. You cannot stop it.”

He added that small airlines should not worry about the implementation of SAATM as it incorporated a regulatory framework that protected airlines from unfair competition and it also had dispute settlement mechanism.

Gebremariam said there was no such thing as big and small airlines in Africa. “We are all small airlines. It is like two bald men fighting for a comb,” he said.

Market liberalisation has always been a bone of contention. Many argue that it brings in more operators, fostering better service and reduced fare. While others contend that the local industry would be stifled.

Berthe said the most important thing is that the 23 countries who are committed to fully implement SAATM represent 80% of the total African air transport market. He believed more countries would join SAATM in the coming few years when they realised the benefits.

SOMMAIRE

UN MOMENT HISTORIQUE POUR L'AVIATION AFRICAINE

Trente ans après la décision des pays africains de libéraliser l'espace aérien du continent en adoptant la Décision de Yamoussoukro, l'Union africaine a finalement lancé sur le marché unique du transport aérien (SAATM), le 29 janvier dernier. Le point avec Kaleyesus Bekele.

Vingt-trois pays représentant 80% du marché du transport aérien africain ont adhéré au projet. Il prévoit la libéralisation complète de l'accès aux marchés entre les Etats africains, le libre exercice des droits de trafic, l'élimination des restrictions à la propriété, et la libéralisation complète des fréquences, des tarifs et des capacités.

Dix autres pays ont exprimé leur intérêt à rejoindre le programme.

Le nouveau président de l'UA, Paul Kagame, le président du Rwanda, a affirmé que c'était un grand pas en avant pour le développement de l'industrie du transport aérien en Afrique.

Le président du Togo, Faure Gnassingbé et Mossa Faki Mohamat, président de la Commission de l'Union africaine (CUA) ont participé à la cérémonie.

Selon les organisations internationales comme l'OACI et l'IATA, cela améliorerait la connectivité et la compétitivité de l'industrie africaine, stimulerait la demande et développerait le commerce et le tourisme et de entre les nations africaines et avec le reste du monde. Le SAATM a le potentiel d'une transformation remarquable du continent.

Il faut maintenant que les 32 autres nations membres fassent de même.

Les prévisions à long terme de l'OACI indiquent le trafic des passagers et de fret pour la région africaine devrait croître d'environ 3,8% et 2,1% respectivement par an jusqu'en 2032.

Tewolde Gebremariam, DG d'Ethiopian Airlines Group et le PDG de RwandAir, Chance Ndagano, ont

souligné que l'ensemble de l'Afrique en bénéficiera économiquement.

Toutefois, d'autres représentants africains ont exprimé leurs craintes comme le président ougandais, Yoweri Museveni, par rapport au risque de domination de l'espace aérien africain par quelques compagnies aériennes. Il suggère la formation de compagnies aériennes régionales avant de libéraliser le ciel.

Par ailleurs, les opérateurs aériens du Nigeria (AON) ont demandé à leur gouvernement de ne pas mettre en œuvre le SAATM, craignant des inégalités. Certaines compagnies aériennes africaines estiment en effet que les grandes compagnies comme South African Airlines, Kenya Airways et Ethiopian Airlines seraient favorisées au détriment des plus petits et des moins solides financièrement.

Sossina Iyabo, secrétaire général de la Commission de l'aviation civile africaine, l'agence exécutive du SAATM, a souligné que tous les pays et compagnies africains vont augmenter leur trafic en améliorant la connectivité aérienne. Ce qui stimulera le développement économique.

Pour le secrétaire général de l'AFRAA, Abderahmane Berthe, ancien DG d'une petite compagnie aérienne, le train de la libéralisation est là. « Vous ne pouvez pas l'arrêter. »

Il a invité les autres pays africains à se joindre à cette dynamique pour ne pas s'isoler face à la concurrence.



More uptime,
less downtime.

More flights, more revenue. That's great for business.
Utilization defined.

www.cfmaeroengines.com

CFM International is a 50/50 joint company between GE and Safran Aircraft Engines

LEAP

Extraordinary together



Open skies with the European Union could help the Tunisian Government turn the corner on a difficult few years. But for Ilyes Mnakbi, the new chief executive of flag-carrier Tunisair, the hard times are just beginning. **Martin Rivers reports.**

Tunisair struggles to squeeze through the Open door

«Une libéralisation du ciel tunisien en douceur » – Page 22

The European Union's delegation to Tunisia could not have struck a more optimistic tone in December, when EU Transport Commissioner, Violeta Bulc, met with officials in Tunis to conclude negotiations over the looming open skies treaty between the two sides.

The Tunisian Government has been inching towards the treaty for several years, emboldened by the success of Morocco's deal with the EU in 2006. That landmark agreement saw tourist arrivals rocketing by 60% over five years, propelled by an influx of European low-cost carriers to the country's popular holiday resorts. Tunisia's treaty, Bulc predicted, would be no less transformative.

"Today, we are not only delivering on the EU's aviation strategy, we are also taking our relations with Tunisia to new heights," she said. "This far-reaching aviation agreement will improve market access and contribute to the highest safety, security and environmental standards. This is great news for tourism, passengers and businesses."

□□□□□

Despite promising to grow Tunisia's gross domestic product (GDP) by 2.7%, the open skies agreement remains a source of contention for many stakeholders in the country.

Trade unions staged a protest within days of the deal being rubber-stamped, warning that flag-carrier Tunisair – by far the country's main employer of aviation workers – cannot withstand a competitive onslaught from Europe. The state-owned airline has already lost \$240 million since the Arab Spring erupted in 2010, reeling from an exodus of tourists that only accelerated after Daesh targeted the country in 2015.



For Tunisair chief executive, Ilyes Mnakbi, who describes the deal as a "huge problem", buying time has become the preferred strategy. "We will not have open skies in Tunis for five years," he said, referring to the capital's temporary exclusion from the agreement. "We will have open skies in Djerba, in Monastir, but not Tunis."

By the time Tunisair's primary hub is opened to competition, Mnakbi said he expects "about 1,200" of his 7,400 employees to have taken voluntary redundancy. Reducing the headcount has been a priority for successive bosses at the airline, but disputes over severance pay have repeatedly derailed the process. Tunisair currently employs more than 250 people for each of its aircraft, versus less than 70 per aircraft at Royal Air Maroc.

"We have to give them an amount of money for compensation for early departure," the chief executive confirmed. "We hope that next year we will find an agreement. Then we have the appropriate number of employees and we will be in a better position."

Creating a no-frills offshoot could be another way for Tunisair to boost its competitiveness, Mnakbi added, with management weighing up launching a "small new company" with a "low-fare, not low-cost" philosophy.

The subsidiary would configure its aircraft in an all-economy layout and charge extra for food, checked luggage and seat selection. If properly executed, it could narrow the gap between Tunisair's full-service pricing and that of ultra-low-cost-carriers like Ryanair. But its small scale would be a significant handicap. When Royal



“We will not have open skies in Tunis for five years... We will have open skies in Djerba, in Monastir, but not Tunis.”

ILYES MNAKBI

Air Maroc made a similar foray into the no-frills arena with Atlas Blue, it quickly deemed the project as non-viable.

A better lesson from Morocco’s flag-carrier could be its reliance on sixth-freedom traffic flows between West Africa and Europe. Rather than competing in low-yield point-to-point markets, Royal Air Maroc retreated to its Casablanca hub after open skies and focused on routes that Ryanair had neither the traffic rights nor the inclination to serve.

The result was a dramatic reversal of fortunes from four years in the red to four in the black – a turnaround that Mnakbi is eager to replicate for his government shareholder.

□□□□□

Tunisair’s international network is already primed for transit traffic. The flag-carrier flies to 29 destinations in Europe; eight in West Africa; five in North Africa; three in the Middle East; and one in North America. It also operates three domestic routes.

Regional subsidiary Tunisair Express, meanwhile, serves four domestic routes, as well as connecting Tunis with Naples, Italy and the Mediterranean island of Malta.

The addition of Montreal, Canada in 2016 heralded Tunisair’s entry to the long-haul market. Frequencies on the route will double to four per week this year, while New York JFK Airport is also in the pipeline for 2019.

“We have a lot of demand from [passengers in] African countries to get them to Tunis, and then to go to other countries in Europe and Montreal,” Mnakbi said, when asked about the sixth-freedom model. “Maybe when we open

Continued
on Page 22

CONTINUED FROM PAGE 21

New York it will be an opportunity for African people to go there.”

Finding new markets in the airline's home continent is a critical component of the strategy. Having launched flights to Cotonou, Benin last December, Tunisair will this year begin serving Khartoum, Sudan; Douala, Cameroon; and N'djamena, Chad.

For 2019, its targets are Lagos, Nigeria and Accra, Ghana. The roadmap for 2020 has not yet been decided, but Libreville, Gabon is believed to be among the candidates.

Frequencies are also likely to grow in the key transit points of Dakar, Senegal and Abidjan, Côte d'Ivoire, owing to Tunisair's reliance on fifth-freedom routes in West Africa.

Growing capacity in Europe will be more challenging due to 2015 terror attacks on a beach in Sousse and a museum in Tunis. Those atrocities claimed the lives of 58 foreign tourists, prompting several western governments to warn their citizens against visiting Tunisia. However, with Daesh on the back foot across North Africa, most countries have softened their travel advisories and holidaymakers are again returning.

“In 2017, we had growth of traffic. In Europe it was about a 25% increase and we suppose that this year it will be about 11% or 12%,” Mnakbi confirmed. “Now we can consider that Tunisia is in a good position of safety and we are very

happy to have visitors from Germany, from France, from all Europe to come into Tunisia.”

He noted that Manchester in the UK and Dublin in Ireland could both re-join the network in 2018, likely as charter services. Britain was the worst affected country in the 2015 attacks, losing 31 of its citizens. But the UK's Foreign Office eased its travel warning for Tunisia last summer, allowing tour operators to re-enter the market.



Steady expansion at Tunisair will necessarily be accompanied by a gradual increase in the fleet size. The flag-carrier currently deploys 16 Airbus A320s, four A319s, seven Boeing 737-600s, and two A330-200s.

Six leased A320neos will be inducted between 2019 and 2020, injecting new capacity for the African network in particular. Mnakbi is also considering whether to take more Boeing narrow-bodies, noting that some of the -600s will be relocated to Djerba and Monastir to fend off low-cost competition.

Parallel changes are afoot at Tunisair Express. The regional subsidiary has already agreed to sell its ATR 72-200 to Niger Airlines, and Mnakbi now wants to replace its two 72-500s and one Bombardier CRJ900. Despite saying that newer models of the same variants will be sought, the

chief executive left the door open to a possible CSeries switch.

“We visited the [Dubai] air show and we are interested in purchasing some CSeries, because it is a very good aeroplane. For us it will be useful,” he said, without clarifying which business unit would deploy the type. “We will check with our minister and then we will decide maybe to take at the most, in the beginning, two or three.”

Having witnessed the impact of open skies on Royal Air Maroc, Mnakbi is determined to restructure Tunisair before low-cost carriers descend on its home base.

Even as he lays down plans for a more efficient future, though, there is little doubt that management remain fundamentally opposed to liberalisation. With no firm date set for the signing of the treaty, Europe's policymakers should not take for granted that the deal will be implemented in full.

“Royal Air Maroc started the experience [with open skies] because they expected a lot of tourists will fly on board these low-cost carriers. But it was the Moroccan people living abroad who take these flights! [There was] no increase in the hotels,” communications director Youssef Kekli argued. “That's why the Tunisian Government wants to reinforce the [flag-carrier's] position in the main airport before accepting open skies.”

SOMMAIRE

UNE LIBÉRALISATION DU CIEL TUNISIEN EN DOUCEUR

Un accord de ciel ouvert avec l'Union européenne pourrait aider le gouvernement tunisien à tourner la page sur quelques années difficiles. Mais pour Ilyes Mnakbi, le nouveau directeur général de Tunisair, les temps difficiles ne font que commencer. Un reportage de Martin Rivers.

Selon la commissaire européenne chargée des transports, Violeta Bulc, il ne s'agit pas seulement de livrer la stratégie de l'UE mais cet accord donnerait une nouvelle impulsion aux relations entre les deux parties, améliorerait la connectivité et les normes de sécurité, de sûreté et d'environnement.

L'on se souvient de l'accord historique avec le Maroc qui a fait grimper les arrivées de touristes de 60% sur cinq ans, propulsé par un afflux de transporteurs européens à bas prix.

Malgré la promesse d'augmenter le PIB de la Tunisie de 2,7%, l'accord de ciel ouvert reste une source de contestation pour de nombreuses parties prenantes dans le pays.

Selon les syndicats, la compagnie ne pourra pas résister à un assaut compétitif de l'Europe. La compagnie aérienne publique a déjà perdu 240 millions de dollars depuis le début du printemps arabe en 2010, sous le coup d'un exode de touristes qui ne s'est accéléré lorsque Daesh a ciblé le pays en 2015.

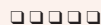
Le directeur général de Tunisair, Ilyes Mnakbi, affirme que le ciel ouvert concernera Djerba et Monastir, mais non pas Tunis.

Au moment où le hub principal de Tunisair serait ouvert à la concurrence, il s'attend à ce qu'environ 1.200 de ses 7.400 employés auraient accepté un départ volontaire.

Il estime que la création d'une filiale avec une politique « low-fare » pourrait être un autre moyen pour Tunisair de renforcer sa compétitivité.

Avec une bonne stratégie et une gestion efficace, elle pourrait réduire l'écart entre le prix du service complet de Tunisair et celui des transporteurs à très bas prix comme Ryanair. Il faut toutefois éviter que sa petite taille ne devienne un handicap à la rentabilité comme dans le cas d'Atlas Blue.

Le réseau international de Tunisair est déjà prêt pour le trafic de transit. Le porte-drapeau dessert 29 destinations en Europe dont huit en Afrique de l'Ouest, cinq en Afrique du Nord, trois au Moyen-Orient et un en Amérique du Nord. Il exploite également trois routes domestiques.



La filiale régionale Tunisair Express, quant à elle, dessert quatre liaisons intérieures, ainsi que la liaison entre Tunis et Naples, l'Italie et Malte.

L'ajout de Montréal en 2016 a permis son entrée sur le marché des vols long-courriers. Les fréquences hebdomadaires doubleront cette année, tandis que Tunisair projette de desservir New York JFK en 2019.

La compagnie mise aussi sur de nouveaux marchés sur le continent. Après Cotonou, Tunisair desservira

cette année Khartoum, Douala et N'djamena. Pour 2019, elle cible Lagos et Accra. Libreville l'intéresserait aussi. Les fréquences devraient également augmenter à Dakar et à Abidjan.

Le renforcement des capacités en Europe sera plus difficile en raison des attentats terroristes de 2015. Cependant, le recul de Daesh en Afrique du Nord pourrait ramener les vacanciers.

En 2017, le trafic concernant l'Europe a augmenté d'environ 23%. Ilyes Mnakbi estime une croissance d'environ 11% ou 12%, précisant que la Tunisie est un pays sûr pour les visiteurs. Manchester et Dublin en Irlande pourraient tous deux rejoindre le réseau en 2018.

Le plan d'expansion s'accompagnera d'une consolidation progressive de la flotte comprenant 16 A320, quatre A319, sept Boeing 737-600 et deux A330-200.

Six A320neos loués seront opérationnels entre 2019 et 2020.

Tunisair Express, sa filiale régionale va remplacer ses deux ATR72-500 et un Bombardier CRJ900. Le DG laisse la porte ouverte à un éventuel changement vers les CSeries.

Face à l'impact de la libéralisation de l'espace aérien sur Royal Air Maroc, Ilyes Mnakbi reste déterminé à restructurer Tunisair avant l'arrivée des compagnies low-cost.

IT REINVENTS FLEET PLANS AND TRANSFORMS BUSINESS PLANS



787 DREAMLINER. A BETTER WAY TO FLY. The industry-leading technology of the 787 Dreamliner is creating remarkable opportunities for airlines around the world. We call it the Dreamliner effect. Its unparalleled fuel efficiency and range flexibility enable carriers to profitably open new routes as well as optimize fleet and network performance. And for their passengers, an experience like none other in the air. Put the Dreamliner effect to work for you. That's a better way to fly.

boeing.com/787

 **BOEING**

Air Algérie's new boss, Bakhouche Alleche, tells Martin Rivers he is determined to set the troubled flag-carrier on a better path.

RAISING THE FLAG

«Air Algérie vise le bon équilibre» – Page 26

Algeria's Transport Ministry denied rumours that Air Algérie was heading for bankruptcy in January, insisting that the flag-carrier enjoys the full support of the government, despite its "difficult financial situation".

The intervention followed a series of walkouts by employees, who are angry at new chief executive, Bakhouche Alleche, for freezing planned wage increases. Those pay-hikes had reportedly been agreed by Mohamed Bouderbala, Air Algérie's previous boss, but were axed as part of a newly launched turnaround plan.

Speaking shortly before the strikes, the airline's top management insisted that boosting on-time-performance (OTP) should be a higher priority than lifting an already burdensome wage bill.

"We have [had] this problem for many years," complained Zoheir Houaoui, the airline's commercial chief. "We have to go to the personnel of Air Algérie and tell them we have to improve."

Alleche emphasised the positive signs that emerged last year – his first at the helm – when the airline's OTP rate shot up to 67% from just 53% in 2015. "We only did what we should be doing [in the first place]," he shrugged. "It's mainly human factors."

But the strikes in January have now reversed those gains, tarnishing the brand and putting management back on a collision course with workers. Given that both sides are refusing to make the first concessions, further industrial action is widely expected.

Whatever happens internally at the company,

Alleche and Houaoui are pressing on with efforts to improve the passenger experience – one that is generally seen as lagging behind that of other airlines in the region.

A spate of aircraft deliveries during Bouderbala's time in office kick-started the renewal process. Eight Boeing 737-800s, two 737-700s, three A330-200s and three ATR 72-600s arrived in Algiers during or immediately before his short-lived tenure, which began in May 2015. The overhaul gave Air Algérie an enviable average aircraft age of just 11 years.

With the oldest 737s dating back to the turn of the century, however, "10 or 12" narrow-bodies are now in need of refurbishment.



"It takes two years to do," Alleche said of the proposed work, which will introduce a standardised two-class layout of 16 premium and 132 economy seats. "We will install in-flight entertainment (IFE) and also replace the old seats with new ones that are lighter and more comfortable."

Work is, meanwhile, under way to introduce a new passenger service system (PSS) linked to Amadeus that will make it easier to keep customers up-to-date about delays and disruption. "In case of a change of aircraft type or cancellation, we can do a mass mailing," Alleche explained. "That is not possible today with the current system."

Turning to operational matters, the chief executive admitted that Air Algérie's network has remained relatively static in recent times.

Hungarian capital Budapest became a rare eastern European addition in 2016, but longstanding plans for a connection to Guangzhou, China have failed to take off. Air Algérie currently serves just two long-haul destinations – China's capital Beijing, and Montreal in Canada. Western Europe remains by far its largest market, accounting for 22 stations including nine in France.

Six destinations are also served in west Africa, along with four in the Middle East (Beirut, Lebanon; Amman, Jordan; Cairo, Egypt; and Dubai, UAE). Elsewhere, Moscow in Russia, Istanbul in Turkey, Tunis in Tunisia, and Casablanca in Morocco complete the network.

Asked about opportunities for growth, the executives said that home continent Africa offers by far the greatest potential – particularly if combined with a new focus on connecting flights.

"We are looking to the south. We want to develop the Africa market," Alleche confirmed. "Maybe Chad, maybe Cameroon, maybe Gabon – Libreville – central Africa."

Houaoui added: "We see it as a big opportunity for Air Algérie also to improve the business with sixth-freedom flows. We had, previously, some issues regarding availability of the fleet and also the crew. Now we can say we are at the level [at] which Air Algérie can make a better performance."

Transforming Algiers into a hub connecting Africa and Europe will not be easy. Regional competitor, Royal Air Maroc, captures most of the flows in its Casablanca hub, and Tunisair is



“ As we see it now,
the sky is already open. ”

BAKHOUCHE ALLECHE

CONTINUED FROM PAGE 24

known to be targeting the same model.

Nonetheless, the development of a new terminal at Algiers Houari Boumediene Airport should give weight to the strategy. The Western Terminal will have an annual capacity of 10 million passengers when it opens later this year, compared to just six million at the existing hub. It will feature vastly improved transit facilities that reduce connecting times between flights.

"The current airport doesn't meet the requirements of the sixth-freedom business," Houaoui admitted. "This is the main problem with the transit [traffic]."

As well as enhancing south-to-north flows between Africa and Europe, Alleche hopes the

new gateway will encourage more travellers to stop in Algiers en route to Montreal and Beijing. Further down the road, he believes the addition of New York flights will cement the capital's status as a bridging point for Africa.

"We would launch tomorrow if we had the right," he said of the long-awaited New York route.

However, with US certification of Algeria's Civil Aviation Authority likely to take "at least 18 months" once launched – and with no date set for its commencement – the chief executive is not holding his breath.

Continued expansion of the fleet is another consideration. Air Algérie currently deploys 56

aircraft: eight A330s, three 767s, 24 737-800s, five 737-600s, two 737-700C convertibles, 11 ATR 72-500s and three 72-600s. The recent deliveries mean that renewal is no longer a top priority, but Alleche remains mindful of the need for long-term planning.

"We are working on a plan of development maybe until 2025," he said. "We think we need another 15 aircraft [for growth] ... including replacement units, all together [the number] is 35 aircraft."

Narrow-bodies will make up most of the orders, allowing Air Algérie to maintain its focus on short- and mid-haul flying. Within the regional-aircraft space, Alleche said the Bombardier CSeries is among the models being considered to replace eight 72-500s.

"We can stay on the ATRs and maybe get the -600, or change maybe to the CS or Embraer," he speculated. "It's not decided yet."

The flag-carrier's three 767s – by far the oldest aircraft in its fleet, at 28 years of age – will also be withdrawn from service this year. But there is no plan to source replacements given the recent addition of three A330s.

Asked about the likelihood of Algeria following Morocco's example by opening its skies with Europe – and what this would mean for the flag-carrier – Alleche seemed perplexed.

"As we see it now, the sky is already open," he insisted. "The tourist market does not exist in Algeria at the moment. That's why we don't have the low-cost companies like EasyJet or Ryanair."

□□□□□

Houaoui added that competition on French routes is particularly dynamic, with Aigle Azur, Air France, ASL, Vueling and Transavia all fighting for market share. While true, Air Algérie nonetheless commands 59% of seating capacity in the country-pair – an advantage that would almost certainly crumble if bilateral restrictions were abolished.

Instead of boosting foreign competition, Alleche believes the state should focus on improving the financial health of its ailing flag-carrier.

Lifting restrictions on ticket prices would be a good start, he said, noting that management are currently forced to seek government approval before setting internal fares. "We are losing money mainly on the domestic flights," he complained. "We cannot charge the fare [we want] on the domestic flights."

The opening of Algeria's East-West Highway strengthens the case for free-market pricing, as travellers now have a cost-effective and convenient alternative to domestic air travel.

However, persuading both the state and its citizens to turn their backs on decades of socialist tradition is not easy. With Air Algérie bracing for more staff walkouts, management have yet to convince even their own employees about the best path forward.

SOMMAIRE

AIR ALGÉRIE VISE LE BON ÉQUILIBRE

Le nouveau directeur général d'Air Algérie, Bakhouche Alleche, a fait part à Martin Rivers, de sa détermination à mettre la compagnie nationale en difficulté sur une meilleure trajectoire.

Le ministère des Transports algérien a démenti les rumeurs selon lesquelles Air Algérie allait en faillite en janvier dernier et a insisté que le porte-drapeau bénéficiait du soutien du gouvernement en dépit de sa « situation financière difficile ».

La compagnie a connu une série de grèves de ses employés en début d'année. Le motif : le gel des augmentations salariales qui avait été acceptées par l'ancien DG (Mohamed Bouderbala). Bakhouche Alleche a dû trancher. Cela s'est fait dans le cadre du nouveau plan de redressement de la compagnie visant à augmenter la performance de la compagnie et en particulier l'OTP. Des signes encourageants ont été visibles en 2017 avec un OTP à 67% par rapport à 53% en 2015.

Ces grèves ont toutefois terni l'image d'Air Algérie. La nouvelle direction compte poursuivre ses efforts pour améliorer le service aux passagers. Le processus de renouvellement de la flotte a été déjà amorcé. Huit B737-800, deux B737-700, trois A330-200 et trois ATR72-600 sont arrivés à Alger depuis mai 2015. L'âge moyen de la flotte est aujourd'hui de 11 ans.

□□□□□

Concernant le réseau, Bakhouche Alleche a admis que celui-ci est resté relativement statique ces dernières années. Budapest est devenue une nouvelle destination d'Air Algérie en 2016 alors que la nouvelle route vers Guangzhou (Chine) n'est toujours pas opérationnelle.

Air Algérie dessert actuellement seulement deux destinations long-courriers à savoir Pékin et Montréal. L'Europe de l'Ouest représente son plus grand marché avec 22 routes dont 9 en France. La compagnie dessert six destinations en Afrique de l'Ouest et quatre au Moyen-Orient (Beyrouth, Amman, Le Caire et Dubaï). Moscou, Istanbul, Tunis et Casablanca complètent le réseau.

Interrogé sur les opportunités de croissance, Bakhouche Alleche estime que l'Afrique offre de loin le plus grand potentiel avec l'importance des

vols en correspondance. « Nous voulons développer ce marché avec peut-être de nouvelles dessertes au Tchad, au Cameroun, au Gabon et en Afrique centrale (Libreville). »

Transformer Alger en un hub entre l'Afrique et l'Europe ne sera également pas aisé avec la présence proche de Casablanca et la montée en puissance de Tunis. Néanmoins, le développement d'un nouveau terminal à l'aéroport d'Alger (Houari Boumediene) devrait apporter une capacité annuelle de 10 millions de passagers (contre 6 millions aujourd'hui) et un meilleur trafic de transit lors de son ouverture prévue fin 2018.

Bakhouche Alleche compte sur cette nouvelle infrastructure qui encouragera plus de voyageurs à s'arrêter à Alger pour les vols vers Montréal et Pékin. « L'ajout d'une route vers New-York viendra à terme renforcer l'importance d'Alger en tant que hub pour l'Afrique. »

La flotte d'Air Algérie compte aujourd'hui 56 avions. Les récentes livraisons signifient que le renouvellement n'est plus une priorité absolue pour la compagnie, mais le nouveau DG d'Air Algérie reste conscient de la nécessité d'une planification à long terme. « Nous travaillons sur un plan de développement jusqu'en 2025. Nous pensons que nous aurons besoin de 35 avions, 15 le seront pour assurer notre croissance et le reste pour le renouvellement de la flotte existante. »

Concernant la politique libéralisation en Algérie, Bakhouche Alleche estime que le ciel est déjà ouvert dans le pays. Par exemple, la concurrence sur les routes françaises est particulièrement dynamique, avec Aigle Azur, Air France, ASL, Vueling et Transavia. Il serait difficile de l'ouvrir davantage. Contrairement à son voisin marocain, le marché touristique n'existe pas en Algérie pour le moment, d'où l'absence des compagnies low-cost comme EasyJet ou Ryanair. La nouvelle direction d'Air Algérie préconise que l'État algérien investisse davantage pour améliorer la santé financière d'Air Algérie de même que la rentabilité des vols domestiques.

10
MORE
YEARS

TPAerospace

WHEELS & BRAKES

IT'S THAT SIMPLE



TPAEROSPACE.COM

Nile Air, Egypt's largest privately-owned airline, is exploring several avenues to ensure its continued growth in the challenging economic climate.

Alan Dron reports.

One Nilestone after another

The past year has seen a series of initiatives by Nile Air to cope with the difficult economic circumstances faced by the nation's airlines. And the pace of change is due to be maintained in 2018.

All Egypt's airlines had to restructure to cope with the sudden 2016 loss in value of the nation's currency. "We, for example, became more aggressive in the domestic market and added new domestic services to Luxor and Aswan in December 2016," said Nile Air CEO, Ahmed Aly.

Hurghada and Sharm El Sheikh were also added to the company's Egyptian route map earlier that year.

Domestic services now make up 25% of Nile Air's flights, but the most extensive section of its route map still lies between Egypt and Saudi Arabia, with 13 routes to 10 Saudi destinations. However, although the Middle East remains very much at the core of its activities, it is starting to look further afield.

It has expanded into what is technically Europe, with a new route to Istanbul, while a second new service to Port Sudan is the first stage in what Aly hopes will be a new chapter of growth in Africa. The latter region has particular problems, however.

Nile Air is very committed to expanding in Africa. "We see it as a unique but challenging opportunity," said Aly, who intends to start a new route this year to an as-yet unrevealed African destination, currently not served by any carrier from Cairo.

The costs of operating African routes are considerable, with airport charges, taxes and a visa regime for intra-African travel that needs to be overhauled. All these pose hurdles for airlines that want to expand in the continent.

Tentative steps are being taken to try to create

a European-style visa-free zone and a new, pan-African passport has been launched but, as yet, very few countries have adopted it.

Local governments have to understand that airlines need a support mechanism that allows them to nurture new routes, said Aly. "If you look at a destination like Kigali, for example, there isn't a pre-existing market; there isn't natural traffic between Egypt and Rwanda – whether it's investment, or business or labour movement, or tourism, – so it does need time to develop.

"To make Africa work, we're going to have to rely on partners. This winter, we're launching two codeshare agreements, with Flydubai and Pegasus Airlines of Turkey. Flydubai has a huge crossover in its Saudi networks, while Pegasus gives us that network into the European market to test the waters."



The next major milestone in Nile Air's evolution will come later this year, when the company will issue an initial public offering (IPO). "There is a family ethos around the company," said Aly. The intention is that all Nile Air's staff will receive stock in the privatised airline, making them shareholders rather than employees.

Over the past year, Nile Air has invested heavily in several behind-the-scenes infrastructure projects aimed at ensuring the airline's future, and that investment will continue this year.

"It's very important to invest in structure that's going to allow us to grow in a safe and efficient manner," said Aly. "We announced last year that we were the first Middle East airline to take the full suite of Amadeus products and we're launching a frequent flyer programme last month based on the Amadeus system."

And, despite having launched its first website just two years ago, this spring will see a completely new online platform opening to the public, together with an app. "It will be a fully interactive website as we drive further traffic towards it. Today, web sales account for just 15% [of the total]. We're aiming to quickly get that up to 30-35%."

New personnel have also been recruited to improve customer service in a drive to make this area "a real, significant point of differentiation" compared to other airlines.

Allied to this, the airline has launched a subsidiary, Nile Academy, 50% of whose students will study aviation-related subjects. This, hopes Aly, will develop a new pool of talent that understands the complexities of the airline business and will form a recruiting ground on Nile Air's doorstep.

Even before the academy comes on line, however, Aly is more than happy with his staff. "I have a really genuinely outstanding team here. I was blown away when I arrived; people were so committed and so loyal."

By way of example, he pointed to the company's 92% on-time performance record: "People think that's just a number, but it comes about as a result of a huge amount of hard work."

Another indicator of the quality of the personnel, he said, was the fact that Nile Air undertook an 'enhanced' IATA operational safety audit (IOSA) in 2016 and became the first Egyptian airline to achieve that standard without a single 'finding', or fault, being raised by the auditors.

The airline has also recently established another daughter company, Nile Air Catering. Ground was broken in December 2017 for a new building to house this business and Aly



● The intention is that all Nile Air's staff will receive stock in the privatised airline, making them shareholders rather than employees. ●

AHMED ALY



Nile Air carried the Egyptian national football team en route to the World Cup finals.

hopes it will be up and running by summer this year.

The decision to set up its own catering division was taken firstly to give Nile Air full control of its catering, particularly in terms of flexibility and quality.

“There are no viable, independent catering organisations. The only one we have is LSG in Egypt, but that is 70% owned by EgyptAir,” he explained. That is a profitable business, he noted, with catering for non-aviation customers bringing in even better yields than those for airlines.



Nile Air has a current fleet of five Airbus A320s and two larger A321s, with the second A321 added in 2017 and bearing a special colour scheme promoting investment in Egypt. The company plans to continue expanding by at least two additional aircraft a year over the next few years, with the newcomers most likely to be leased further examples of the two European types.

In April 2017, Nile Air became the first Egyptian airline to order the neo version of the A320 family when it converted an existing order for two A321neos to A321neos. Deliveries are planned for 2020.

Despite the country's recent problems, Aly said he is confident that the situation is improving in terms of political stability. Tourists and investments are returning: “We're not out of the woods yet, but we're certainly moving on the right track,” he said.

“The good thing about Egypt is, despite all the problems, it's a country full of opportunity. If you're committed for the long term, you will see fantastic returns – not just in aviation.”

Sudan's glimmer of hope

For a decade, Sudan Airways has struggled to maintain services in the face of US sanctions against the African nation. Those sanctions have now been eased, but the airline still faces problems, as deputy general manager, Yasir Timo, explained to Alan Dron.



We still cannot buy aircraft at the moment. This will be the case until we are removed from the list of states sponsoring terrorism.

YASIR TIMO

It has been a long, hard road for Sudan's national airline. After the country was placed on a US sanctions list in 2006 for war crimes against its own people and support for known terrorists, the company found it difficult to source new aircraft, spare parts and all the other services that are required to allow an airline to function.

Struggling to maintain services, it was forced to acquire aircraft wherever possible, with its current fleet consisting of just one Airbus A300-600 and a smaller A320.

Those aircraft fly seven international routes – to Riyadh, Jeddah, Cairo, N'Djamena, Kano, Juba and Asmara – as well as four domestic destinations.

The October 2017 decision to ease sanctions allowed US companies to trade with the African nation once again. However, Sudan remains on the US list of state sponsors of terrorism, which means the airline's equipment situation is unlikely to improve in the near future, explained deputy general manager, Yasir Timo.

The US Government must still grant licences for companies wishing to export a wide range of goods to Sudan.

"It's not easy at all to buy spare parts. It's very difficult, very costly and always takes us a long time to find somebody who can provide us with them," said Timo.

"We still cannot buy aircraft at the moment. This will be the case until we are removed from the list of states sponsoring terrorism."

In the past, the company has used aircraft on operating leases from other Sudanese and foreign companies to maintain services. Today, aircraft are sometimes leased from Sudanese operators such as Badr Airlines and Tarco Air.

There are glimmers of light on the horizon. "After these sanctions have been partly removed we are starting to have contacts with aircraft manufacturers such as Boeing and we hope that we will find a way to get a licence to get new aircraft," said Timo.

"We are doing this through the US embassy in Sudan. We need to come up with a practical lease plan that shows that we are only trying to get aircraft for civil use. The Americans are always afraid of things that can have a dual use, civil and military. We'll try to come up with a business plan that they can monitor, so they can be assured that [the aircraft] are for civil use."



The airline is receiving assistance from the US Bureau of Industry and Security (BIS) in the Office of Foreign Assets Control (OFAC). BIS ensures that exporters have the information they need to comply with US export control requirements on commercial goods. "They are trying to help the vendors apply," said Timo.

One possible means of easing the process of finding new aircraft is through aid from Saudi Arabia. Riyadh has offered funding to help improve Sudan's transport sector as a whole and it may provide easy funding terms for Sudan Airways to acquire aircraft, or even donate them. But this route remains unclear and Saudi Arabia would still have to receive a US licence, even to donate aircraft.

When these problems are finally resolved, Sudan Airways is looking at two classes of narrow-body aircraft to renew its fleet – one in the 120 to 140-seat category and a slightly larger type in the 180 to 220-seat bracket. Various models from the Airbus A320 and Boeing 737 families are obvious contenders.

The airline also has an eye to longer-range routes in the future and hopes that the role of Khartoum Airport can be enhanced. "We used to fly to London before and we can connect traffic from northern to southern Africa using Khartoum as a transit point," said Timo.

Like many of the region's carriers, Sudan Airways also foresees a role in carrying pilgrims to Saudi Arabia's holy sites. A Boeing 737-900, for example, would be capable of flying direct from points in west Africa, such as the Malian capital, Bamako, to Jeddah.

For the moment, however, those glimmers of light on the horizon are still rather faint.

AIRSPACE. TAKES YOU AWAY BEFORE YOU'VE LEFT THE GROUND.



FLY
WE MAKE IT

No matter how busy the flight, your passengers will feel like they're in a world of their own thanks to our beautifully designed Airspace cabins. HD in-flight entertainment throughout, quieter, and with soothing LED ambient lighting, Airspace delivers first class comfort for every passenger. And not only is it available across our newest widebody fleet, it's also being rolled out across our single aisle A320 family too.

Tranquility. We make it fly.

Egyptian exports rely heavily on the freight system. Alan Peaford met with Captain Bassim Gohar to explore how the EgyptAir cargo division is meeting expectations.

MEETING THE FREIGHT OF EXPECTATION

Captain Bassim Gohar will be celebrating 40 years' service with EgyptAir next year, having begun his career with the national carrier flying Fokker 27s. He actually became a captain way back in 1988.

"Even as a child, I knew I wanted to be a pilot. I used to travel a lot with my parents and there was never any doubt about what I would do," he said.

Today, as CEO and Chairman of EgyptAir's cargo division, Gohar still gets into the left-hand seat of the Airbus A330 each month to retain his currency and stretch a flying career that saw him rise through the ranks to chief pilot, then vice president of operations for the airline, and VP safety for the holding company before taking the CEO role with the cargo carrier.

"I was delighted to make the move to cargo," Gohar said. "As VP of safety I learned about all of the different subsidiaries doing audits. I learned a lot about the cargo operation and found it very interesting."

□□□□□

Gohar is very relaxed as he extols the advantages and the prospects for the cargo carrier.

"It is certainly much easier dealing with freight rather than passengers," he said with a laugh. "One hour delay could mean a million complaints on the one hand, but one hour in cargo operations is acceptable. And, of course, cargo does not eat and drink."

But even without passengers, there are still challenges.

The US is one of them. Cargo operations were banned from Cairo after the Metrojet incident in 2015. But Gohar is hoping the ban will be lifted.

"The Transportation Security Administration (TSA) has visited Egypt on four occasions and has seen us implement new systems and make a lot of improvements to our whole approach to security. They have confirmed that we are complying with the security measures and have filed their report," he said.

America is an important market for Egypt's textile industry and represents a potential 30 tonnes of freight daily between Cairo and JFK Airport in New York.

Another major market for Cairo is the European Union, where the demand is for fresh produce.

Agriculture is big business in Egypt. EgyptAir Cargo



It is certainly much easier dealing with freight rather than passengers.

CAPTAIN BASSIM GOHAR

flies five times a week to Cologne in Germany and Ostend in Belgium with perishable goods; a passenger Boeing 777 also fills its belly with produce for the UK market with its daily flight to London Heathrow.

"In this past year we have seen a 30% increase in the export of vegetables from Egypt," Gohar said.

The benefit of new products in the passenger side of EgyptAir is permeating through to the cargo side, with four of the A330-200s being assigned from the passenger fleet to the cargo fleet. They will be undergoing conversion to freighters by Airbus subsidiary EFW as launch customer for its A330-200P2F passenger-to-freighter conversion programme.

□□□□□

The first two aircraft were delivered to Dresden for the conversion with another two to follow once EgyptAir receives its first Dreamliners.

The two A330-200F aircraft will replace the existing ageing A300B4 freighters. They will provide an additional 33% payload, with substantially improved range capabilities and significantly reduced carbon dioxide emissions, coupled with extensively improved noise footprints.

"They will be capable of flying direct to New York or Guangzhou," Gohar said.

There are also plans to extend the 40,000sqm warehousing and freight terminal at Cairo by 15,000sqm to open by 2019. It will include a cold area to allow for the consolidation of perishable goods.



EAST AFRICAN AIR FREIGHT SOLUTIONS

SCHEDULED FREIGHTER SERVICE

Nairobi - Europe (London & Liege)
 Nairobi - Juba (South Sudan)
 Nairobi - Entebbe (Uganda)
 Nairobi - Dar-es-salaam (Tanzania)
 Nairobi - Mwanza (Tanzania)
 Nairobi - Zanzibar (Tanzania)
 Nairobi - Moroni (Comoros)
 Nairobi - Mogadishu (Somalia)
 Nairobi - Kigali (Rwanda)
 Nairobi - Pemba (Mozambique)

ON DEMAND CHARTERS

Aid & Relief, Project Cargoes, Mining,
 Oil & Gas to over 50 Destinations in Africa.

FREIGHTER FLEET

Fokker 27, DC9F, B727F & B747F



Africa Flight Services Terminal, Jomo Kenyatta International Airport, P.O. Box 594 (00606) NAIROBI, KENYA

Tel: +254-20-827222/6 | Cell: +254-733-827222, 710-827222 | Email: info@astral-aviation.com | Web: www.astral-aviation.com

FOD*BOSS®

AIRPORTS & AIRBASES F.O.D.FAST SWEEPER



SAFE : THE FODBOSS® removes dangerous FOD (Foreign Object Debris) from Runways, Taxiways and Aprons that may cause damage to aircraft, impair their operation or harm personnel.

VERSATILE : Works by friction and removes metallic and non-metallic material, such as nuts and bolts, stones, gravel, luggage hardware, cabin cleaning trash, from dry or wet pavement at an amazing speed.

FAST & EFFICIENT : Towed by any vehicle up to 50 km/h, with sweep width of 2.4m, 4.8m or 7.0m. The Triplex can sweep a 3000x45m runway in half an hour.

LOW COST&RELIABLE : THE FODBOSS® is affordable by even the smallest airports. It has no rotary brushes or vacuum motor, hence virtually any maintenance, and can be towed by any vehicle.

GUARANTEED : THE FODBOSS® is tough and durable; it comes with a Lifetime Guarantee on performance and manufacture.



The FODBOSS® is a unique and patented design manufactured by Aerosweep Pty Ltd Australia.

FODBOSS-AFI distributes and supports the FODBOSS® throughout Africa.

The FODBOSS® is used worldwide on airbases and carries the NATO NSN 3825-66-123-7130



DISTRIBUTOR FOR AFRICA: WWW.FODBOSS-AFI.COM • INFO@FODBOSS-AFI.COM



CHALLENGE.
CREATE.
OUTPERFORM.

MIDDLE SEAT REFUSERS LOVE2

**No middle seat
means unrivalled
passenger space
and comfort**

- The most efficient single-aisle aircraft
- High aspect ratio wing for increased efficiency
- On time, on budget, better than original spec.

#E2ProfitHunter
E2ProfitHunter.com

South African Airways' new CEO has begun to implement a multi-year turnaround plan that will restore the airline's fortunes after a long period of turbulence. Alan Dron reports.

Jarana stands to deliver...

The past few years have not been kind to South African Airways. One of Africa's oldest and most-respected carriers, it has not made a profit since 2011 and has experienced a revolving door of chief executives, several of whom have been suspended or dismissed for alleged transgressions.

The short time in office of many of them made it difficult to get to grips with the airline's problems.

Those problems have included an ageing fleet and increasingly intense competition from non-African carriers.

These factors have put the company in a difficult financial situation, with the South African Government having had to step in with several cash infusions or financial guarantees in recent years to allow it to continue trading.

In the 2017-18 financial year, for example, SAA is receiving ZAR10 billion (\$700 million) for recapitalisation. That money will be used partly for working capital and partly to settle debts, enabling the airline to reduce its interest expenses.

The good news is that the South African Government believes that retaining a national airline is still in the country's interest. "The airline remains a strategic asset and, in its role as flag-carrier, it serves as an economic enabler with direct and indirect benefits across a wide range of economic activity," the National Treasury noted in July 2017.

However, a turnaround is urgently needed. That is the situation into which Vuyani Jarana stepped when he took up the role of CEO in November 2017.

Jarana arrived after two decades with South African telecom company Vodacom. He is the first to admit that he has no previous

experience with the airline, or the sector generally, "except flying on the airline".

He was appointed after being chosen by an external headhunting agency as the man most likely to turn around the ailing company. He does not know which factors made him the first choice, but says that he brings strong commercial experience to the table and has also been involved in a technological environment for many years.

In some ways, an airline's business is straightforward, he said: "Essentially, it's about facilitating the movement of passengers in the most secure and comfortable manner."

And, like many other sectors, the customer has to be at the centre of the business.

However, his first priority is stemming SAA's financial losses. As part of that process, he is working to get lenders back on board; several major financial institutions declined to provide further funding to SAA in 2017.

Alongside this is the need to change the airline's internal culture, to drive the commercial orientation of the airline's services. In other words: "What it means to be profitable and to have more and more customers preferring you ahead of the competition."

That focus on profitability and customers can be built on the foundation of SAA's strong reputation in the operational field.

"Look, SAA is a very good airline in terms of operations and safety but for years it's not been profitable," said Jarana. It was essential to build a leadership focus on winning customers and giving them a good experience during their flights, he said.

The airline business today has



Ex-telecom boss Vuyani Jarana, is ringing the changes at SAA – and believes that the airline can successfully compete with its huge Middle Eastern rivals.

Continued
on Page 36

CONTINUED FROM PAGE 35

notoriously low margins, which means that a tight rein on costs is essential. On the other side of the coin, new income streams are essential. For that reason, there will be a major focus on augmenting traditional income from airfares with ancillary revenues.

And, to improve efficiency: “We need to put together a strong ‘big data’ analytics capability, both in terms of systems and people, to liberate customer engagement and give passengers what they want. Segmentation is going to be key.”

Segmentation has become a major component of successful airlines in recent years, particularly in the US, where major carriers are increasingly dividing up the mass of economy-class passengers, giving them a series of price points from which to choose. A passenger can opt for a basic, no-frills flight, perhaps with limited baggage and less seat pitch at the rear of the aircraft, pay a bit more for a few frills, such as advance seat reservation, or upgrade to premium economy.

Equipment is another area on which SAA has to focus. It has been operating an increasingly outdated fleet in recent years, with its long-haul services still mainly based around the Airbus A340-300 and -600. The four-engined A340 has rapidly disappeared from most other major carriers’ inventories, as the efficiencies of the ‘big twins’, such as the Boeing 777 and the Airbus A350, have become apparent.

“At the end of the day,” said Jarana, “the aircraft becomes a big part of the proposition, so



Short- and medium-haul services in Africa are handled by a mix of Boeing 737-800s and the Airbus A320 (pictured).

if you have an aircraft that doesn’t offer modern, comfortable, flights and services that customers are looking for, your competitive ability is very limited. We are making sure we have a fleet fit for purpose, together with network design.

“It will take us a while to get there – until we get into a better position financially. Alongside that will be fleet strategy. But for now, it’s all about optimising the current network and maximising the return on current assets.”

In a move towards the ‘big twins’ approach, SAA last year introduced the Airbus A330-300 on its services from Johannesburg to Washington DC, via Dakar, with a new business-class product and improved economy-class cabin. It is also due to introduce the 249-seat A330-300 (46 business, 203 economy) on the Jo’burg-London route in April 2018.

In an example of optimising the route network, however, the arrival of the new aircraft on the London sector is being accompanied by a drop from the current double-daily flight to a once-daily frequency.

“In terms of route optimisation, we’re looking through our portfolio and looking at routes that are not profitable. We have a number of routes where we can recover profitability in the short to medium term; those that we can’t, we are dropping or reducing capacity,” said Jarana.

“We’re pruning the tree, strengthening the rest so that it can bear better fruit.”

The giant Middle East airlines have, in recent years, increasingly pushed into Africa, siphoning up traffic through their hubs at the expense of African carriers. How does SAA propose to compete?

“One has to be very clear on how you compete in a market where scale is becoming a big driver of competitiveness,” said Jarana. “If you’re never going to get to the scale economics of some of the bigger players in the short to medium period, you have to develop a different strategy.”

□□□□□

One key point in SAA’s favour, he said, was that it provided direct routings to its destinations, rather than connecting through an intermediate hub.

However, it was also essential that a carrier offered excellent service to its passengers. “I think SAA has a great advantage in terms of our people. Yes, we have to improve, but my experience in terms of our own cabin crews gives us a big differentiator in the market.

“If I take my own experience, comparing SAA with other airlines, I think we have the ability to compete, but we need to accept that the air travel market is not static, it’s growing. So, the fact that you have bigger guys putting in more seats [to the market] doesn’t necessarily mean that the medium-sized guys will necessarily lose. I think we can both grow.”

Do low-cost carriers also pose a threat? “When an airline has only a full-service model, you feel you’re being challenged. Fortunately, we have Mango, our own LCC, so that gives us a chance to compete in both markets,” concluded Jarana.

partner of choice
1000 airlines say so.

AJW
ajw-group.com

Mango acting CEO, Nic Vlok, has been with the South African Airways (SAA) low-cost subsidiary since just before the airline launched in 2006. Victoria Moores caught up with him to find out what life has been like since former CEO, Nico Bezuidenhout, jumped ship to run rival African LCC Fastjet.

MANGO'S METHODS BEGIN TO BEAR FRUIT

Mango acting CEO Nic Vlok said: "In the airline industry, everything tastes like chicken." As soon as you innovate, someone copies it, but innovation remains important. "There aren't many options in the airline business, you're either a full-service, a low-cost carrier, or somewhere in between."

Vlok has no plans to fundamentally shift away from the Mango model that he worked alongside former CEO, Nico Bezuidenhout, to create. "Nico had a fairly winning recipe. Since he left, competition has increased, so things have changed from that point of view, but it's really not been necessary to take a big strategic leap in a new direction," Vlok said. "We've always been positioned as a value-for-money low-cost carrier and I see no reason to change."



The South African market is stagnant and fiercely contested. Johannesburg-based Fly Blue Crane failed in February 2017 and Mango's parent carrier, South African Airways (SAA), has been forced to make capacity cuts. Meanwhile, Mango's passenger numbers have remained flat and its market share has dipped slightly.

"You have to be careful with averages. Some routes do well, others don't," Vlok said. "The year before last we made a loss, but we've turned that around. The results are not public knowledge yet, but they will be known in due course. I'll let the figures speak for themselves."

Mango is a relatively small airline, operating 10 Boeing 737-800s on domestic routes within South Africa and on a single regional service to Zanzibar in Tanzania. "It's a tough business to be in, but in that context Mango is doing as well as it is entitled to. We've always boxed above our weight and it's no different now," said Vlok.

Whether or not the fleet grows will depend on what happens with SAA, which has been through ongoing financial woes and a revolving door of management changes over recent years. But, like most near-teenagers, Mango's parental turbulence could be a recipe for growth, because it is likely that SAA will pull out of unprofitable routes, opening them up for Mango.

"We will take advantage of whatever opportunities emanate from that process," said Vlok, who added that Mango had been largely unaffected by SAA's troubles.



The year before last we made a loss, but we've turned that around. I'll let the figures speak for themselves.

NIC VLOK

"Our reputation in the market seems to be fairly intact."

A proposed holding-company level restructure could also give Mango a louder and more equal voice. According to some sources, the South African Department of Public Enterprises (DPE) is pushing for a consolidation of state-owned companies.

At the moment, Mango is a subsidiary of SAA, which, in turn, reports to the treasury. Meanwhile, state-owned regional airline, South African Express, reports to the DPE. This means that the country's three state-owned airlines report to two different government departments, have three separate mandates and each have their own boards.



However, under the planned organisational restructure, the three airlines would be brought under one holding company, with a single board, linked to just one government department. This would balance the interests of the three airlines, which would keep their own dedicated CEO and operational management.

Two separate sources said the government has no plans to sell off its airlines, but they are coming under increased pressure to perform.

Mango already serves all of the major bases in South Africa, making up 80% of the market. Against the backdrop of stagnant growth at

home, Vlok might consider expanding within the region, particularly as more intra-African services open to competition, but he has no plans to create any new joint ventures or subsidiaries.

He is not blind to the fact that other low-cost carriers have added business-class type frills, but he has no immediate plans to change Mango's 186-seat, single-class configuration and on-board product. "You determine your costs. The market determines the price," he said. "We need to make our product available on as many shelves as possible."

Mango has also been active on social media for a number of years, building up over a million Facebook followers, but Vlok is quick to temper this achievement. "It's like a dog chasing a bus. What do you do with it?" he said. "I think the social media side is over-emphasised. You have to leverage it. If you don't leverage something, you don't gain from it."



DAVENPORT

aviation inc.



**Propelling
Aviation
Performance**

**OEM Parts Distribution | Vendor Managed Inventory | Component Support
Solutions | Repair Management Services | Surplus Material Acquisition**

Member IATA Clearing House • A59120 certified • 24/7/365 AOG Support
www.davenportaviation.com • T: +1 614-754-6482 • E: sales@davenportaviation.com

Elmar Conradie was a finance guy but, 12 years ago, he got sucked into the aviation industry and now, as Victoria Moores discovers, he's leading South African aviation firm Safair and its low-cost carrier, FlySafair.



LOVE SAFAIR

“I never thought I’d run an airline but I have to say I love what I do,” said Safair CEO Elmar Conradie. While doing audit work for PWC, Conradie ended up with Safair as a client. Fast forward a few years and he was working for Macquarie Bank when he got a call from Safair offering him the role of finance director. Very quickly, he was hooked. “I liked the people I met at Safair and, as they say, the rest is history.”

Safair has been around for 52 years as a wet-lease operator, capacity provider for humanitarian work, and maintenance organisation. In 2008, the maintenance business was sold off, but since 2011 Safair has been rebuilding that capacity and it now performs C checks on its own leased and scheduled fleet.

Around nine years into his career as finance director with Safair, Conradie became CEO, not long after the company launched new low-cost airline FlySafair in October 2014.

In the beginning, FlySafair operated just two aircraft, mainly flying between Johannesburg and Cape Town. By December that year, the fleet had grown to four aircraft.

Continued
on Page 40

“The thing that they say about jet fuel in the veins is true. I can’t see myself being in any other industry now.”

ELMAR CONRADIE

CONTINUED FROM PAGE 39

Today, the airline has 12 Boeing 737s, performing 1,700 flights per month.

“We’ve captured quite a chunk of the local market,” Conradie said. That ‘chunk’ is about 14% of domestic capacity. “That’s only domestic; we don’t fly regionally at the moment,” he said.

So, will FlySafair go regional? “That’s a question I get asked on a regular basis,” replied Conradie. “As long as we don’t run out of opportunities in the domestic market, we will stick to the domestic market. One day, if we see we are really struggling to grow domestic, we might start looking at regional.”

Should that happen, FlySafair would fly regionally from South Africa, rather than setting up a parallel operation in another market. But Conradie has reservations.



“I am not 100% sure whether regional routes are ready for the pure low-cost model yet, especially in terms of distribution, because we mainly distribute through our website, whereas for a lot of regional routes you need to have travel agents or global distribution systems to sell that. The business model challenges that a little bit. Also, regional routes aren’t as thick as domestic routes, so I don’t want to put too much capacity on regional. It’s a thing we’re looking at, but we don’t necessarily have all the answers yet.”

Distribution is also a barrier to FlySafair forming interline partnerships, but this is an area that Conradie is looking into. FlySafair is already in talks with a couple of airlines over possible interlines and, if they can get over the technical hurdles, more could follow.

But the simplicity of FlySafair’s low-cost model is also a strength. Conradie said his carrier was the first low-cost airline in South Africa to unbundle its fares and the first to charge for hold luggage. “That was quite a big thing – sometimes it’s still a big thing. It took a while, but customers are now used to it and understand it much better.”

That model is paying off. In 2016, FlySafair

Airlink acquisition could change the landscape

Things could be about to change for FlySafair following the November 2017 announcement that South African regional carrier, SA Airlink, plans to acquire its parent company, Safair Operations.

Airlink, which was established in 1992, has sought permission from South Africa’s competition commission to unite the two companies under the Airlink umbrella and a decision is expected during the first quarter of 2018.

“Coming under a single umbrella will create economies of scale that will enable both airlines to share costs, optimise assets and remove systems duplications. This will position the new Airlink Group for future growth,” said Conradie, who will continue as Safair CEO.

The airlines will retain their own products, fleets and management. FlySafair and Safair’s other businesses, including humanitarian aid flights, will continue to operate separately under their existing brands and no job losses are expected.

Airlink CEO and managing director, Rodger Foster, described Safair as “financially robust and profitable” and said the deal “makes good business sense”.

“Our combined networks will enable us to connect 37 destinations in nine southern African & Indian Ocean countries and St Helena. This will stimulate and enable trade, tourism, economic growth and social development in those markets we serve,” Foster said.

ASL Aviation Holdings, which holds a capped 25% stake in Safair, will become a minority shareholder of the Airlink Group of companies. Black Economic Empowerment (BEE) holds a little over 25% of Safair, while the company’s management holds around 49%.

posted its first profit, which Conradie described as a “pleasant” surprise, because breakeven was only anticipated from 2017.

“We are doing very well,” he said.

Passenger numbers grew 47% in the first six months of 2017 alone and in the full-year the figure was roughly 2.2 million, expected to increase to around 2.4 million in 2018. To cater for that growth, the fleet may need to grow.

At the moment, FlySafair operates nine 165-seat Boeing 737-400s (eight of these are owned) and three 189-seat 737-800s (all leased). Two of those -400s are used as back-up aircraft, supporting the core operational fleet.

“Because the 737-400s are owned, we will probably keep them for a bit; we don’t have any pressure to replace them. The idea is to try and replace the -400s slowly with -800s over next two to three years,” Conradie said. He added that two -400s will leave the fleet this year, with two -800s earmarked to replace them.



However, he is being cautious with fleet growth because the South African economy – and therefore overall passenger numbers – is pretty much stagnant.

“What we have seen, though, is our passengers have grown considerably. What we think will happen is slow, but steady progress. The general flying public is trading down to low-cost airlines. Once they fly low-cost, they realise it’s not so bad and they get a pretty good service for what they pay. We’ve effectively been adding four aircraft a year. Depending on how fast that growth is, I do see us adding more capacity, but we will see how the market develops.”

Some of that market development will depend on what happens with beleaguered national carrier South African Airways (SAA), but – perhaps counterintuitively – Conradie is not wishing for SAA’s demise.

“It’s not good for the economy, or the country, if SAA goes under. I think the best thing that could happen for the industry as whole in South Africa is if SAA actually manages to turn around. A lot of our traffic would actually connect with SAA in one way or another, so really there’s no immediate benefit to us if SAA goes under, or if there is a problem with SAA. In the long term, yes, but not immediately. I think immediately it would do more harm than benefit.”

Conradie has come a long way since taking that audit job and he has no plans to change direction now.

“In aviation, even if you stay in the same job for 12 years, it’s never the same and I enjoy that. Every year there’s a new challenge, a new thing that comes up, a new problem that you need to solve. I like it that there’s always something that challenges me. I love what I do. The thing that they say about jet fuel in the veins in true. I can’t see myself being in any other industry now.”



AIRPORT BUILDING SOLUTIONS

For more information please call + 971 508312274
uae@sprung.com



Sprung Structures

High performance fabric building solutions available immediately from our UAE inventory.

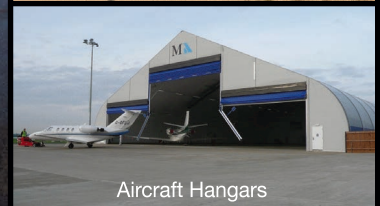
Learn how Sprung can save you time and money at sprung.com/aviation



Helicopter Hangars



Aircraft Hangars



Aircraft Hangars



PUBLIC NOTICE OF CAMEROON AIRLINES CONTINUING DEFAULTS

Cameroon Airlines Corporation (Camair) has been in a continuing and ever-worsening default situation under the terms of the aircraft engine lease agreement it entered into on May 27, 2014 for a PW4060-3 engine.

Camair **has not made a single payment** of rent or use fees due under the terms of the engine lease agreement **since August 2016**.

Camair's current debt to the lessor under the engine lease agreement amounts to almost **US\$2 million**.

Camair **refuses to return the leased engine** to its lawful owner and the lessor under the lease agreement.



Willis Lease Finance Corporation
NASDAQ: WLFC
773 San Marin Drive, Suite 2215
Novato, California 94998
+1.415.408.4700
www.willislease.com

**AFRICA'S LEADING
WORLD-CLASS MRO**
(Maintenance, Repair, Overhaul Organisation)


SOUTH AFRICAN AIRWAYS
TECHNICAL



**SOUTH AFRICAN AIRWAYS
TECHNICAL**

Capabilities in Line Maintenance,
Base Maintenance, Engineering,
Planning, Training and Certification

Email: SATMarketing@flysaa.com

SAA Technical holds the following:
South Africa CAA - (AM01)
United States FAA - (DW5Y820M)
EASA 145 - (EASA 145.0136)

Philippe Bohn: « Notre objectif est de gagner le plus rapidement possible la confiance des clients avec notamment, des coûts attractifs et une sécurité sans compromis. »



Bohn perspectives

«Dynamic future planned for Air Senegal » – Page 44

Les autorités sénégalaises souhaitent mettre en service la nouvelle compagnie nationale au plus vite. Vincent Chappard a fait le point avec le nouveau DG d'Air Sénégal SA, Philippe Bohn.

Le décollage d'Air Sénégal SA était annoncé depuis de nombreuses années et devait coïncider avec la mise en service le 9 décembre dernier de l'aéroport international AIBD de Dakar.

Face aux retards et aux difficultés rencontrés, les autorités sénégalaises ont choisi de confier cette mission à un homme d'expérience et de « networking », Philippe Bohn. Sa mission : remettre à flot la compagnie et lancer les opérations commerciales.

Arrivé en septembre dernier, cet ancien directeur Afrique et du développement d'EADS (aujourd'hui Airbus Group) va poser les bases techniques d'une compagnie aérienne à vocation internationale avec son équipe dans la sérénité, la détermination et le sérieux.

« Le gouvernement a décidé de mettre à la tête d'Air Sénégal une équipe internationale car il a des ambitions de bâtir une compagnie nationale avec une vocation de rayonner et de s'inscrire dans un environnement concurrentiel global », a déclaré Philippe Bohn à *African Aerospace*.

Les autorités sénégalaises vont ainsi injecter les moyens financiers et réunir les conditions nécessaires pour la réussite de cette nouvelle compagnie nationale.

Rappelons que le Sénégal a déjà connu deux déboires avec notamment Sénégal Airlines (la stratégie de développement a été très vite contrariée par défaut de fonds propres) et Sénégal International (sortie du marché suite aux

Continued
on Page 44

Philippe Bohn: «L'ATR72-600 et les A330neo témoignent de notre ambition pour cette nouvelle compagnie.»



SUITE DE LA PAGE 43

difficultés croissantes avec la maison mère, Royal Air Maroc).

« Air Sénégal SA est une « start-up airline » qui a la chance de bénéficier d'un engagement et d'un soutien très fort de l'État qui en a fait une ambition stratégique dans le cadre du Plan Sénégal Émergent », souligne Philippe Bohn.

Le nouveau DG ne part pas d'une page blanche. Les autorités sénégalaises ont commencé à mettre les fondations d'Air Sénégal SA. Elles ont notamment signé à l'occasion du Salon du Bourget un contrat portant sur une commande ferme de deux ATR72-600.

La compagnie se dote ainsi d'actifs propres. Elle a pris livraison du premier avion en décembre dernier lors d'une cérémonie à Toulouse. Le second était en cours de convoyage à Dakar au moment où le magazine allait sous presse.

Reste cependant des étapes majeures à franchir avant son entrée en service. Elles ne dépendent pas uniquement de la compagnie.

□ □ □ □ □

La première étape et non des moindres est liée à l'obtention du PEA (Permis d'Exploitation Aérienne), un long processus entre l'OACI, l'aviation civile sénégalaise (ANACIM) et Air Sénégal SA. Pour Philippe Bohn qui a repris le dossier en vol, Air Sénégal SA est confiante. « Nous sommes, me semble-t-il, proche de cette échéance. »

Il y a également des questions à régler concernant la MRO. La mise en opération du nouvel aéroport AIBD en décembre dernier représente un nouvel environnement dans lequel la compagnie doit s'adapter et se déployer. La compagnie finalise actuellement la formation de ses pilotes.

La tâche semble être plus ardue que prévue pour Philippe Bohn. Selon des sources concordantes, il faut aussi structurer la gestion, les finances, les ressources humaines et la

SUMMARY

DYNAMIC FUTURE PLANNED FOR AIR SENEGAL

The Senegalese authorities have appointed ex-Airbus executive, Philippe Bohn, as director general of Air Senegal SA to head-up its mission to relaunch the company.

Scheduled to coincide with the December 9 launch of Dakar's new AIBD International Airport, the country's government announced that it had entrusted the future of the airline to a man they describe as "possessing the necessary experience and extensive networking abilities".

Having arrived in the country last September, Bohn, a former director for African development for EADS, will lay the technical foundations of the international airline.

"The government has decided to put Air Senegal in the hands of an international team because it has ambitions to build a national company with an in-built ability to expand and to succeed in the global competitive environment," Bohn explained.

□ □ □ □ □

"So, the Senegalese authorities have injected the necessary finances to ensure the success of this new national company.

"Air Senegal SA is a start-up airline, which is fortunate to have a very strong commitment and support from a state that has made it a strategic ambition under the Plan Senegal Émergent."

But the new DG does not start with a blank page. The Senegalese authorities have begun to put the foundations of Air Senegal SA in place, in particular by ordering two ATR72-600s at last year's Paris Air Show. The first of these was delivered in December, while the second was due to arrive in Dakar as African Aerospace was going to press.

Air Senegal SA intends to launch operations with its two ATR72-600s on the domestic network during the second quarter of this year serving Ziguinchor and Cap Skirring from Dakar and also Banjul, Praia and Nouakchott.

The second phase will be with the introduction of two A330neo twin-aisle airliners which will serve cities such as Abidjan, Bamako, Conakry, Cotonou, Niamey and Ouagadougou.

logistique pour que la compagnie fonctionne de façon nominale.

Air Sénégal SA compte lancer ses opérations au premier semestre 2018 avec ses 2 ATR72-600 sur un réseau domestique (Ziguinchor et Cap Skirring depuis Dakar) et de voisinage (Banjul, Praia, Bissau et Nouakchott).

La seconde phase se fera avec l'introduction des A330neo. La compagnie a en effet signé un MOU pour l'acquisition de deux A330neo au dernier salon de Dubaï. Cet accord a été transformé en commande ferme en février lors d'une cérémonie à Dakar en présence du président sénégalais, Macky Sall et de son homologue français, Emmanuel Macron (en visite officielle au Sénégal). Air Sénégal SA compte ainsi desservir des villes comme Abidjan, Bamako, Conakry, Cotonou, Niamey et Ouagadougou.

« Il est important de débiter notre activité commerciale avec des avions neufs, fiables et économiques, tout en offrant à nos passagers un confort inégalé », rappelle Philippe Bohn. « L'ATR72-600 et les A330neo témoignent de notre ambition pour cette nouvelle compagnie. »

□ □ □ □ □

Toute l'équipe d'Air Sénégal est donc mobilisée pour le démarrage des vols commerciaux. Le marché du transport aérien est toutefois très concurrentiel en Afrique de l'Ouest. D'où, selon Philippe Bohn, la nécessité de présenter un très bon produit et un service irréprochable pour se démarquer.

« Notre objectif est de gagner le plus rapidement possible la confiance des clients avec notamment, des prix attractifs et une sécurité sans compromis. »

Air Sénégal SA symbolise à la fois jeunesse, détermination et espoir.

Il incombe maintenant à Philippe Bohn et à son équipe de porter les ambitions du Sénégal de devenir un hub aérien régional dans un avenir proche.

THE SMART CHOICE FOR RELIABLE AIRFRAME MAINTENANCE SERVICES



FAA & EASA Part 145 certified

Aircraft Capabilities



- B737 (Classic, NG and MAX)
- B787-800/900



- E170
- E175
- E190
- E195



- A300-600
- A310-200/300
- A320 Family
- A330
- A340-200/300

Offering You

- ▶ Base Maintenance and Modifications
- ▶ Line Maintenance
- ▶ Component and Aerospace Systems Maintenance
- ▶ Maintenance Management and Engineering Services

Backshop Services

- ▶ Avionics Systems
- ▶ Mechanical Systems
- ▶ Safety Equipment
- ▶ Wheels and Brakes
- ▶ Aircraft Structures
- ▶ Cabin Equipment and Appearance
- ▶ Specialized Services

KENYA'S SILVERSTONE ON THE

Silverstone Air is the latest low-cost carrier to enter the east African market space.

Githae Mwaniki takes a look at what's on offer.

The growth of low-cost carriers (LCCs) has been a key factor to the increased air passenger numbers throughout east Africa.

Kenya, in particular, has witnessed the launch and operation of a number of budget carriers, attracting a wide range of tourists, business executives, government officials and now regular citizens, some of whom are first-time flyers.

The Kenyan carriers contributing to this growth include Jambojet and Skyward Express, which have joined the more established regional LCCs like Fly540, Fly Sax (East African Safari Air Express) and Tanzania's Fastjet.

Now they have been joined by Silverstone Air Services, branded as Silverstone Air, which was launched in October 2017 using two 50-seater Fokker 50s to serve the lakeside town of Kisumu and south coast town of Ukunda-Diani.

The launch was well received by the market due to attractive pricing and the convenience of operating out of Wilson Airport, which is just 5km from Nairobi Central Business District (CBD).



The airline subsequently expanded by commencing operations to the coastal destinations of Malindi and Lamu, adding two lease purchase agreement 37-seater Bombardier Dash 8 Q-100s. These were delivered in November and December 2017 respectively.

All the flights depart from Wilson Airport at the airline's passenger terminal at the Airlink Building, next to the Aero Club of East Africa. Additionally, the airline offers group charter flights to any of the destinations within Kenya and east Africa.

Silverstone Air Services was, initially, a charter and contract air operator using a Cessna Caravan CE208 to serve northern Kenya destinations and within South Sudan, primarily serving NGOs with humanitarian and relief flight operations on a contract basis.

This continued until 2015, when the company faced operational challenges that included maintaining the lease of the aircraft. Consequently, the management decided to sell the company 100% to a new set of investors,



Silverstone Air CEO captain Mohamed Somow and Kisumu Governor Anyang Nyongo officially open the Kisumu Nairobi flight after touching down at Kisumu Airport.

PHOTO/GEORGE OMONDI, THE STAR.

who were planning to set up a domestic airline.

The transaction was completed in 2016 and the new shareholders, led by Captain Mohamed Somoh, set about restructuring and recapitalising the operation, expanding its certification to include a scheduled service operation.

"Silverstone Air is Kenya's newest domestic airline aiming to provide the finest experiences," said Somoh. "We continuously strive to provide safe and economical solutions. We pride ourselves on customer service and dedication towards each passenger's experience, exceeding client expectations by ensuring they feel valued and welcomed."

As of January, the airline expanded again, launching operations to Lodwar in the oil-rich Turkana County. Flight operations to Lodwar have targeted business executives with interests in oil and gas exploration activities, tourists, and government officials. Silverstone is the fifth airline to serve the northern Kenya destination.

In February, the carrier launched flights from the lake city of Kisumu to the coastal city of Mombasa – a new direct service not previously offered as, previously, passengers had to connect via Nairobi Jomo Kenyatta International Airport (JKIA).

"Our research has shown there is demand for the direct service between the two cities," said Somoh.

The airline also plans to offer flights to more destinations from Wilson Airport to reach Mombasa, Eldoret and Homa Bay Airport (also known as Kabunde Airstrip) in western Kenya.

In addition to scheduled flights, the airline offers commercial cargo services with cargo charters to destinations in eastern Africa; private air charter to a wide range of clientele (including VIPs, medical evacuations, aircraft, crew, maintenance and insurance (ACMI) wet lease services); and humanitarian relief services to NGOs in the region.

The airline also plans to begin flights to more northern Kenya destinations including Marsabit, Wajir and Mandera, as it was recently granted a variation to its air service licence to include the routes. It will add a CRJ 200 to its fleet.



"We are looking forward to exposing ourselves fully to competition to make us a stronger and better airline," said Somoh.

The airline plans to expand its fleet by leasing two further 50-seater Bombardier Dash 8 Q-300s, with the first delivery expected in June.

More Kenyans are identifying with the airline due to its budget pricing and convenience of operating out of Wilson Airport, where access is not affected by the traffic congestion that hits JKIA at peak times.

It has also focused on customer care, with its interactive communication on social media platforms, effective website, where tickets can be purchased with various forms of payment, and its in-flight publication "Tembea" (Swahili word meaning to walk), which outlines a range of information on the airline's destinations, culture,

FAST TRACK TO GROWTH...

Silverstone was launched using two 50-seater Fokker 50s and then added two lease purchase agreement 37-seater Bombardier Dash 8 Q-100s (below).



aircraft fleet details and various aspects of Kenyan culture.

“Due to our customer service and dedicated staff, we have received positive feedback, which has translated into repeat business and exponential growth,” said Somoh

“Our pocket-friendly fares have opened the market and helped us defy the narrative that flying is only for the elite. With time-saving and convenience in mind, many people are embracing air transport. Business people with meetings across the country have been a big support to us and we’ve earned their trust as an airline that doesn’t delay them or cancel their important meetings.”

The airline’s rapid growth has been based on a business plan that was developed locally with financing from local facilities, like the Gulf African Bank, that has assisted the airline in fleet acquisition and other capital requirements.

Private airline financing has been a challenge from most carriers in the region; thus, an effective financing model is key in delivering a sustainable scheduled flight operation.

WWW.HAHNAIR.COM

 **Hahn Air Systems**

Go global overnight



H1-Air is your way to outsource indirect airline distribution

Hahn Air Systems’ H1-Air enables airlines to enter indirect distribution (GDS) under the code H1 and to sell services worldwide.

- > Reach more than 100,000 travel agencies in 190 markets
- > Gain incremental bookings in secondary markets
- > Increase your sales potential on a global level
- > Sell to high-yield customers

If you would like to receive further information, please contact Hahn Air Systems at: h1@hahnair.com

Hahn Air Systems GmbH, Germany Phone: +49-6103-7331-0 www.hahnair.com

Exhibition
space still available



FARNBOROUGH
INTERNATIONAL

AIRSHOW

16-22 JULY 2018

The future starts here



More than just an airshow...

Discover a range of new business incentives, attractions and networking opportunities at FIA2018. With attendance from key global influencers plus the latest thought leadership and industry insight, FIA delivers the best value for your business.

Book your Visitor Passes today at
www.farnboroughairshow.com/trade



Tanzanian President, John Magufuli, formally inaugurated the new facilities at Ngerengere.

The rise and rise of Tanzania's Air Force

Alan Warnes *spotlights the origins of the Tanzanian Air Force Command and highlights an interesting mix of aircraft being flown.*

Tanzania, situated on the Indian Ocean coast, shares borders with an impressive eight countries – Kenya and Uganda to the north; Burundi, the Democratic Republic of Congo and Rwanda to the west; and Malawi, Mozambique and Zambia to the south.

At just over 50 years old, it is a relatively young country, having been formed from Tanganyika and Zanzibar, which had respectively gained independence on December 9, 1961, and December 9, 1963.

The two countries officially joined together as the United Republic of Tanganyika and Zanzibar on April 26, 1964, subsequently becoming the United Republic of Tanzania on October 29, 1964.

The country's air force, originally known as the Jeshi Wananchi la Tanzania (JWTZ) and referred to as the Tanzanian People's Defence Force Air Wing (TPDF-AW), is now known as Tanzanian Air Force Command (T AFC), but remains under the control of the JWTZ.

It is unclear exactly when the name change took place but it is believed to have been in early

2014 and, by the following year, its aircraft were appearing with T AFC, rather than JWTZ, titles.

The origins of the air force go back to 1964, when an offer from West Germany to help establish a military air transport unit was accepted and training began.



Piaggio FWP149D trainers, plus Dornier 28 and Nord 2501D Noratlas transports, were supplied by West Germany to form the embryonic JWTZ. But political fall-out between the two countries during the following year quickly stopped further assistance.

Canadian support then followed but, by the early 1970s, Russian and Chinese influence had become increasingly the norm, with acquisition of aircraft from the West being declined. As a result, by the 1980s most of the JWTZ fleet, with a few exceptions, was of Soviet design and Chinese origin.

Today, the Chinese legacy lives on and almost all of the current types originate from there, with a couple of exceptions.

The air force's functions are officially described as providing air protection to key national, political and economic areas; providing air defence for major military centres and military gatherings; providing support to domestic military forces; providing support to civilian authorities, particularly at times of national disaster; escorting military leaders and collecting security information; promoting military relations with other countries through joint exercises; and participating in United Nations peacekeeping operations.

There are currently three main air bases in use by the T AFC. These comprise Dar es Salaam, Mwanza and Ngerengere.

The air force headquarters and primary base is at Dar es Salaam/Mwalimu JK Nyerere International Airport, on the Indian Ocean coast. This base houses a fighter squadron equipped with F-7TG Airguard and FT-7TG fighters; a training squadron with K-8 Karakoram jet trainers and possibly still Shenyang FT-5s; a transport squadron with Y-

Continued
on Page 50



One of the earliest types to serve the Tanzanian People's Defence Force Air Wing was the DHC-4 Caribou. Four new aircraft were delivered in 1966, which were later augmented by eight ex-Canadian Armed Forces examples. Here, one of the original four is seen discarded in Malta in 1984, where it was scrapped a decade later.

PICTURE: RICHARD VANDERVORD.

CONTINUED FROM PAGE 49

12 II Turbo Pandas and Shaanxi Y-8F-200s; a helicopter squadron with Eurocopter H155s; and finally, a light observation squadron with Seabird SB7L-360 Seeker 2s.

Mwanza, located close to the shore of Lake Victoria in northern Tanzania, was previously the main fighter base. However, the only known residents now are a detachment of F-7TGs and FT-7TGs from Dar es Salaam.

The final major base is Ngerengere, which houses a training unit operating Hongdu (formerly Nanchang) PT-6 piston-engine trainers. This base, located 75 miles (120km) west of Dar es Salaam, was originally built around 1970 with assistance from the Chinese Government. Most recently, China funded a \$68.5 million reconstruction of the base, which began in July 2013.

Tanzanian President, John Magufuli, formally inaugurated the new facilities at Ngerengere on March 6, 2017, when the renovation was completed. During the ceremony, Tanzania's Chief of Defence Forces, Venance Mabeyo, said that work had included extending the runway to enable large military and commercial aircraft, up to Boeing 777 size, to land and take-off from the base.

Representing the Chinese at the opening was the Chinese Ambassador to Tanzania, Lu Youqing, who said the upgrade further cemented the close relationship between the two countries.

It is not yet clear whether this expansion means that further aircraft assets will now operate from the base, although this seems likely in view of the new investment that has taken place.

As already mentioned, the majority of the current inventory is of Chinese origin. The latest acquisitions have been a batch of Chengdu F-7TG Airguard fighters, along with two-seat Guizhou FT-7TGs, these being local designations for the J-7G and J-7N, respectively.

The fleet comprises 12 F-7TGs and a pair of

FT-7TGs, ordered in 2009. Deliveries began in 2011, with at least four confirmed operational by November of that year after being shipped from China in crates and then re-assembled and test flown before entering service. The remainder are thought to have followed soon afterwards.

The type is operated from Dar es Salaam and Mwanza.

One known attrition loss occurred on February 27, 2015, when a F-7TG had a bird strike on take-off from Mwanza. The pilot ejected successfully, sustaining only minor injuries, but the aircraft was a total loss.

Tanzania had for decades also operated the Shenyang F-6A and F-6C, along with the two-seat FT-6, until retiring the F-6As in 2010, followed by the F-6Cs and FT-6s in 2011. Google Earth imagery from March 2017 shows that, at that time, 21 F-6/FT-6s were still in open storage at Ngerengere, where they had previously been based.



An initial pair of Hongdu K-8 Karakoram jet trainers were delivered to Tanzania in 2009, with a further four joining them since. These are based at Dar es Salaam and primarily used in the training role, as evidenced by their overall bright yellow colour scheme. However, they do also have a light attack capability.

One of the K-8s, serial number JW9129, was involved in an accident on October 23, 2012, when control was lost on take-off; it veered off the runway and collided with a shipping container. Both crew members ejected, but one of them was killed when his parachute failed to deploy and he fell on to the tarmac. The nose sustained impact damage but the aircraft is believed to have since been repaired and returned to service.

Another K-8 crashed into the sea off Mbudya Island during a training flight on October 1,

2015. Despite an extensive search, after two weeks the two crew members could still not be found and were assumed dead.

The status of TAFC's few remaining Shenyang FT-5s is uncertain. Five of the type had been in Tanzanian service since 1973, but two were lost in accidents. The most recent crash was on June 28, 2010, when JW-9119 crashed on a highway after take-off from Ngerengere, killing both crew members.

It is believed the surviving three aircraft were finally retired at some point after delivery of the new K-8s, but this is unconfirmed.

Transport assets are limited to two Y-12 II Turbo Pandas and two Y8F-200s.

The two Y-12s entered service in September 1994, while both of the Y-8Fs were delivered on November 3, 2003. All four are thought to remain operational, with one of them participating in Exercise Blue Kunene in Namibia during early September.

Three Antonov An-28s had also been in service, but all three were offered for sale in September 2015, by which time they had already been in storage for several years. One was located at Dar es Salaam, another at Dodoma and the third at Mwanza.

A number of Cessna twins have previously been operated, but most were retired many years ago. The only one in recent use had been a Cessna 402, which had also been withdrawn from use and placed in storage at Dar es Salaam by around 2015.

The most recent rotary-wing asset to be added to the TAFC is the Airbus Helicopters H155 (EC155B1), the latest variant of the Dauphin family.

At least two have been acquired and these entered service in or around 2015 with the helicopter unit at Dar es Salaam. It is unclear whether these are new or second-hand examples, but it is thought they are the only operational

Among the longest-serving aircraft with the Tanzania Air Force Command is the Harbin Y-12, which is used for light transport duties. One of the aircraft, in a new grey scheme, was involved in Exercise Blue Kunene in Namibia during September.

PICTURE: RICHARD VANDERVORD.



TANZANIA AIR FORCE COMMAND – ORDER OF BATTLE

Training Squadron	Nanchang PT-6	Ngerengere
Fighter Squadron	F-7TG/FT-7TG	Dar es Salaam
<i>(With a detachment at Mwanza Airport)</i>		
Training Squadron	FT-5 (?), K-8	Dar es Salaam
Transport Squadron	Y-12 II Turbo	Panda
	Y-8F-200	Dar es Salaam
Light Observation Squadron	SB7L-360	Dar es Salaam
Helicopter Squadron	Airbus H155	Dar es Salaam

helicopters remaining in the TAFC inventory.

Four Agusta Bell 205A-1s and four AB412EPs had also been in service from 1977 and 2005, respectively, of which one of the former and three of the latter were lost in accidents. The survivors were all withdrawn from use in 2015 after the H155s entered service.

Around 10 or more Nanchang (now Hongdu) PT-6 piston-engine trainers were delivered from China, probably during the 1970s. These were thought to have been long retired but, by 2010, it was apparent that the type was still very much in service and they appear to have been refurbished for continued service. They remain operational with the training squadron at Ngerengere.

One of the more unusual acquisitions by the TAFC has been the Seabird 7L-360 Seeker 2, an Australian-designed light observation aircraft, which was also manufactured in Jordan.

The Tanzanian aircraft are believed to have come from the Seabird Aviation Jordan production line and had been delivered by mid-2013, although may have been in service earlier than this.

At least four are thought to have been acquired for operation with the light observation squadron at Dar es Salaam in the intelligence, surveillance and reconnaissance (ISR) role. Rather oddly, the first indication that they were being operated by

the TAFC was when a music video was released on the internet on March 27, 2014, using one of them as a backdrop.

The aircraft carried serial JW-9704, suggesting that this was the fourth aircraft, as Tanzanian serials normally begin with JW-xx01 for each type. It was also apparent from the video that it is fitted with a Wescam MX-10 electro-optical/infra-red sensor turret.

Among its recent partnerships with overseas countries, the TPDF signed a memorandum of understanding (MoU) with the Pakistan Air Force (PAF) in February 2015, under which Pakistan undertook to train TAFC personnel on operations, equipment maintenance, training, security and the military application of information and communication technology. The MoU was also expected to lead on to bilateral exchanges and possible later purchase of Pakistani equipment, although there has been no evidence of any progress with the latter, probably due to a lack of funds.

China also continues to support Tanzania and, during a visit to Beijing on April 24, 2017, TAFC commander, Major General William Ingram, met with his Chinese PLAAF counterpart, General Ma Xiaotian. The Chinese general reiterated his country's continued support for further

developing the already long-term relations with the TAFC, including more exchange and cooperation in various fields.

With a limited budget for new aircraft purchases, Tanzania's air force has, since its inception, relied heavily on assistance from other countries, and this trend looks set to continue. With hard facts difficult to come by from official sources, it is currently unclear whether any new aircraft acquisitions are planned in the near future.

For VIP transportation of the president and other high-ranking officials, the Tanzanian Government operates a small fleet of aircraft based at the international airport in Dar es Salaam. These comprise a BAe 146-200, Fokker 50, Fokker F28 Fellowship Srs 3000, Gulfstream G550 and Piper PA-31-325 Navajo C/R.



The F28 has been operated since being delivered new in the 1970s, while the Navajo was acquired in 1980. The Fokker 50 joined the fleet in April 1992 and the G550 followed in September 2004. The latest addition is the BAe 146, purchased second-hand and transferred to Tanzania on October 31, 2012.

Dar es Salaam is also the base for the Tanzanian Police Air Wing. Currently, this comprises just two aircraft, a Cessna U206 Stationair and Bell 206L-1 LongRanger II helicopter.

The certificate of airworthiness of a Bell 412EP previously operated expired in February 2016 and it is assumed it is no longer operational.

A Robinson R44 Raven II, built in 2013 and acquired second-hand in Kenya, was donated to the Ministry of Natural Resources and Tourism for anti-poaching operations and entered service in September 2014. It was flown by Police Air Wing crew but, after only a matter of weeks, it was lost in a crash on November 29, 2014, killing all four on board, including three police officers.

Kenya's requirement for new light attack/armed intelligence, surveillance, and reconnaissance (ISR) aircraft has been dogged by controversy.

Jon Lake attempts to unravel a complicated situation.

Longsword is an AT-802 crop duster made by Air Tractor, which is modified by L3 to carry weapons and an electro-optical infrared (EO/IR) sensor, turning it into a light attack aircraft.



KENYA TURNS TO CROP DUSTERS

A unique combination of factors – not least the re-running of the 2017 Kenyan presidential election – has thrown the country's order for a new light attack/armed ISR aircraft into chaos.

Currently, there is a planned foreign military sale (FMS) of up to 14 L3 Longsword aircraft to Kenya – Longsword is an AT-802 crop duster made by Air Tractor, which is modified by L3 to carry weapons and an electro-optical infrared (EO/IR) sensor, turning it into a light attack aircraft.

However, this FMS has been challenged, not only by the US Congressional Committee on Oversight and Government Reform, but also by rival manufacturer Iomax, and by Congressman Ted Budd, whose congressional district includes Iomax's headquarters.

To see how we reached this situation, it is best to look back a few years.

Kenya has experienced a growing insurgent and terrorist threat from the al-Shabaab jihadist fundamentalist Islamist group, including attacks at Nairobi's Westgate Shopping Mall in September 2013, which killed 69 people; the Garissa University College in April 2015, with 148 people dead; and the Kenyan military base at Kulbiyow in January 2016, with 57 fatalities.

These and other attacks prompted the country to want to increase its anti-terrorist and counter-insurgency (COIN) capabilities.

However, there had also been a growing recognition that the air force's ageing Northrop F-5E Tiger II fighters were not well suited to anti-terrorist missions, since they have no meaningful ISR capability and no small

precision guided weapons. By contrast, the operational success of the UAE Air Force and Air Defence's Air Tractor-based Border Patrol Aircraft (BPA), and of armed light ISR aircraft like the Combat Caravan, had been recognised and noted by African air arms, including the Kenya Air Force (KAF).

Accordingly, Kenya submitted a request to purchase six AT-802L aircraft (with an option for additional aircraft) and two AT-504 training aircraft to support the country's anti-terrorism efforts in December 2015, at a reported approximate value of \$243 million.



On January 19 2017, the US Defence Security Cooperation Agency (DSCA) notified Congress of a possible \$418 million sale of up to 12 Air Tractor AT-802L and two AT-504 trainer aircraft to Kenya, plus weapons, technical support and programme management.

The AT-504 is a smaller-span version of the Air Tractor, with side-by-side seating to facilitate pilot training. It is powered by a 750shp Pratt & Whitney PT6A engine, giving a useful load of 2,200kg and a cruise speed of 150mph. It is intended as a pure pilot conversion trainer and has no weapons capabilities. Kenya has reportedly also asked L-3 for weather radar and communications systems to satisfy its unique requirements.

L-3 Communications' platform integration division of Waco, Texas was listed as the prime contractor because it is the systems integrator for the AT-802L.

Air Tractor originally developed an AT-802U armed model of its crop-sprayer in 2008, in response to the US Air Force's light attack/armed reconnaissance (LAAR) programme and the growing international requirement for light counter-insurgency aircraft.

A prototype (N427U) was displayed at the Paris Air Show in 2009 but, in the event, it was Iomax that won the lucrative contract to supply 24 armed Air Tractors to the UAE as AT-802 Border Patrol Aircraft.

L3 initially became involved with the conversion of the Air Tractor AT-802L into a light attack/ISR aircraft after the 'Big Safari' programme office awarded a 2014 contract to the company for the conversion of four AT-802L ISR aircraft for Yemen.

L3 had made a name for itself as a special mission aircraft conversion specialist through its modification of the King Air 350 into the MC-12W Liberty ISR aircraft.

Unlike the UAE Air Tractor BPAs, the L3-supplied AT-802Ls had no weapons capabilities, and were pure ISR platforms.

With the Houthi invasion of southern Yemen, the four L3-modified AT-802Ls were not delivered to Yemen and were, instead, diverted to Jordan – being delivered there in April and May 2016.

The AT-802L L3 Longsword being offered to Kenya is a further developed aircraft, with updated digital avionics and a redesigned cockpit, and with a new wing, which incorporates under-wing hardpoints for 6,200lb of weapons carriage. The primary ISR sensor is an L3 Wescam MX-15D high-definition electro-optical/infrared (EO/IR) turret.

Iomax is offering the new Block II version of the Thrush 710-based Archangel.



TO TURBO CHARGE ITS FORCES

The aircraft has a Garmin G600 avionics suite and an L3 ForceX Widow mission management system, while Moog supplies the stores management system. The crew can use a Thales Scorpion helmet-mounted display.

The Longsword offer to Kenya was originally due to expire in June 2017 but was extended to September 16 2017 because Kenya's national elections were due to take place on August 8. Unfortunately, Kenya's Supreme Court annulled the 2017 presidential election and ordered a new presidential election, which took place on October 17. The Longsword offer lapsed, just as objections to the L3 contract reached a crescendo.

Opponents of the Kenyan Longsword deal believe that Iomax could have supplied an equivalent (but significantly more capable and combat-proven) package at much lower cost, and that the uncompleted contract had been awarded to a company with very limited experience in the conversion of this class of aircraft, supplying an uncertified and still-developmental platform.

Iomax alleged this had been misrepresented to Kenya, though, in point of fact, the Longsword had been awarded a supplemental type certificate by the US Federal Aviation Administration for its updated digital avionics and cockpit in June 2017.

It was further alleged that the USAF's Big Safari programme office (the 645th Aeronautical Systems Group at Wright-Patterson AFB, Ohio) had favoured L3 (a proven and trusted supplier on Big Safari's other ISR programmes), in effect encouraging L3 to

piggy-back on the success of the similar Border Patrol Aircraft and Archangel platforms developed by Iomax for the United Arab Emirates.

Kenya's *Daily Nation* reported that Iomax had said it could provide Kenya with "superior" aircraft, weapons, technical support and program management at a cost of \$237 million, which is \$181 million lower than the contract ceiling of L-3 Technologies – a claim Iomax was happy to repeat to *African Aerospace* at the recent Dubai Air Show.



Iomax remains confident of overturning Kenya's selection of the rival Longsword, and is offering the new Block II version of the Thrush 710-based Archangel, rather than an aircraft based on the Air Tractor.

After building 24 of its AT-802U/AT-802i Border Patrol Aircraft, Iomax's experience with these aircraft prompted it to switch from the Air Tractor to the Thrush 710 (S2R-660) as the basis of its design. It said it did this in order to be able to incorporate major modifications on the line, which it thought could not be incorporated in green Air Tractors, and which addressed safety and other flaws in the AT-802 design that made it unsuitable for the ISR/COIN role.

These modifications included, but were not limited to, moving the cockpit, while also providing bigger tail surfaces, providing improved brakes, and beefing up some parts of the airframe structure.

Iomax is planning to add an air-to-ground radar, offering either a podded Thales I-Master lightweight ground surveillance radar or a Leonardo Osprey 30 lightweight active electronically scanned array (AESA) radar. The latter would be fully integrated into the aircraft internally, with two arrays in the wing leading edges. This would provide synthetic aperture radar (SAR), ground moving target indication (GMTI) and sea surface moving target indication.

Iomax has now delivered 48 of this class of aircraft (BPAs and Archangels), and between them these have delivered 3,500 munitions in combat (of 4,500 weapons delivered in total). This makes experience and combat record a key differentiator.

The official response to objections to Kenya's selection of the Longsword came in September, when the US Government Accountability Office (GAO) finally issued its report. This said that the GAO had found "nothing untoward" in the proposed January 2017 sale of 12 AT-802L Longsword turboprops to Kenya, and said that Kenya had conducted its own market research prior to selecting the AT-802L, including attendance at air shows and consultation with partner nations, and that Kenya had considered several aircraft models.

The US Air Force backed the GAO, reporting that Kenya had: "made a reasonable choice when it selected the AT-802L aircraft".

Despite this, the Kenyan order remained unconfirmed at the time of writing and both L3 and Iomax were still trying to win an order.

The Cameroonian Air Force (CAF) transport fleet is one of the most capable and serviceable in the region and provides a capability that has few equivalents throughout central Africa. Erwan de Cherisey looks at its history and current state of readiness.

Ever ready for the fight against Boko Haram

«Immersion dans la lutte contre Boko Haram » – Page 56

Since May 2014, when Cameroon President Paul Biya declared all-out war against the terrorist group Boko Haram operating in the country's far north, the CAF transport fleet has been providing a permanent air bridge between the south and centre of the country and Maroua in the far north.

Maroua has been turned into the logistics hub for Operation Emergence 4 and Operation Alpha, the two ongoing Cameroonian counter-insurgency operations, and the multinational joint task force's (MNJTF) sector 1, headed by the Cameroonian Defence Forces (CDF).

The CAF was actually born on January 1, 1961, as Cameroon's National Flight, with three Max Holste MH-1521 Broussard light utility aircraft donated by the French Air Force.

In the ensuing years, Yaoundé, the country's capital, obtained its first transport types in the guise of several examples of the emblematic Douglas C-47 Dakota, also provided by France.

Finally rechristened as the CAF in 1966, Cameroon's air arm continued to expand, acquiring more transport aircraft, including the German-made Dornier Do 28, before obtaining a pair of De Havilland Canada DHC-4 Caribous in the early 1970s.

These aircraft provided a significant boost to the CAF's still fledgling transport capabilities, with a larger useful load than that of the ubiquitous C-47. A rear-loading ramp made loading and unloading easier, and there was a larger cargo hold. One of the Caribous was written-off in 1975.

The economic bonanza brought by the oil boom of the mid 1970s saw additional deliveries of transport types, with two Hawker Siddeley HS 748s and a pair of Lockheed C-130Hs being received in 1977.

The former were transferred to the Cameroonian presidency two years later and subsequently served briefly with the national civilian carrier before being withdrawn, but the latter were to become the stalwarts of the Cameroonian transport fleet and still soldier on to this day.

A single C-130H-30 was added to the fleet in 1982, while between 1981 and 1983 four DHC5 Buffalos were received. One of these was written-off in 1983 and replaced by a new aircraft in 1985.



By 1987, the single surviving DHC-4 was finally withdrawn from use.

The early 1980s represented the golden era of the CAF, which fielded its largest and most modern aircraft fleet, with as many as seven transports. However, by the second half of the decade, a degrading economic situation was beginning to affect aircraft maintenance and availability.

The 1990s were difficult times, which saw the progressive grounding of the entire DHC-5 fleet, while the C-130s soldiered on with difficulty. Crew training was also cut back.

By the 2000s, only the three Hercules remained on strength, while the Buffalos were phased out, as bringing them back into service was too expensive.

Improving economics, combined with renewed investment in the military because of a fast-degrading situation in the Central African Republic, piracy activity at sea, and the strengthening of the Boko Haram insurgency from the early 2010s onwards, have since breathed new life into Cameroon's transport fleet.

At present, the fixed-wing airlift fleet comprises the three veteran C-130 Hercules, a Chinese-made XAC MA60, donated by Beijing in 2012, and an Airbus Defence & Space CN235-300, received in 2014.

These are all housed at Air Base 201, in Douala, the economic capital of Cameroon, where they are operated by the 21st and 22nd air squadrons.

While the C-130s and the CN235-300 are configured as troop/cargo transports, the MA60 is outfitted for passenger flights, with an airline-like interior. All aircraft take part in the air bridge between the southern half of Cameroon and Maroua.

The C-130s are the most widely used aircraft and frequently fly mixed loads of cargo and personnel. All troop rotations are conducted by air, as reaching the far north by road from Yaoundé can take several days due to the very limited

Continued
on Page 56

The CAF fields three C-130 transports, which, despite four decades of service, are in excellent condition and provide the bulk of the Cameroonian military's logistics support capabilities.

PHOTO: ERWAN DE CHERISEY



Cameroon flies a single CN235-300 which was received in 2014.

PHOTO: ETIENNE FOUTÉ



The MA-60 was delivered in 2012 and while not as capable as the larger C-130, is also used to move personnel between Southern Cameroon and the Far North region, where combat operations against Boko Haram take place.

PHOTO: ERWAN DE CHERISEY



CONTINUED FROM PAGE 54

network in the northern part of the country.

With more than 9,000 soldiers currently deployed under Operation Emergence 4, Operation Alpha, and as part of the MNJTF's sector 1, the flying tempo is high. As Colonel Didier Badjeck, spokesman for the Cameroonian Ministry of Defence and himself a former C-130 pilot said: "Without the air transport, the anti-terrorist campaign would not be sustainable."

The Cameroonian C-130s and the single CN235 are also used in other activities, notably as platforms for parachute training. Every year, new intakes from the Airborne Troops Battalion (BTAP), based at Koutaba, and from the Special Amphibious Battalion (BSA), in Tiko, gain their parachute wings after conducting several jumps from these aircraft. The commandos of the rapid intervention battalions, the elite forces of the Cameroonian military, are also trained as paratroopers.

The aircraft also provide transport services to the families of Cameroonian servicemen. They are allowed to board those taking part in regular sorties, notably to the far north.

Medical evacuation is another mission for the aircraft of the 21st and 22nd squadrons. Indeed, in February 2016, the MA60 was used to fly several badly-wounded troops, who had been hit by an improvised explosive device (IED), back to Yaoundé for emergency treatment. No on-board medical equipment was available and this operation highlighted the need to procure a dedicated medevac suite for outfitting the C-130. While the matter was being actively explored in 2016, it is unclear whether any procurement has since taken place.



Over the years, the CAF has worked with several foreign companies to provide servicing to its transport fleet, notably its C-130s.

Denel in South Africa or Sabena Technics in France were contracted successively during the 1990s and 2000s to undertake maintenance with mixed results, according to one CAF officer. A few years ago, a new contract was signed with OGMA of Portugal to cover C-130 maintenance. Since then, C-130 availability has notably increased, with OGMA deploying some of its technicians in country to work alongside CAF personnel and train them.

Level 1 and level 2 maintenance are undertaken in Cameroon, while level 3 services and overhauls require the aircraft to be flown to OGMA's facilities in Portugal.

One issue regarding maintenance is the lack of a dedicated hangar to house the C-130s in Douala, which also means they are exposed to the saline air found in this coastal city.

CN235 maintenance is done locally up to level 2, while level 3 and overhauls are completed in Seville, at Airbus' facilities.

The MA60 is serviced in-country, although

SOMMAIRE

IMMERSION DANS LA LUTTE CONTRE BOKO HARAM

La flotte d'avions de transport de l'armée de l'air camerounaise (CAF) est l'une des plus performantes en Afrique centrale. Erwan de Cherisey nous retrace son histoire et nous dresse un bilan.

Depuis mai 2014, le président camerounais Paul Biya a déclaré une guerre totale contre le groupe terroriste Boko Haram opérant dans le nord du pays. La flotte de la CAF joue un rôle primordial et a fourni un pont aérien entre le sud, le centre du pays ainsi que Maroua dans le nord.

La Cameroon National Flight fut créée en janvier 1961. Elle débute ses opérations avec trois Max-Holste MH-1521 Broussard avant d'obtenir le certificat pour le Douglas C-47 Dakota.

Elle prit le nom de CAF en 1966 et poursuivit son expansion avec des Dornier 28 et des Havilland Canada DHC-4 Caribou jusqu'au début des années 1970.

Avec la manne économique liée au boom pétrolier du milieu des années 1970, la CAF consolida sa flotte avec deux Hawker Siddeley HS 748 et deux Lockheed C-130H. Un autre C-130H-30 fut livré au début des années 80 ainsi que quatre DHC5 Buffalos.

Cette période fut l'âge d'or de la CAF qui comptait jusqu'à sept avions dans sa flotte.

Les années 1990 furent plus difficiles avec le retrait progressif des DHC-5. Les trois C-130 prouvèrent leurs capacités dans les années 2000.

La CAF connut une nouvelle dynamique au début des années 2010 avec de nouveaux investissements en raison de la situation compliquée en République centrafricaine, des actes de piraterie en mer et l'insurrection de Boko Haram. Elle comptait à cette époque trois C-130, un XAC MA60 et un CN235-300.

Plus de 9 000 soldats sont aujourd'hui déployés dans le cadre des opérations. Selon le colonel Didier Badjeck, porte-parole du ministère camerounais de la Défense, la campagne anti-terroriste ne serait pas durable sans le transport aérien.

Les C-130 et le CN235 sont également utilisés comme une plateforme pour la formation au parachutisme, le transport des familles des militaires camerounais et l'évacuation médicale.

Au fil des années, la CAF a travaillé avec plusieurs opérateurs étrangers pour la MRO de ses avions de transport. Citons Denel ou Sabena Technics durant les années 1990 et 2000. La maintenance du CN235 se fait localement et à Séville. Le MA60 est maintenu dans le pays.

La CAF n'a pas d'école de formation et envoie ses pilotes principalement en France. Depuis la fermeture du PANVR, ils vont à Salon de Provence et sur la base aérienne d'Avord.

La flotte de la CAF répond actuellement à la plupart des besoins camerounais et ne nécessite pas d'expansion.

L'enjeu se trouve dans la disponibilité des C-130 qui devraient garantir un soutien logistique adéquat aux forces déployées au nord.

overhauls likely require Chinese technicians to visit Cameroon to oversee the process.

The CAF has no aviation school and sends its officers abroad to undertake pilot training.

Until 2015, it was involved in the running of the Regional Vocation National Aeronautics Pole (PANVR) alongside French military instructors. This provided initial flying training on ultralight aircraft to officers belonging to most French-speaking African countries, including CAF personnel, prior to their going to the French Air Force School at Salon de Provence for more advanced training.

With the PANVR closed, the CAF is dependent on foreign institutions for flying training. Although France once was the main destination, nowadays Cameroonian pilots are sent to different European countries, to either military or civilian schools. Those who train at the latter subsequently undergo officer training at the Joint Forces Military School, which trains all officers of the Cameroonian military.



Many senior Cameroonian transport pilots undertook training at Salon de Provence before moving to the French Air Force's Transport Aviation School at Avord Air Base. Type conversion on the C-130 was then conducted in the US, with Lockheed Martin, with simulator training being undertaken regularly at CAE's facilities in Brussels. Funding and staffing difficulties meant that the training of new transport pilots came to a halt several years ago.

However, by 2014, with the campaign against Boko Haram in full swing, a higher availability of the Hercules fleet, and a very high tempo of operations, the CAF realised the urgent need to expand its shrinking pool of C-130 pilots. The services of a former Portuguese Air Force pilot and C-130 instructor were, thus, enlisted to provide hands-on training to young officers. For the past three years, this instructor has been training new co-pilots for the C-130, while also flying as a pilot on operational sorties.

MA60 pilots were trained in China in 2011, prior to the delivery of the aircraft to Cameroon, while the aircrews for the CN235-300 undertook conversion training at Airbus in Seville, where they continue to travel for recurrent courses.

The existing transport fleet currently meets most Cameroonian requirements and does not require any significant expansion. Increasing the availability of the C-130s is one of the priorities and should ensure that adequate logistics support is provided to the forces in the far north.

While a limited modernisation of the Hercules' avionics could be useful, this is not an urgent requirement.

Infrastructure work, such as the construction of a modern hangar in Douala, is needed, although it is uncertain whether this will take place in the short term.

UNLOCKING AFRICA'S AEROSPACE AND DEFENCE POTENTIAL



532
Exhibitors from
34 Countries

34 000
Trade Visitors
from 105 Countries

444
Accredited Local and
International Media

57 000
Public Visitors

86
Civil and Military
Aircrafts on display



THE PREMIER EXHIBITION OF AIR, SEA & LAND TECHNOLOGIES ON THE AFRICAN CONTINENT

**BUSINESS TO BUSINESS
LINKAGES**

**TRADE
EXHIBITION**
19-21 SEPT 2018

**LIVE DEMONSTRATIONS,
MOBILITY TRACK, SEMINARS**

**PUBLIC
AIRSHOW**
22-23 SEPT 2018

AIR FORCE BASE WATERKLOOF, CITY OF TSHWANE

// AFRICA AWAITS // VISIT WWW.AADEXPO.CO.ZA

OUR PARTNERS:





The mystery of Algeria's

Delays to the work on three special mission Gulfstreams 550s are causing the Algerian Air Force some real concerns. Alan Warnes reports.

It has been more than two years since a \$1.1 billion deal with Raytheon for three intelligence surveillance and reconnaissance (ISR)-configured Gulfstream 550s was signed. Yet, according to sources, little progress has been made on integrating new systems on the business jets.

The contract, brokered by Algerian Forces joint chief of staff, General Ahmed Gaid Saleh, is causing a scandal in Algeria.

Raytheon, or Greenville-based E-Systems which it bought, has in the past supplied similar ISR-configured business jets, like the Sentinel R1 (Global Express) to the UK RAF. Since then it has been looking to gain a bigger foothold in special mission systems integration, and this deal went some way to achieving that.

Raytheon regards this kind of work as 'multi-intel ISR'. At the Paris Air Show last June, the company's vice president, business development, Jim Hvizd, said it had generated around \$2 billion in special mission aircraft

business over the past four years. He wouldn't add detail, but it would have included the Algerian G550s, and another G550 destined for the US Navy range support at NAWC Point Mugu.

Not being a systems integrator, the US aerospace giant outsourced the Algerian work to US-owned Field Aerospace, based at Will Rogers World Airport in Oklahoma. This is where the three Gulfstream 550s, N543RN c/n 5543, N546RN c/n 5546 and N550RN c/n 5550 (ex N750GA) are all currently housed.

Field's past work has included the US Air Force's KC-10 and KC-135, but among its boasts is that of an ISR integrator. However, it appears no work on the integration of Raytheon's systems on the three Gulfstream 550s has so far been started.

According to our sources, Field Aerospace has realised it is unable to carry out the integration, with several reasons being cited: "There is not enough power being generated on board the

aircraft to keep the multi-spectral systems working and, while a bigger generator is required, it has not been delivered."

The same source continued: "Secondly, modifications to the aircraft's airframe to accommodate the system will be so cumbersome, and cause so much drag, that the flight management load systems and on-board software needs to be completely re-written."

Another issue is that, due to US international traffic in arms regulations (ITAR), sensors like the DB-110 tactical dual band day/night reconnaissance system, an exportable version of the U-2's SYERS system, have to be downgraded "at added cost to the Algerian Air Force."

Instead of an active electronically-scanned array (AESA) radar, the Gulfstreams are going to be fitted with a 'repackaged recycled version of the old Raytheon HISAR radar called HISAR 3000, with a mechanical steering antenna.

There's no robust electronic counter measures (ECM) either, just peacetime functions.

The older HISAR system is already operational on the Algerian Air Force's fleet of Beech 1900s, acquired in the early 2000s.

Algeria also wanted to integrate two L3 Wescam MX-20 electro optical/infrared turrets, which include a laser-designator. But, under the



ISR Gulfstreams

ITAR restrictions, these are banned.

It is unclear if General Saleh is looking to take legal action against Raytheon for not fulfilling the contract. However, it seems he has now turned his attention to Italy's Leonardo to supply up to six MC-27J Spartans, which is not going down well with key figures in the Air Force Command.

□□□□□

"It is not a dedicated ISR aircraft and the concept of operations doesn't sit well within our aspirations to have an inter-operable system," commented one source. "It has been to Algeria, but we weren't impressed and it is untried by any export customers, so why is he now looking at this aircraft rather than a tried-and-tested strategic ISR platform?"

While all this unfolds, Algeria has seen its plans for an integrated strategic and tactical ISR capability unravel. When asked to comment, Raytheon had not responded by the time *African Aerospace* was going to press.

Meanwhile, neighbour and long-time foe, Morocco, is also looking to procure four strategic ISR platforms, aimed at defeating Algeria's deadly S-300 surface-to-air missile

(SAM) systems and Su-30s multi-role fighters acquired from Russia.

There is also the possibility these could eventually be augmented by the impressive S-400 Triumf.

The two types under consideration are the Gulfstream 550 offered by Texas based L-3, while Israel's Elta is offering either the Global Express 6000 or the Gulfstream 550. A decision is likely to be made by the end of the year and will significantly increase Morocco's already impressive integrated air defence system.

Highly sophisticated ISR platforms like these are now becoming increasingly popular because they are being modified to cover several key aspects of intelligence gathering, such as electronic intelligence (ELINT), communications intelligence (COMINT), signals intelligence (SIGINT) and electronic support measures (ESM). As such, they are becoming increasingly popular with the Arab Coalition fighting in Yemen.

Saudi Arabia is considering such a system for integration on a Bombardier Global 6000 business jet, while the United Arab Emirates has contracted the UK's Marshall Aerospace and Defence Group to work on two ISR-configured Global 6000s.

Delays to the integration of ISR systems on three Gulfstream 550s like this, acquired by the Algerian Air Force, will have a detrimental effect on its integrated air defence systems.

PICTURE: ALAN WARNES

SOMMAIRE

LE MYSTÈRE GULFSTREAM ISR EN ALGÉRIE

Le retard accumulé sur le programme Gulfstream 550 ISR algérien crée de vives inquiétudes au sein de l'armée de l'air. Un reportage d'Alan Warnes.

Il y a maintenant plus de deux ans que l'armée de l'air algérienne a signé un accord avec Raytheon pour trois Gulfstream 550 intégrant un système ISR (Intelligence, Surveillance et Reconnaissance). Selon des sources concordantes, il y a eu peu de progrès sur ce programme. Le contrat, négocié par le chef d'Etat-major des forces algériennes, le général Ahmed Gaid Saleh, provoque un scandale en Algérie.

N'étant pas un intégrateur, Raytheon a sous-traité cette tâche à Field Aerospace.

Selon nos sources, cette société basée à l'aéroport de Will à Oklahoma, s'est rendu compte qu'elle ne pouvait pas procéder à cette intégration pour plusieurs raisons : « Il n'y a pas assez de puissance électrique pour alimenter le système. Un autre générateur est requis mais il n'a pas été livré. De lourdes modifications de la cellule sont également à prévoir et augmentera la masse de l'avion. Cela entraînera une traînée et une refonte notamment des logiciels embarqués sur l'avion. Enfin, en raison des lois américaines (ITAR), « d'autres systèmes auraient dû être suspendus ou limités ».

On ne sait pas si le général Gaid Saleh intentera une action contre Raytheon mais en attendant, l'Algérie a vu ses ambitions anéanties pour disposer de capacités stratégiques et tactiques en termes d'ISR. Le général s'intéresserait au MC-27J Spartan de l'italien Leonardo. Pas de retour du côté de Raytheon alors que le magazine allait sous presse.



Cheetah purrfect for US private air force

South Africa will supply nine single-seat Cheetah Cs and three dual-seat Cheetah Ds.

The most advanced fighter aircraft ever constructed in Africa is about to find a new lease of life on the other side of the world.
Alan Dron reports.

The distinctive delta-winged shape of the Atlas Cheetah will be seen in the skies over the western US later this year, following the sale of 12 of the ex-South African Air Force (SAAF) aircraft to US company Draken International.

Draken is frequently referred to as the world's largest private air force. It provides dissimilar air combat training to the US armed forces, with an inventory that includes the MiG-21bis, McDonnell Douglas A-4K Skyhawk and Dassault Mirage F1M. The company's 'order of battle' is considerably larger than that of many air forces.

Atlas – which later became Denel – developed the Cheetah in the 1980s to revitalise the SAAF's combat fleet of Dassault Mirage IIIs, which was facing increasingly modern Soviet-supplied MiG-23s in nearby states.

Cheetah development involved the addition of canards above the engine air intakes, a dog-toothed wing leading edge plus other aerodynamic refinements, a more powerful SNECMA Atar 9K50C-11 engine and a major upgrade of the aircraft's avionics, which necessitated the Cheetah's distinctive lengthened nose.

Around 70 aircraft were converted, with the type being retired in 2008 when the Saab Gripen arrived.

Draken has bought nine single-seat Cheetah C and three two-seat Cheetah D variants to use as fourth-generation opponents for the US and other air arms. The cost of the deal has not been revealed.

The contract includes return-to-service and flight-acceptance tests in South Africa and aircraft delivery to the US. At the time of writing, Denel Aeronautics was negotiating to secure a logistics support contract for the supply of component and engine MRO services, plus design authority and systems engineering support for the aircraft.

Engine MRO work on the Cheetah will be coordinated by Aero Engines MRO, formerly engine support company Turbomeca Africa, in which Denel took a controlling stake in 2017.

"This is a major achievement for the South African defence industry, as other South African companies will form part of the logistics support programme," said Zwelakhe Ntshepe, Denel's Group CEO.

Denel aims to tap into the manpower pool that developed

and maintained the aircraft during their initial life to help return the aircraft to service, while other South African companies will be used for specific workshop capabilities.

Denel Aeronautics' CEO, Mike Kgobe, noted that the company had received several expressions of interest for the remaining Cheetah fleet since the delivery in 2011 of 12 aircraft to the Ecuadorian Air Force.

Draken visited Denel Aeronautics in July 2017. A letter of intent for the aircraft was received a month later.

While in storage, the Cheetah airframes received various scheduled maintenance actions. The amount of life remaining in the airframes is dependent on the continued scheduled maintenance being performed.



According to John Baum IV, Draken's vice-president, security & strategic projects: "A few [Cheetahs] were kept in flying condition while the rest were put into controlled climate storage, disassembled properly for a quick return to service inspection. The jets are going through a full overhaul inspection, replacing time-limited components as required."

The first two jets were expected to undertake inspection flights in February or March. They would then be partially disassembled for transport by container ship to the US.

Baum said that Draken had modernisation plans in mind for the aircraft, but added that the Cheetah C was "already a formidable aircraft with the upgrades accomplished at Denel, including a new Northrup Grumman GPS/INS system and colour multi-function displays".

He added that Draken would train its own pilots to fly the Cheetahs, with assistance from Denel's test pilots, who were either former or current SAAF reserve pilots.

The aircraft will be used by Draken for a US Air Force contract it operates at Nellis AFB in Nevada, supporting the USAF Weapons School and Red Flag exercises. The US Navy, meanwhile, has requested supersonic jets to support the famous Top Gun course at Naval Air Station Fallon, also in Nevada. Both of these contracts were ideal for Cheetah operations, said Baum.

Draken aims to have the aircraft flying in the US at the end of summer 2018.

The ZAF will take two Leonardo C-27J Spartans.



ZAF remembers the Spartans

The Zambian Air Force (ZAF) will substantially improve its transport capabilities with the arrival of two Leonardo C-27J Spartan tactical airlift aircraft.

The aircraft's manufacturer has had two C-27Js for an unidentified African air arm on its order book since 2015. In December last year, the ZAF's deputy commander, Major-General David Muma, was reported by the *Lusaka Times* as mentioning the imminent arrival of the new aircraft.

The newspaper said he made the comments while attending the annual officers' ball at the ZAF's Livingstone Air Base.

Thanking the Zambian Government for its efforts to improve the force's capabilities, Muma was quoted as saying: "In the first quarter of 2018, two Spartan

aircraft will be delivered and this will increase the flying capacity of air transport support command."

The two C-27Js will considerably enhance the ZAF's transport capabilities. At present, the ZAF's transport component consists of five elderly German Dornier Do28 utility transports, eight Chinese-built Harbin Y-12 light transport aircraft, and a single Xian MA-60 utility twin turboprop.

The Y-12s can carry a maximum of 17 passengers and a maximum payload of 5.7 tonnes. The C-27Js, however, are considerably more capable, with the ability to carry up to 60 troops (or 45 paratroopers), with a cargo payload under tactical conditions of eight tonnes. This rises to 11 tonnes if operating into normal runways.

The aircraft can operate using rough, unprepared airstrips and has a large rear loading ramp that can be opened in flight and used to air-drop supplies.

Zambia's aircraft will also be able to handle missions such as transport for United Nations personnel in areas of tension in the continent.

Leonardo, which did not reply to requests for information on the Zambian aircraft, has sold more than 80 C-27Js to 14 air arms around the world. In Africa, Morocco and Chad have also acquired the type.

The new transport aircraft are the latest arrivals for the steadily-modernising ZAF, which has also taken delivery in the past two years of six Hongdu L-15Z supersonic multirole aircraft that can be used in the advanced trainer or light attack roles.



The UH-1H Huey IIs, seen here shortly before delivery from the US, will supplement Russian-supplied Mi-17 helicopters in the transport role.

Hueys give Uganda's force uplift

The Ugandan People's Defence Force (UPDF) has received a useful boost to its vertical lift capabilities with the arrival of five refurbished Bell Huey II helicopters from US surplus stocks.

The aircraft, formerly used by the US Army, had undergone almost a year being upgraded at Bell Helicopter's Ozark, Alabama plant, according to South African internet site DefenceWeb.

Uganda's current transport helicopter fleet consists of 10 Russian-built Mil Mi8/Mi-17s. The US machines are part of a \$79 million package of defence aid to Uganda announced by the US in 2016. The US embassy in Kampala at the time said that the helicopters were being provided to assist Uganda's efforts as part of the African Union mission in Somalia (AMISOM).

Bringing a UH-1H up to Huey II standards involves refurbishing the basic airframe to zero-time original equipment manufacturer standards – in other words, effectively taking it back to 'as-new' status – completely reworking the aircraft, installing updated avionics and providing options for mission-specific equipment kit.

The 1,800shp Honeywell T53-L-703 engine is combined with dynamic components from the

commercial twin-engined Bell 212 model, which improves the helicopter's hover performance in hot conditions.

The aircraft's maximum gross weight rises to 10,500lbs (4,670kg) compared to the original 9,040lbs (4,000kg), giving the Huey II a useful load of almost 4,900lbs. It can carry around a dozen troops.

Although not an attack helicopter, the Huey II can be armed with machine guns fired from the open doors of the troop compartment.

A US State Department official confirmed that the aircraft had been transferred to UPDF representatives in late November 2017. He added that the US assistance included not only the aircraft but also pilot and maintainer training.

The US was committed, he said, to working with Uganda to achieve full operational capability on the Hueys so that Uganda could "safely and effectively operate the aircraft in support of counter-terrorism".

Uganda has faced a 20-year-long insurgency in the north of the country by the Lord's Resistance Army. It also shares borders with the strife-torn Democratic Republic of Congo and South Sudan.

FLIGHT SUPPORT



- VIP Ground Handling
- Fast, Accurate and Efficient National and International Flight Dispatch
- Overflight and Landing Permits
- Flight Planning
- Weather
- Crew Transfers
- Hotel Reservations
- VIP Catering
- Ground Transportation
- Fueling
- Immigration



→ npereira@bestfly.aero
→ apereira@bestfly.aero
→ ops@bestfly.aero
www.bestfly.aero

4th of February International
Airport Executive Terminal
Luanda, Angola
+244 924 881 000 | +244 927 491 327



Scan this
page with
Layar APP



INTERACTIVE PRINT



Download the free
Layar App



Scan the page



Discover
interactive content

Alan Peaford *meets the man trying to turn around Smart Aviation.*

Zakaria's Smart moves are on course for profit

With more than 30 years in aviation, Captain Mohamed Roshdy Zakaria knows the airline business from top to bottom.

Having been made CEO of EgyptAir in 2012 he had done it all. He had been chief pilot examiner and instructor on Airbus 300-B4, Boeing B767 and B777 aircraft. He had also been an influential member of various strategic committees and led a number of projects in the transition period of EgyptAir. He had been instrumental in setting and building the airline's integrated operation control centre (IOCC) in 1999.

But when it came to stepping down from the airline's hot seat, Zakaria knew early retirement was not an option. Instead, he took up the reins at Egypt's first private aviation company, Smart Aviation.

Stepping into his office in the Ministry of Civil Aviation building, it was clear that Zakaria is hands on. Very hands on.

"We need fuel in the Gulfstream now," he barked down the telephone. "And where are the crew?"

He had picked up on a charter opportunity for a Gulfstream G450 managed by Smart. "We have just one hour-and-a-half to get crew, catering, fuel and permits," he said.

Zakaria had been tasked with turning around the loss-making charter business, which had been formed in 2007 and operating in the VIP sector since 2009.

"So far it is working," he said. "We have seen losses reducing each quarter and I am confident that we will now be turning into profit when the 2017 results are out."

Zakaria has been focusing on reducing costs – something he did successfully at the national carrier – but recognising that quality service has to remain at the core of Smart's market offering.

"We have seven aircraft in the fleet, six Cessna Citation Sovereigns – one is managed by us and the others owned – and the Gulfstream, which we manage," he said. The operator is part of the Avinode network and is seeing the international charters increasing.

"We lost a lot of our market after the revolution and it hasn't recovered. It has picked up over the past year, but probably only to 80% of what it was before."

He estimates a current operating level of 300-400 hours per year for each aircraft, but knows there is more potential.



"We have a limited number of high-end tourist flights right now," he said. "But hopefully that may change. We have been very busy with charters to and from Saudi Arabia and the Gulf states."

Embargoes from Russia and the UK have affected business, too, and the recent issues with Qatar have not helped. But Zakaria is optimistic. "The industry has been affected by the security situation but it is picking up again."



Smart has been living up to its name with its eye for opportunities. The Sovereigns are ideal for medical evacuation activities and two of the fleet have been made ready for medevac operations.

"These are the only real air ambulances in Egypt," Zakaria said.

While we were talking, one of the air ambulances was on standby to collect a patient in South Africa to fly to Barcelona for medical treatment.

"It takes us just 40 minutes to convert the Sovereign from its VIP configuration to the air ambulance

role," Zakaria said. "We are also very competitive."

Smart has Q400s on dry lease to Bangladesh and a King Air 350, which is operating calibrating navigational aids.

"This is an area of great demand," Zakaria said. "We use Smart Aviation pilots who are accompanied by inspectors and engineers. We have worked on the systems at most Egyptian civil and military airports and also won contracts in Oman and Saudi Arabia. We have also begun working in South Sudan."

The company also has an Airbus H125 (previously named the AS350 B3e), which it used for inspection of electrical towers and pylon washing. "Power towers tend to accumulate great amounts of contamination throughout the year such as dirt, salt and bird excrement. This contamination can build up inside electric insulating equipment and cause power outages. Using our helicopter for cleaning the high tension electrical towers insulators saves 15 to 20% of the lost transferred electrical energy," Zakaria explained.

The business stream has been so successful that Smart will be talking to Airbus about increasing its fleet.

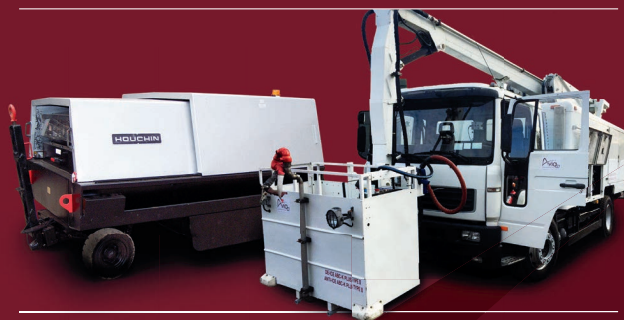
With ground-handling and FBO services at Cairo Airport's private terminal, the business looks set to stay.

“We lost a lot of our market after the revolution ... It has picked up over the past year.”
CAPTAIN
MOHAMED
ROSHDY ZAKARIA



YOUR SUPPLIER FOR USED REFURBISHED GSE AND RENTAL SOLUTIONS

More than 25 years
of experience supplying used and
refurbished ground support equipment
across the five continents.



Aviaco, your best choice to meet
all your GSE requirements.

Danny Vranckx / CEO
+32 471 942 780 / danny.vranckx@aviaco-gse.com

Bart Kroonenberg / COO
+31 653 765 332 / bart.kroonenberg@aviaco-gse.com

www.aviaco-gse.com / info@aviaco-gse.com



Hussam El-Talawy:
Passenger numbers have
dropped since Russia's
Metrojet flight 9268 fell from
the sky over Sinai in 2015.

TIGER WANTS THE RUSSIANS TO ROAR

Tiger Aviation Services (TAS) started its ground-handling services with just four staff in a small office at Cairo International Airport nearly three decades ago. As Marcelle Nethersole discovered, it's been progress most of the way since then.

Tiger Aviation Services (TAS) is, today, looking forward to moving into a huge office block to accommodate its 350 staff.

"The company started in 1989 with just a few qualified traffic officers and handled its first flight at Sharm El Sheikh International Airport. Since then, it has been a fascinating journey for everyone to be part of the travel practice," said chairman and CEO, Hussam El-Talawy.

The company offers services from ground-handling, fuel, global flight support, crew and logistics – including having its own crew lounge, VIP services, catering, cargo, and TAS Travel – a sister company to TAS.

"From the moment the aircraft approaches its parking until the chocks are off, TAS will supervise the process every step of the way," said El-Talawy.

The company currently has 26% of the market in Egypt and deals with 1.5 million passengers a year. However, passenger numbers have dropped since Russia's Metrojet flight 9268 fell from the sky over Sinai in 2015.

□□□□

"In 2010 we had 2.5 millions passengers," said El-Talawy. "These were mainly Russians as we handled 90% of the Russian work, making up 30% of tourists coming here. Now not as many come after the incident over Sinai.

"However, our government and the airports have taken a big leap to clear all the concerns tourists have, including security. For instance, Hurghada International Airport has very strict security now, using new fingerprint machines at security."

El-Talawy added that tourists have only recently started to come back to Egypt. "The Germans and the British have already started to come back," he said. "We just need to see the Russians."

El-Talawy said he is looking forward to seeing passenger numbers increase and the company further expanding.

"Besides a new office block, we have started our own kitchen company here in Cairo providing catering for both business and commercial flights," said El-Talawy. "We offer cuisine literally fit for kings and queens as we have already served many royal parties."

The company is also looking into starting its own tour operation.

"As aviation and tourism returns to normal here, we want to further increase our services," said El-Talawy. "After all, our business is aviation and aviation is tourism."

Abidjan est un aéroport très attractif avec d'excellentes prévisions.



La Côte d'Ivoire se dote d'un terminal d'aviation d'affaires

Le nouveau terminal d'aviation d'affaires à l'aéroport international Félix Houphouët-Boigny sera opérationnel en mai 2018. Il s'inscrit dans la stratégie de modernisation pour faire d'Abidjan un hub comme nous le montrent

Anuradha Deenapanray et Vincent Chappard.

Le terminal d'aviation d'affaires est la deuxième composante du vaste programme de l'Aérocité Akwaba qui s'étendra sur une superficie de 3700m². La valeur ajoutée de ce FBO est sa présence sur le barycentre économique de la sous-région, qu'est la Côte d'Ivoire.

« En offrant une palette supplémentaire de services au monde économique sur un aéroport déjà certifié TSA, desservant l'Afrique, le Moyen-Orient, l'Europe et les Etats-Unis, l'attractivité du pays va être renforcée », a déclaré Gilles Darriau, Directeur général de l'aéroport international d'Abidjan (AERIA), à African Aerospace.

Selon lui le marché estimé à l'heure actuelle est « à minima de 1000 mouvements par an avec un bon potentiel de progression » compte tenu de la croissance économique de la Côte d'Ivoire.

Les autorités ivoiriennes ont ainsi choisi de capitaliser sur le secteur aérien, un levier de croissance économique, commercial et touristique.

Un projet indispensable surtout pour répondre à la hausse rapide du trafic passager, de 17% depuis 2015. La troisième composante, l'extension de l'aérogare internationale, portera la capacité d'accueil à 3 millions

d'ici 2022 et à 5 à l'horizon 2025, voire davantage dans sa phase ultime.

De 2016 à 2019, le concessionnaire AERIA aura investi 42 milliards de francs (environ 65 millions d'euros). La deuxième composante du programme est en cours de réalisation.

Avec ce terminal d'aviation d'affaires avant-gardiste au niveau design et les services d'excellence, Abidjan projette de réaffirmer son leadership comme capitale économique et des affaires de la sous-région.

Par ailleurs, un projet de centre MRO est à l'étude pour exploiter davantage ces infrastructures aéroportuaires qui sont de surcroît très onéreuses.

Le FBO qui sera géré par Jetex disposera de quatre salons dont trois en « open space » et un autre totalement isolé dédié éventuellement à des réunions privées. Il offrira tous les services afférents dont limousines et business center.



Abidjan est le deuxième aéroport africain où Jetex s'implantera pour offrir des services FBO et de « ground handling » après le Maroc.

« L'aéroport d'Abidjan est idéalement situé, les prévisions en matière de trafic de passagers sont excellentes, les indicateurs économiques sont bons et le pays est stable. C'est pour ces raisons que nous avons voulu entrer dans ce marché », explique Adel Mardini, CEO et président de Jetex.

Jetex est présente mondialement à travers 20 FBOs. Comme le souligne Adel Mardini, « on ne peut pas être présent partout. Nous voulons privilégier l'excellence de nos services ».

L'opérateur prospecte d'autres endroits en Afrique comme Accra et Nairobi pour couvrir les régions stratégiques du continent. « Il y a un énorme potentiel pour l'aviation d'affaires en Afrique. Beaucoup de nos clients voyagent dans ces régions. »

Selon Adel Mardini, avec une croissance d'environ 3%, l'Afrique et le Moyen-Orient sont des régions qui vont attirer de plus en plus de business à l'avenir.

Il estime que la croissance serait meilleure en 2018/19 en raison d'une hausse éventuelle du prix du pétrole.

SUMMARY

IVORY COAST BUSINESS TERMINAL SET TO OPEN

The new business aviation terminal at the Ivory Coast's Félix Houphouët-Boigny International Airport in Abidjan is scheduled to open in May.

Gilles Darriau, MD of Abidjan International Airport (AERIA) said: "By offering an additional range of services at an airport serving Africa, the Middle East, Europe and the USA, and already certified by the Transportation Security Administration (TSA), the overall attractiveness of the country will be enhanced."

According to Darriau, the estimated market today is "at least 1,000 annual movements with good potential for further growth".

The FBO will be managed by Jetex and will

feature four lounges, three of which are open-plan with one specifically for private meetings.

According to Adel Mardini, CEO and president of Jetex, Abidjan is a very attractive airport at which to operate as it possesses excellent expansion forecasts.

Abidjan is the second African airport – after Morocco – at which Jetex will operate FBO and ground-handling services. The operator is exploring other locations in Africa, such as Accra and Nairobi, to cover the continent's strategic regions.

"There is a huge potential for business aviation in Africa. Many of our clients travel to these areas," concluded Mardini.

The inaugural Kenya Business Aviation Conference, aiming to highlight the sector's importance in the east African region, was recently held in Nairobi. Githae Mwaniki was there.

East Africa gets down to the business of working together

While commercial aviation flies to where the money is, business aviation flies to where it will be. So said Dawit Lemma, managing partner at Krimson, who used his conference speech to point out that, in 2015, Kenya had a total of 134 business aircraft – 11 jets and 123 turboprops – and was ranked second on the continent in terms of business aviation by the African Business Aviation Association (AfBAA).

South Africa was ranked first with 451 aircraft and Nigeria third with 91, said Lemma, who challenged the industry to redefine the perception that business aviation was for the wealthy. He referred to the Federal Aviation Authority description of business aviation as the use of any “general aviation” aircraft for a business purpose that consists of companies of all sizes that rely on many different types of aircraft, fixed-base operations and other services that support flight operations at the nation’s public airports.

The conference, attended by aviation stakeholders from Kenya, Ethiopia, Nigeria and South Africa, was organised by Purple Lotus International and supported by the Kenyan Civil Aviation Authority (KCAA), with sponsorship from Dassault Falcon Service.

Nickolas Muhoya, manager air transport on behalf of Gilbert Kibe, director general KCAA, said the limiting factors to business aviation growth included the high cost of global fuel prices, the high cost of investment in modern aircraft, stringent certification processes, high insurance premiums and the shortage in skilled manpower.

He said the cost of flying had been reducing in the last 20 years and indicated that competition in the airline market had increased due to growth of low-cost carriers. He encouraged more players into business aviation and reiterated KCAA’s role in delivering a fair playing field for all operators.

He also lauded Wilson Airport, which acts as a home to the region’s business aviation with an average of 425 flights per day, including tour charters and business flights.

James Boorman, director Fred Black Insurance Brokers, outlined how his organisation serves three markets – general aviation, airline and business aviation – with comprehensive insurance products for aircraft, crew and passenger liability, which are all reinsured by Lloyds of London.

Austin K’Oso, commercial banking officer at GT Bank, also spoke about the various forms of aviation finance products on offer.

Githae Mwaniki, senior consultant, Aviation Information



**Nickolas
Muhoya:
reiterated KCAA's
role in delivering a
fair playing field for
all operators.**

Consultants, highlighted on the state of the helicopter sector in Kenya, explaining that the 13 commercial operators had experienced exponential growth in the last five years, with the total number of registered helicopters rising to 80 at the end of 2017.

He noted the sector faced key challenges in training pilots and maintenance capabilities, but said there were opportunities in contract services to oil and gas exploration and aircraft financing.

Christopher Kenana, from the East African School of Aviation, discussed aviation training, and Mercy Makau, from the Young Aviators Club of Kenya, looked at youth mentorship in aviation.

In his closing remarks, Lemma highlighted the support to business aviation from the KCAA and the Kenyan Government.

He called for closer cooperation from the authorities, manufacturers and operators to address the challenges faced by business aviation, including inaccurate perceptions, ineffective certification and high operating costs.

And, finally, he called for everyone to support sector growth to ensure it delivered true value to the economy.

Gulfstream



CONFIDENCE IS EARNED

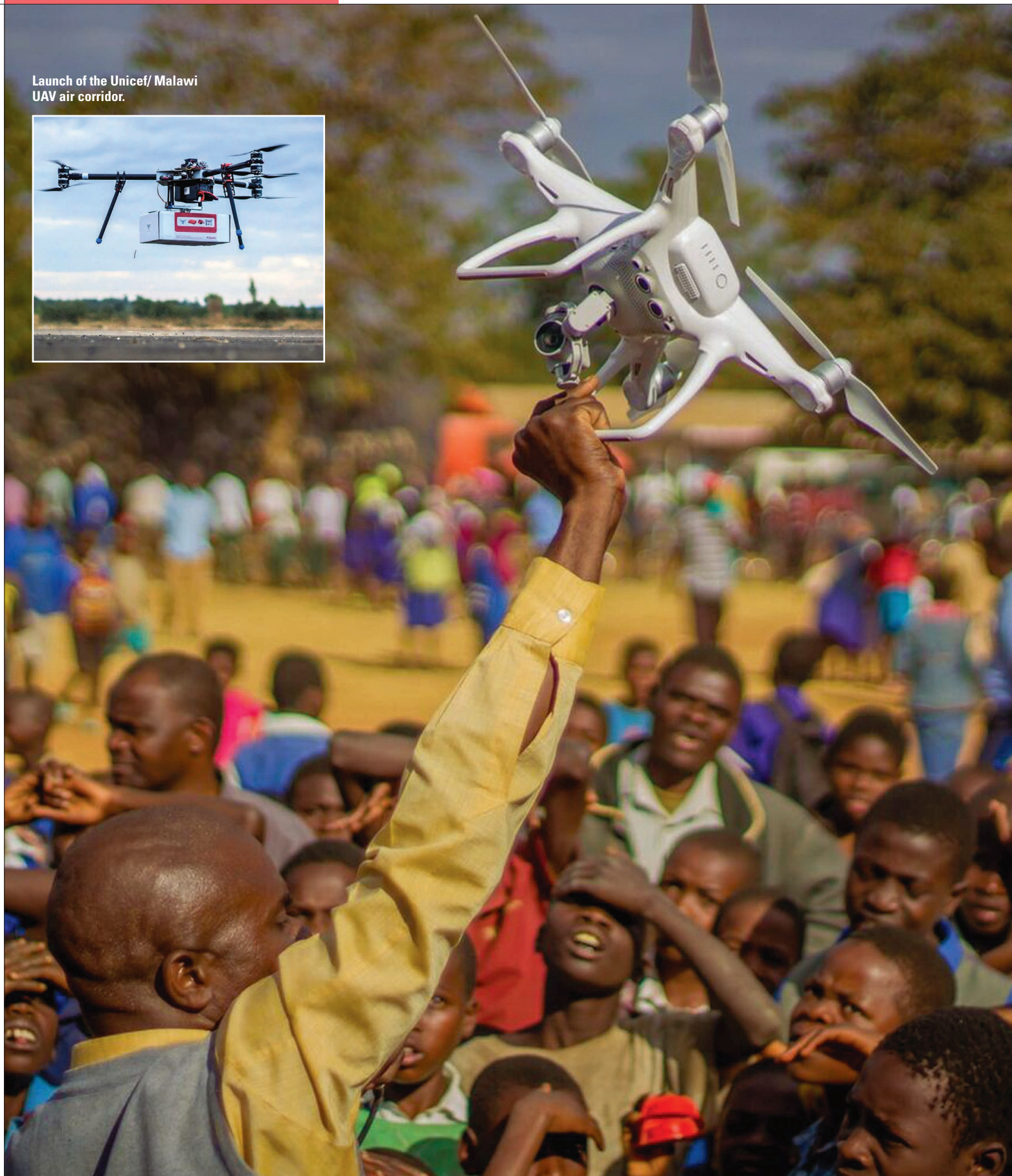
That's why our worldwide 4,000-person-strong customer support network is with you every step of the way. How we serve you is just as important as how your aircraft performs. Discover promise in every journey.

GULFSTREAM.COM

Gulfstream Regional Vice President: Nicolas Robinson, +44 7950 885 967
Gulfstream Authorized Sales Representatives (West Africa): Bruce Fullerton, +1 305 458 7700
(Southern Africa): Tim Webster, +27 83 251 0318; Raymond Steyn, +27 82 652 3439; Gerry Wyss, +27 82 318 5089

Gulfstream[™]
A GENERAL DYNAMICS COMPANY

Launch of the Unicef/ Malawi
UAV air corridor.



The African unmanned aerial vehicle (UAV) market is interesting in comparison to other regions of the world, with less dominance on the military use of such technologies and more emphasis on the humanitarian benefits. Beth Stevenson reports.

Why drone use is different in Africa

«Pourquoi l'utilisation des drones est différente en Afrique » – Page 70

A UAV can be used to deliver aid or samples for testing, watch for wildlife poachers, and provide surveillance over areas in which there are tensions – applications that are all relevant to the various requirements and geopolitics of African nations.

Despite there being more traction in the humanitarian and peacekeeping segments, there is still a small military market, primarily coming from the South African defence industry.

Systems belonging to the Denel Dynamics Seeker series were operated by the South African Air Force until the mid-1990s, and variations of the family are still provided for export today for nations including the United Arab Emirates and Algeria.

Furthermore, up until early 2017, the Seeker II underwent testing at Kruger National Park to assess its potential to spot animal poachers, although the results were not as conclusive as expected and a year-long trial came to an end as the park opted to continue its work by using other aviation assets.

It was reported that the thermal imaging payloads used could not distinguish between poachers and animals. But, while this project did not prove fruitful, the park has not ruled out using UAVs again in the future.

The aircraft used for this effort were provided by South Africa-based UAV & Drone Solutions. Its systems are still being used for other conservation projects.

□□□□□

A more successful employment of the company's UAVs to help catch poachers is through the Air Shepherd project, which is currently carrying out operations in Malawi, South Africa and Zimbabwe, with the potential to expand into Botswana, Mozambique and Zambia.

In order to find animals like elephants and rhinos, poachers employ a range of technology, including night vision and sophisticated weaponry, the project says, so it deploys electric-powered UAVs with day/night cameras and image processing capabilities to provide over-watch and catch the poachers.

Air Shepherd is a charitable effort ran by the Lindbergh Foundation, which funded the 12-month pilot programme in South Africa in 2015. It is still going strong and has

expanded into the other African countries, as poaching continues to be a problem across the continent.

For the Air Shepherd effort, the UAVs carry infrared cameras and GPS payloads to identify both the animals and poachers as they move across the area of interest at night.

According to the foundation, the aircraft are battery-operated and nearly completely silent, which enables them to go undetected while tracking poachers in order to then pass on the information to rangers, who can stop the crimes being committed.

The UAVs monitor the animals as much as the poachers, analysing the angles they come at to target their prey. The University of Maryland is aiding with this, carrying out analysis of the poachers to help determine behaviours and trends that they follow, so as to predict their actions.

□□□□□

Another humanitarian application for the technology is for health monitoring. For example, in Malawi, the Matternet One UAV has been tested to assess its potential to transport blood samples from babies for HIV testing.

A common choice for deliveries, the Matternet One has also seen success in Switzerland, where it is also used for transportation of samples between hospitals, as well as by Swiss Post for mail delivery.

Matternet teamed with Unicef for the Malawi testing in 2016. The charity declared that the feasibility study had been a success and that UAVs were a viable addition to existing transportation methods for applications, including moving blood samples for HIV diagnosis.

Following the success of the trial, in December 2016 it was announced that the Malawi Government had once again teamed with Unicef to create an air corridor in-country for UAV use.

It is the first of its type in Africa, the charity says, and internationally it is one of the first corridors focusing on humanitarian and development use. It was opened by Malawi's Minister of Transport and Public Works, Jappie Mhango, and Unicef Malawi representative, Johannes Wedenig, in June 2017.

Covering some 40km, the corridor is designed to provide a defined space in which UAVs can be used for testing different

Continued
on Page 70

CONTINUED FROM PAGE 69

applications, including the delivery of small payloads such as emergency supplies, vaccines and samples for diagnosis.

Additionally, imagery will be collected to aid with crises such as floods and earthquakes, with the data used to help responders plan how to deal with situations. The corridor will also test the potential of UAVs being used to bolster and extend connectivity in remote areas, including internet and telephone services, particularly following natural disasters and other events.

The United Nations (UN), meanwhile, is now in its fourth year of using UAVs for peacekeeping efforts in the Democratic Republic of Congo.

Leonardo is contracted to provide unmanned intelligence, surveillance and reconnaissance

(ISR) services, which is currently fulfilled using its fixed-wing Falco UAV.

"We are under contract for the fourth year of activity and we are performing the missions as and when we are required to by the UN mission on site in the DRC," said Fabrizio Boggiani, senior vice-president of support and service solutions for Leonardo in Italy, noting that the activities are running on a regular basis and in accordance with requirements coming from the UN.

The baseline Falco configuration is currently being used. However, should the UN require different services, Leonardo could opt to use its newer Falco Evo system that has an increased payload capacity and endurance.

"We are currently using the Falco because it

satisfies the requirement and type of mission," Boggiani said. "We are aware that there could be other needs, so we are ready and we have already offered the option to move to the Evo in case of a different mission."

The original contract was for three years, followed by a year add-on.

"We are supporting their mission and, if the mission is to continue, we are confident that we can continue. It is the UN that will decide on what to do in the future," Boggiani said.

The Falco can carry a 70kg payload and operate for between eight and 14 hours, depending on the configuration and mission.

"We have to be ready to fly when and where they require it, as well as providing the data from the sensors we have on board," Boggiani said. "Then, based on the data collected, either in real time or after analysis, they decide what to do from the point of view of the operation."

As for the potential to expand the mission, Boggiani could not add much detail, other than to point to the fact that the UN could have requirements elsewhere in Africa: "It's public knowledge to a certain extent that there are other areas, particularly in Africa, where the UN is thinking of operating, or is already present.

"There is the possibility that the UN could use the UAV technology and services in other areas but, once again, these are the plans of the UN and we are always available based on the huge experience we have gained over the last four years."



Leonardo is now planning to use its experience for other commercial operations, announcing at the Paris Air Show in June 2017 that it is establishing a new business unit dedicated to UAV services.

"This [the UN mission] is definitely a pioneering success story," Boggiani noted. "We are very proud of what we have done. From many different angles, it is a success story."

Given the geographical, geopolitical and economical nature of much of Africa, the use of UAVs to replace other technologies – or even introduce aerial systems into certain operations for the first time – is logical.

This disruptive technology can provide a more stealthy and cost-effective alternative to manned aircraft that are often used to catch wildlife poachers, for example, and while there is arguably still some work to be done to perfect their use for this, the benefits are beginning to be realised.

Peacekeeping, meanwhile, is a necessary mission in the region, and employing an unblinking eye can help monitor tensions in the early stages to avoid any unnecessary conflict.

While Africa is not seeing much use of the two ends of the UAV spectrum usually associated with this technology – namely high-end military systems and low-end consumer drones – the mid-ground it is sitting in has much potential for the continent and its needs, and is proving fruitful already.

SOMMAIRE

POURQUOI L'UTILISATION DES DRONES EST DIFFÉRENTE EN AFRIQUE

Le marché africain des drones est intéressant par rapport à d'autres régions du monde. Cette technologie est moins utilisée dans le militaire et davantage dans l'humanitaire. Des détails avec Beth Stevenson.

Le drone a fait son entrée dans le militaire essentiellement en Afrique du Sud. Les systèmes de la série Denel Dynamics Seeker ont été exploités par l'armée de l'air sud-africaine jusqu'au milieu des années 1990. Certaines variations sont encore exportées vers les Émirats arabes unis et l'Algérie.

Jusqu'au début de 2017, le Seeker II a subi des tests au parc national Kruger pour évaluer son potentiel de repérage des braconniers, mais les résultats n'ont pas été aussi concluants. Toutefois, le parc n'exclut pas l'utilisation de drones à l'avenir.

Les avions utilisés ont été fournis par UAV & Drone Solutions basé en Afrique du Sud. Ses systèmes sont encore utilisés pour d'autres projets de conservation.

Le projet caritatif Air Shepherd mené par la Lindbergh Foundation, en fait bon usage pour capturer les braconniers au Malawi, en Afrique du Sud et au Zimbabwe, avec un potentiel d'expansion au Botswana, au Mozambique et en Zambie. Les braconniers emploient diverses technologies, y compris la vision nocturne et des équipements sophistiqués. De ce fait, le projet déploie des UAV électriques équipés de caméras jour/nuit avec des capacités de traitement d'images pour les surveiller et les attraper.



Les drones transportent des caméras infrarouges et des charges utiles GPS pour identifier les animaux et les braconniers qui se déplacent dans la zone d'intérêt la nuit.

Étant silencieux, ils passent inaperçus tout en traquant les braconniers. L'université du Maryland y contribue en analysant les comportements et les tendances des braconniers pour prévenir leurs actions.

Par ailleurs, le drone Matternet One a été testé au Malawi pour évaluer son potentiel à transporter des échantillons de sang de bébés pour le dépistage du VIH.

En Suisse, il est également utilisé pour le transport d'échantillons entre hôpitaux et pour livrer du courrier.

Matternet s'est associée à l'Unicef pour les tests au Malawi en 2016. Selon l'organisation onusienne, les UAV constituent un ajout viable aux méthodes de transport existantes.

Le gouvernement a ainsi annoncé l'ouverture d'un corridor aérien de 40 km dans le pays, une première en Afrique, pour favoriser leur utilisation.

De plus, des images seront collectées pour faciliter la gestion des catastrophes naturelles. Le corridor testera également le potentiel des drones pour renforcer et étendre la connectivité dans les zones reculées, y compris les services Internet et téléphoniques, en particulier à la suite de catastrophes naturelles et d'autres événements.



Entre-temps, l'ONU utilise les UAV pour la quatrième année consécutive lors des opérations de maintien de la paix en République démocratique du Congo.

Le Falco UAV de la société Leonardo fournit ainsi des services de renseignement, de surveillance et de reconnaissance (ISR) sans pilote. Selon Fabrizio Boggiani, directeur général des solutions de support et de service pour Leonardo en Italie, les activités se déroulent régulièrement et conformément aux exigences de l'ONU.

Le nouveau système Falco Evo doté d'une capacité de charge utile et d'une endurance accrues pourrait être déployé dépendant des besoins de l'ONU.

Leonardo envisage d'autre part d'établir une nouvelle unité commerciale dédiée aux services d'UAV.

L'utilisation de drones pour remplacer d'autres technologies est intéressante face à l'étendue géographique, le contexte géopolitique et les besoins économiques de l'Afrique.



Celebrating 50 years of excellence in the aviation industry!

Since 1968, Africair has been supplying the top aviation brands like Cessna, Beechcraft, and Bell, to customers in over 40 African countries while providing incomparable product support for these models and others. We pride ourselves in understanding our customers' needs ensuring their success, in turn, resulting in our mutual success.



✉ info@afriair.com

☎ +1 305.255.6973

☎ +1 305.255.4064

🌐 www.afriair.com

📍 13551 sw 132nd ave.
Miami, FL. 33186 USA





2ND HAND GSE

THE GSE SOLUTION

to increase, replace or back-up your fleet

SHORT LEAD TIME - SAFE & RELIABLE - COST EFFECTIVE



- ◆ Sales of second hand GSE
- ◆ Refurbishment
- ◆ Before and after sales consultancy
- ◆ Trainings
- ◆ Spare Parts

FAIRS: VISIT US!



AVIATION AFRICA
17-18 APRIL
STAND 15



THE AIRPORT SHOW
7-9 MAY
STAND 4531





Un Green Airport pour Madagascar

Les nouveaux projets de développement aéroportuaires malgaches allient développement durable et nouvelle approche du business.

Anuradha Deenapanray et Vincent Chappard nous les présentent.

La construction du nouveau terminal de l'aéroport international d'Antananarivo-Ivato devrait être achevée fin 2019 pour une ouverture prévue au début de 2020. C'est l'ouvrage le plus important du projet de modernisation et d'extension des aéroports d'Ivato et de Nosy Be piloté par le groupe ADP, actionnaire clef de la société Ravinala Airports, aux côtés des groupes Bouygues Construction et Colas.

Les travaux concernent la rénovation des pistes et de certaines aires avions sur les deux aéroports de même que de terminaux à Nosy Be, et la construction d'un nouveau terminal d'une capacité de 1,5 millions passagers à Ivato. La remise en état de la piste de Nosy Be est cependant terminée.

La notion de développement durable est au centre de ce projet novateur qui allie nouvelle technologie et amélioration de la qualité en matière de sécurité et de service.

« Le projet de construction du nouveau terminal d'Ivato répondra à des critères élevés en matière d'environnement. Ce sera même une première car c'est le premier projet aéroportuaire à respecter la qualification 'Edge', qualification en matière d'environnement durable de la SFI-Banque mondiale », affirme Jacques Follain, directeur général délégué du groupe ADP.

Il ajoute les deux aéroports seront dotés d'une station

d'épuration. Le consortium veillera également à réduire leur empreinte carbone en optant pour des panneaux solaires.

D'autre part, le nouveau terminal sera doté d'un système de gestion intégrée entièrement numérique permettant notamment de donner une information fiable en temps réel aux passagers. Les deux aéroports seront largement connectés.

Toutefois, le financement de ces projets est souvent un handicap. « C'est pour cela que la solution apportée par le Groupe ADP et ses partenaires, Meridiam, Bouygues et Colas, c'est-à-dire sans engagement financier de l'état, est une solution d'avenir pour beaucoup de pays d'Afrique et de l'océan Indien », souligne Jacques Follain.

La concession mise en place prévoit une rémunération de l'état visant à apporter une source de financement au développement des aéroports sur l'île.

Selon les prévisions, la croissance du trafic aérien devrait dépasser les 5% annuellement dans les prochaines années. Il estime que la présence d'une compagnie nationale de qualité est un élément fondamental dans la réussite d'un aéroport de capitale.

« L'annonce du partenariat stratégique entre Air Madagascar et Air Austral est une excellente nouvelle. Nous travaillerons avec les nouvelles équipes de façon à faire de ce partenariat une réussite, que ce soit pour le déploiement d'Air Madagascar à l'international, ou la consolidation de l'activité domestique de la compagnie. »

Madagascar veut ainsi saisir toutes les opportunités de développement. Selon Jacques Follain, la compétition crée une émulation saine pour le trafic aérien et pour les passagers.

Le projet de reconstruction des plateformes d'Ivato et de Nosy Be est un projet ambitieux mais nécessaire. Selon Jacques Follain, « les redevances spécifiques mises en place sont nécessaires pour assurer le financement de ce projet ».

Il précise que cette redevance de préfinancement a été pleinement discutée avec les compagnies aériennes lors de consultations. De nombreux pays ont déjà mis en place des redevances équivalentes et ont des niveaux de charges équivalents ou supérieurs.

Par ailleurs, le groupe a mis en place de nouvelles méthodes de travail et un plan détaillé de formation pour permettre au pays d'optimiser ces nouvelles infrastructures.

La relance est dans l'air du temps dans la Grande île !

SUMMARY

MADAGASCAR AIRPORTS TURN 'GREEN'

Combining sustainable development and a fresh business approach, the Malagasy airports development project is well under way with the new terminal building at Antananarivo-Ivato International Airport due to open early in 2020.

The major works include the renovation of runways and aircraft parking areas as well as terminals at Nosy Be (where the runway resurfacing is complete) and the construction of a new 1.5-million passenger terminal at Ivato.

Sustainable development is at the centre of this innovative project, combining new 'green' technology and enhanced quality in terms of safety and service, explained Jacques Follain, ADP group deputy CEO. The project is a 'first' as it meets the Edge sustainable environmental goals of the IFC-World Bank and includes a new waste treatment plant and power from solar panels.

A state funding package has enabled developer Group ADP – and its partners Meridiam, Bouygues and Colas – to begin work and has facilitated the project to develop the island's airports in response to forecasts showing an annual 5% growth in traffic.

Said Follain: "The announcement of the strategic partnership between Air Madagascar and Air Austral is excellent news. We will work with them to make this partnership a success, both for the deployment of Air Madagascar abroad and the consolidation of the domestic market."



AIBD SE POSITIONNE COMME UN HUB EN AFRIQUE DE L'OUEST

Le président du Sénégal, Macky Sall, a inauguré le nouvel aéroport international Blaise Diagne près de Dakar. Un reportage de Vincent Chappard.

Après plus de 10 années de travaux et de multiples rebondissements tant au niveau de son financement que de sa construction, le nouvel aéroport international Blaise Diagne (AIBD) a finalement été mis en service.

« L'aéroport AIBD doit être à la fois un hub aérien en Afrique de l'Ouest et un pôle d'opportunités économiques. Après tant d'efforts, nous sommes aujourd'hui au bout de la piste, prêts pour le décollage. Cet aéroport est avant tout un emblème, une vision qui donne un cap, celui du Sénégal Emergent à l'horizon 2035 », a déclaré Macky Sall.

Situé à 45 kilomètres au sud-est de Dakar, l'AIBD prend le relais de l'aéroport international Léopold Sédar Senghor. Il vise à désengorger la ville de Dakar et favoriser un meilleur aménagement du territoire pour la création d'un nouveau pôle de développement économique et social.

L'AIBD est doté de trois aérogares : une première de 4200m² construite sur deux niveaux pour les passagers, une seconde dédiée aux opérations de fret offrant une capacité annuelle de 50 000 tonnes et une troisième réservée au transport des pèlerins. Un pavillon présidentiel a également été aménagé.

L'aéroport dispose d'une piste principale de 3500m de long et de 75m en largeur pouvant accueillir les avions long-courriers (de type A380 et B787). Il y a également sept « taxiways » pour fluidifier le trafic. L'infrastructure d'AIBD peut accueillir 50 avions simultanément.

Une nouveauté, AIBD dispose de six passerelles

télescopiques, de postes de police des frontières, de postes de contrôle des douanes, de banques d'enregistrement et de quatre tapis-bagages. Un espace commercial de 5000 m² et trois salons VIP ont aussi été aménagés.

Le nouvel aéroport du Sénégal a cependant été confronté à des problèmes de jeunesse peu après sa mise en service, ce qui peut laisser penser à une ouverture précipitée.

L'aéroport a dû affronter une grève de deux jours des contrôleurs aériens une semaine seulement après le début des opérations.

Il y a eu ensuite des couacs au niveau de l'approvisionnement du kérosène. Ces difficultés seraient attribuées à l'arrivée tardive des cuves, des certificats d'exploitation de la nouvelle société chargée de l'assistance au sol et du coût des opérations. Les difficultés d'approvisionnement avaient été signalées par l'IATA au ministre sénégalais des Transports.

Des difficultés sont apparues également dans la capacité des sociétés aéroportuaires à assurer les opérations de fret pour les compagnies aériennes. Selon la presse sénégalaise, plusieurs compagnies auraient décidé de privilégier leurs opérations de fret depuis Praia, au Cap-Vert. La grogne est également venue des voyageurs (retard dans la livraison des bagages, manque de chariots, peu de restaurants ouverts et d'espaces de repos en fonction).

Xavier Mary assure également avoir procédé à des ajustements suite aux désagréments liés à la mise en service d'AIBD.

Il a exprimé sa satisfaction de disposer d'un aéroport moderne, sûr et bien équipé. « C'est important pour un pays d'avoir un aéroport de cette qualité et les Sénégalais peuvent en être fiers. » Xavier Mary a également salué le travail remarquable concernant le transfert des activités de l'ancien au nouvel aéroport.

AIBD a enregistré plus de 163 000 passagers pour environ 1000 mouvements de vols après un mois d'exploitation. A ce jour, 34 compagnies desservent le nouvel aéroport. Le trafic a également augmenté en décembre 2017 avec notamment l'arrivée de deux compagnies aériennes africaines, Camair Co et Rwandair.

SUMMARY

AIBD CAN BE THE HUB OF OPPORTUNITY IN WEST AFRICA

Following a decade of work, Senegal's new Blaise Diagne International Airport (AIBD) was inaugurated in December 2017 by the country's president, Macky Sall.

"AIBD airport must be both an air hub for west Africa and a focus for economic opportunities. After so much effort, we are now at the end of the runway, ready for take-off," said the president.

Located 45km south east of Dakar, the AIBD takes over from Leopold Sedar Senghor International Airport and it aims to unclog road traffic in the city of Dakar and to promote fresh areas for the creation of a new region of economic and social development.

The AIBD has three terminals. The first is 4200sqm and built on two levels for passengers; a second is dedicated to freight operations with an annual capacity of 50,000 tonnes; and a third is dedicated to the transport of Moslem pilgrims to the Middle East.

Zambia has improved its fire and rescue services at a time when the southern African nation has made progress in reviving the national airline. Humphrey Nkonde reports.

Zambia fired up by safety improvements



Fire and rescue officers at Kasama Airport.

PICTURE: HUMPHREY NKONDE.

The Zambian aviation industry collapsed following the decision by President Frederick Chiluba's government to liquidate the then state-run Zambia Airways in 1994.

Improvements in fire and rescue services have come at the time when the government has announced a revival of the national airline through a public private partnership with Ethiopian Airlines. The government will have a 55% share in the partnership, while the remaining 45% has been reserved for Africa's major airline.

By 2009, safety standards in the civil aviation sector had deteriorated so much that the European Union (EU) banned aircraft registered in Zambia from landing in its territory.

This was after an oversight audit by the International Civil Aviation Organisation (ICAO) in 2009.

After meeting safety standards and establishing an independent Zambian Civil Aviation Authority (ZCAA), the EU lifted the ban in 2016.

ICAO's audit in 2009 was carried out under the universal safety oversight programme (USOP), which came up with 98 safety concerns about Zambia.

To counter these, the Zambian Government has embarked on various projects in which it has acquired fire tenders and ambulances.

Bigger airports, like the Kenneth Kaunda International Airport in the capital, Lusaka, and the Copperbelt International Airport, in Ndola, on the Copperbelt are developing modern fire and rescue stations.

The government, through the ZCAA, recently acquired six fire (foam) tenders for various airports throughout the country, the Zambia Air Services Training Institute (ZASTI) in Lusaka and the Zambia Air Force (ZAF).

The fire and rescue station is part of the upgrades at Kenneth Kaunda International Airport being completed at cost of \$360 million.

Kenneth Kaunda International Airport's fire and rescue station includes eight parking bays for fire tenders, a watch tower, a separate parking bay for ambulances and a crash aid wing.

It is being serviced by three Carmichael fire (foam) tenders, each with a capacity of 10,474 litres of foam, 1,263 litres of water and 225 kilogrammes of dry chemical powder, according to information provided by the Zambia Airports Corporation Limited (ZACL).

In Ndola, the city will, for the first time, have a category 10 fire and rescue station when Copperbelt International Airport, now under construction, is completed.

ZACL is developing the Copperbelt International Airport at a cost of \$397 million.



Ndola is currently being serviced by the Simon Mwansa Kapwepwe International Airport, which currently has a category eight fire and rescue station.

Safety standards have also been extended to smaller and provincial airports located in the rural parts of the country.

For instance, Mfuwe International Airport, on the border with Malawi, which services South Luangwa Game Park, has acquired a Titan 4x4 E-One fire (foam) engine.

The airport is prone to bush fires because it located in a thick forest.

South Luangwa Game Park is one of the largest in Africa and has attracted tourists from Europe, Asia, the Americas and other parts of the world.

Bush fires are common in the area because the local people have a tradition of hunting mice and burning bushes to clear the forest.

Meanwhile, Kasama Airport, a provincial facility in the Northern Province, has acquired three E-One fire (foam) tenders, two Iveco ambulances and a British Land Rover Defender for fire and rescue services.

Kasama Airport will soon attract large aircraft, meaning that the landing facility will require a modern fire and rescue station.

China's Anhui Shui'an Construction Group is developing a 4,600 metre bituminous runway and the airport will also have a new control tower.

The current fire and rescue station is an open shed that was previously used by the Food Reserve Agency as a storage shed for maize.

FCSL's Diamond DA62 aircraft are fitted with 28 antennas to provide flight inspection services.

PICTURE: DIAMOND AIRCRAFT.



FCSL checking in for Africa

Flight Calibration Services Ltd (FCSL) is Europe's only privately-owned and fully independent flight calibration service.

David Oliver has been looking at the services it is now providing in Africa.

FCSL provides cost-effective flight calibration, inspection, validation and checking for the full range of aircraft radio navigation aids, including everything from instrument landing systems (ILS) to Cat III and primary/secondary radar systems, with minimum disruptions to airfield and aircraft operations.

The company is both a flight inspection service provider and a flight inspection system (FIS) manufacturer.

Through its use of the latest technology, significant cost-savings have been achieved by using small lightweight airborne equipment with a high level of automation.

FCSL owns and operates four Diamond DA 62, one Diamond DA 42 and two Piper Chieftain aircraft, with sufficient aircrew and equipment to operate them simultaneously. This is the largest fleet of flight calibration aircraft in private ownership.

The airborne flight information (AFIS) equipment comprises a small lightweight unit housing the specialist navaid receivers, GPS receiver, data collection computer, telemetry transceiver and an operator laptop. It also includes a separate pilot's head-up display (HUD) to assist with guidance and awareness.

The AFIS equipment uses its own satellite-based

augmentation systems (SBAS) to determine the aircraft's position in space to within 20mm accuracy.

The head-up guidance display provides the pilots with situational awareness and accurate guidance during the inspection runs. Each profile run is preprogrammed into the system and can be selected by either the flight inspector or the pilot using the touchscreen interface.

The laptop computer provides the flight inspector with all the real-time inspection and positioning data. The flight inspection software runs in a user-friendly Windows environment using multifunction facilities with the data presented in a clear and precise graphical format.

FCSL also provides a mobile AFIS that is capable of easy installation on locally-based light or medium-sized aircraft. This is a flexible solution for commissioning and maintaining nav aids at airports in remote locations, where the cost of deploying a flight-check aircraft is uneconomic. The compact lightweight design enables the equipment and crew to be deployed worldwide at short notice by commercial airlines. The mobile AFIS does not require any structural changes to the aircraft's airframe or any additional antennas to be fitted.

A compact lightweight automated precision reference system (PRS) unit provides differential global positioning system (DGPS) corrections to the aircraft to enable the AFIS airborne equipment to fix its position in space. DGPS correction data is sent to the airborne flight inspection system via a dedicated telemetry link. Guidance information and inspection analysis is then provided to the pilot in real time.

FCSL has signed contracts with several African countries, including Libya, for en-route aids and a number of airports have signed up to various services.

They include the recent ILS Cat II commissioning at Tripoli and Benghazi airports in Nigeria for ILS; VHF omnidirectional range (VOR)-scheduled and commissioning flight inspections at Lagos, Abuja, Kano, Port Harcourt, Kaduna, Bauchi, Sokoto and Enugu Airports; and, in the Democratic Republic of Congo, the commissioning of new instrument landing systems distance measuring equipment (ILS/DME) at Kinshasa, Lubumbashi and Kisangani Airports.

FCSL has also undertaken flight calibration of new ILS/DME (Cat II) at Kotoka International Airport in Accra for the Ghana Civil Aviation Authority.

SOMMAIRE

CALIBRER LES AÉROPORTS D'AFRIQUE

FCSL fournit des services attractifs de calibration, d'inspection et de validation pour les systèmes de radionavigation des avions, incluant des systèmes allant de l'ILS (système d'atterrissage aux instruments) au Cat III et des systèmes de radar pour assurer un minimum de disruption des opérations au niveau des avions et des aéroports.

FCSL est à la fois un fournisseur de services et un fabricant de systèmes automatisés d'inspection en vol (AFIS).

FCSL dispose et opère quatre avions Diamond DA 62, un Diamond DA 42 et deux Piper Chieftain dotés d'équipements adéquats de même que des équipages pour opérer simultanément. Parmi les équipements embarqués, citons un AFIS qui utilise son propre système d'aide à la navigation par satellite (SBAS) pour déterminer la position de l'avion avec une précision de 20 millimètres. Il peut facilement être installé sur des avions légers ou moyens.

FCSL a signé des contrats avec plusieurs pays africains, dont la Libye pour des services dans plusieurs aéroports. Des services sur mesure ont également été déployés au Nigéria (aéroports de Lagos, Abuja, Kano, Port Harcourt, Kaduna, Bauchi, Sokoto et Enugu) en République Démocratique du Congo (aéroports de Kinshasa, Lubumbashi et Kisangani). Des prestations de calibration et celles liées à l'ILS ont récemment été fournies à l'aéroport international de Kotoka, à Accra à la demande de l'aviation civile du Ghana.

Victoria Falls is one of Africa's greatest tourist attractions and Zambia has been investing in its airport at Livingstone, which bears the name of a national hero. Humphrey Nkonde reports.

Livingstone right to presume it could have a great future

Livingstone has attracted thousands of tourists from the time a Scottish explorer became the first European to view the mighty Victoria Falls on November 16, 1855.

Local people called the falls Mosi-oa-Tuny (smoke that thunders) and it was that explorer – David Livingstone – who renamed it Victoria Falls after the then Queen of Britain.

The British Colonial Government constructed the aerodrome near the Victoria Falls in 1952 to mainly serve local tourists and named it Livingstone Airport after the explorer.

It was renamed Harry Mwaanga Nkumbula International Airport on September 28, 2011 by the then Zambian President, Michael Sata.

Nkumbula was one of the prominent freedom fighters in Northern Rhodesia, now Zambia, in the 1950s and in the years leading to up to the former British colony's independence on October 24, 1964.

Harry Mwaanga Nkumbula International Airport has two runways – the main one is 3,000 metres long and 46 metres wide and is capable of accommodating the Boeing 767 aircraft.

Facilities at the airport have been modernised, making Livingstone one of the preferred destinations for major international airlines.

□□□□□

Notable users include British Airways, operated by South Africa's Comair, whose origin, like that of South African Airways, is Johannesburg. There is also South Africa's Airlink, whose flights originate from Nelspruit.

Other users include Ethiopian Airlines, which has flights to Livingstone from Addis Abba, and Kenya Airways, which has made Livingstone a transit point on its Nairobi-Cape Town route. Proflight Zambia, which has several interline agreements with many international airlines in Africa, is the major local carrier.

The Zambia Airports Corporation (ZACL), the state-run

company that develops and manages international airports, has spent about \$1 billion in its 2012-2017 strategic plan to upgrade the country's major airports.

An estimated \$50 million of that amount has been spent on an international passenger terminal at Harry Mwaanga International Airport, where construction work began on August 16, 2010.

With a floor area of 119,236sqft (11,077sqm), the international passenger terminal has 12 check-in desks and a capacity of handling one million passengers a year.

There are two boarding gates, five club lounges, 30 retail spaces and viewing terraces.

The airport has Wi-Fi and it is possible for travellers to pay for visas using credit cards.

The international passenger terminal, which was officially opened last year, was preliminarily opened in 2013 to receive delegates to the 20th general assembly of the 186-member United Nations World Tourism Organisation (UNWTO).

□□□□□

Meanwhile, the Harry Mwaanga Nkumbula International Airport's original terminal building, with an area of 34,768sqft (3,230sqm), has been turned into a domestic passenger terminal.

Although its numbers have not exceeded 50,000 passengers a year in the last five years, it has a capacity of handling 250,000 people annually.

Explorer Livingstone's statue, and those of his faithful aides, Chuma and Susi, have been erected outside the domestic passenger terminal.

For the past five years, the airport's international passenger numbers have ranged between 136,000 and slightly more than 150,000, according to ZACL statistics.

The highest figure was recorded last year at 172,662 of which 82,420 were arrivals, while the remaining 90,242 were departures.

As the number of international passengers is slightly below 200,000, Harry Mwaanga Nkumbula International Airport's international passenger terminal has an annual utilisation capacity of around 20%. ZACL, therefore, needs to work with tourism authorities to market Livingstone throughout the world.

It should not relax in light of the new developments at Victoria Falls International Airport in Zimbabwe, which also depends on the Victoria Falls to attract international passengers.

The Zimbabwe Aviation Authority has completed upgrades of the airport, including a new international passenger terminal with a capacity of 1.5 million passengers a year, thanks to a \$150 million loan from China.

The airport has attracted big airlines in Africa, including Ethiopian Airlines, a new development that could pose stiff competition for its Zambian historic neighbour.

Harry Mwaanga Nkumbula International Airport.



ZAS Aviation Services (ZAS) is looking to expand its operations in Africa with MD, Omar Zarkani, saying: "Africa is more in line with the type of company we have set up to be." Marcelle Nethersole reports.

ZAS the way to do it – be part of the African family



Omar Zarkani: "We are finally starting to see more flights come into the country."

Egyptian ground-handler (ZAS) started its services in 1976 and operates at Cairo, Hurghada, Sharm El Sheikh and Marsa Alam International Airports, as well as at smaller facilities in the country.

The family-run company has 40% of its business in corporate flights, 40% in charter flights and 20% in cargo – depending on the season – and has been a success story in the country even though its managing director, Omar Zarkani, noted: "Egypt has suffered some years of problems."

However, he added: "We are finally starting to see more flights come into the country and I am very optimistic that Egypt is seeing light at the end of the tunnel."

Zarkani said the company is looking to expand, adding that while EgyptAir and the Egyptian Aviation Authority provide the ground-support equipment (GSE) at the airports in Egypt, ZAS is interested in operating its own GSE.

"We are more than ready to provide our own equipment if we were offered a licence," he said.

While the company also offers charter flights in the UAE, its main focus is on Africa, where it has services in Sudan and South Sudan.

"Africa is more in line with the type of company we have set up to be – working in areas where the facilities are not up to the standards that we operate," explained Zarkani.

"When we first got to Juba, it was very difficult to find people with experience in the industry, so we brought in our training department and they perform training every three months for the locals. We also own the handling equipment there."

Zarkani added: "There were two things we looked for in Juba – trained staff and the airport facilities.

"Initially, for example, there was no airport follow-me car – it was actually a guy on a bicycle heading in front of the aircraft – so the first thing we did was provide the airport with a follow-me car. We also donated a proper X-ray machine."

The company has also been operating Khartoum since 1981. It hires equipment from Sudan Airways but it is currently in the process of applying for a licence.

"It takes a long time to be trusted in Africa, but we have gained that trust and reliability," said Zarkani. "While we might have competitors, we offer everything, from business and corporate, to diplomatic, cargo and commercial services. Business aviation is a big part of the business in Africa and we have the expertise for it."



Zarkani said that recruitment and training of local staff is also key to success.

"We are very careful in recruiting and training and making sure they have the supplies they need to perform their duties – then we have on-time performance," he said.

ZAS also provides the catering by working with local hotels.

"We have also sent our catering manager from Egypt to show the hotel staff how to prepare catering for a VIP flight, and the packing of it, and when it should be delivered and how to store it. Doing it this way, we also make a margin. While we don't do the catering, we do provide the truck with the right temperature controls, this allows us to make sure the food is fresh."

ZAS now has its sights on three other countries in Africa – Somalia, Tanzania and the Congo.

"East Africa, we feel, is where we can make a strong presence," said Zarkani.

"People's attitude in these countries change when they see we are wanting to help make change and they embrace training.

"Some of these countries have no means and facilities but are happy once we are there and they then understand our intentions. In Juba, it took a long time to get the licence, we had to prove that we were there to help, but today we get an automatic renewal of licence as they know we are doing good work. This is what we want to achieve in other African countries."



بدر للطيران
BADR AIRLINES



BADR AIRLINES CATERING



BADR Catering Unit was established in January 2017 and has witnessed rapid expansion over the past 14 months, it has intensified its efforts to promote continuous improvement, innovation and streamlining processes to meet growing demand and operational efficiency. Our operations cover a wide range of support services and hospitality services to airline customers and other leading companies in other sectors.

This includes catering services in the field of menu coordination and planning, frozen meal production and lounge management.

Catering services for other airlines, VIP services. Featuring international chefs of our team experts specialized in local, regional and international dishes. Team consistently and regularly to review and improve the planning and menus to make sure that they meet the high expectations of travelers and achieve the highest levels of satisfaction.

With a capacity of 9000 meals per day for 20 domestic, regional BADR flights, and other international airlines, with international standard (ISO 22000:2005) HACCP.

BADR Catering Unit implements a strict quality operations assurance program to ensure that all aspects of its meet the highest international standards.

BADR Catering Unit
Sudan P.O.Box 6899-Khartoum Arkawet Block 65
T: +24990 123 7723 | E: Catering@badrairlines.com
www.badrairlines.com



Meet North Africa's

Alan Warnes takes a detailed look at north Africa's rotary assets. Those countries bordering the Mediterranean's north African coast all operate a mixture of military helicopters. Most of the fleets are ageing, with the majority coming from Russian sources, although Morocco and Tunisia have always looked more towards European or US sources for their hardware requirements. Here is the latest breakdown:

ALGERIA



An Algerian Navy Super Lynx Mk 130 LS-5 comes in to land at Aeródromo Militar de Pollença, Palma de Mallorca, Spain, on October 4, 2017, while taking part in the Cernia 2017 international SAR exercise. Algeria took delivery of four Super Lynx Mk 130s and six Super Lynx Mk 140s, which are all based at El Boulaida/Blida with 560 Escadron de Recherche et Sauvetage.

PICTURE: SPANISH AIR FORCE.

In recent years, the Algerian Air Force's primary attack helicopter has been the Mi-24 Super Hind Mk III, a much-upgraded variant developed by South Africa's Advanced Technologies and Engineering (ATE) company.

Algeria ordered 30, converted from its existing Mi-24D and Mi-24V airframes, with the first entering service in 2001.

The type is operated by three squadrons at Biskra, with detachments at Bordj Mokhtar and Tamanrasset/Aguenar-Hadj Bey Akhamok. Another squadron operates the type at Ourgla.

Some older Mi-24Ds and Mi-24Vs may also still be in service. Algeria acquired 20 Mi-24Ds, delivered from 1980, while 28 Mi-24Vs were delivered from Ukraine between 1999-2001.

A contract for 42 Mi-28NE Night Hunters was signed in December 2013. The first two were delivered on May 26, 2016, with six in the country by late June of that year.

An initial two Mi-26T2 Halos were delivered in June 2015. At least 12 are now in service at Biskra out of 14 ordered, with the remaining two expected shortly.

Various Mi-8/17s remain in service, while, over the last decade, newer Mi-171Sh have been delivered. The initial Mi-171Sh order was for 42. On February 28, 2014, ARMS-TASS reported conclusion of a contract with Rostvertol, which includes upgrade of all 39 surviving Mi-171Sh by the Ulan Ude Aviation Plant, including weapons integration.

The type is flown by three squadrons at Ech Cheliff/Chlef, with detachments at Ain Beida/Doum el Bouaghi, El Bouleida/Blida, Boudghene Ben Ali Lotfi

Airport, Béchar/Boudghene Ben Ali Lotfi and Tindouf. In addition, there are three Mi-171Sh squadrons at Ourgla, with detachments at Bordj Mokhtar and Tamanrasset/Aguenar-Hadj Bey Akhamok.

The final unit with the type is a Special Helicopter Squadron at Setif/Ain Arnat.

A small number of AS350B Ecureuil and AS355F Ecureuil 2, in service since around 1995, are believed to have been withdrawn after the first nine new AS355Ns arrived in 2005. The total number in service is unknown, but they are based at Ech Cheliff/Chlef and Boufarik.

□ □ □ □ □

A squadron at Setif/Ain Arnat had used Mi-2s for pilot training since 1988 but these are now thought to have been withdrawn following the introduction of PZL W-3A Sokols from January 2014, when the first two of eight on order were delivered. The remaining six followed between March and May of that year.

The order included a further 15 options but it is uncertain if these have been taken up yet. Another training squadron at Setif uses the AW119Ke Koala Mk II. At least eight have been confirmed delivered between September 2013 and January 2014, from an order for 12.

Two AW101 Srs 641 serve with a VIP/VVIP unit at Boufarik, both having been delivered in December 2013.

For search and rescue (SAR) missions, at least 12 AW139s were ordered, of which 11 had been delivered by May 2014. Three Bell 412EPs, delivered to Khalifa Airways in 2004, were transferred to the air force when

the airline went bankrupt. They are believed to be still in service, based at Boufarik and Cheraga.

Three Kamov Ka-32S Helix-Ds entered service from 1994 and two Ka-32T Helix-Cs from around 1995. At least one of each is thought to be still operational at Boufarik, with detachments to Bou Sfer and El Bouleida/Blida. The Ka-27 was also operated but is now thought to have been withdrawn.

The Gendarmerie took delivery of 13 AS355Ns from 2003, the final one arriving on June 13, 2017, while the first five of 15 AW109LUHs were handed over in November 2011. Both types equip units at El Boulaida/Blida, Oran-Tafaroui, Annaba/El Mellah, Biskra-Mohamed Kheider, Méchéria, M'Sila, Ouargla-Ain el Beida, Sétif-Ain Arnat and Tébessa/Cheikh Larbi Tébessi.

The Police Nationale took delivery of 10 AW109LUH aircraft in 2011-2012. These are operated from Alger/Houari Boumediene Dar el Beida and Oran-Ahmed Benbella Airport.

The Direction Générale de la Protection Civile operates AW139s from Alger/Houari Boumediene Dar el Beida, six having been delivered from February 2012.

The sole Navy aviation unit is based at El Boulaida/Blida. It operates six search-and-rescue-configured AW101-610s, which had been ordered in July 2007, three AW139s delivered from February 2015, four Super Lynx Mk 130s delivered from September 2010, and six Super Lynx Mk 140s delivered from December 2015. An AW101 detachment is maintained at Annaba/El Mellah.

blade runners....

PICTURE: US ARMY/
STAFF SGT LEAH KILPATRICK



Two Egyptian Air Force SA342L Gazelles launch missiles on the live-fire range at the beginning of the final joint combined arms Bright Star live-fire exercise at Mohamed Naguib Military Base, Egypt, on September 20, 2017. The helicopter seen here launching a missile carries 'ARE Civil Police' titles in English and Arabic on the forward part of the tail boom, indicating its use by the Arab Republic of Egypt Civil Police. Upwards of 90 Gazelles were delivered to Egypt, of which around 50 are thought still in service.

Egyptian Air Force and Air Defence Command
Egypt has relied on the AH-64 Apache for its attack helicopter requirements for more than 20 years, initially ordering 24 AH-64As in 1990, then adding 12 more in 1994, with deliveries from March 1994.

By late 2006, 35 had been upgraded to AH-64Ds, while 10 new AH-64Ds were ordered in December 2012. The latter were manufactured as AH-64E Apache Guardians and delivered in November 2014. The Apaches are operated by one squadron at Wadi al Jandali Al Qatamiyah (Al Khatamia) and another at Abu Hammad/Az Zagaziq.

An initial three of 46 Kamov Ka-52 Hokum-Bs on order were delivered by July 2017; 15 should have been delivered by the end of this year with the last expected in 2019.

In February 2014, an arms package agreed between Egypt and Russia included an unspecified number of Mi-35M attack helicopters. No further details have since emerged and it is unclear whether a firm contract has yet been signed.

Large numbers of SA342 Gazelles entered service from 1976, with at least 90 known deliveries. Four SA342Ks operate from Cairo East-Almaza with a VIP squadron, while around 50 SA342Ls are thought to be still in service with various squadrons at unknown locations, although some are at Al Ismailia and

EGYPT

Alexandria/Borg-el-Arab (El Nhoza), while others fly with a training squadron at Al Minya.

Two AW139s, configured primarily to undertake SAR tasks, were delivered on March 9, 2012.

Five Westland Commando Mk 1s entered service from 1974, followed by 19 Mk 2Bs and four Mk 2Es. The few surviving examples are primarily at Alexandria/Borg-el-Arab (El Nhoza), although the Mk 1 is also operated from Cairo East-Almaza, along with a single ex-US Navy VH-3A Sea King that was delivered in 2007.

In 1981, 15 Italian-built CH-47Cs, previously destined for Iran, were delivered. Between 2002 and 2005, 12 were upgraded to CH-47Ds and the other three retired. Additionally, four new-build CH-47Ds were supplied in 1999-2000. All 16 are based at Kom Awshim.

Ten SH-2G(E) Seasprites, upgraded from ex-US Navy SH-2Fs, were delivered between October 1997 and 1999. Three more followed from June 1998 and a fourth after 1993. From late 2008, 10 began a mid-life update, which included a digital automatic flight control system, FLIR Systems Safire infrared imager, a GE Aviation health and usage monitoring system, and an AN/ALE-47 countermeasures dispensing system. This was apparently abandoned by 2011 after four had been completed. At

least four were still based at Alexandria/Borg-el-Arab (El Nhoza) in July 2016.

More than 100 Mi-8s were delivered to Egypt from 1968, followed by 20 Mi-17-1Vs in 1999-2000.

Units operating these include four squadrons at Cairo East-Almaza, two squadrons at Hurghada, one squadron at Al Ismailia and four others at unknown locations. The type also appears to operate from Berence Ras Banas, Daraw and Uthman.

It is unclear how many Mi-8/17s remain in service but, in December 2015, it was announced that Russian Helicopters had been contracted to overhaul and maintain 41 Mi-8Ts and three Mi-17-1Vs for Egypt, while also training personnel so that the Helwan Factory for Developed Industries could, in future, undertake this work itself.

The first four of 24 Kazan-built Mi-17s were delivered in December 2009 and these are based at Mersa Matruch.

Ten S-70A-21 Black Hawks (two in VIP configuration) were delivered from 1990 and these are based at Cairo East-Almaza. A Defense Security Cooperation Agency (DSCA) notification to the US Congress on September 9, 2008, indicated that Egypt planned to buy four UH-60Ms for border security and patrol and to establish a military SAR centre. Nothing further has been heard of this proposed order.

Most recently, three AS350B3 and six AS550C3 were donated by UAE in 2017.

LIBYA



Little detail is known of the current status of the helicopter fleets in Libya, but seen here is one of the reactivated Mi-35s after being newly refurbished by the Tripoli-based Libya Dawn Air Force.

On-going internal conflict in Libya has meant that it is very difficult to determine exactly what military air assets remain operational in the country.

There are now two rival factions operating military aircraft – the Government of National Accord’s Libya Dawn Air Force (LDAF) based in Tripoli, and the Libyan National Army Air Force (LNAAF) in Tobruk.

Both sides initially managed to keep a small number of helicopters airworthy by cannibalising others, with the LNAAF known to have taken over three Mi-35s and two Mi-8s.

In 2014-2015, support from Egypt included the donation of eight (or possibly 10) surplus Mi-8Ts to the LNAAF. In April 2015, four Mi-35Ps or Mi-24Ps were donated to the LNAAF by the UAE, which had bought them from Belarus.

Some ex-Sudanese Mi-24Ps were reportedly acquired by the LDAF, but latterly there has been no confirmation of any rotary-wing types still operational.

While there is certainly a demand for additional helicopters on both sides, it seems likely that this will rely on further donations by other countries wishing to support them.

PICTURE: COLOMBIA HELICOPTERS.



The Moroccan Royal Air Force’s depleted CH-47C Chinook was supplemented by three ex-US Army CH-47Ds in 2015, one of which, CN-ALL, is seen here on a pre-delivery test flight from Colombia Helicopters’ refurbishment facility in Oregon, where all three were overhauled and upgraded.

All of the Moroccan Royal Air Force’s rotary-wing assets are based at Rabat-Sale. One squadron flies SA342L, AB205A, AB206B, AB212/Bell212 aircraft and another has SA330F and CH-47Ds, while a Specialist Helicopter School boasts AB205A, AB206B and SA342L.

Deliveries of 48 Agusta-Bell 205As began in 1968 and around 15 are thought to remain in service.

Five AB206A JetRangers were delivered from 1976, followed by 18 AB206Bs, with around 12 of the latter thought to still be operational. Two Bell 212s were delivered from 1973 and three Agusta-Bell 212s also entered service.

MOROCCO

Deliveries of 34 SA330F Pumas began in 1974, of which around 24 are thought to be still current.

Nine Meridionali-built CH-47C Chinooks were delivered from 1978 but, by 2010, only three were active. They were joined by three refurbished ex-US Army CH-47Ds in August 2015. A total of 24 SA342L Gazelles were delivered from 1982, with around 18 thought still to be in use. A single AW139, delivered in 2011, is operated by the government.

The Moroccan Navy has just three AS565MB

Panthers, based at Casablanca/Mohammed V. They were delivered in 2004.

The Gendarmerie Royale at Rabat-Sale has AS332L, SA330L and SA342 aircraft, while based at Rabat-Souissi are Alouette II/III, Lama, AS365N, SA330, AS355F1, EC135T2i, EC145, EC225LP, SA342K and S-70A-26 types. There are also helicopter detachments at Agadir, Tangier and Marrakech.

Exact numbers of each type are unconfirmed, but latest reports suggest that eight Alouette II/III, four SA342L, five SA330, four SA365N, two AS355F1, two S-70A, two EC145, one EC225LP, three AS550A2 and three EC135T2i are current.

MEBAA™

SHOW

10-12 DECEMBER 2018
DWC, AIRSHOW SITE

**LEADING THE WAY
FOR BUSINESS AVIATION**



BOOK YOUR SPACE NOW

WWW.MEBAA.AERO

TUNISIA

The latest rotary-wing acquisitions by the Tunisian Air Force are 24 ex-US Army OH-58D Kiowa Warriors, which are equipping a squadron at Gabes.

The first four arrived in the country on February 4, 2017. Weapons for them include AGM-114R Hellfire missiles, M124 miniguns, rocket launchers and advanced precision kill weapon system (APKWS) laser-guided rockets.

The country is also acquiring up to 16 UH-60M Black Hawks.

On March 17, 2015, Sikorsky was awarded a contract to manufacture the first eight 'green' UH-60Ms for Tunisia, with further contracts following on June 30, 2015, for four more and on September 28, 2016, for another four. No deliveries have yet taken place.

The Sikorsky HH-3E is operated from the main helicopter base at La Karouba/Bizerte-Sidi Ahmed, with a detachment at Sfax/Thyna. The transfer of a total of 16 from US Air Force surplus stocks had been approved in batches between September 1994 and December 1996. Most have now been grounded.

A total of 18 Agusta-Bell 205As and a small number of Bell 205A-1s were delivered from 1980. These are based at Bizerte/La Karouba-Sidi Ahmed, Gafsa and Sfax/Thyna, plus a detachment at Monastir.

From 1973, deliveries of 25 UH-1H Iroquois began, plus at least 12 ex-US Army types after 1991, the most recent being two in 2008 and one in 2010. Two UH-1Ns also entered service from 1975.

The Hueys are flown by two squadrons at Bizerte/La Karouba-Sidi Ahmed, along with another at Gafsa. An unknown number of AB412s were delivered from 1992 and are thought to remain current.

The Alouette III entered service around 1964 and some examples were still operational in mid-2016 at Bizerte/La Karouba-Sidi Ahmed.

Deliveries of AS350Bs began in 1983, with at least six confirmed in service with a squadron at Sfax/Thyna.

Five upgraded and refurbished ex-French Army SA342L1 Gazelles, acquired from French company Aerotech, entered service from 2011.

Around six AS350Bs were delivered to the Gendarmerie from 1983, plus an unknown number of AS355Fs.

PICTURE: US EMBASSY.



Tunisian Air Force OH-58D Kiowa Warrior L81516/TS-VTN was one of the first six to arrive in the country and is seen here on February 4, 2017, during a formal handover ceremony at the base at Gabes.



Take off with regulatory training from the practising UK CAA experts

London Gatwick | Kuala Lumpur | Singapore | Dubai | Hong Kong

A comprehensive portfolio of public access courses developed in accordance with EASA and ICAO Standards and Recommended Practices, designed to cover all aspects of aviation safety regulations, including:

- SMS and Risk Management, Just Culture and Root Cause Analysis
- Airworthiness (NDT Audit Oversight)
- EASA Approvals (Part 21, Part 145, Part 147 & Part M)
- Inspector Theory (Flight Ops, Cabin Safety, Dangerous Goods)
- Fatigue Risk Management Systems
- Accountable Manager (Aerodrome, Airworthiness, AOC)
- FSTD Operations & Qualification
- Human Factors in the Aviation Maintenance
- Introduction to International Air Law

To book now or for more information, please visit www.caainternational.com/training or contact us: +44 (0) 3300 224401 or training@caainternational.com

www.caainternational.com
 Part of the UK CAA International Group

Together for better aviation



Airspace, safety and security are key issues for the Middle East and North Africa. The United Nations body for civil aviation, ICAO, has its regional headquarters in Cairo, where Alan Peaford met regional vice president, Mohamed Rahma.

Cooperation is the key to a safer future for everyone



signed the Muscat Declaration, which sets out to drive the necessary political and financial momentum to achieve ICAO compliance by states across the region with collaboration at the heart of the initiative.

“This is a fast-growing region. We know air transport will double in the next 15 years, maybe even sooner than that. Geographically it is only a small part of the world but there is 10% of the world’s air traffic at any time. There is not only civil aviation but also military and unmanned aircraft. We need to optimise the space but also make it even more safe – that has to be our number one priority,” Rahma said.

Egypt hosted a special ICAO meeting at Sharm el Sheikh in the summer. “Twenty-seven ministers were there from all over Africa and the Middle East,” said Rahma.

The meeting ratified ICAO’s global aviation security plan (GASeP), which Rahma said is vital for the region to defeat the threats to safety.

“Civil aviation has been a target for terrorism. By enhancing collaboration, we need to prioritise the states that need assistance to improve their systems. Other states can help with financial resources or hands-on support,” he said.



Rahma cited the successes that Egypt and Jordan have enjoyed. Both countries were in the area of “serious concern” on the ICAO scale of its universal security audit programme (USAP), which provides a proactive indicator of levels of security performance.

“Both were around 52-53% on the scale, but Jordan hit 82% and Egypt 84% and have the right procedures in place for audit and inspections. ICAO is transparent about the level of oversight and implementation of the 12,000 standards and states can view this on line,” Rahma said.

“The safety of all of us depends on us reaching the standards and knowing where the challenges are.”

He added that maintaining safety and security is no easy matter. “Systems are becoming more complex; we are seeing emerging risks with the increase in air traffic and, of course, smart terrorism. We recognise that we need to be more proactive.”

Rahma sees ICAO playing a vital role in pushing the message for cooperation and collaboration. “It is so important that we get understanding of why states should work together.”

Rahma will be one of the key speakers at April’s Aviation Africa summit, which takes place in his home town. “Bringing airlines, airports and regulators together is a great opportunity to take the message further and help us see results,” he said.

It is so important that we understand why states should work together.

MOHAMED RAHMA

Mohamed Rahma has seen the challenges facing aviation from all sides. Following a successful career at EgyptAir he became an advisor to the Egyptian Minister of Civil Aviation and then Undersecretary of International and Internal Affairs at the ministry, where he sat on the board of the Egypt Airports Company. Now he heads ICAO’s activity for the MENA region.

“Aviation is critical to the economies and success of the MENA region,” Rahma said. “There are 2.4 million jobs and \$157 billion in gross domestic product (GDP) that has been created in the region.”

Rahma strongly supports the “No country left behind” (NCLB) strategy, which he believes is essential if the Middle East and Africa are to realise their potential, and collaborate to raise the standards of efficiency and safety across the entire region.

Rahma was joined by ICAO Secretary General, Dr Fang Lui, and the directors general of some 17 civil aviation authorities at Muscat, Oman in November, where they



EGME opens its doors to tailor-made solutions

EgyptAir Maintenance and Engineering is targeting third-party work to put its new capacity and capabilities to profitable use.
Chuck Grieve reports.

Calling all African operators: EgyptAir Maintenance and Engineering (EGME) is open for business – and keen to get yours.

That’s the message from the MRO division of EgyptAir, one of the pioneers of civil aviation in Africa and the Middle East.

And it’s serious, judging by the latest group annual report, which shows EGME’s third-party revenue was up 67% in 2015-16.

As the country’s Aviation Minister, Sherif Fathi, said in a recent interview with *Farnborough International News Network (FINN)*, Egypt has had “some challenges” recently. However, its aviation sector is recovering from the setbacks of recent years and moving forward, modernising as it goes.

Alongside the expansion of its main customer, EGME is upgrading capacity and capabilities at its main base, an integrated maintenance and overhaul complex at Cairo International Airport.

The centrepiece will be a new heavy maintenance facility alongside Hangars 8000, 7000, 6000 and 5000, which is expected to be built in the next two years.



In the meantime, the MRO operator is renovating its existing hangars on a schedule which, it says, mirrors EgyptAir’s fleet modernisation while meeting the technical requirements of all its customers. Existing shops cover a wide range of technical capabilities including metallic and non-metallic structural repairs.

It plans to extend services to other countries in north Africa by adding to its 11 line maintenance stations, which include EASA Part 145-approved facilities in Dammam, Riyadh, Jeddah and Khartoum. These facilities already serve an impressive list of airlines from all over Africa, the Middle East and Asia, including the big four from the Gulf.

EGME is well-positioned with its light and heavy capabilities for many modern types to handle the growth it expects in narrow-body, wide-body and regional aircraft.

Last September, it gained a key approval from the Egyptian Civil Aviation Authority (ECAA) to overhaul CFM56-7B engines, which power EgyptAir’s growing fleet of B737-800 aircraft. EGME chief executive, Abou Taleb Tawfik, described the approval as a strategic move to control costs and time out of revenue service, but also to extend the scope of EGME’s services for the benefit of current and prospective customers operating the same aircraft.

Tawfik said EGME is investing in continuous development and improvement in technical capabilities and human resources to expand the scope of technical services it provides “to meet the needs of the largest number of customers”.



He said EGME is working to a “long-term plan” to expand capacity and capabilities in line with its target growth. Among its projects were a new hangar dedicated to painting and two light maintenance hangars.

A spokesman said EGME is targeting markets in both the Gulf and Africa, where it can capitalise on its relative competitive advantages. These it lists as its central location, extensive technical experience on a variety of aircraft types, and one-stop shop capability in engines and components, which add up to “best value for money” in maintaining expensive assets.

“We partner with our clients to address their technical requirements,” said the spokesman, “and creatively develop solutions tailored to each client’s operational characteristics.

“Our geographical centrality enables our customers to access our main base facilities with minimum cost, time and climate constraints.”

EGME has selected the AMOS digital platform developed by Swiss-AS to help manage its activities. “This software is designed to support operational processes and real-time technical decision-making, securing the residual value of our customer assets,” said the spokesman. Go-live is expected by year-end.



Over **18,000**
shop visits
in 36 years
on more than
30 engine
programs



LIFETIME EXCELLENCE

MTU Maintenance, the world leader in independent engine services. As engine experts, we focus on maximizing your earnings and optimizing costs during the life cycle of the engine and beyond. With decades of experience, we offer tailored solutions encompassing innovative MRO services, integrated leasing and best-of-breed asset management. There is always a better solution for your engines, MTU has it.

www.mtu.de/maintenance



Hafsa Abdulsalam: "AJW's longevity in Africa underlined its commitment to helping airlines grow and remain sustainable through cost control and operational efficiency."

C-check breakthrough

Nigerian airline, Aero Contractors, and its stakeholders celebrated an MRO milestone for west and central Africa with the completion, in January, of a domestic C-check on a Boeing 737-500.

The work was carried out at Aero's MRO facility at Murtala Muhammed Airport, Lagos, following certification by the Nigerian Civil Aviation Authority (NCAA) last September. Aero's technical partner in this initiative is AJW Group.

The last time a C-check was carried out in Nigeria is believed to be about 14 years ago, before the demise of Nigerian Airways and its MRO facility.

AJW has supported Aero since July 2017, helping restructure and upgrade the airline's MRO support services to C-check standard for Boeing 737-300/400/500 Classic aircraft. Aero also has Nigerian Civil Aviation

Authority (NCAA) certification for maintenance on Bombardier Dash 8-300 aircraft and helicopters.

Hafsa Abdulsalam, AJW's regional sales director for Africa, said the company has been active in Africa for almost 40 years, partnering with MRO services including Tunisair Technics and Al Algeria Technics. All its "strategic alliances" on the continent "are geared to driving down our partners' repair costs".

She said AJW's longevity in Africa underlined its commitment to helping airlines grow and remain sustainable through cost control and operational efficiency. "That's the kind of relationship we're currently building and trying to strengthen on the continent."

Airlines in west Africa pay an estimated \$1 billion a year for ferrying their aircraft to Europe and America for scheduled maintenance.

Every C-check on B737 Classics – the workhorse of domestic operations – costs between \$1.8 million and \$3 million. For Nigeria alone, with a national fleet of about 30 B737 Classic aircraft, the saving from doing the work domestically could amount to as much as \$90 million.

Maintenance "is done in dollars, while the airlines sell tickets in naira. This is killing the airlines," Dr Harold Demuren, former NCAA director-general, is reported as saying. He added: "The success recorded by Aero with the establishment of this MRO and successful completion of a C-check must continue."

Aero chief executive, Captain Ado Sanusi, told Invest Nigeria the airline plans to extend its heavy maintenance capability to B737 Next Generation (NG) aircraft.

He said an advantage to third-party airlines of in-country C-checks is the possibility of inspecting work as it progresses. "If the airlines have the capacity to supervise us, that will be good," he said, adding: "We are already doing certain levels of maintenance for other airlines."

Reports say Aero has applied for free trade zone status for its MRO facility to expedite turnaround.

AFRICA BUILDS CONNECTIONS AT DUBAI SHOW

In spite of its name, MRO Middle East and the co-located Aircraft Interiors Middle East attracted considerable interest from Africa.

The conference and exhibition in Dubai in January gave about 5,000 trade visitors the opportunity to meet and talk to 320 exhibitors, whose businesses covered everything from APU overhaul to cabin crew uniforms.

The exhibition featured the 2018 HMG Aerospace Inflight Awards, in which Ethiopian Airlines emerged a winner, lifting the title for the best interior retrofit project.

Ethiopian recently refurbished its Boeing 767-300ER fleet with fully flat business class seats, following a similar project on its B777 fleet. The work was carried out by the airline's MRO centre in Addis Ababa.

Also at the show, Kenya Airways took a step toward better supply chain management and dispatch reliability by signing a two-year

contract with Airinmar, a specialist in support services and systems for component repair management. The contract applies to the airline's seven Boeing 787s, 11 B737s and 15 Embraer ERJs.

Ronald Lussier, Kenya Airways head of material management, said: "We hope to gain supply chain management knowledge and instil it in our workforce."

Better component management skills would help the airline develop its supply chain performance and warranty management.

Meanwhile, EgyptAir and Safran Nacelles used the occasion to sign a maintenance contract covering thrust reversers on the Rolls-Royce Trent 700 engines that power the carrier's Airbus A330 fleet.

The agreement involves scheduled 'soft time' preventive maintenance, unscheduled repair services and asset management.



There are eight scheduled passenger airlines currently operating domestic flights in Nigeria – Arik Air, Air Peace, Overland Airways, Aero, Azman Air, Medview Airlines, Dana Air and First Nation Airways.

Now 15 years old, Overland Airways has been the most consistent airline in terms of passenger operations. It runs a fleet of nine aircraft, featuring three ATR72s, three ATR42s and three Beechcraft 1900Ds.

Azman Air operates two B737-300s and two B757-500s, while First Nation Airways has two A319s and Dana Air four MD-83s.

Arik Air operates only domestic and regional flights. Its 10 aircraft include B737-800s, B737-700s, a CRJ and Q400s.

Aero's fleet recently dropped from three to two Dash 800 aircraft, following the grounding of its only Boeing 737-500 Classic aircraft.

Air Peace, the fastest growing airline in Nigeria, has received its 13th aircraft after three years of operations and has placed orders for additional B777 and six Embraers. It currently operates both regional and domestic flights and has been designated for international operations.

Medview, meanwhile, operates four Boeings on domestic, regional and international routes, including B767-300 and B777-200.

Although the Nigerian Civil Aviation Authority (NCAA) says it still has applications for air operator's certification (AOC) under consideration, it is on record that more than 50 local airlines have emerged and collapsed since Nigeria's independence in 1960 due to issues ranging from poor business plan, political interference, lack of good corporate governance and harsh operating environments, among others.

For instance, two of the airlines – Arik

THE BATTLE FOR SURVIVAL

More than 50 local airlines have emerged and collapsed since Nigeria's independence in 1960 and, as Chukwu Emeke reports, the cycle looks set to continue.

Arik and Aero – have been taken over by the Asset Management Corporation of Nigeria (AMCON) within the last few months due to some of these issues.

AMCON had, in 2016, taken over the running of Aero Contractors, Nigeria's oldest aviation company, which commenced business in 1959. It appointed new managers to run the operation and cited the need to protect the brand heritage of the airline and public interest as reasons for the takeover.

This was after AMCON had, in 2010, invested N15 billion (\$41.5 million) in Aero and later injected another N5 billion. The government agency currently owns 60% of the company with the remaining 40% held by the Ibru family. Arik Air had, equally, been taken over by AMCON following a very high level of debt to government agencies and several other customers.

Medview recently suspended an international operation due to alleged debt to its ground-handling partner in London.

According to Captain Nogie Megisson, chairman, Airline Operators of Nigeria (AON), the operating environment and government policies constitute a challenge to domestic airlines' survival in Nigeria.

"Nigerian airlines are subjected to multiple charges, taxes, levies and fees," he said. "On the average, we pay about 37 different charges that come under the guise of statutory levies and taxes to sustain a staff strength of about 18,000 people from the various government agencies. This compares to most African carriers, who pay a fraction of this cost in their countries to support a staff strength of less than 500."

He identified other challenges as 28% bank interest rates, payment of Value Added Tax (VAT) by airlines, difficulty in accessing foreign exchange (forex) and high prices for JetA1 fuel due to high taxes.

Over the years, local airline operators have complained of overburdening high maintenance costs resulting from the absence of a major MRO centre in the country. Many airlines have abandoned their aircraft at maintenance facilities in Europe due to an inability to pay.

Gbenga Olowo, president of the Aviation Safety Round Table Initiative (ASRTI), recently advocated a regulation-driven recapitalisation of all airlines in Nigeria through mergers, code share arrangements and diverse forms of collaboration as a way of mustering economic strength for survival.

In the case of Nigeria, unless high operating costs are reduced and operating environment and policy issues are addressed, profitability in airline business might remain a mere figment of the imagination.

Pictured above: Overland Airways has been the most consistent Nigerian airline in terms of passenger operations. Arik operates only domestic and regional while Medview flies domestic, regional and international routes.



It's no accident that the AIB is getting better all the time

Nigeria's Accident Investigation Bureau (AIB), the only autonomous accident investigation agency in west Africa has, since December 2016, worked on the execution of its short and medium-term plans, one of which is emergence as the region's accident investigation hub.

Chukwu Emeke reports.

AIB chief executive officer, Engineer Akin Olateru, ranks his organisation as the 10th best accident investigation agency worldwide in terms of equipment, manpower and infrastructure.

"What we need to work on and improve right now is systems processing and procedures, regulation, and our operations manual," he said. "This is one of the reasons for my recent meeting with the UKAIB to see how they can help us, work with us and improve our processes.

"Without the processes, systems, standard operating procedure (SOP), operations manuals etc, you can't really make the best of whatever you have. That is where we are right now. With a few improvements, we will be on a par with the world on accident investigation."

Olateru noted that many other countries in Africa do not have autonomous accident investigation agencies because of constraints of finance and manpower. However, the National Transportation & Safety Board (NTSB) of both Singapore and the US have been supportive to Nigeria's AIB, training the investigators on how to use the equipment in the recently revived flight safety laboratory.

"We have eight of our investigators training in Singapore right now. Another group is in America with the US NTSB," said Olateru. "Along the line, we will be



"With a few improvements, we will be on a par with the world on accident investigation."
AKIN OLATERU:

partnering with Cranfield University in the UK.

"Within the next year there will be extensive training on accident investigation and manpower development for the entire AIB. In the long-term, we are working with the Nigerian Civil Aviation Authority (NCAA) and the Nigerian College of Aviation Technology (NCAT) to develop the right training curriculum for AIB Nigeria and for the sub-region and Africa as a whole."

As 2018 began it was confirmed the UKAIB will be working with AIB to review its procedures and equipment.

Nigeria, as the leader of the Banjul Accord Group Accident Investigation Agency (BAGAIA), which has seven countries as members, has received proposals from neighbours Sao Tome & Principe, Cape Verde and the Benin Republic, to sign a memorandum of

understanding to enable AIB assist them in developing their technical expertise and provide them with needed support in case of serious accidents and incidents.

Nigeria's AIB was established as an autonomous accident investigation agency in 2007 in compliance with the Nigerian Civil Aviation Act of 2006 and ICAO Annex 13 provisions. Accident investigation plays a vital role in maintaining a robust air safety regime, which cannot be achieved if investigation results are not released in a timely manner.

Olateru says he inherited 27 outstanding accident reports when he assumed office as CEO in December 2016. He released 10 reports within his first year in office, which contained 35 safety recommendations, including the issuance of an all operators' letter (AOL) by NCAA whenever there is an engine change.



Another batch of six accident reports were scheduled to be released in March 2018, while the agency intends to clear the backlog by the end of this year.

Observers believe the bureau's various measures have contributed to the reduction in aviation accident and incident rates in Nigeria.

The agency has established a safety recommendations implementation unit to identify how many recommendations have been taken forward and to push for implementation of those that are outstanding.

Meanwhile, AIB has launched the AIB mobile application, which can be downloaded free and enables recording of accidents and serious incidents by any member of the public. It enables live reporting by eye witnesses in the event of accidents or incidents, and pictures can be uploaded on the application to assist in investigations.

It also serves as a faster alternative to web browsing, provides immediate information access and consumes less data than websites.

Olateru said the application "gives us a new and more convenient way to receive aircraft accident reports in real time."

Controversy surrounds the privatisation of some Nigerian airports. Chukwu Emeke has been looking into the situation.

Shortly after taking office as Nigeria's Minister of State for Aviation, Hadi Sirika confirmed the federal government's plan to allow privatised services at four of the country's major airports.

The facilities concerned are Nnamdi Azikiwe International Airport (Abuja), Murtala Muhammed International Airport (Lagos), Mallam Aminu Kano International Airport (Kano) and Port Harcourt International Airport (Port Harcourt).

The announcement has sparked controversy among industry stakeholders, with some backing the idea and others demanding clarification of government intentions in the light of previous failed privatisation experiences.

Typical of the various points of view were Captain Nogie Megisson, chairman of Airline Operators of Nigeria (AON), who believed airport concession would increase operational efficiency and profitability and create jobs. However, Dr Harold Demuren, former director general of Nigerian Civil Aviation Authority (NCAA), advised the government to be honest with workers' unions in negotiation processes, as this issue had been a challenge in previous arrangements. Meanwhile, Group Captain John Ojukutu (Rtd), former Commandant of the Lagos airport, said the airside should be a no-go area in any concession arrangement.

Back in November 2017, when Professor Yemi Osinbajo, the country's vice-president, first announced that the government had approved the privatisation decision, the various aviation workers' unions held a press conference in Lagos, kicking against the plan.

Secretaries of the National Union of Air Transport Employees (NUATE), Air Transport Services Senior Staff Association of Nigeria (ATSSSAN) and Nigerian Union of Pensioners (NUP) jointly called on the government to display more transparency and incorporate manpower and legal liabilities into any plan.

They emphasised the need to include in the plan the fate of 6,285 Federal Airports Authority of Nigeria (FAAN) personnel and more than 4,124 pensioners.



ROW BREWS OVER PRIVATISATION PLANS

The unions revealed in a joint statement that there were currently around 64 concession litigations against FAAN, all pending in various courts, arising from alleged fraudulent operations, faulty and irregular agreements, negation/violation of agreements, failure to perform according to agreements, and so forth.



The unions also raised a litany of questions at the forum. "What will be the fate of 18 other airports that depend largely on financial survival/support of the four major airports listed for concession? What will happen to the existing liabilities? Will they be attached to the concession?"

"Are current employees to be transferred and or redeployed from the sector? If so, are there limitations to be included in the agreement on the numbers that may be laid off or declared redundant?"

The Nigerian Government had, in 2013, secured a \$500 million loan from the Chinese bank for its nationwide airports remodelling project. The unions are unhappy that FAAN was instructed to begin defrayment of the loan, even though neither the company's management nor its

personnel were consulted before incurring the loan.

Nigeria currently has five international and 22 domestic airports. On a yearly basis, about 15 million people fly in and out of the country. Minister Sirika says the government believes the country can accommodate between "70 and 100 million passengers annually, within the next five years, if the right things are put in place".

Stakeholder apprehension over the government's concession plan stems from past experience. There is, for instance, a pending dispute between the government and Bi-Courtney Aviation Services Limited (BASL), on the concession of the Murtala Muhammed Airport Terminal Two (MMA2) in Lagos.

The MMA2 terminal was built and is currently operated by BASL but the tenure spelt out in the concession agreement and the facilities involved are still mired in controversy and have been the subject of pending litigations. FAAN argues that the authentic agreement document limits the duration of the concession to 12 years and that the airport's General Aviation Terminal did not form part of the concession, whereas BASL claims the tenure is 36 years and that the GAT was part of the deal.

Pictured above, from left: General Secretary, National Union of Air Transport Employees (NUATE), Comrade Olayinka Abioye; Deputy General Secretary, Air Transport Services Senior Staff Association of Nigeria (ATSSSAN), Comrade Francis Akinjole and Vice Chairman, NUATE, Comrade Shola Idowu, during the recent press conference on proposed concession of airports held in Lagos.

In today's dynamic and challenging airspace environment, the lack of a cost-effective, real-time risk-management solution has been an industry concern for years. Now a new aviation security company will be at Aviation Africa in Cairo this month to share the answer.

Steve Knight talks to Osprey Flight Solutions CEO, Andrew Nicholson.

Osprey en route to a safer flight



Using the latest technology, the London-based company's software interrogates more than 200,000 information sources in over 60 languages, allowing patterns and trends that may be invisible to a purely human analyst, to be identified.

"It's a system for the 21st Century," said Nicholson. "All the information is out there. Now, for the first time, our technology is able to bring it all together and the analysis is instant.

"When you supplement this information with our team of leading aviation security experts working all around the globe, it means we offer a unique 24/7 operation."

Civil aviation is very much the focus. "We want our system to be available to everyone, which means it has to be cheap enough for people to use – typically less than \$50 per flight," said Nicholson.

"Aviation safety and security is our top priority, which is why people can sign up to our breaking news security alerts on our website, a service we provide for free.

"We believe it is vitally important that every operator, from a single aircraft owner/pilot to the largest commercial airline, has access to the right information to best understand and mitigate the threats to their crew, passengers and aircraft."



Nicholson, a highly experienced aviation security expert, admits that he had been thinking about the service for some time. "I knew what was needed from a security point of view but it was only in the last 12 months that I gained sufficient knowledge of the technology and how it could be used," he explained.

"The technical challenges – and particularly integrating our technology with other operators' systems – have been a huge learning curve for us."

So why has a service like this, which has global safety and security implications, been launched by a private company, rather than an over-arching body like the International Air Transport Association (IATA) or the International Civil Aviation Organization (ICAO)?

"The ICAO did try with its conflict zone information repository (CZIR)," explained Nicholson. "Unfortunately, it did not achieve what was hoped for, sparking a growing realisation that an independent solution would not be constrained by the same diplomatic pressures.

"Basically, we haven't got to worry about diplomacy or politics. We can just report what's going on, in real time, which means that our clients will get what they need, when they need it.

"Africa, in particular, could be a major beneficiary of our service. It is growing very quickly in aviation terms but it also has a number of fast-moving and ever-changing security challenges. Our new system could certainly help mitigate a number of these situations."

It is vitally important that every operator, from a single aircraft owner/pilot to the largest commercial airline, has access to the right information to best understand and mitigate the threats to their crew, passengers and aircraft.

ANDREW NICHOLSON

African aviation experts are about to learn more about a pioneering flight-risk management system that could revolutionise aviation security throughout the continent.

First unveiled late last year, Osprey Flight Solutions' innovation will provide all operators with instant access to flight-specific, accurate and comprehensive airport, country and overflight risk assessments.

For the first time, this analysis can be delivered instantly and directly into flight-planning software, heralding an important step in enabling operators to maximise the protection of crew, passengers and aircraft.

The man heading up the service, Osprey Flight Solutions CEO Andrew Nicholson, will be speaking in Cairo at Aviation Africa – the continent's premier event covering the entire aviation industry – on April 17-18.

"Since we unveiled the service at AVSEC World in Abu Dhabi in November, we have had fantastic feedback," said Nicholson. "Everyone has been fantastically positive, saying it's what's been needed for years."

Osprey's new software system is able to deliver an instantaneous, integrated risk assessment bespoke to the specific geographical planned route of a flight and can provide dynamic re-assessment in real-time if the flight-route is altered.

"The analysis is continuously updated, ensuring the assessment is accurate to the second the flight is planned," said Nicholson.

Eways Aviation is the Aircraft Parts Supplier that keeps African Carriers flying by understanding local specificities and maintains the highest level of quality and service while providing cost effective and timely solutions.



Our services

SUPPLY & DISTRIBUTION OF AVIATION SPARES, ASSEMBLIES, MATERIALS & SUPPLIES

MANAGEMENT OF REPAIR AND OVERHAUL OF AIRCRAFT COMPONENTS

PROVIDING AIRLINES E-SOLUTIONS SERVICES

ACMI SERVICES

BUSINESS AVIATION SERVICES

AIRPORT EQUIPMENT & SERVICES

AOG Services

OUR 24/7 AOG Service can ensure Next Day Delivery Service of your shipments from North and Europe to most major African cities.

aog@eways-aviation.com

Premium partners

PROUD REPRESENTATIVE ON AFRICAN MARKETS



EWAYS AVIATION

Paris Roissy CDG Office
1 rue de la haye,
95700 Roissy CDG - FRANCE
Phone : + 33 171 063 340
sales.fr@eways-aviation.com

EWAYS AVIATION LLC

Miami Executive Airport Zone
15075 SW, 137 St, Unit 10 -
Miami- FL33196 - USA
Phone : + 1 786 701 2164
sales.us@eways-aviation.com

EWAYS AVIATION

Dubai South Office
Aviation District
Dubai
UNITED ARAB EMIRATES
sales.dxb@eways-aviation.com

EWAYS AVIATION

Trading Unit
Africa's Office
Marrakech
MOROCCO
sales.rak@eways-aviation.com



CONTACT 24 / 7 sales.fr@eways-aviation.com | + 33 171 063 340

WWW.EWAYS-AVIATION.COM

A CERTIFIED
COMPANY



La Banque africaine de développement (BAD) a partagé sa vision sur les enjeux du transport aérien en Afrique lors du 3ème Forum aéronautique mondial de l'OACI, à Abuja. Un compte-rendu de Vincent Chappard.

La BAD au cœur du progrès de l'aviation africaine

La BAD a investi 20 milliards de dollars dans les infrastructures au cours des 10 dernières années en Afrique, dont plus d'un milliard de dollars dans le secteur de l'aviation. Elle a financé des projets aéroportuaires (construction/extension) et d'amélioration de la sécurité et d'achat d'avions.

A titre d'exemple, les aéroports AIBD de Dakar (Sénégal) et Jomo Kenyatta de Nairobi (Kenya). Il y a également de multiples projets au Cap-Vert, en Égypte, au Ghana, au Kenya, au Maroc et en RDC.

Selon Pierre Guislain, le vice-président en charge du secteur privé, de l'infrastructure et de l'industrialisation, la BAD travaille à l'élaboration d'une feuille de route pour lever les contraintes qui ralentissent le développement du transport aérien en Afrique. Elle appelle ainsi les pays africains à appliquer l'accord de Yamoussoukro « pour un ciel ouvert ». Le secteur aérien contribue aujourd'hui 72,5 milliards de dollars au PIB du continent et emploie 6,8 millions de personnes.

La BAD et l'IATA ont d'ailleurs signé un MOU visant à booster ce secteur en Afrique. Ce partenariat va accroître le développement social et économique en érigeant une industrie sûre et efficace. Il s'agit d'améliorer la sécurité, la connectivité et les infrastructures.

Ainsi, la BAD a soutenu des projets pour améliorer la sécurité aérienne et renforcer la capacité au niveau régional. Un des objectifs de la Banque est d'aider 20 aéroports africains à être certifiés d'ici à 2019 conformément aux normes de sûreté et de sécurité de l'OACI. La BAD a également contribué au financement des programmes de modernisation et d'extension des flottes d'Ethiopian Airlines et d'Air Côte d'Ivoire.

« L'industrie aéronautique est un véritable accélérateur d'intégration régionale et favorise le désenclavement territorial grâce au commerce et au tourisme, et rapproche nos 54 états. Une piste de 1 600m peut accueillir des appareils courts et moyen-courriers et servir de hub d'éclatement pour l'acheminement de marchandises, et ainsi créer et intégrer les chaînes logistiques et rapprocher des zones géographiques éloignées ».

La BAD préconise également une baisse des coûts et une amélioration des connexions et des infrastructures. Les frais liés au transport aérien sont 30% supérieurs en Afrique par rapport à la moyenne mondiale. Les taxes et les redevances sont également trop élevées et freinent le développement du secteur. Par exemple, un vol Lilongwe-Johannesburg coûte trois fois plus qu'un vol de la même durée reliant Rome à Londres. La

SAATM constitue une étape importante dans le programme d'accélération de l'intégration économique de l'Afrique et la mise en œuvre de la décision de Yamoussoukro.

PIERRE GUISLAIN



BAD plaide donc en faveur de l'augmentation de la capacité des terminaux, du développement de la MRO et du renforcement des organismes de sécurité aérienne.

L'institution a aussi applaudi la décision de l'Union africaine prise en marge du 30e sommet des Chefs d'Etats, de lancer le Marché unique africain du transport aérien (ou SAATM – Single African Air Transport Market).

« Ce programme phare de l'Agenda 2063 de l'UA constitue une étape importante dans le programme d'accélération de l'intégration économique de l'Afrique et la mise en œuvre de la décision de Yamoussoukro », rappelle Pierre Guislain.

La BAD est donc un partenaire incontournable. Elle est au cœur des enjeux du transport aérien en Afrique.

AFDB AT THE HEART OF PROGRESS

Speaking at the third ICAO World Aeronautical Forum, held in the Nigerian capital Abuja, the African Development Bank (AfDB) shared his vision for air transport in Africa.

According to Pierre Guislain, the airline sector is vital as it opens up countries to investors. "Connectivity is intimately linked to economic growth," he explained.

AfDB advocates lower costs and improved connections and infrastructure. Air travel costs are 30% higher in Africa than the world average while taxes and fees are also too high, hindering development. For example, a Lilongwe to Johannesburg flight costs three times more than a similar duration flight from Rome to London.

The AfDB therefore advocates increasing terminal capacity, developing the MRO sector and strengthening air safety organisations within the continent.

The AfDB invests heavily in air transport on the continent and during the past decade it has provided around US\$1-billion for airport expansion and building; security enhancements; and aircraft procurement. Examples are the AIBD airport in Dakar and Jomo Kenyatta airport in Nairobi.

AfDB and IATA have signed a MoU to boost the sector in Africa while the AfDB also plans to help 20 airports to meet ICAO safety and security standards by 2019.



INITIATE, PARTICIPATE, COMMUNICATE,

JOIN AfBAA NOW

SHAPE THE FUTURE OF
AFRICAN BUSINESS AVIATION

www.afbaa.org

info@afbaa.org

[f /AfricanBAA](https://www.facebook.com/AfricanBAA)

[t @africanbaa](https://twitter.com/africanbaa)

Join our [Linked in](#) group

Kevin Evans

Marcelle Nethersole *speaks to*
Rolls-Royce's VP customers, Africa.

1 2

■ What do you see for the future of aviation in Africa?

Africa is set for significant and sustained growth and we share IATA's positive outlook for the region of 5% growth per annum over the next 20 years.

As we witnessed in January, 23 of the 55 African states agreed to the single Africa air transport market (SAATM). This exciting development will remove significant barriers that previously stifled growth.

As is often quoted, 80% of passengers flying into and out of Africa currently use non-African airlines. However, really significant changes are happening and bold strategies are being enacted by some impressive African airlines.

Rolls-Royce believes there will be a demand for hundreds more wide-body aircraft in Africa over the next 20 years. We are not only seeing new aircraft coming into the region; previously operated aircraft are entering the market, brought in from other parts of the world.

■ How do you manage after-market and customer support?

We have traditionally been strong at service innovation and TotalCare has, for many airlines, represented a truly win-win alignment of interests between us and them – a transfer of risk from operator to OEM and low, predictable maintenance costs.

This has certainly been true in Africa, although we are acutely aware that not all airlines are the same. Some airlines want us to provide greater levels of service than others; some want engine transportation included, for example, or access to lease engine support, or line-replaceable unit (LRU) coverage and so on.

We currently have support teams in three African locations and we envisage more to come. We will be delivering on-wing-care service support and lease engine availability from within the region.

3

■ What is Rolls-Royce doing to help African carriers make savings?

Modern, well-maintained engines burn less fuel. With the success of the Trent engine on the continent, we are already helping customers achieve significant savings. And this trend continues – the XWB engine on the A350, in service already in Ethiopia and Mauritius, is the most fuel-efficient in the world. Per passenger, over the same distance, the Trent XWB uses about the same amount of fuel as a small family car!

However, we are not only investing in new technologies and product design to lower fuel costs, we are also conscientiously developing new affordable service initiatives that optimise fuel efficiency over the lifespan of the engine, and lower through-life maintenance costs.

4

■ How do you help African countries produce good engineers?

We share our knowledge and world-leading training programmes with airlines and educational institutions across Africa and the rest of the world.

We have a number of sponsorships, collaborations and initiatives in place to help support the education of tomorrow's aviation engineers. One of our corporate objectives is to reach more than six million children through our science, technology, engineering and maths (STEM) outreach programmes by 2020.

5

■ How did you get your role?

Having left Leeds University in my early 20s, I joined Rolls-Royce as a qualified chartered accountant. But, fairly early on in my career, I realised there were more exciting opportunities available to me.

My first customer-facing role was in our defence business visiting air forces across Africa and elsewhere.

My greatest highlights have been introducing new customers to Rolls-Royce and then nurturing these into long-term relationships; and in witnessing the Rolls-Royce footprint in Africa grow.

6

■ What challenges do you face in your job?

Africa is huge, and one of the greatest challenges comes from the sheer size of the territory I cover, getting to see all of our operators as often as I would like to.

There are certainly issues and situations in some places that present challenges to us. For instance, political uncertainty and change, cashflow and foreign exchange constraints, and evolving socioeconomic landscapes. Underpinning it all, however, is the sense of real opportunity, unlike anywhere else in the world, and I see such challenges for us not as barriers but as opportunities.



EGYPTAIR

A STAR ALLIANCE MEMBER 

Every second counts



Intertek



egyptair.com

A million reason\$ to fly ATR.



That's why we're the Regional Leader.



ATR/72-600



ATR/42-600

#ATRLeads

Choosing ATR's solutions generates \$1 million of savings annually, per aircraft, compared to their direct competitors. This explains the vast success of the program and its leadership in terms of orders, deliveries, backlog, operator base, investor's opinion and residual value retention.



atr-aircraft.com

ATR

PROPELLING THE NEXT CONNECTION