



AFRICAN AEROSPACE

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN AFRICA

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Egypt's revival linked to tourism presents a lesson to us all

The latest delivery of an aircraft to EgyptAir last month says a lot about the whole revival of Africa's longest running airline.

For the past eight years there has been a steady stream of strategies to stem the flow of uncertainty following the Arab Spring and a series of security events.

But the delivery of the first Airbus A220 – the aircraft formally known as the CSeries – demonstrated the importance the national carrier is putting on its domestic services.

Tourism has been the cornerstone of Egypt's fortunes for many years and, to say it was adversely affected by the events of 2011, is an understatement.

But there is a resurgence. With massive private investment in cities like Hurghada and Sharm el Sheik, the tourists are returning, foreign currency is flooding into the country and EgyptAir has brought its domestic fleet back into the fold with sufficient investment to see it opening up new internal market opportunities.

For Ahmed Adel, EgyptAir's new chairman and chief executive, preparing the flag-carrier for the next decade is a balancing act between unlocking the country's growth potential and building defences for the next, inevitable crisis.

Adel met with *African Aerospace* in Cairo and at the International Air Transport Association (IATA) annual general meeting in Seoul to outline the airline's strategy for this next stage of its recovery... and it is a positive story. It is one that other African nations can develop.

Tourism and aviation do go hand-in-hand, but



there were stark warnings from the joint conference between the International Civil Aviation Organization (ICAO) and the United Nations World Tourism Organization (UNWTO) in Cape Verde recently.

ICAO president, Dr Olumuyiwa Benard Aliu, said at the event that, in recent years, Africa accounted for only 5% of global tourist arrivals and

3% of global tourism spending. This was despite recent modest growth attributable to the revival of the tourism industry in northern Africa, and improvements to African air connectivity generally.

At the heart of the issue is the same old problems that have hindered prosperity – capacity limitations at many African airports; a related lack of finance and investment for infrastructure development and modernisation; a persistent lack of skilled education and training capacity, along with many countries still piling on taxes on aviation and making visas difficult to obtain or ludicrously expensive.

We are now entering the conference season across the continent with the African Airlines Association (AFRAA), the Airlines Association of Southern Africa (AASA), Airports Council International (ACI), and IATA all holding major events.

With many other parts of the world suffering trade wars and real wars, Africa has an opportunity to capitalise by boosting tourism.

Let this year be the time we stop talking and take action in order to get our airlines, our airports and our governments on board and recognise the benefits that can come – just look at Egypt.

Alan Peaford,
Editor-in-chief

COVER: EgyptAir chairman and CEO, Ahmed Adel. PICTURE: BILLYPIX.

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Summit special

The Aviation Africa Summit and Exhibition, which took place in Kigali, Rwanda in February this year, has been nominated for three major awards.

The EN Indy Awards – organised by *Exhibition News* – are dedicated to recognising the achievements of independent show organisers, teams and individuals.

Aviation Africa has been nominated for ‘best international event’. The summit grew overall by 35% and 92% of attendees rated it good or excellent, with 93% of exhibitors saying they would exhibit again.

The summit was also nominated in the ‘indy organiser team of the year’ category and for ‘best show feature’ – for the silent conference, which combined the exhibition and conference in one hall, where all delegates and speakers listened via headphones so that business was not disturbed.

Mark Brown, director of summit organiser, Times Aerospace Events, said: “We are really delighted to be nominated. This was the fourth Aviation Africa event we have organised and we have all put in a lot



Double delight for EgyptAir

EgyptAir is enjoying a double celebration with two new aircraft flying in recently.

Last month the carrier took delivery of its first A220-300 aircraft of 12 on order, thus becoming the first A220 operator based in north Africa and the sixth operator worldwide.

“We are proud to welcome our very first A220 aircraft – the most innovative and technologically advanced aircraft in the world,” said Captain Ahmed Adel, chairman and CEO, EgyptAir Holding Company.

“Airbus’ A220 airliners are integral to the execution of EgyptAir’s business development strategy – Horizon 2025 – and our fleet optimisation plan.”

EgyptAir also took delivery of its fifth B787-9 Dreamliner in July.

The fifth aircraft is more fuel-efficient and generates fewer greenhouse emissions than similarly sized-aircraft. The delivery flight used 30% bio fuel.

“This was a project we are really proud to be part of as we look at ways to reduce carbon emissions across our operations,” said Adel.

■ Grand plan, page 14.

of time, experience and expertise to get the event to this stage. We are proud of how far it has progressed in a relatively short time.”

■ Aviation Africa, page 73.

Trenchard’s soft touch

Trenchard Aviation Group has opened a new facility on the Indian Ocean island of Mauritius in order to better serve its long-standing customer, Air Mauritius.

With its own cut-and-sew facilities, the company’s expertise covers the manufacture of all types of seat covers and curtains, fire containment sacks, and other cabin bags and warning streamers.

Mark Faulkner, Trenchard Aviation Group’s CEO, said: “With our latest facility near to Sir Seewoosagur Ramgoolam International Airport in Mauritius, we will not only

be able to enhance that service but also make a unique offer to potential new customers.”

SITA supports Algeria systems

SITA has been selected to provide key systems to support the smooth opening and operation of Algeria’s new international terminal at Houari Boumediene International Airport.

The new terminal, which

opened to the public in April 2019, is among the first airports in north Africa to use SITA’s airport management solution – a suite of integrated software applications designed to effectively manage airport operations from the terminal to the airfield.

The system should mean the airport is able to centrally manage everything from passenger processing and baggage-handling to the real-time allocation of fundamental resources across the terminal.

Agreement RAM-med home

Royal Air Maroc (RAM) and Royal Jordanian (RJ) have concluded a free sale codeshare agreement whereby RJ will market RAM flights, putting RJ’s carrier code on these flights between Casablanca’s Mohammed V International Airport and Amman’s Queen Alia International Airport.

Africa’s first A320neo delivered to Air Seychelles

Air Seychelles’ first Airbus A320neo aircraft – named ‘Veuve’ – conducted its first flight to Mauritius in August.

Mauritius Minister of Tourism, Anil Kumarsingh Gayan, said: “We are delighted to have this new aircraft sharing its colours in our skies. I am happy that carriers in our region are sensitive to air travel’s carbon footprint impact by investing in equipment which addresses the concern of climate change.”

Air Seychelles CEO, Remco Althuis, added: “We are proud to be the first A320neo operator in the Indian Ocean and Africa. The aircraft will primarily serve the Johannesburg and Mumbai market but we are pleased to be able to also operate this aircraft once per week to Mauritius to commence in November this year, which will provide increased capacity on the route.”

■ Connectivity, treasure of the isles, page 36.





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Mauritius pilot scheme

The Flying Academy of the Air Mauritius Institute (AMI) has launched an air transport pilot licence (ATPL) training course, which is recognised by the International Civil Aviation Organization (ICAO).

The course has also been approved by the Mauritius Qualifications Authority (MQA) and the South African Civil Aviation organisation.

The academy will work in partnership with the Progress Flight Academy in Port Elizabeth, South Africa. The course will be run at the academy headquarters in Mauritius (Ebène).

Moroccan first

Zahira Bouaouda has been appointed president of MATIS Aerospace, a 50/50 joint venture between Safran Electrical & Power and Boeing, specialising in electrical wiring interconnection systems.

She is the first woman to manage an aerospace company in Morocco.

Bouaouda began her career in 1997 as an auditor with Dorlian and Associés and then MCA and Associés. She joined KPMG Morocco in 2001 as a senior manager and joined MATIS Aerospace in 2006 as finance director, before becoming operations director in 2017.

ExecuJet expands

Luxaviation's ExecuJet is expanding its capabilities in Africa, adding a second Pilatus PC-24 to its managed fleet.

ExecuJet pioneered the use of the PC-24 for charter missions in Africa, becoming the first business aviation company to operate and manage the jet in the region last year.

Both PC-24s will be based at ExecuJet's FBO at Cape Town International Airport in South Africa.



Ethiopian has introduced internet connectivity. Right: Tewelde GebreMariam receives his honorary doctorate.

Ethiopian in \$500m partnership with Collins

Ethiopian Airlines Group has signed a partnership agreement, valued at \$500 million, with Collins Aerospace.

The 25-year agreement covers maintenance of heat exchangers, air management systems, and fuel metering units on 60 De Havilland Canada Dash 8-400 turboprops.

Ethiopian Group CEO, Tewelde GebreMariam, said: "Within our strategic roadmap – vision 2025 – we envision making our MRO unit the leading service provider in Africa with revenue close to \$600 million.

"As our MRO continues to rapidly expand in line with our strategy, the new partnership enables us to serve other African carriers with their Q-400 aircraft maintenance needs.

Meanwhile, Ethiopian has introduced internet connectivity, with the latest Ka-band broadband satellite technology, on its A350 fleet.

Tewelde said: "The launch of the on-board Wi-Fi internet is part of our relentless efforts to further add to passengers' comfort, keeping pace with the technology of the day. As a customer-

centric airline, we will remain focused on continuous service excellence, taking advantage of emerging technologies and infrastructure."

There was also personal delight for Tewelde recently when Addis Ababa University conferred an honorary doctorate degree upon him.

Dr Abiy Ahmed, Prime Minister of Ethiopia, awarded the degree in recognition and honour of the CEO's achievements in the growth and expansion of Ethiopian Airlines.

■ Ethiopian plots flightpath, page 23.



Bestfly founding partners Alcinda Pereira and Nuno Pereira mark the arrival of two ATR 72-600 aircraft to the fleet.

Bestfly signs for ATR 72-600s

Nuno Pereira, CEO and founder of Bestfly, the Angola-based aviation services company, signed for the company's first two ATR 72-600 regional aircraft in August.

The twin-engine, turboprop regional airliners, which have been leased from ACIA Aero Capital group, represent a first of this type for Bestfly, as well as being the first ATR-600 series to operate in Angola.

"We are a customer-centric organisation and we responded to the growing demand for this type of aircraft from our clients," said Nuno Pereira.

"As ATR is one of the world's leading regional aircraft manufacturers, we're proud to be doing our part to expand regional connectivity in Angola by basing these aircraft here."

Sabre thrusts into cloud solution

South African carrier, kulula.com, is to implement Sabre's new cloud-based digital workspace solution, aiming to transform the airport experience.

Digital workspace should help shorten queuing times and allow passengers to enjoy a hassle-free check-in experience.

The technology will be rolled out across all the airports that kulula.com serves, assisting more than 1,200 agents and making them up to 30% more efficient.

"Investing in new, digital technologies is crucial to our strategy, which centres around improving the travel experience for our passengers," said Wrenelle Stander, Joint CEO of Comair, which operates kulula.com. "In today's digital

world, our customers expect a reimagined air travel experience, and Sabre's digital technology will help us achieve our goal of becoming the most visionary and customer-centric carrier on the African continent."

Uganda eyes up Zipline

Uganda could be the next company interested in using the commercial drone delivery service, Zipline.

The company, which already operates in Rwanda, has been in talks with Uganda, which, according to Zipline's head of global regulatory affairs, Dan Czerwonka, is showing a strong interest.

Czerwonka added that "at least 20 countries in Africa" are also interested in the service.

■ Zipping to the rescue, page 57.

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Airbus tests connected cabin IoT

Airbus has begun in-flight trials of internet of things (IoT) connected cabin technologies on board an A350-900 flight laboratory aircraft – thus becoming the first aircraft manufacturer to undertake such flight-testing of actual connected cabin innovations.

The platform, known as the airspace connected experience, was unveiled at APEX Expo last year. It will usher in a new personalised experience for passengers and provide opportunities for improving airlines' ancillary revenues and operational efficiencies.

All go for IndiGo

Training organisation Insight Aviation, based at Port Alfred in South Africa, has been awarded a contract to select and train pilots for India's low-cost carrier IndiGo.

The initial first stage of training – the air transport pilot licence (ATPL) theory – will be carried out in India, before the cadets move to Port Alfred for their basic flight training.

Upon return to India, Insight Aviation will manage the conversion of the cadets' South African Civil Aviation Authority licence into an Indian DGCA licence before they proceed to an authorised aviation training organisation



Tunisair Express buys three ATR 72-600s

Tunisair Express and ATR have confirmed a firm order for three ATR 72-600s. The aircraft will renew Tunisair Express' regional fleet and supply essential connectivity, both domestically and internationally.

Tunisair Express director general, Yosr Chouari, said: "We have had a long and strong partnership with ATR since the early 1990s and we are pleased to introduce the modern ATR 72-600 into our fleet thanks to the support of the Tunisian Government and parent company

Tunisair. When deciding on a fleet renewal strategy, it was clear that the combination of its unbeatable economics and most eco-responsible performance made the ATR the best choice for our regional network.

"We are sure that our passengers will greatly appreciate the modern, spacious cabin, with its widest-in-class seats and the new cutting-edge Cabinstream technology, giving them an exceptional on-board experience."

(ATO) for a multi crew cooperation (MCC) and A320 type rating course.

Vertis adds Falcon 900EX

Switzerland-headquartered Vertis Aviation has added a Dassault Falcon 900EX to its Vertis charter management programme (VCMP).

The latest addition to the virtual roster of aircraft is managed and operated by a UK air operator's certificate (AOC) holder and is now exclusively marketed through Vertis.

Based at London Farnborough Airport, the Falcon 900EX is available for international charter immediately through any of

the Vertis offices in Cape Town, Dubai, Boston, and the headquarters in Zug.

■ **Swiss bank on the Hart of Africa**, page 39.

Dogged determination

Military personnel from the Nigerian Air Force (NAF) began intensive training in South Africa in June to qualify as highly specialised canine unit (K-9 unit) operatives.

The programme enhanced the NAF's special operations, explosive ordinance detection (EOD) and narcotics detection capabilities, with instruction given by the experts at Paramount K9 Solutions,

one of Africa's leading K9 training academies – a subsidiary of Paramount Group.

Tanzania link back after 10 years

The first of Air Tanzania's four weekly flights between South Africa and the east African nation took to the skies from OR Tambo International Airport in July after more than 10 years.

Air Tanzania managing director, Ladislaus Matindi, said: "Tanzania is an increasingly popular destination within Africa and we believe greater connectivity will encourage more South Africans to visit our country."

Turkish cargo marketing deal

ECS Group's Turkish subsidiary, Globe Air Cargo Turkey (GAC TR), has signed an exclusivity contract with EgyptAir Cargo to begin optimising marketing of its cargo offering from September.

Since 2016, GAC TR had already been one of the Egyptian airline's preferred sales agents.

Three years later, it is becoming its exclusive contact for managing marketing of its cargo capacity and its other services within the region.

Growth slowing

The International Air Transport Association (IATA) announced slowing global passenger demand growth for July. Total revenue passenger kilometres (RPKs) rose 3.6%, compared to the same month in 2018. This was down from 5.1% annual growth recorded in June.

African airlines' July traffic rose 3.6%, a significant decline from 9.8% growth recorded in June, as weakening business confidence in South Africa offset solid economic conditions elsewhere on the continent.

Capacity rose 6.1%, and load factor slipped 1.7 percentage points to 72.9%.

Pegasus signs tech deal

South Africa's Pegasus Universal Aerospace, pioneer of the vertical business jet (VBJ) Pegasus One, signed a memorandum of understanding (MoU) in September with UK-based, technical aviation consultancy, Callen-Lenz Group.

The agreement brings the two companies together to exclusively collaborate on the design and development of the flight control systems for the Pegasus One aircraft.

The flight control systems are integral to supporting the aircraft operations in all phases of flight, including transition from vertical take-off and hover to forward horizontal flight.

The merging of these functions into one unique system will be a key technology, enabling Pegasus One to deliver its powerful performance capabilities.



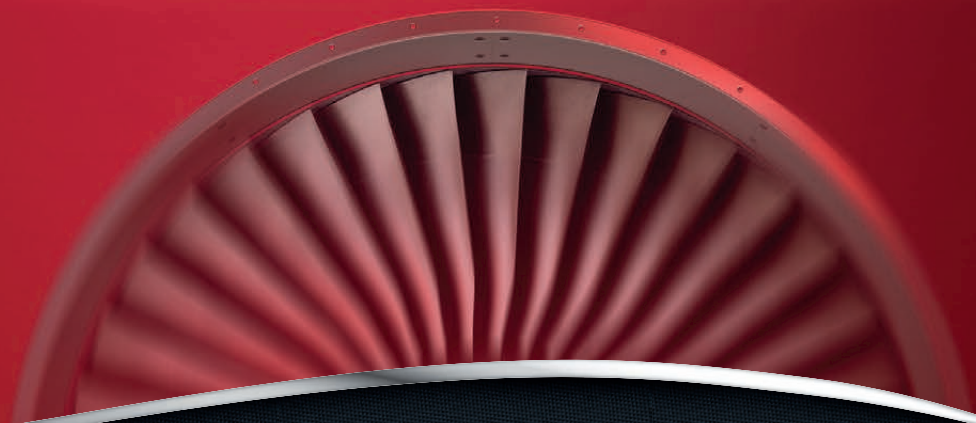
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Extraordinary together



*Ahmed Adel, EgyptAir's new chairman and chief executive, tells **Martin Rivers and Alan Peaford** why he is looking forward to a renewed period of growth and prosperity for the nation's flag-carrier.*

ADEL'S GRAND PLAN

Improved security throughout Egypt and renewed investment under President Abdel Fattah el Sisi means optimism is rising on the streets of Cairo.

And that translates very much to EgyptAir, the nation's national flag-carrier.

Like any state-owned airline, EgyptAir's fortunes are tied inexorably to those of its home nation. That has translated to heavy losses and weak demand in recent years as the country was buffeted by successive waves of political and security unrest.

Two devastating air disasters – the bombing of Metrojet flight 9268 and the still unexplained crash of EgyptAir Flight 804 – only added to the airline's troubles.

However, with large-scale projects like the Grand Egyptian Museum and a new high-speed rail network fuelling hopes of a happier future – one in which both locals and foreigners can travel across this ancient land without fear of violence or persecution – things are looking up.

For Ahmed Adel, EgyptAir's new chairman and chief executive, preparing the flag-carrier for the next decade is a balancing act between unlocking the country's growth potential and building defences against the next, possible crisis.

"The aviation business goes hand-in-hand with the economy and with the country's stability. In the past two to three years, stability in Egypt has become much, much better," said Adel.

"With the mega projects that are happening in the country, the stability, and the security enhancements, we are expecting that there's going to be good growth. The numbers that are coming out of the tourism ministry are very promising.

"But the aviation industry is very sensitive. It's very affected by geopolitical situations."

Despite planning to grow the 72-strong fleet to more than 100 aircraft, therefore, Adel's immediate focus is on a "complete restructuring plan for the future, to make EgyptAir well placed in the aviation industry and able to compete".

Lifting operational efficiency, streamlining group-wide management structures, and rejuvenating the route network are his top priorities.

The first step was hiring consultancy firm, Bain & Company, to assist with the development of the overarching turnaround plan. Following 'quick wins', such as boosting aircraft utilisation, Adel's attention has now turned to an 18-month implementation phase that will see the activities of several subsidiaries folded into the main airline.



"In a nutshell, the strategy that we agreed upon is to make the holding company a lean entity where all the strategic decisions are made, and to consolidate or merge some of the companies together to have a more efficient product," he explained.

EgyptAir Express, the group's regional arm, will be the first casualty.

Its existing fleet of 12 Embraer E170s will be replaced by an identical number of Airbus A220s between now and next April. But, with the new model being inducted by the mainline carrier rather than the subsidiary, Express is effectively being shut down.

"Instead of two companies with two different boards, [we want] to make the decision-making process under one roof, to start moving forward towards an efficient smart network," Adel said.

In the past, he admitted, rival managers at the

Ahmed Adel: "Our next step is to start looking into the renovation of the next 50% of the fleet, and to grow north of 100 aircraft by 2027."



mainline and regional subsidiaries have ended up "competing with each other" instead of "working hand-in-hand" to promote the broader interests of the group.

Changes are also expected at Air Cairo, EgyptAir's leisure-focused subsidiary, though precise details have not been finalised and the brand is expected to survive.

Air Cairo currently has an awkward business model straddling both scheduled low-cost carrier (LCC) operations and more traditional charter flights. Its hybrid approach is, in part, a reflection of the Egyptian market's continued reliance on pre-packaged holidays – a sector that has been in decline globally amid the rise of self-booked online travel.

In 2017, Yasser el Ramly, Air Cairo's chairman and chief executive, said he planned to nearly triple



the fleet size while pivoting towards higher frequency scheduled operations. To date, however, little has changed at the company beyond the unveiling of a new brand.

Adel tacitly admitted that Air Cairo is not meeting its potential and said the best way forward could be for EgyptAir to take full ownership of the subsidiary.

“We hold a 60% stake in Air Cairo, so we are doing our due diligence now because Air Cairo fits as a low-cost arm, and our strategy is to have a strong low-cost arm,” he affirmed.

“We are looking into considering acquiring Air Cairo fully... If we take the decision to acquire it, we’re going to turn it around completely to be an LCC operator, fully scheduled, with all the bells and whistles and the perks that come with being an LCC.”

Asked whether the no-frills model is compatible with Egyptian regulations – foreign carriers are obliged to offer a full-service product on routes to the country – Adel said the legal landscape will be assessed before any investment is made.

“We will look into it, because it [Air Cairo] falls under the 159 law not the 203 law of EgyptAir,” he noted. “We want to keep it this way... The 159 law gives more freedom.”

Further opportunities for consolidation have been identified in the cargo division.

EgyptAir Cargo last year became launch customer for the A330-200P2F and currently deploys two of the passenger-to-freighter conversions, with a third expected shortly. When that unit arrives, the airline’s last A300F will be retired and type commonality will allow the

Continued
on Page 18

Large-scale projects like the Grand Egyptian Museum and a new high-speed rail network are fuelling hopes of a happier future.



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CONTINUED FROM PAGE 15

operation of the freighter fleet to be moved to the main airline.

Responsibility for the EgyptAir Cargo Village will also be transferred to EgyptAir Ground Services, Adel said, citing the latter's specialised expertise.

At a government level, talks are, meanwhile, under way about possible consolidation between the EgyptAir Training Academy and the transport ministry's own pilot cadet programme. Adel believes a merger is now likely, though it is not clear whether the new entity will come under the umbrella of the airline or the ministry.

Turning to the fleet, he admitted that diversity in the types of aircraft operated by EgyptAir is an obstacle to greater efficiencies.

The mainline carrier currently deploys six Boeing 777-300s, six 787-9 Dreamliners, 29 737-800s, four A330-200s, four A330-300s, and four A320s. Another three Airbus freighters, 12 Embraers and seven A320s are operated by EgyptAir Cargo, EgyptAir Express and Air Cairo respectively.

Although fleet rationalisation has been a stated goal of successive management teams, EgyptAir continues to deploy a mixture of Airbus and Boeing metal in both its narrow-body and wide-body fleets.

then move into the network planning, and then make the decision about the second batch of the aircraft... We're now working on that aggressively."

The chairman would not be drawn on his preferences for future orders, confirming only that the 777-300s will need replacing in the first half of the next decade – followed shortly after by the A330-300s. About half of EgyptAir's 737-800s and all of Air Cairo's A320s will also be more than 15 years old by that timeframe.

Earlier plans to deploy as many as eight freighters – including a pair of A320P2Fs – are no longer active due to challenging conditions in the cargo market.

"We converted three, and then instead of converting the rest we have shifted the strategy [by] increasing the amount of [passenger] aircraft in the fleet, so increasing the belly volume," Adel explained.

"For example, the cargo [subsidiary] was thinking of operating a direct flight to Chicago. Then, when we opened the Washington Dulles route, they found that there is no need... because the bellies of these [Dreamliner] aircraft would be more than enough to move cargo in and out of the United States."

Washington became EgyptAir's third North American destination when it was launched in June

"We operate to more than 19 destinations in Africa, and are we looking to increase them? Yes, we are. One of the reasons we are looking into the aircraft capacities is to operate with maximum efficiency to west Africa.

"This area is a challenge. Do we go with a wide-body or a narrow-body where you have a problem with restriction with the loads? So, we're trying to find the sweet spot to operate in west Africa. But we're definitely interested.

"Our president is now the head of the African Union. So the whole mindset in the country is to focus on collaborations and expansions in Africa," he said.

But it is the domestic network that stands to benefit most from the new aircraft type. Several of the A220s are likely to be based at the new Sphinx Airport to the west of Cairo, enabling whistle-stop tours of the capital's main attractions.

"With the opening of the Grand Museum there will be an opportunity for one-day visits," Adel affirmed. "People can come from Europe to the [Red Sea] resorts and then fly for one day without checking out of their hotel – take a tour of the pyramids and the Grand Museum – and go back to their hotel for their diving or sun-and-sea vacation."



At home base Cairo International Airport, meanwhile, EgyptAir aspires to have a "seamless, efficient connecting hub" that will grow the sixth-freedom traffic – but not at the expense of more lucrative point-to-point operations.

Adel is also conservative when it comes to the hot-potato subject of open skies, drawing a sharp distinction between unilateral arrangements that work to the advantage of one side and bilateral deals that spread the benefits more equally.

He cited the example of Saudi Arabia, with whom Egypt has "excellent bilateral agreements" owing to strong traffic flows between the two countries.

Without explicitly stating it, the chairman implied that such an agreement would not be possible with a super-connector airline like Emirates. Any open-skies deal with the Dubai Government would allow its flag-carrier to Hoover up Asia-bound passengers from Cairo in vast numbers, while offering just one travel market in return.

"It has to be reciprocal," Adel insisted. "This is our position. This is the win-win situation."

Broader aero-political liberalisation is a question of "when, not if" for the Egyptian Government, he said, but EgyptAir needs time to prepare itself before the competitive floodgates are opened.

"Economically, you need to look at all aspects. If you look from the tourism aspect, yes, it [open skies] is excellent for today. But what if something happens?"

"All the companies that have the capacity to come [to Egypt] with seven or eight flights a day can close shop within 24 hours. And what's going to happen then? You're going to go looking for your national carrier, and it's not going to be there." ■



In need of replacement: The mainline carrier currently deploys six Boeing 777-300s.

The flag-carrier is inducting 15 A320neos next year, for example, despite nine of its 737-800s having been delivered by Boeing within the past three years. Likewise, the arrival of the final three Dreamliners on order, which flew in in August, comes alongside plans to keep the A330-300s in service for several more years.

The passenger A330-200s and the older-generation A320s are the only models facing imminent retirement, though EgyptAir also recently stopped operating the 777-200 and the A340.

"Our next step is to start looking into the renovation of the next 50% of the fleet, and to grow north of 100 aircraft by 2027," Adel said, confirming that an earlier target of 127 aircraft by 2025 has been scrapped.

"I wouldn't say it's slowed down. I would say we're looking at it again, because with everything that's happening we don't want to bite off more than we can chew.

"We needed to finish the restructuring plan and

as a thrice-weekly service, joining New York JFK and Toronto.

Adel wants to grow frequencies to five or seven flights per week "as fast as we can", but will only do so when demand justifies the move.

Extra capacity is also planned for the airline's twice-daily service to London Heathrow, with a Dreamliner due to take over from the 737-800 that currently operates the afternoon flight.

At the time of writing, the network also included another 18 points in Europe, 18 in Africa, 16 in the Middle East and six in Asia Pacific.

Route launches are unlikely to be a priority until further progress is made with the restructuring plan. But Adel confirmed that Shanghai remains of interest if suitable landing slots are offered by the Chinese authorities. And Africa is always "on the table", he said, as evidenced by recent expansion to Douala (Cameroon) and Kigali (Rwanda).

The African network should grow further with the arrival of the A220s, as their range and capacity is nearly twice that of the E170s they are replacing.

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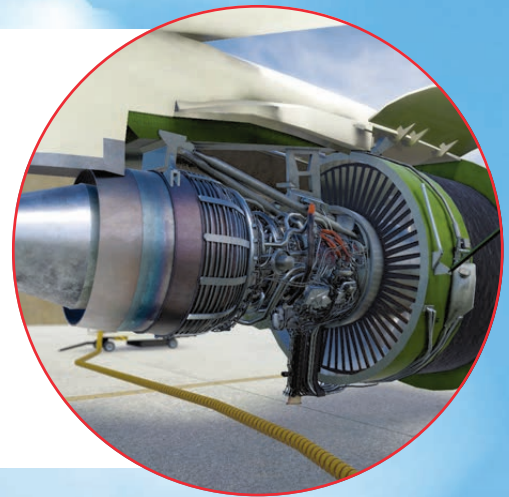
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How Team Congo can pull

Desiré Balazire Bantu was appointed chief executive of Congo Airways in 2016 with a mandate to deliver sustainable growth at the state-owned flag-carrier, which launched services the previous year.

His aim of deploying 10 aircraft by 2020 quickly unravelled when the then president, Joseph Kabila, refused to step down at the end of his term, igniting a full-blown political crisis in the Democratic Republic of the Congo (DRC).

It was not until this January that a successor replaced him and relative calm returned to capital city Kinshasa.

“A lot of things changed. The country was expecting to have elections but they were postponed for two years and this had an impact on our strategy,” Balazire recalled.

“Because we are a public-owned company, we need to have a government which can plan with us for the long-term. The government we had during the transition period could not [do that]... But we have, now, a new president. He recently appointed the prime minister. They are working to have a new cabinet. And I think that with that team we can work now for our future.”

Despite the challenging climate, Congo Airways has expanded its presence and now serves 14 airports in the vast central African country. Most of its routes are operated with a fully owned fleet of two Airbus A320s and two De Havilland Canada Dash-8 Q400s, though wet-leases are also frequently used to lift capacity.

Attempts to expand beyond the DRC's borders have been less successful: only one of the three international markets added last year – Johannesburg (South Africa) – is still being served.

Asked about the closure of the fifth-freedom route from Kinshasa via Douala (Cameroon) to Cotonou (Benin), Balazire blamed tough competition with the continent's more established airlines.

“We are not the only operator. We have Kenya Airways, Ethiopian, Asky and also Air Côte d'Ivoire,” he noted. “Passengers are more familiar with their products and so on. This means we have to work very hard in order to convince those passengers to be travelling with us.”

Congo Airways boss, Desiré Balazire Bantu, explains to Martin Rivers and Romuald Nguéyap how political unrest at home has slowed the flag-carrier's growth plans.



Desiré Balazire Bantu: Believes with the country's new government team in place Congo Airways can work on its future.

The chief executive cited a study by one consultant which found that only 35 passengers were likely to travel each way on the Kinshasa-Douala leg. That would represent a 51% load factor on the Q400, making the route commercially unviable, even with the smallest model in Congo Airways' fleet.

Cargo uplift in Benin also fell short of the company's expectations, he added.

Management will “re-examine” the business case for Douala and Cotonou in the future, but Kinshasa is unlikely to be used as the point of origin.

Instead, Balazire now wants to introduce a five-point service originating in Brazzaville, the capital of neighbouring Congo Brazzaville. That line would first stop in Libreville (Gabon) before passing through Douala and Cotonou and eventually reaching Abidjan (Côte d'Ivoire). It is considered viable because of the recent failure of Equatorial Congo Airlines (ECAir), Congo Brazzaville's own flag-carrier.

“And also, we have Bangui,” Balazire noted, referring to the capital of the Central African Republic. “The airport asked us to go there, but there is no market [for travel] from Bangui to Kinshasa. But there is from Brazzaville to Bangui.”

Congo Airways previously set a target of opening eight new overseas stations in 2019 – also including Pointe Noire (Congo Brazzaville), Bujumbura (Burundi), Nairobi (Kenya) and Luanda (Angola) – but meaningful expansion will not be possible until more aircraft join the fleet. There is, therefore, no timeframe for any of the route launches.

Efforts to spread the flag-carrier's wings beyond Africa also lack momentum, though Balazire remains hopeful that European and Asian flights could get off the ground by 2021.

“In Europe, we are targeting Brussels and Paris,” he confirmed. “Congo Airways is already in the process of [undergoing] third country operator [TCO] certification. We are also targeting Asia to go to Dubai and Guangzhou, and we will see if we can also combine this with Mumbai.”

Asked about plans to acquire two wide-bodies for the

away from the turbulence

Expanding presence in the DRC: Congo Airways now serves 14 airports in the vast central African country.



proposed long-haul network, the chief executive downplayed suggestions of a direct order with Airbus or Boeing.

"We have two possibilities," he insisted. "The first one is to lease the wide-bodies. We have some offers from lessors and we will continue discussing with them. The other possibility is to collaborate with Ethiopian Airlines. They are ready to give us the right aircraft. They can sub-lease them."

Balazire is confident that Congo Airways will secure TCO status from the European Union this year, noting its successful completion of the International Air Transport Association (IATA) operational safety audit (IOSA) in 2018.

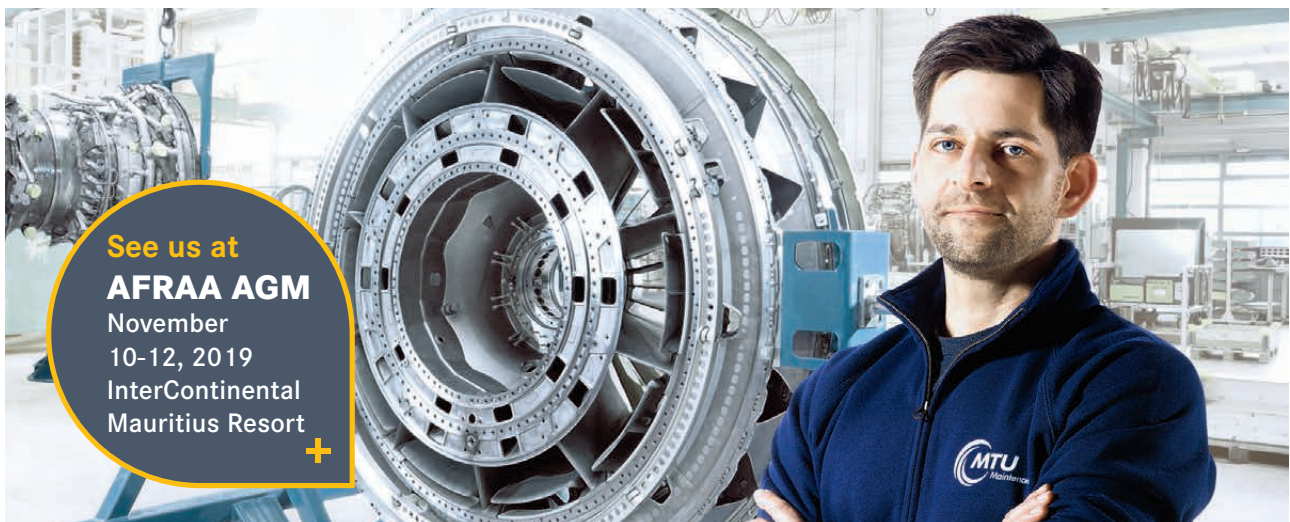
However, if there is a delay to certification, the airline also has a third option: taking delivery of wide-bodies and registering them in a foreign country under a flag of convenience. That

approach has been favoured by Libya's airlines since their inclusion on the European blacklist. But it is considered a last resort by Congo Airways, which was created to raise standards in the DRC.

On the financial side, the airline's turnover increased from \$39 million in 2016 to \$74 million in 2017. "For 2018, the preliminary figures indicate nearly \$73 million," Balazire said, citing the impact of political unrest.

He added that talks with Ethiopian Airlines about a "strategic partnership" are also gathering pace. Ethiopian Airlines has adopted a multi-hub strategy by investing in several African flag-carriers, including Togo's Asky and Malawian Airlines. It is now negotiating a 15% stake in Congo Airways' ground-handling subsidiary, Africa Handling, which could serve as a precursor to buying equity in the airline.

In 2016, the DRC's former transport minister, Justin Kalumba Mwana Ngongo, told *African Aerospace* that Ethiopian Airlines had sent him six letters asking to invest in Congo Airways. ■



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Ethiopian plots flightpath to 2035

Ethiopian Airlines will shortly unveil a new strategic roadmap to serve the airline from 2020 to 2035. **Kaleyesus Bekele** talked to CEO, **Tewolde GebreMariam**, to find out more.



Our strategic roadmap draws a line from China all the way to Brazil and we are located right in the middle.

**TEWOLDE
GEBREMARIAM**

Ethiopian Airlines is one of the fastest growing carriers in Africa. It currently operates 125 aircraft, with an average age of less than five years, and serves 121 international and 22 domestic destinations.

In 2011, Ethiopian began implementing a 15-year growth roadmap dubbed vision 2025. Under that plan it transformed itself from an airline into the biggest aviation group in Africa with seven profit centres – Ethiopian International, Ethiopian Express (regional), Ethiopian Cargo, Ethiopian MRO, Ethiopian Catering, Ethiopian Aviation Academy and Ethiopian Ground Handling.

The airline, which had an annual passenger traffic of three million and a revenue of \$1.3 billion in 2010, today transports more than 12 million passengers and generates an annual revenue of \$4 billion.

After achieving most of the targets set in vision 2025, the management is now drafting a new growth strategy dubbed vision 2035 – a plan aimed at sustaining the airline’s fast growth.



Ethiopian Airlines Group CEO, Tewolde GebreMariam, said: “Our strategic roadmap draws a line from China all the way to Brazil and we are located right in the middle. China is still growing, albeit slower. India is growing again. Africa is growing, although there are different countries at different paces of growth. South America is growing; we are happy to see the Brazilian economy, the biggest in South America, is coming back to growth after a long period of recession.”

Today Ethiopian serves 60 destinations in Africa. But

now, as the competition heats up, Ethiopian is trying to find new markets elsewhere.

Tewolde said: “Our flights to Latin America have very good load factors, not only from Africa but from China, Japan, Korea, India, Israel, Lebanon and Italy. These are the markets that we are entering.”

The airline wants to connect Europe with Asia via its Addis Ababa hub. “Bringing passengers from Europe and connecting them through Addis with Thailand, Malaysia, the Philippines, and Indonesia is doable as long as we do it in the right way,” said the CEO. “These are relatively challenging markets but we should be prepared for that.”

Ethiopian is also contemplating connecting North America with Asia via Addis Ababa.

The other new market which the airline started to serve recently is the west Africa-North America market.

Ethiopian is flying to New York via Lome and it is also planning to fly to North America via Accra. The carrier recently signed an agreement with the Ghanaian Government to set up a home-based carrier in Accra.

“We have Asky in Lome and we are working to establish a new airline in Accra. But we do not want two kids fighting over the same bread. We want them to complement each other,” Tewolde said.



Ethiopian is also considering connecting south east Asia with the Middle East. “The pilgrimage market from Indonesia to Saudi Arabia is huge. The competition is also tough – the gulf carriers, Saudi Arabian airline, Garuda, Turkish, and so on – but we will have our own share,” he said.

Ethiopian has ventured into the hotel and tourism sector by setting up Ethiopian Holidays and inaugurating a five-star hotel named Ethiopian Skylight Hotel near Addis Ababa Bole International Airport. It started building the second phase of the hotel recently.

It has also teamed up with DHL to transform its cargo business into a fully fledged logistics company and is in the process of establishing an aerospace manufacturing industry. The management has initiated talks with leading aircraft and engine manufacturers like Boeing, Airbus, Bombardier (De Havilland) Safran and Collins Aerospace.

Under vision 2035 the airline will grow its fleet to more than 200 aircraft and the aviation group annual revenue would be more than \$25 billion.

However, scaling up the growth is not an easy task. “We know that it is going to be challenging,” said Tewolde.

“Human resource development, infrastructure, systems, the operating environment – bringing all these things up to the next level will be a challenge. For instance, five years from now, Addis Ababa Airport will not be able to accommodate us – even with the expansion – because we are going to fill in the extra capacity in the next four or five years at the rate that we are growing. So, we need a new airport and we are working on that.”

■ **Aviation Africa, page 73.**

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Introduction to Flight Operations Management (Classroom, 5 Days)	30/09/2019	04/10/2019
Professional Skills For DGR Instructors - Categories 1,2,3,6 (Classroom, 5 Days)	30/09/2019	04/10/2019

OCTOBER

Training Needs Assessment (Classroom, 3 days)	14/10/2019	16/10/2019
Airline Marketing (Classroom, 4 days)	14/10/2019	17/10/2019
Airline Leading Practices and Cost Reduction Strategies (Classroom, 5 days)	21/10/2019	25/10/2019

NOVEMBER

Crew Resource Management (CRM) Implementation (Classroom, 3 days)	04/11/2019	06/11/2019
Tax Planning and Compliance for International Airline Professionals (Classroom, 3 days)	04/11/2019	06/11/2019
Aircraft Decommissioning Workshop (Classroom, 2 days)	07/11/2019	08/11/2019
Network, Fleet and Schedule Planning (Classroom, 5 days)	11/11/2019	15/11/2019

DECEMBER

ULD Operations (Classroom, 3 days)	02/12/2019	04/12/2019
Airport Terminal Planning and Design (Classroom, 5 days)	02/12/2019	06/12/2019
Aircraft Airworthiness and Air Carrier Certification (Classroom, 5 days)	09/12/2019	13/12/2019
Crew Resource Management for Instructors (CRMI) - (Classroom, 3 days)	16/12/2019	18/12/2019

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*Fly Angola's general manager, Belarnicio Muangala, tells **Martin Rivers** why the start-up airline is betting on one of Africa's most restricted aviation markets.*

ANGOLA'S GOAL

Angola's aviation sector took a symbolic step forward in April, when the European Union lifted all restrictions on TAAG Angola operating in its airspace.

The state-owned flag-carrier had been trying to shake off its EU ban for more than a decade: first gaining an exemption for Portuguese flights; then securing the right to serve elsewhere in Europe with specific aircraft; and finally, being given unfettered access to the continent.

By removing TAAG from its blacklist, Brussels signalled that the mismanagement and corruption associated with the airline no longer poses a danger to the safety of flight.

On a broader commercial level, however, there remains little positive to say about civil aviation in Angola.

The government still keeps foreign airlines on a tight leash by restricting traffic rights at Luanda's Quatro de Fevereiro International Airport, the country's main hub. Its grip on the domestic market is even firmer: the closest thing TAAG has to a competitor is another state-owned entity, SonAir, which is a subsidiary of national oil firm, Sonangol.

It was in this stagnant business climate that Gestomobil, an Angolan investment firm, last year launched its own scheduled airline: Fly Angola.

"Since 2017 we have been forecasting the market for overall investment in the economy of Angola, and we identified a big opportunity in aviation," explained general manager, Belarnicio Muangala.

"TAAG and SonAir were the only operators on some routes, and all the markets were underserved. We had non-regular operators like AeroJet, which is our air operator's certificate (AOC) holder. We had Guicango. But all these operators mainly operated charter flights. And, obviously, because Angola has a big road and railway network problem, we identified this opportunity for aviation."

Fly Angola currently sells tickets from capital city Luanda to Saurimo and Dundo in the east of the country, and Benguela and Lubango in the south.

Its route network – a mixture of direct roundtrips and triangle flights – is operated with a fully owned 50-seat Embraer ERJ-145 (registration D2-FDF)

that has been placed on the registry of AeroJet, a local charter carrier.

Sub-contracting technical providers is an expensive way of launching an airline, but Muangala described the set-up as a temporary measure.

"It made no sense to go through certification and to invest before we were sure the market confirmed our business plan and all our forecasts," he argued. "Now we are acquiring an AOC ourselves to gain operational control, and we think financially it makes more sense to add aircraft under our own AOC."

As well shifting D2-FDF to its own registry, Fly Angola plans to acquire a second ERJ-145 "as soon as we can get the certification process concluded". That unit will primarily be a "back-up" aircraft to keep flights running smoothly during scheduled maintenance work and aircraft-on-ground (AOG) incidents. Before then, however, management expect to sign a dry lease for a smaller EMB-120 that can grow the network while AeroJet is still handling operations.



Muangala said the 30-seat aircraft would spend four days of the week based at Benguela's Catumbela Airport, which he envisages becoming a "mini-hub" for Angola's south-western provinces.

"This is something, I think, in the last five years no operator has done," he noted. "But, because of the traffic we have carried from Luanda to Benguela and vice versa, we have been able to survey the passengers and see that not all of them have Benguela as [their] end destination. So, we are now looking at options of feeding Benguela from Namibe, Lubango and Ondjiva."

The EMB-120 will spend the rest of the week in Luanda, running triangle flights to Soyo and the northern exclave of Cabinda – the beating heart of Angola's petro-economy thanks to its vast off-shore oilfields.

Fly Angola conducted test flights from Luanda to Cabinda in February and has already opened a sales office in the province. But, despite calling it the country's "biggest route in terms of demand", Muangala is braced for tough market conditions.

TAAG currently deploys mid-size Boeing 737-700s to both coastal cities, dramatically undercutting the seat costs that Fly Angola can achieve with its regional fleet. SonAir's Beechcraft 1900Ds also make regular appearances at the two northern airports. Though smaller than the EMB-120, their presence eats up demand from contractors working with Sonangol.

Asked about opportunities for route development in the east of the country, Muangala noted that Luena is already served on a charter basis – primarily catering for financial companies – but there are no plans to make the link scheduled.

"The perspective for Luena is different," he explained. "Luena is in the province of Moxico – bordered by Zambia – and to the south you have [the province of] Kuando-Kubango, which borders Namibia. So, in terms of trade and the social perspective, the populations of these provinces find it easier to go to Zambia or even to Namibia. Passengers don't really seek to come to Luanda."

Demand for air freight in the town is also limited due to the presence of the Benguela Railway line – the largest of its kind in Angola – which runs eastward from the coast through Luena and into the Democratic Republic of the Congo (DRC).

"So, we think [scheduled] flying in Luena would [involve] making a new hub again like Benguela and flying to the other points in the east like Saurimo or Dundo, or to the south to Menongue. This makes sense... but it's worth experimenting with the Benguela hub first."

When it comes to international markets, Fly Angola is pragmatic about the restrictions imposed on domestic carriers by the government.

The company has identified several destinations of interest across Angola's northern borders with the DRC and Congo Brazzaville. Without naming specific cities, Muangala said his team is "one step ahead" of the competition and would be ready to launch flights "tomorrow" if given the green light.

That permission, however, will almost certainly not be forthcoming in the current climate. Management's only realistic chance of cross-border flying thus hinges on striking up a partnership with a foreign airline that already has traffic rights at



Workhorse: The route network – a mixture of direct roundtrips and triangle flights – is operated with a fully owned 50-seat Embraer ERJ-145.

Luanda. Though not an impossibility, Fly Angola's small size and limited operational experience makes this an unlikely near-term prospect.

Even so, Muangala believes planning for all eventualities is prudent – especially given strong support for open skies elsewhere in Africa.

“We don't want to take any steps before we see that there is a political willingness for this. But we think it's a matter of time,” he said. “The government will eventually have to think about internal companies being able to fly [overseas], because when they open up to the regional markets we will obviously see companies from Ethiopia, Kenya [etcetera] coming to Angola.”

□□□□□

Changing fortunes at the flag-carrier could also speed up the pace of liberalisation.

President Joao Lourenco has made privatisation a mainstay of his policy agenda since taking over from Jose Eduardo dos Santos in 2017, with TAAG front and centre of the sweeping reforms.

An earlier attempt to curb losses at the flag-carrier saw his predecessor award a management contract for TAAG to Dubai's Emirates Airline. But the partnership quickly collapsed when the government – reeling from low energy prices – blocked Emirates and other carriers from repatriating funds.

Adamant that TAAG needs private owners as well as managers, Lourenco has upped the ante by reincorporating the flag-carrier as a public limited company and pledging to sell its equity. He has also ditched plans for a public-private consortium of domestic operators – dubbed Air Connection Express – handing the group's order for six De Havilland Canada Dash-8 Q400s back to TAAG.

What all this means for Fly Angola remains to be seen, but Muangala is hopeful that its positive contribution to the country will not go unnoticed.

“We hope the government can reduce its influence in TAAG so that the private operators have a chance,” he said. “Angola is a country coming out of a recession and it's tough for the private companies to fight against a company that has support from the state.”

“It made no sense to go through certification and to invest before we were sure the market confirmed our business plan and all our forecasts. Now we are acquiring an AOC ourselves to gain operational control, and we think financially it makes more sense to add aircraft under our own AOC.”

BELARNICIO MUANGALA



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A CERTIFIED COMPANY



Abdelhamid Addou, PDG de Royal Air Maroc, compte accélérer le développement de la compagnie nationale marocaine pour devenir un leader continental. Le point avec Vincent Chappard.

DÉCOLLAGE VERS UN NOUVEAU MONDE POUR RAM

«RAM ready for take-off into a new world»

– Page 30

La compagnie Royal Air Maroc (RAM) est confrontée à une concurrence féroce tant au niveau domestique, régional qu'international. Le rôle de son PDG est de la rendre encore plus performante et dynamique sur les cinq continents, au service du développement économique et du désenclavement territorial du pays.

« Nous œuvrerons également à faire de Casablanca le principal hub du continent africain », souligne Abdelhamid Addou.

Au second trimestre 2019, RAM a lancé successivement deux routes vers les États-Unis : Boston et Miami. Ces deux destinations viennent renforcer son réseau en Amérique qui compte

déjà quatre routes : Montréal, New York, Sao Paulo et Rio de Janeiro. A noter qu'American Airlines a annoncé des vols vers Casablanca pour 2020, ses premiers en Afrique.

RAM compte aujourd'hui se développer en Chine. La compagnie nationale marocaine a ouvert les réservations pour le lancement de sa route Casablanca-Pékin le 16 janvier 2020. RAM viserait également d'autres hub du pays comme Guangzhou et Shanghai. C'est un marché prometteur en raison des investissements et de l'expansion du

Continuer à
la page 30



Un Boeing 787 de Royal Air Maroc.



RAM
devrait être
officiellement
intégrée à
Oneworld
mi-2020.
ABDELHAMID
ADDU

SUIVE DE LA PAGE 29

tourisme et des affaires de la Chine en Afrique.

En août dernier, RAM a signé un accord de partage de code avec Royal Jordanian. « Cette nouvelle coopération vient consolider les liens entre nos deux royaumes et soutenir notre vol Casablanca-Amman lancé en avril dernier », affirme Abdelhamid Addou. La compagnie dispose d'une bonne connexion avec le Moyen-Orient et dessert Amman, Beyrouth, Doha, Istanbul, Djeddah et Riyad.

La grande avancée sera sans conteste l'intégration de RAM à l'alliance Oneworld. La compagnie a reçu une invitation officielle le 5 décembre dernier à New York.

« Nous avons mis en place un PMO de 26 projets regroupant une centaine de salariés représentant l'ensemble des métiers », explique Abdelhamid Addou. « Le chantier avance conformément aux objectifs fixés et RAM devrait être officiellement intégrée à Oneworld mi-2020. »

RAM sera ainsi la première compagnie africaine à devenir membre à part entière de Oneworld. « Ce sera une reconnaissance pour le Maroc mais également de la qualité de RAM, de son leadership et de son ambition stratégique. L'accès vers nos destinations touristiques sera facilité. Enfin, nous serons à même de mieux connecter notre continent au reste du monde », ajoute son PDG.



RAM reste le leader sur le marché domestique malgré la concurrence d'Air Arabia Maroc. La compagnie nationale marocaine a également une stratégie de service public et assure le maillage vital des dessertes aériennes dans le pays. Elle contribue au désenclavement et au développement économique de nombreuses régions du Royaume.

Depuis le 11 juin dernier, RAM a ouvert une base aérienne à Laâyoune. Une convention de partenariat a en effet été signée entre le Conseil de la Région de Laâyoune Sakia Al Hamra et la compagnie aérienne. Son programme comprend six liaisons reliant Laâyoune à Agadir, Dakhla, Marrakech, Smara, Guelmim et Las Palmas. Elles renforcent l'offre existante via son hub régional de Casablanca.

« L'amélioration des connexions aériennes vers nos provinces du Sud contribuera indéniablement au développement économique

« Nous serons à même de mieux connecter notre continent au reste du monde. »

ABDELHAMID ADDOU

SUMMARY

RAM READY FOR TAKE-OFF INTO A NEW WORLD

Despite facing fierce competition at domestic, regional and international levels, Royal Air Maroc's dynamic chairman and CEO, Abdelhamid Addou, has plans to further develop Morocco's national airline (RAM) into a leading player on the African continent.

"We will also work to make Casablanca the main hub of the African continent and an early example of this is the fact that American Airlines will be flying into the city in 2020, its first African route," said Addou.

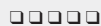
In the second quarter of 2019, RAM launched two new routes to the United States – Boston and Miami. These two destinations strengthen its network to the Americas, where it already serves Montreal, New York, Sao Paulo and Rio de Janeiro.

In August 2018, RAM signed a code-share agreement with Royal Jordanian Airlines and, said Addou, this new cooperation strengthens the ties between the two kingdoms and supports the new route from Casablanca to Amman.

RAM already has several routes to the Middle East, including Beirut, Doha, Istanbul, Jeddah and Riyadh. It has also opened bookings for when the Casablanca-Beijing route opens on January 16 2020.

But the further development of RAM's network is hampered currently by the grounding of its two Boeing B737MAX single-aisle airliners – and the non-delivery of two others due earlier this year – following the type's much-publicised accidents.

RAM has had to wet-lease four additional aircraft to maintain its routes to Vienna, Athens, Amman, Brussels and London.



But Addou believes that the most important step forward for the airline will be joining the Oneworld Alliance.

Oneworld currently comprises American Airlines, British Airways, Cathay Pacific and Qatar Airways. Addou said a project management team of around 100 RAM employees will ensure that the airline's integration will be finalised by mid-2020.

The Moroccan flag-carrier will be the first airline in Africa to become a full member of Oneworld and, he added: "It will be important recognition for Morocco and also for the quality of RAM, its leadership and strategic ambition. Access to our tourist destinations will be facilitated and we will finally be able to connect Morocco – and our part of the continent – to the rest of the world."

RAM intends to retain its leadership in the country's domestic market despite competition from Air Arabia Maroc. The Moroccan national airline has a public service strategy that ensures vital air links within the country.

In June this year RAM opened an airport in Laayoune, in the Sakia Al Hamra region, and six routes have been created linking Laayoune with Agadir, Dakhla, Marrakech, Smara, Guelmim and Las Palmas.

et social de nos régions par le renforcement de leur attractivité économique, la mise en valeur de leur potentiel touristique et en facilitant le déplacement de nos concitoyens », souligne Abdelhamid Addou.

Le développement du réseau de RAM est cependant contrarié par la mise au sol de ses B737MAX. Ils devaient être l'épine dorsale de sa flotte. La compagnie a déjà dû louer pendant plus de six mois (période estivale), quatre avions additionnels avec leurs équipages, afin de maintenir ses engagements vis-à-vis de ses clients. Cela comprend les nouvelles routes (Vienne, Athènes, Amman) et également l'augmentation de ses fréquences vers Bruxelles et Londres.

RAM compte aujourd'hui 61 avions dont 37 B737NG, 6 ATR-600, 4 E190, 2 B737MAX, 9 B787 et 2 B767. Elle aurait dû prendre livraison de ses deux B737MAX supplémentaires au premier semestre 2019.

« L'indisponibilité de nos quatre B737MAX a un impact financier majeur qui évolue malheureusement à la hausse au fur et à mesure que la durée d'immobilisation perdure », déclare Abdelhamid Addou.

Cette solution de leasing dans le contexte actuel engendre des coûts et des charges d'exploitation supplémentaires.



La transformation digitale et l'innovation est l'un des piliers du plan de développement de RAM. La compagnie vient lancer un nouveau service d'information robotisé et instantané via Whatsapp.

Cela lui permet d'offrir à ses clients des informations sur leur vol en temps réel. RAM devient ainsi l'une des cinq premières compagnies aériennes au monde et la première sur le continent africain à proposer ce service.

La compagnie a transféré ses activités vers le nouveau Terminal 1 de l'aéroport international de Casablanca. Il a été inauguré le 22 janvier dernier par sa majesté le Roi Mohammed VI.

« L'extension du terminal 1 de l'aéroport Mohammed V apporte une capacité d'accueil supplémentaire de 7 millions de passagers par an », rappelle de son côté Zouhair Mohammed El Aoufir, directeur général de l'ONDA.

Ce terminal regroupe maintenant l'ensemble des opérations de RAM ainsi que des compagnies aériennes partenaires. Il est notamment équipé d'un nouveau processus de check-in en libre-service. L'aéroport Mohammed V devient le premier aéroport en Afrique à proposer un enregistrement de bout en bout en libre-service.

Enfin, Abdelhamid Addou encourage l'initiative du SAATM. « Il faut aller de l'avant. Si l'on veut générer plus de trafic, attirer plus de touristes et de flux entre les différents pays, il est important d'optimiser les coûts et les taxes afin d'être rentable et compétitif. »

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A new agreement among African states seeks to link the growth of air transport and tourism – but more has to be done to improve the continent’s aviation infrastructure.

Alan Dron reports.

Big potential: Tourism, exemplified by this group of visitors and locals in Cabo Verde, can be a major revenue-earner for African nations – but only if there is cooperation between airlines and governments.



Just the ticket for tourism - or is it?

More than 20 aviation and tourism ministers from African nations have agreed a new action plan that links air transport and tourism development throughout the continent.

As prosperity increases across the globe – notably in Asia – tourism is rapidly becoming one of the fastest growing sectors of the international economy and offers considerable potential benefits to Africa.

A few African states, such as Egypt, Tunisia, Morocco and South Africa, have longstanding and substantial national tourist industries, while tourism in others, such as Cabo Verde, is much younger.

Air transport and tourism complemented each other and continued “to deliver increasing contributions to global socio-economic prosperity, with a combined contribution to world GDP today of close to 14%”, according to International Civil Aviation Organization (ICAO) president, Dr Olumuyiwa Benard Aliu.

He was speaking at an inaugural ministerial conference in Cabo Verde that brought together ICAO and the United Nations World Tourism Organization (UNWTO).

Aliu noted, however: “In Africa today, the incredible economic potentials of air transport and tourism still remain largely untapped.”

In recent years, the continent accounted for only 5% of global tourist arrivals and 3% of global tourism spending, he said, even despite recent modest growth attributable to the revival of the tourism industry in northern Africa, and improvements to African air connectivity generally.

He pointed to several connected factors that were hindering progress, including capacity limitations at many African airports, a related lack of finance and investment for infrastructure development and modernisation, and a persistent lack of skilled education and training capacity.

He also noted that some countries still had poor regulations covering markets, taxes on aviation, and difficulties in visitors easily obtaining visas.

It is well known that some governments still regard civil aviation as an easy target through which to raise money; the resulting taxes and charges – for example, for providing airport services – make flying more expensive. So, for a short-term gain to their treasury, those countries are actually throttling the growth of aviation over the longer term.

Just days before the Cabo Verde conference, Aliu had warned an aviation workshop in Nigeria that better air connectivity in Africa and the important sustainable development it could bring required more investment in the continent’s aviation infrastructure.

Africa had the greatest potential for growth in aviation passenger traffic – 4.3% annually from now until 2035 – of all ICAO’s global regions, but this growth was in danger of not being realised, he said.

□□□□□

“The launch last year of the African Union’s single market demonstrated Africa’s unity and agreement... that aviation connectivity’s socio-economic benefits are real, sustainable and worthy of the attention and commitment of African governments,” he told the workshop.

“But rapidly expanding air traffic and enhanced air connectivity can only be sustained with continued investment and development for aviation infrastructure, capacity and technology, supported by a regulatory framework that is ICAO-compliant and, therefore, harmonised with other states and regions.”

Aliu added that ICAO played an important role in bringing together donors, investors and governments that needed funding for aviation infrastructure. In doing so, the organisation facilitated local capacity-building and the mobilising of resources under its ‘no country left behind’ initiative.

However, he said, finding this type of dependable, long-term funding was becoming more difficult, which posed problems for many states.

Bearing in mind these problems, Aliu encouraged delegates to focus on developing pragmatic solutions that would enhance air transport, increase air connectivity, and improve the investment climate. Such solutions included creating a dependable regulatory climate in all African countries and aligning air transport and associated national development priorities.

The ministers adopted an action plan on air transport and tourism development in Africa. This calls for linkages between air transport and tourism policies, as well as seeking innovative and sustainable solutions to encourage air connectivity. ■



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L'ATR 42-600 STOL: UN AVION ADAPTÉ POUR L'AFRIQUE



L'ATR 72-600 de Bestfly.

L'avionneur franco-italien ATR a lancé la version « Short Take Off and Landing » (STOL) de l'ATR 42-600, un avion particulièrement adapté pour l'Afrique selon Stefano Bortoli, son président exécutif. Des détails avec Vincent Chappard.

Le salon aéronautique de Paris-Le Bourget 2019 fut un excellent cru pour le constructeur numéro un mondial d'avions régionaux. ATR a en effet signé un total de 75 commandes, dont 35 fermes de la part de NAC (Nordic Aviation Capital). Côté clients africains, l'ATR 72-600 fait son arrivée en Angola. La compagnie aérienne privée angolaise Bestfly va en effet louer deux ATR 72-600 à Acia Aero pour assurer des vols d'affaires et des liaisons charters dédiées aux entreprises dans l'ensemble du pays. Tunisair Express et ATR ont également confirmé une commande de trois ATR 72-600.

L'événement phare du salon pour ATR fut l'annonce de trois clients de lancement pour la nouvelle version STOL de l'ATR 42-600 par Air Tahiti, Elix Aviation et un client dont le nom n'a pas été dévoilé. Il s'agit, pour ATR, d'une marque de confiance en la qualité et la valeur de l'avion et cela met en évidence le potentiel de cette version STOL sur le marché de l'aviation régionale.

L'ATR 42-600S offre la possibilité et des capacités optimisées de décoller et d'atterrir sur des pistes de seulement 800 m de long. Il bénéficie également de coûts d'exploitation inégalée du même ordre qu'un avion de 30 places.

Stefano Bortoli, son président exécutif, a déclaré à

African Aerospace qu'il existe beaucoup d'opportunités pour ATR sur le continent particulièrement en Afrique du Nord, du Sud et en Afrique subsaharienne. L'ATR-600 et maintenant l'ATR 42-600S sont très bien adaptés pour le continent.

« C'est un avion qui permet de connecter les communautés, de donner de la flexibilité dans plusieurs régions sans avoir à investir sur une autoroute ou un nouveau chemin de fer. »

ATR dispose également de solides bases pour le support de ces avions depuis Toulouse, Miami ou Singapour.

Pour l'Afrique, ATR a un centre de formation de formation de pilotes et de techniciens de maintenance à Johannesburg. C'est un hub majeur de l'Afrique subsaharienne et de l'océan Indien, permettant un accès simple et rapide à tous les opérateurs du continent.



Selon l'étude de marché 2018-2037 d'ATR, 2260 turbopropulseurs de 30 à 50 places en service dans le monde et environ 1220 sont appelés à être remplacés dans les années à venir.

La croissance de la flotte devrait ainsi représenter plus de 3020 livraisons. Elle résultera principalement de la création de nouvelles routes notamment pour améliorer la connectivité intra-africaine et régionale dans le cadre des stratégies de développement des réseaux des compagnies aériennes.

Dans un contexte de croissance économique, le prix du pétrole (plus élevé dans les aéroports régionaux que dans les principaux hub) devrait doubler au cours des 20 prochaines années. La région Afrique et Moyen-Orient est la plus vaste et la plus polyvalente, mais aussi la plus pauvre en infrastructures routières et ferroviaires.

Beaucoup d'avions de 30 à 50 places ont une exploitation onéreuse et sont amenés à être remplacés pour assurer la continuité de la connectivité régionale. La croissance du trafic est estimée à 4% avec plus de 350 livraisons de « turboprop ».

L'avionneur estime qu'il existe de nouveaux marchés, encore inexploités qui viendront consolider le « benchmarking » des turbopropulseurs.

SUMMARY

ATR'S STOL VERSION OF REGIONAL TURBOPROP

French-Italian airframer, ATR, has launched a short-take-off-and-landing (STOL) version of its ATR 42-600 regional turboprop that it claims is particularly suited to African operations.

The new version – the ATR 42-600S – was announced at this year's Paris Air Show, held at Le Bourget, where the company also signed orders for 75 regional airliners, including 35 from Nordic Aviation Capital (NAC).

For African customers, the larger ATR 72-600 makes its debut in Angola, where privately owned airline, Bestfly, will lease two airframes to Acia Aero for business and corporate charter flights.

Tunisair Express and ATR have also confirmed an order for three ATR 72-600s.

But the airshow highlight for ATR was the announcement of three launch customers for

the ATR 42-600S – from Air Tahiti, turboprop leasing specialists Elix Aviation, and a further unnamed customer.

This new version can take-off and land on runways that are only 800 metres long, while carrying around 50 passengers and offering the operating costs of a 30-seat aircraft.

ATR's executive president, Stefano Bortoli, said there are many opportunities for ATR throughout Africa, where all its regional turboprops are particularly suited to the continent's operating conditions.

He added: "It's an aircraft that connects communities and gives flexibility without having to invest in new highways or railways and we're always ready to talk to customers and offer support from our Toulouse base." ■

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Les États insulaires sont confrontés à de nombreux défis et dépendent énormément de la connectivité aérienne en raison des contraintes géographiques. Le point avec **Anuradha Deenapanray**.

LA CONNECTIVITÉ, UN TRÉSOR POUR LES ÎLES



Indian ocean connectivity.
PICTURE: COI

Les compagnies aériennes des États insulaires reconnaissent à l'unanimité qu'un cadre réglementaire adéquat, le développement des infrastructures, la modernisation de la flotte, la formation et un écosystème favorable sont des éléments essentiels sur lesquels reposent la solidité et la viabilité du secteur de l'aviation.

Il y a des siècles, ces îles attiraient les conquérants en raison de leur positionnement stratégique et de leurs ressources naturelles. Aujourd'hui, les énormes progrès réalisés dans le transport aérien présentent de nouveaux défis et d'énormes opportunités s'ouvrent à elles. Les opérations insulaires dépendent donc énormément de la connectivité et de la capacité opérationnelle de la flotte.

« La fluctuation du prix du pétrole a des répercussions directes sur les coûts opérationnels alors que la

modernisation de la flotte est une nécessité pour le développement des routes », affirme Rolland Besoa Razafimaharo, PDG d'Air Madagascar. Grâce à son partenariat stratégique avec Air Austral, la compagnie aérienne se remet de nombreuses années de difficultés financières. Il ajoute que les taxes et les redevances doivent être traitées en priorité.

Comme les îles de l'indiaocéanie n'ont pas les mêmes économies d'échelle, les acteurs de l'industrie appellent à une consolidation des partenariats, davantage de synergies et une coopération régionale durable. Elles pourront ainsi pénétrer plus efficacement les marchés africain, asiatique et européen.

Créée en 2015, L'Alliance Vanille, qui regroupe les compagnies aériennes de l'océan Indien, œuvre dans cette direction. Elle vise, entre autres, encourager le tourisme et le trafic dans la région grâce à une meilleure connectivité et une politique tarifaire coordonnée et un package compétitif et attractif.

Reste cependant un défi majeur : comment aller au-delà de la région. Comment concilier spécificité, développement et intégration ?

Pour Michael Berlouis, directeur financier d'Air Seychelles, les sujets clés sont : les complexités opérationnelles et la nécessité de se concentrer sur la capacité v/s la demande, en particulier pour les pays plus dépendants de l'aviation. « Avec les nouvelles générations de moteurs et l'innovation technologique, on gagne en charge utile tout en réduisant nos coûts opérationnels. »

Les États insulaires, comme les pays enclavés, sont très conscients du poids de l'aviation dans leur PIB. Par exemple, le secteur du tourisme, moteur de l'économie mauricienne (23,6% du PIB national), dépend du transport aérien (95% des touristes prennent l'avion).

« Air Mauritius a une approche s'articulant autour de trois axes (réseau des îles Vanille, réseaux africain et asiatique et un réseau international) pour construire un hub pour Maurice grâce à la connectivité, aux fréquences et à une souplesse opérationnelle », explique Donald Payen, son directeur exécutif.

Le soutien gouvernemental, la libéralisation de l'espace aérien et la coopération dans le domaine de la MRO sont également des éléments importants pour les aider à exploiter pleinement leur potentiel. ■

SUMMARY

CONNECTIVITY, A REAL TREASURE FOR THE ISLANDS

Commercial airlines throughout the Indian Ocean's island states are dependent on many features – excellent regulatory framework and infrastructure planning; coherent fleet modernisation; comprehensive training; and a favourable ecosystem. However, for all these to succeed, excellent connectivity and suitable fleet capacity is an absolute must.

Many challenges must be overcome before this 'wish list' can be realised, explained Rolland Besoa Razafimaharo, CEO of Air Madagascar: "Fluctuating oil prices have had a direct impact on operational costs, while fleet modernisation is needed for route development."

Industry players are calling for stronger partnerships, more synergies and sustainable regional cooperation, all

designed to assist market penetration into the African, Asian and European markets.

The Indian Ocean's Vanilla Alliance, created in 2015, brings together all the region's airlines and is designed to enhance tourism by rationalising connectivity and fares.

For Michael Berlouis, CFO of Air Seychelles, the key areas to be tackled continue to be operational complexities and the need to focus on capacity versus demand, especially for countries more dependent on commercial aviation. He explained: "With new generations of engines and hi-tech airliners, we gain in payload while reducing operational costs."

Island states, like landlocked countries, are all too aware of the importance of aviation to their gross

domestic product (GDP). For example, tourism is a key force in the Mauritian economy, where it forms nearly a quarter of GDP, and it depends almost entirely on commercial aviation as 95% of tourists arrive by air.

Air Mauritius' executive director, Donald Payen, said: "Our airline has a three-pronged approach to tackle this: the Vanilla Island network; our African and Asian routes; and an international approach to build a hub for Mauritius through connectivity, added frequencies and operational flexibility."

Government support, airspace liberalisation and cooperation in maintenance, repair and overhaul (MRO) are also important elements to help airlines fully exploit their potential. ■

War and Peace: Air Peace chairman, Allen Onyema, has repeatedly accused Togo of deliberately imposing outrageous charges on airlines that show any interest in flying into Lome.



How single can west African skies be?

West Africa seems to be facing particular problems as it tries to come to grips with implementation of the single African air transport market (SAATM).

Chukwu Emeke
reports.

The single African air transport market (SAATM) was launched by the African Union (AU) in Addis Ababa, Ethiopia, in January 2018, with the aim of opening up interconnectivity in all parts of the continent.

So far, 26 of 54 African states have signed the solemn commitment to the SAATM.

The initiative was expected to encourage the exercise of fifth freedom rights (which allow an airline to carry revenue traffic between foreign countries as a part of services connecting the airline's own country) and traffic privileges by, among other measures, relaxation of immigration regulations and visa requirements.

Implementing the concept at sub-regional levels ought to aid actualisation of this continental dream, which will contribute to the realisation of the AU's 'agenda 2063' economic objective.

In west Africa, however, the issues of 'level playing field' and continued restrictions of inter-state flights by member states, as well as the arbitrary imposition of charges on designated airlines from neighbouring countries, has boosted controversy regarding the sincerity of political will for implementation.

For instance, Colonel Dokisime Gnana Latta, the director general of the Togo Civil Aviation Authority, has frowned at implementation delay, saying his country encourages airlines to come in by trying to reduce taxes and provide a visa-on-arrival service at the airport. Ironically, however, Togo is one of the Francophone countries in west Africa that Allen Onyema, the chairman of Nigeria-based Air Peace, has repeatedly accused of deliberately imposing outrageous charges on airlines showing an interest in flying into Lome.

Elsewhere, the International Air Transport Association (IATA) special envoy to Africa on aero-political affairs, Raphael Kuuchi, has lamented that: "\$80 from each ticket is paid to the government of Niger in fees, taxes and charges, while Cameroun recently added a \$37 development tax per passenger, and DR Congo is charging every arriving passenger \$15."

Single skies may not be achieved until the full issues surrounding the welcoming of a new entrant into a country is addressed by the aviation authorities.

For example, despite the benefits that the policy promoters said the Nigerian economy would receive, the country's domestic airline operators are arguing Nigeria is not yet ready to compete with the rest of Africa to get the accruing benefits of single skies.

According to Captain Nogie Meggison, chairman of the Airline Operators of Nigeria (AON), while the idea of SAATM may be noble on paper: "There is a need for government not to overlook the dangers that the direct impact of the decision on the Nigerian economy, and Nigeria as a whole, could have on the future of our youth."

□□□□□

Although IATA projects that Nigeria will gain more than \$128 million on its annual gross domestic product (GDP) with SAATM implementation, Meggison said there are unclear and constantly changing policies that throw the Nigerian airlines' feasibility studies into the red.

He said the government should be clear on the policy and its advantages but argued: "The charges around Africa are not uniform across the board.

"Governments should ensure all the taxes are uniform before the implementation of the open skies. For instance, when we fly to some African countries, they charge us heavy landing fees in excess of \$5,000 – \$6,000. The same countries subsidise their local operators, who pay \$200 for the same service. But when they fly into Nigeria, they pay a mere \$500, the same as our local carriers."

He added: "AON considers it unfair, and a complete disconnect, that Nigerian airlines, which are the fulcrum of the implementation of SAATM in the country, were not carried along in the decision process leading up to the signing of a treaty and firm commitment that affects the future and survival of our airlines."

Dr Harold Demuren, former director general of the Nigerian Civil Aviation Authority summed up: "SAATM is a very good idea if you are strong. You don't go into competition when you are weak. We don't have strong Nigerian airlines today. It is not wrong but, for SAATM to work, we need to think outside the box."



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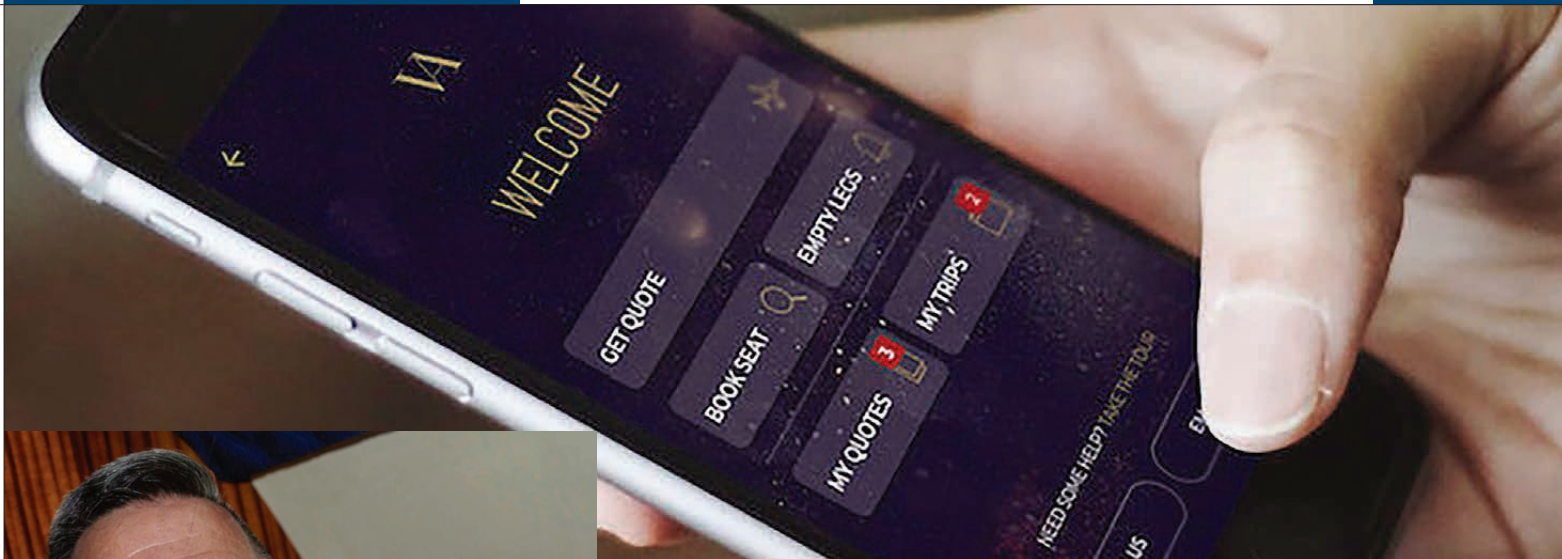
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Leslie Hart: "There is huge potential across the continent and we see a lot of opportunity for the Vertis business model to support the increased needs."

Above: The Vertis Aviation app for chartering a private jet, a seat or access empty leg data.

Swiss bank on the Hart of Africa

Booming business across Africa and the resulting increase in high-net-worth individuals is supporting the need for business aviation, encouraging some of the world's top luxury services providers to invest in the region.
Dave Calderwood talked to one of them.

Vertis Aviation, the Switzerland-headquartered, Argus-certified, charter specialist, has appointed industry veteran, Leslie Hart, to the business development team based in Johannesburg.

Hart is responsible for identifying new markets of opportunity, growing the charter market for aircraft currently within the Vertis portfolio, as well as strengthening the fleet through the Vertis charter management programme.

Vertis currently has two Boeing Business Jets (BBJ), an Airbus ACJ319, two Bombardier Global 6000, a Gulfstream G450 and a Bombardier Challenger 350.

Hart will work with Mark Abbott, the existing Vertis rep in the region, and his initial focus will be on countries where increased economic, social and political stability is enabling economic growth, particularly in east, central and west Africa.

"Growth is predominantly driven by commodity prices on the whole in Africa as the oil, gas, gold, and minerals sectors need business aviation to thrive," said Hart.

"In addition, industries such as construction, telecoms and general infrastructure development, are driving demand.

"There is huge potential across the continent and we see a lot of opportunity for the Vertis business model to support the increased needs. It is a huge task to manage business development across the continent, but one that I'm looking forward to taking on."

Hart's background is multinational consumer electronics, where he opened subsidiaries and brands across Africa, as well as creating distribution channels into, and within, the continent.

For the last three years, he has been dedicated to charter aircraft management. It's an international and continental skill-set that should position him well to support the company's further growth in Africa.

Vertis Aviation CEO, Jeffrey Emmenis, said: "It seems that Africa is one of the last continents where there is still massive potential for investment from local and international companies.



"Confidence has grown as economies have strengthened. Commercial airline travel still has many limitations and business aviation is often the only means of travel between point-to-point destinations.

"We know that Leslie's experience with international business, combined with his local knowledge in the air charter field, adds massive value to our team. We're excited about the possibilities."

Vertis Aviation has offices in Switzerland, the UAE, the USA and South Africa, and delivers charter broker services with a boutique touch.

The company calls itself 'The Architect of Charter' and recently launched its own booking app to simplify jet charter. It allows the user to book individual executive jet seats, source near-real time charter flight information, and access empty leg data for private jet flights.

"We do everything in our power to ensure our clients receive the most complete service available on the market," said a spokesperson.

Not only private jets – top wines, hotels and even yachts are part of its service. "To support the expanding needs of our elite clientele, Vertis works with Ocean Independence to source luxury yachts for charter. A single call to our team will fulfil all your jet and yacht charter requests," added the spokesperson. ■



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One possible frustration: Organising permits for business aviation flights across Africa can be tricky.



Dawit Lemma: "Our growth is being driven by an increase in business activity, coupled with our reputation as a reliable ground-handler and trip planner for the region."

WHY KRIMSON IS IN THE PINK

Ethiopian business aviation operator, Krimson Aviation, is growing fast. Dawit Lemma, CEO, tells Dave Calderwood how the company is coping.

Krimson Aviation, one of the first operators to be granted a licence to carry out business aviation flights in Ethiopia, has expanded its backroom team to better manage the company's extraordinary growth.

No fewer than five new members joined the Addis Ababa-based company this summer.

Edomgenet Sentayehu has been appointed as the chief financial officer – Krimson's first – while Helina Teshome and Nadia Getachew have come on board as flight operations officers. Betelhem Shumu heads up marketing and Yonas Desalgne is re-joining the company, after a year working with Oxfam, to look after IT and support Betelhem with graphic design and branding skills.

CEO Dawit Lemma enthused: "I'm so excited about the depth of experience, the professional abilities and fantastic team that is now supporting Krimson. Recruiting for aviation is a challenge but my new people have a wealth of skills, talent and character."

"Our growth is being driven by an increase in business activity, coupled with our reputation as a reliable ground-handler and trip planner for the region. We operate locally to the highest quality of standards, driven by my experience operating in Switzerland. We understand the expectations of international operators and customers and try and anticipate all needs and requests."

Krimson is also building a reputation for its understanding of the local processes, its local connectivity within Ethiopia and further afield in Africa. "We are winning business through word of mouth, which is often one of the best ways to acquire new customers," said Lemma.

"We have been supporting more medevac operations, too, which is a new area of business for us. We've handled some complicated flights around this subject and, consequently, operators are coming back to us to take advantage of our offering and knowledge."

Addis Ababa is the head of the African Union, which means that there are a lot of governmental and head-of-state flights to handle. "Ethiopia is also the fastest growing

economy in Africa, and one of the fastest growing in the world, which is driving more and more international flights as the opportunities presented here for commerce are expanding," enthused Lemma.

"The government is actively supporting the industry and is currently constructing a new airport. All these factors bring more business to the country."

"Regionally, we have also seen more activity since the airspace above Eritrea has opened up. It means more flights can route directly, which has significantly increased traffic."

There are still some frustrations, however. "Permits are an ongoing challenge in Africa," said Lemma. "There are as many ways to process overfly or landing permits as there are countries on the continent. Some countries require simple online applications and take around an hour to be granted, others expect a lot of administrative information including licences, crew and passenger passports, which can take a minimum of three days to process. It is improving but it remains a challenge."



"Lack of infrastructure generally is still a problem and, while awareness of the need for dedicated facilities for business and general aviation is growing, so is the amount of commercial air traffic. Airports are becoming more and more congested and non-commercial airline traffic is given least priority. Small business aircraft are vying with commercial operations for slots, parking, or navigation routes, so that can be an issue, too."

"Staying up-to-date with simple things like valid entry and exit points, airway closures, and military exercises can also all be issues to overcome. We are making progress, though, and I'm optimistic as we move forward – we handled our 220th flight last month, so business continues to grow."

"We are looking at developing further services that interline with commercial aircraft. So, for example, we've recently begun to develop our concierge service for those flying business class with Ethiopian Airlines. We offer a service that welcomes and helps passengers transfer through the airport."

"We are also developing a concierge service for crew, not just passengers. Crew are always asking us what to do and where to go as they average a couple of days on the ground. We would like to give them more than just a recommendation and really help them enjoy the sights and sounds of Addis and beyond." ■

As Rwanda continues its remarkable development – particularly in the aviation arena – Akagera Aviation is proud to be playing its part. Marcelle Nethersole reports.



Rwandan academy 'first' for Akagera

Rwanda, the Land of a Thousand Hills, has seen a lot of heartache over the years. However, today, it is a country of promise. This is something that Kigali-based Akagera Aviation takes very seriously.

The company, which offers a wide range of helicopter solutions and aerial tours, is proud to be the only helicopter pilot training organisation in the region.

"We offer private pilot licence (PPL) and commercial pilot licence (CPL) helicopter pilot training," said managing director, Patrick Nkulikiyimfura. "Courses include instrument rating (IR) and night rating (NR)."

In July, the company also signed a joint venture agreement with Nexus, a Saudi Arabian aviation training company, that will upgrade Akagera's training wing to become a fully fledged academy that will operate under the name Nexus Training Academy.

Claver Gatete, Rwandan Minister for Infrastructure, said: "We are enthusiastic to attract such investments and we have high expectations from this new Nexus Training Academy. This investment fully aligns with the national transport policy, with a plan to establish an aviation centre of excellence for the development of the skills needed to support the growth of the aviation sector in Rwanda."

He added: "This signing will also offer valuable employment opportunities to Rwandans."

Nkulikiyimfura said: "Our mandate, as part of the ATL Group of companies, is to rapidly reduce the skills gap in the industry and put the country on a highly visible map in aviation development. We truly believe that an informed

perspective and synergy among aviation stakeholders is very important in order to succeed in emerging future roles and create economies of scale."

Akagera Aviation will have a 40% stake in the academy and Nexus 60%.

Akagera, located at Kigali International Airport, has come a long way since it was founded in 2004.

"Back then, we had three Robinson R44 helicopters. Today our fleet includes AW139, AW109 and R44II helicopters, plus we recently added two Agusta 119 (A119MKII) high-performance single-engine helicopters configured for six passengers," said Nkulikiyimfura.

The company also provides aircraft maintenance, tourist transfers, regional flights, aerial photography, emergency medical evacuation services, game-herding, and aerial survey.

"Five years ago, we also introduced a service of VIP meet-and-greet and ground-handling for private jets," said Nkulikiyimfura. "The meet-and-greet services help to minimise the delays, hassle and passenger queues at check-in and check-out counters, as well as at immigration. "The services also offer travellers timely assistance with the processing of their luggage, thereby enhancing and greatly contributing to the existing efficient services at the airport."



The company's aerial tours are popular with both tourists and business travellers alike.

"Tourist numbers coming into Rwanda are steadily growing and this translates into more interest in helicopter tours to experience the unique landscapes, culture, mountain gorillas, safari animals, and birdlife, as well as tours into our neighbouring east African countries," said Nkulikiyimfura.

"A tourist on a helicopter tour has a lot more to see than on a land tour."

The company has also recently become the first helicopter scheduled flight provider in Rwanda.

"This new product was introduced with the main aim of providing affordable helicopter transfers to both corporate travellers and tourists, which will boost the tourism industry in Rwanda and across Africa," said Nkulikiyimfura.

He added the company is expecting to increase its routes shortly, but for now they include the Nyungwe National Park, Akagera National Park, and Musanze Airstrip.

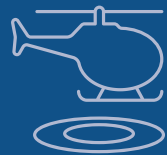
"This product will enable us to cross-sell other services and products the company provides, which will inevitably increase our client base and revenues," said Nkulikiyimfura. "Importantly for our customers, the scheduled services mean affordability, industry value, comfort, and, obviously, simply stunning scenery of our beautiful country of a thousand hills."

Above: Patrick Nkulikiyimfura: "Tourist numbers coming into Rwanda are steadily growing."

Top right: Akagera Aviation boasts AW139, AW109 and R44II helicopters, plus two recently added Agusta 119MKII high-performance single-engine rotorcraft configured for six passengers.

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Busy: Acher's Airbus H145 is flown low over the Indian Ocean on tanker-servicing operations. Inset: Chris Berlyn: "The single-engine performance of the H145 is very good."



NOTHING CRUDE ABOUT ACHER'S POLISHED OPS

Flying low over the Indian Ocean, servicing tankers on their way to deliver crude oil to South Africa's refineries, there's precious little a pilot can do should the helicopter have an engine failure.

Yes, a commercial operator flying over water will have emergency floats in case of ditching but that's still a dangerous and expensive way out. Far better to have sufficient power in the remaining engine to maintain the flight, return to base and make a normal landing.

That's exactly the thinking that's core to the operations of Acher Aviation, one of Africa's leading helicopter operators based at Durban Airport on the east coast of South Africa. It led to the company's choice of a new Airbus H145 nearly two years ago and it's been a busy helicopter ever since.

"The single-engine performance of the H145 is very good," said Chris Berlyn, operations manager for Acher at Durban. "We're able to operate the aircraft at maximum mass right up to 28°C, which implies that the performance doesn't limit the services we provide."

Why up to 28°C? That's very warm and aircraft performance deteriorates as the air gets hotter and less dense. So, the H145's twin Saran Arriel 2 engines, delivering a total of 894shp, are its 'get out of jail free' card. They also give the 4-ton class H145 a maximum speed of 130kt, 353nm maximum range, and 3 hour 36 minute endurance.

But the engines weren't the only reason Acher chose the H145.

"We were guided by the Helionix Step 2 avionics system and the size of the helicopter as well," said Berlyn.

Airbus decided to develop its own Helionix avionics suite because it felt none of the off-the-shelf systems delivered the right experience for the pilot. The emphasis is on presenting the pilot with exactly the information needed for a particular stage of flight – and no more. Don't

*Durban-based
Acher Aviation
makes difficult
helicopter
operations look
easy but, most
importantly,
ensures they are
safe as well.*

**Dave
Calderwood
reports.**

overload the pilot, in other words. "It made the transition to the H145 much easier," admitted Berlyn.

Acher's customers require the company to operate to what's known as class 1 profiles, meaning being able to fly the aircraft on one engine in an emergency. That's partly because these types of operations can be among the most hazardous and, from the start of the business more than 13 years ago, Acher has been at the forefront of helicopter safety.

The company is a licenced Part 127 (operations) and Part 141 (training) operator founded on oil and gas producers (OGP) standards.

It has specialised in 24-hour offshore marine service activities by helicopter and the company's safety structures, administration, training and careful choice of helicopters has allowed more than 140,000 safe hoist operations – still growing at a rate of more than 35 per day/night – as well as thousands of deck landings.



One result of this safety record is a succession of successful Shell Aviation London and Chevron Aviation Houston audits routinely performed for all the major oil and gas company vessels and rigs passing through South African ports.

A major element of any audit, of course, is aircraft maintenance, and Acher cracks this by operating two approved aircraft maintenance organisation bases. These are staffed by fully licenced and approved engineers, who have maintained exceptional serviceability rates in excess of 98%.

As well as the crew hoists and deck landings transfers, Acher also manages a fleet of privately owned aircraft, operates charter flights, runs a marine pilot service for harbours, and operates flights in support of mining and resource exploration.

It has also teamed with private aviation company, ExecuJet Aviation Group, based at Cape Town, to operate a range of services including helicopter management and charter, as well as specialised support to the oil, gas, mining and resource exploration sectors. These include hoisting operations, oil pipeline inspections, equipment and cargo transportation, and remote location support. ■

A South African kitplane manufacturer – The Airplane Factory (TAF) – is going from strength-to-strength, having just announced a brand new aircraft.

The new high-wing version of TAF's four-seater, the Sling TSi, was revealed at the Experimental Aircraft Association (EAA) AirVenture event in Oshkosh, USA.

The Sling TSi was, itself, a brand new aircraft just a year ago.

Company founder, Mike Blyth, said he expected to have a prototype flying by the end of the year. If that seems impossible – to go from drawing board to a new model in less than six months – then some of TAF's other feats will seem like miracles.

Blyth and his co-director, James Pitman, are a couple of adventurers where aviation is concerned. In 2009, the pair flew the just-launched two-seat Sling 2 around the world on a 40-day, 45,000km journey that included a momentous 22-hour flight through terrible weather conditions across the Pacific Ocean. This was followed by a second around-the-world feat in 2011 and a third in 2015.

The business has grown so much in the 10 years since that the pair can only occasionally snatch time away for long-distance flights.

"I fly a bit less than I used to because I seldom do test flying these days," said Blyth. "I usually take the TSi whenever I want to go away with my family.

"James and I are planning to fly our prototype TSi High Wing to Oshkosh in July next year and then we'll probably take it up to Alaska and fit floats on it for some fun adventure flying there.

"I am still working very hard running the company with my partners and a really great team. I should be retired, according to my children, but I love what I do so there is no stopping me.

"We have grown substantially. We have a factory of 5,500sqm and employ 215 people. We are constantly developing new products and improving our existing ones, which keeps our 15 engineering staff busy and motivated.

"Currently, we produce 140 aircraft kits a year, of which we assemble about 20 as quick-builds and 30 as fully assembled ready-to-fly aircraft."

To put that in perspective, that's more aircraft than Textron made of its long-established Cessna 172 last year.

The latest aircraft, the four-seat Sling TSi, is powered by a Rotax 915iS fuel-injected turbocharged engine producing 141hp and burning just eight gallons per hour (31 litres/hr) in the cruise. During test flights, the aircraft reached a maximum straight and level speed of 155ktas and has a range of 800nm.

It comes standard with a bespoke three-blade Airmaster



Quick win: The Sling TSi four-seater was, itself, a brand new aircraft just a year ago.

BLYTH SPIRIT

A South Africa company makes more kitplanes per annum than Cessna does 172s – and it keeps on growing. **Dave Calderwood reports.**



Partners: James Pitman (left) and Mike Blyth.

constant speed propeller, Garmin 10inch G3X Touch electronic flight display, plus a Garmin G5 as a back-up, digital autopilot system and a four-place intercom. This is a sophisticated aircraft!

Meanwhile, the two-seat Sling 2 is just as well equipped and was paid the ultimate compliment when Belgian aerospace giant, Sonaca, licensed the aircraft, renamed it the Sonaca 200, certified it with the European Aviation Safety Agency (EASA) as a factory-built aircraft, and is selling them as fast as it can build them to flight schools all over Europe.

Blyth admits that the idea of building certified aircraft is on the radar but there's just too much on with the kitplanes at the moment.

However, that hasn't stopped the company from getting involved in a joint venture with California-based Wayne Toddun to launch the Sling Pilots Academy at Torrance Airport, just south of Los Angeles.

The academy offers an accelerated course from zero flight hours through private pilot, commercial pilot, instrument rating, multi-engine, flight instructor rating, all in just nine months and for \$62,995 – that's a good 15-20% less than other schools.

Toddun puts the low cost down to the highly efficient Sling 2 aircraft. It uses the equally modern Tecnam P20006T light twin, also equipped with Rotax engines and Garmin avionics, for the multi-engine training. "It's really to get pilots ready for the airlines as quickly as possible," said Toddun. ■



KC-390

READY FOR THE MISSION

EMBRAER DELIVERS THE FIRST KC-390 TO THE BRAZILIAN AIR FORCE

Embraer celebrates the first of 28 deliveries of the KC-390 to the Brazilian Air Force. At the same time, the Portuguese Government signed a contract for the acquisition of five airlifters to be operated by the Portuguese Air Force. This is a significant moment in the KC-390 program, marking, not only its Entry Into Service, but also the confirmation of the aircraft's export potential and operational effectiveness within NATO. This follows an exceptionally thorough campaign in which the aircraft accumulated more than 2,200 hours of flight testing in the most demanding environments, reinforced by thousands of engineering simulation hours. In the coming months the Brazilian Air Force will continue to incorporate additional KC-390 into service. Embraer also looks forward to seeing the aircraft recognized and accepted by other Armed Forces around the world as the natural choice in its field. The combination of 21st century, state-of-the-art advanced systems and proven engines, in conjunction with a worldwide sustainment alliance of reputable suppliers, makes the KC-390 the most reliable, easy to operate and efficient aircraft in its class.

Nigeria's continuing counter-insurgency campaign against Boko Haram is the driving force behind a further small increase in the capabilities of its air force. Alan Dron reports.

NAF BREATHES NEW LIFE INTO ALBATROS

Three stored Aero L-39ZA Albatros advanced jet trainers have been brought back into service to help provide an increased stream of combat pilots for Nigeria's air arm, which has been heavily involved in ground-attack duties against the terrorists.

Although most L-39s were built in the 1980s, the Czech-built jet remains in service with several African air arms.

Its relative simplicity, sturdiness and ease of maintenance, makes it a popular choice, with differing variants being used for training and light-attack roles.

Nigeria's examples are understood to have been used for both types of missions.

Nigeria is thought to have around 19 L-39s in its inventory, although unserviceability has considerably reduced the number available for use in recent years.

The three aircraft, identified in the Nigerian media as bearing the serials NAF 352, 354 and 364, were handed over during a ceremony on June 21 at the service's 403 Flying Training School (403 FTS) in Kano, northern Nigeria.

The aircraft were reactivated by technicians from manufacturer Aero Vodochody, assisted by Nigerian Air Force (NAF) personnel.

Speaking at the handover, NAF Chief of Air Staff, Air Marshal Sadique Abubakar, welcomed the transfer of skills to Nigerian engineers and technicians that the project had involved and expressed hopes that Aero would be able to assist in the reactivation of a further six L-39ZAs.

Abubakar added that the restoration to service of the L-39ZAs was part of an overall initiative to undertake as much maintenance and training work in-country as possible.

"The domiciling of the maintenance and training locally will enable the NAF to make huge foreign exchange savings, which can then be channelled towards providing additional facilities to enhance NAF's training and maintenance efforts," he told local journalists.

Nigeria needs to ensure a steady pipeline of new pilots to help fill the cockpits of new aircraft that are being inducted to boost the service's frontline units, such as a dozen Embraer Super Tucano ground-attack turboprops and PAC/CAC JF-17 Thunder lightweight multirole fighters developed jointly by China and Pakistan.

Although Nigeria has, so far, only ordered an initial batch of three JF-17s, more are expected to follow. The NAF is also buying 12 Mil Mi-35 combat helicopters from Russia.

Senior officers at 403 FTS are understood to have complained in recent months that they had insufficient



Unveiled: The three L-39s were rolled out at a Nigerian Air Force base in Kano.

aircraft with which to train the number of new pilots needed for the NAF's frontline units. Restoration of the three L-39ZAs can be seen as part of the efforts to solve that problem.

"The reactivation [of the L-39ZAs] will ensure that the NAF increases the number of fighter pilots available to man its existing fighter jets, as well as the new platforms, such as the A-29 Super Tucano and JF-17 Thunder multirole fighter, which are to be inducted into NAF inventory soon," said a spokesperson.

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Quoted in the Nigerian media, Abubakar added: "The handing-over ceremony of the three reactivated L-39ZA aircraft marks a positive turning point in our efforts to ensure that the NAF is able to sustain jet training of our potential pilots in this school.

"The support provided by the federal government has, no doubt, had a positive impact on the ability of the NAF to meet the operational needs and requirements of the armed forces.

"It has also enhanced our efficiency and improved provision of welfare and other services to our personnel."

The Czech ambassador to Nigeria, Marek Skolil, told the handover ceremony that Aero would be prepared to provide Nigeria with the latest-generation L-39NG (new generation) – Senegal has already ordered four of the latest variant – although whether this will appeal to the NAF when its finances are committed to the new types already ordered is perhaps doubtful. ■

The Madagascar Air Force received a boost in June with the arrival of a batch of new aircraft to bolster its small inventory. **Erwan de Cherisey reports.**

AIRCRAFT BOOST FOR MADAGASCAR



Clockwise from top left: Rustled up: The Malagasy Air Force now fields three AS350B2 aircraft, which are to be used in operations against cattle-rustlers.

PICTURE: PRÉSIDENTIE DE LA RÉPUBLIQUE DE MADAGASCAR.

On parade: A single BK117 has also been procured from South Africa and is seen here with Army commandos aboard during the June 26, 2019, military parade.

PICTURE: PRÉSIDENTIE DE LA RÉPUBLIQUE DE MADAGASCAR.

Major improvement: The three AS350B2s received by Madagascar were procured from South Africa and commissioned in June 2019. They represent a major improvement over the obsolete Alouette IIs that made-up the helicopter fleet.

PICTURE: MINISTÈRE DE LA DÉFENSE DE MADAGASCAR.

Restoring capability: This CN235-10 was received on June 24, 2019. It previously served in the Botswana Defence Force.

PICTURE: PRÉSIDENTIE DE LA RÉPUBLIQUE DE MADAGASCAR.

A ceremony at Ivato International Airport, Antananarivo, saw the island's president, Andry Rajoelina, officially hand over the equipment to the service.

The air force has been in steady decline for years, with previous Soviet-supplied equipment, such as a single squadron of obsolete MiG-17s and a few MiG-21s, having been withdrawn from service.

Established in 1960, the Armée de l'Air Malgache (Madagascar Air Force) started operations with a mixed fleet of transport types transferred by France, the former colonial power, which included several Douglas C-47s, Max Holste MH-1521 Broussard, and Dassault MD-312/315 Flamant. It acquired its first MiG-17 fighter jets from North Korea in 1979, subsequently replacing them with MiG-21bis.

Several SA316 Alouette III, Mil Mi-8 and Antonov An-26s were also received throughout the 1970s and early 1980s.

Also in 2009, Madagascar purchased four former Belgian Military Sud Aviation SA318C Alouette II helicopters from an aircraft broker. The aircraft had been produced in 1969 and, prior to their disposal by Belgium, had been demilitarised.



Since their delivery, at least two Alouette IIs have crashed – first in June 2015, when one crash landed inside a stadium during a rehearsal for a military parade and then, in January this year, in the course of an operation against cattle-rustlers.

While the aircraft that was damaged in 2015 may have been repaired, it seems that the helicopter lost in 2019 was written-off.

For nearly a decade, the Alouette IIs were the sole helicopters available to the Madagascar armed forces. They were primarily used in support of gendarmerie and army troops deployed against armed cattle thieves known as Dahalo.

The helicopters apart, the air arm had been reduced to a small,

heterogeneous collection of a handful of Humbert Aviation Tétrás ultralights and a single Morane Saulnier MS 885.

The most significant aircraft to be handed over in June was a single CASA/IPTN CN235-10 tactical transport, which filled the gap left by the withdrawal of the Air Force's An-26 fleet in the 1990s. The aircraft is expected to provide support in emergency situations, notably after natural disasters, as well as to carry out medical evacuation, the president noted during the ceremony.

The CN235-10 is a former Botswana Defence Force aircraft, one of two such examples to be operated between 1987 and 2009, which was sold, together with its sister aircraft, to Rampart Aviation, in 2011.

Both aircraft were then overhauled in South Africa, and one was sold to the Air Force of the Republic of Congo, while the other was to be taken up by the Togolese Air Force. The latter deal failed to

materialise and the CN235-10 was eventually taken up by French company SOFEMA, which put it through an upgrade, including the addition of a Garmin avionics suite.

While the CN235-10 will provide a boost to the Malagasy Air Force's airlift capabilities, the type is likely to prove difficult to maintain, since it is one of only 15 such examples to have been produced. Due to the small production run, the availability of specific spares for the CN235-10 is increasingly limited, which could affect the serviceability of Madagascar's only example.



Three Airbus Helicopters AS350B2 Ecureuil aircraft were also presented at Ivato, still wearing South Africa registrations.

Prior to their sale, they were flown by civilian operators.

The first of these aircraft had arrived in Madagascar in May 2019. These new platforms are a major improvement over the Alouette II in terms of performances.

The June 26 military parade commemorating Madagascar's independence saw the three AS350B2 and the CN235-10 carry out a fly-past, as did a single BK117-850D2, which had not previously been seen and was still carrying a South African civilian registration.

Five Cessna 206s were also observed during the event. According to the president's office, the latter are slated to perform coastal surveillance duties.

Madagascar has been preparing new aircrews to operate its expanded aircraft fleet, with 20 men and women undergoing training at a new facility established at the Arivonimamo Tactical Air Base.

While the CN235-10 may prove difficult to sustain in the longer term, this influx of new aircraft, including such a proven platform as the AS350B2, will significantly strengthen and increase the capabilities of the Malagasy Air Force, which should allow the military and police to more effectively counter such internal security threats as the Dahalo. ■

COMBAT PILOT MFEKA IS A SAAF HISTORY-MAKER

The South African Air Force (SAAF) now has its first black female combat pilot, writes **Jon Lake**. Major Mandisa Mfeka is a Hawk Pilot with No85 Combat Flying School, AFB Makhado, and she hopes one day to convert to the Saab Gripen.

She began researching careers in maths and science, before a South African Air Force recruiting advert changed the course of her life.

“When I first discovered the air force, and found that I could be a pilot, I was hooked. I remember that night when I discovered that pamphlet; I slept with it in my bed. When I saw that I met the requirements, I was just dreaming about it.

“I didn’t even know that coming into this profession was possible for someone like me. I remember my grandmother first, and then my mother, used to take us to air shows at the Virginia Airport. We could not afford the ticket so, instead, we would park the car outside and watch the aircraft flying, and we would be mesmerised,” she said.

Mfeka joined the South African Air Force in 2008 and went to the Central Flying School at

Langebaan, just outside Cape Town, in 2010, winning her wings in 2011.

It was while piloting the Astra (as the Pilatus PC-7 Mk II is known in South Africa) that she was tasked to fly the Nelson Mandela funeral flypast. But, on the day, the cloud base was too low and the 16-ship Astra formation was cancelled, with helicopters taking their place.



Mfeka’s most memorable flight was her first solo formation trip in the Hawk.

“For the first time you realise that you are fully in control of this aircraft – the more so when you’re in a complicated or advanced flying manoeuvre.

“So, you’re banking and you’re maintaining station. That’s when you realise how far you’ve come, how much you’ve accomplished and the self-confidence... it makes you want to punch the cloud!

“That’s when I was reassured that this is where I am meant to be; this is what I want to do for the rest of my life – if God will just bless me!” ■



Leading lady: Mandisa Mfeka, callsign ‘Comet’ is South Africa’s first female black combat pilot. She flies the BAE Systems Hawk Mk120 with No89 Combat Flying School.

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Innovative design: The Yabhon United 40 medium-altitude long-endurance UAV.



Algerian interest in the Adcom Systems Yabhon United 40 medium-altitude long-endurance (MALE) UAV was first reported during the 2013 Dubai Airshow.

Adcom was urgently seeking export orders. The company had started to produce unmanned drones from 2002, initially manufacturing target drones to meet Emirati requirements after the United States restricted the sale of unmanned vehicles to the UAE.

In 2013 the company had also purchased Belarus-based Indela, a producer of small unmanned systems – the Belar Ys-Ex.

At the Dubai show, Ali Al Dhaheri, the CEO and general designer for Adcom, said Algeria was interested in acquiring the Block 5 version of the Yabhon United 40 (also known as the Smart Eye 2) for intelligence, surveillance, and reconnaissance (ISR) and light-attack missions, tracking militants, insurgents and traffickers in the vast emptiness of the Sahara.

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Two years later, Adcom was reporting Algerian interest in the smaller, unarmed Yabhon Flash-20 UAV.

Also back in 2013, the Russian Ministry of Defence (MoD) announced that it intended to procure the United 40 UAV, but this was only for evaluation, and the programme was delayed. The Russians finally commenced flight-tests of the United 40 at the Chkalov State Flight Test Centre in April 2016.

For a couple of years, little more was heard from Adcom Systems. The company's website and social media accounts ceased all new activity and it did not exhibit at the 2017 Dubai Airshow.

Fast forward to the end of 2018, when

Footage shown on Algerian national TV and posted by the Algerian Ministry of Defence on its official Facebook page has revealed that two Emirati-developed unmanned air vehicles (UAVs) are now in service with the Algerian Air Force. Jon Lake reports.

ADCOM UAVS IN SERVICE IN ALGERIA

Algerian TV footage revealed at least two armed Yabhon United 40s (apparently named locally as the El Jazair 54 or Algeria 54) and two smaller unarmed Yabhon Flash 20s (El Jazair 55/Algeria 55) in service with the Algerian Air Force.

The aircraft were seen on the flightline of the Polygone Central de l'Air at Hassi Bahbah in the Djelfa Province, which comes under the command of the 1st Military Region. They were deployed to Hassi Bahbah to participate in a military demonstration for the deputy minister of national defence and chief of staff of the national army.

Hassi Bahbah lies about 45km south of Ain Oussera, the home of the Algerian Air Force's main reconnaissance wing, the 5e Escadre de Reconnaissance et de Guerre Electronique, which includes at least one UAV squadron – the 545e Escadron de Reconnaissance et de Guerre Electronique, equipped with Denel Dynamics Seeker II UAVs.

A visit to the base by chief of staff, Lieutenant General Ahmed Gaid Salah, in October 2018 revealed that it also housed armed Chinese CH-3 and CH-4 UAVs. Both are members of the China Aerospace Science and Technology Corporation (CASC) Rainbow family.

A statement issued by the Algerian MoD on the Adcom UAVs noted: "These drones were built locally by engineers, technicians, and executives of the National People's Army," implying that Algeria had rights to manufacture the Yabhon United 40 and Yabhon Flash 20 as the Algeria 54 and the Algeria 55 under a licence from Adcom, or even that the entire Adcom operation has been transferred to Algeria.

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First revealed in scale-model form in 2007, the Adcom Yabhon United 40 was named to commemorate the 40th year of the UAE, and has been renamed as the Algeria 54 in Algerian Air Force service.

The aircraft was Adcom's largest design – a twin turboprop, 36 feet (11 metres) long with a wingspan of about 68 feet (21 metres) featuring Adcom's distinctive tandem wing configuration and curved 'S'-shaped fuselage. The aircraft is fitted with a retractable tricycle landing gear with twin wheels on each unit.

Up to 10 hardpoints can be fitted, with four on the front wings and six on the rear. These accommodate a payload of up to 1,050kg.

The aircraft was also fitted with a six-unit rotating dispenser mounted in the fuselage. The Algerian aircraft were armed with what looked like converted 120mm mortar rounds and Emirati Namrod air-to-surface missiles (ASMs). ■

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Countries in sub-Saharan Africa are now using an ever-increasing fleet of small and tactical unmanned air vehicles (UAVs), which will soon be augmented by Mauritania fielding its first medium altitude long endurance (MALE) platform. Erwan de Cherisey reports.

The capabilities offered by drones for surveillance, air strike, and covert reconnaissance are increasingly appealing to a growing range of African militaries confronting asymmetric threats, whether they be from terrorists in the Sahel or armed militants operating in forested areas.

Mauritania, for example, has made significant efforts over the last few years to strengthen its military capabilities, with a strong focus on air power, including intelligence, surveillance, and reconnaissance (ISR) aircraft.

In late 2018, several news reports citing Mauritanian military sources confirmed the purchase of an undisclosed number of Chinese-made UAVs, which have since been identified as CASC CH-4s.

The aircraft are to be used in support of the G5 Sahel (which comprises Burkina Faso, Chad, Mali, Mauritania, and Niger) joint anti-terrorist force and in ongoing border security efforts.

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The Senegalese Army fields an unknown number of Israeli-made tactical UAVs, which were deployed into The Gambia in January 2017 to support the Economic Community of West African States' (ECOWAS)-led military deployment to install democratically elected President Adama Barrow.

The specific UAV type in service is unknown, although unconfirmed reports mention the Elbit Systems Skylark 2.

Commercial quadcopters are also in use with the Intervention Group of the Senegalese Gendarmerie (GIGN).

In 2014, the General Directorate for External Research (DGRE), Cameroon's leading intelligence agency, deployed a handful of small UAVs in the far north as part of the military build-up against Boko Haram. These were operated in close liaison with the elite troops of the rapid intervention battalions (BIR).

The capabilities they offered were not lost on the BIR, which decided to set up its own UAV component. An Aeronautics Orbiter 2 small UAV system, comprising several aircraft, was procured, together with a number of commercial DJI Phantom quadcopter mini UAVs, which entered service in 2015 with the newly

AFRICA IN THE DRONE ZONE

formed BIR Air Observation Group (GOA), based at Maroua-Salak.

That same year, a US foreign military sales (FMS) order for a Boeing Insitu ScanEagle tactical UAV system was placed. The system, comprising a control station, a relay station, a simulator, and six UAVs, started operating from Maroua-Salak in November 2016.

Electro-optical (EO) and infrared (IR) payloads can be fitted to the aircraft, which are capable of operating by day and night and have an endurance exceeding 24 hours, although the severe heat prevailing during daylight in the dry season tends to reduce it.

An order for an Aeronautics Orbiter 3 system was subsequently placed, with operators training in Israel in October 2017, ahead of its delivery in March 2018. The system, which comprises several aircraft and a control station, is based in Waza, more than 100km northeast of Maroua.

The Orbiter 3 is a significant improvement over the Orbiter 2, featuring a longer range – exceeding 120km – a greater endurance of seven to eight hours, and a heavier payload of 5.5kg.

The GOA has also acquired several DJI Mavic Pro aircraft, which have replaced most Phantoms in the far north. Several DJI Inspire 2s have also been received. These small UAVs are fielded by different battalions, providing them with short-range reconnaissance and perimeter security.

A couple of DJI Matrice 600 Pros have

also been procured and are deployed in the south-west region, where a separatist armed insurgency has developed since late 2016.

One of the roles assigned to the GOA and its UAVs is supporting artillery strikes. In 2015 and 2016, the Orbiter 2s were used to pinpoint large concentrations of Boko Haram militants, transferring their coordinates to the Cameroonian Army's 155mm howitzer batteries, which hit these.

To date, Nigeria is the only country in sub-Saharan Africa to field armed drones and to have used them in combat.

The Nigerian Air Force's (NAF's) first drones were a number (some sources say nine) of Israeli-made Aeronautics Aerostar tactical UAVs, which were procured in 2006. Their service history was plagued by issues resulting from poor maintenance and lack of training. They were progressively grounded, to such an extent that Nigerian media reported that, by 2014, none were operational.

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While the Aerostar appears to have now been withdrawn from use, Nigeria received a major capability boost in the shape of the Chinese-made CASC CH-3A armed tactical UAV, which was delivered in 2014. The exact number procured remains unconfirmed but should comprise at least five aircraft.

The type came to prominence after photographs of a crashed example, still carrying an AR-1 missile and what may have been a guided bomb, appeared on social media.

The NAF has since acknowledged the use of its CH-3As in several air strikes against Boko Haram. To supplement these and increase self-reliance, it started developing its own UAV, the Gulma, which bore an external resemblance to the Aerostar and was first unveiled in 2013.

The type was used as a testbed to gain experience in UAV technology and eventually evolved into the more advanced Tsaigumi. The latter was designed with assistance from Portuguese company UAVision. While the NAF produced the airframe, UAVision provided the avionics suite and telemetry equipment.



The Tsaigumi was first unveiled in February 2018 and is intended for tactical surveillance.

Nigeria has its own UAV pilot training capability as part of the 401st Flying Training School of Kaduna. The latter fields Chinese-made Mugin commercial UAVs for initial training. More advanced training is then conducted on tactical UAVs.

In 2018, the first home-grown UAV pilots completed training after clocking nearly 100 flying hours on the CH-3A.

Ethiopia is known to have procured UAVs from Israeli company, BlueBird, in 2011. No details of the order have been made public, although two types should have been received: the Spylite electric mini UAS, and the now discontinued Boomerang.

Other elements of the contract should have included setting up a local maintenance facility and providing technology transfer of an unknown nature.

No images of Ethiopian BlueBird UAVs have been released and it remains unclear whether these were delivered and if so, whether they have ever been deployed to Somalia under the African Union Mission in Somalia (AMISOM), or with any of the United Nations peacekeeping operations, to which Ethiopia contributes troops.

Kenya ordered a ScanEagle UAV

system under a \$9.8 million FMS announced in September 2015. It is unclear when the system was delivered and which of the Kenya Defence Forces' (KDF) service branches is fielding it, although it is possible that it is operated by the KDF Military Intelligence Battalion.

The only acknowledgment of its operational use came in March 2017, when a Kenya Army officer disclosed that the UAV had been used to support an attack by Kenyan and Somali forces against Al Shabaab.



In this instance, the UAV was used to detect and monitor enemy forces, providing GPS coordinates, which were used to direct artillery strikes ahead of an air attack conducted by Army helicopters, followed by a ground forces mop-up.

The Kenyan Army also operates the Aerovironment RQ-11B Raven small UAV. The US Government donated several examples for use in Somalia in 2012. The type is believed to be in service with the KDF Military Intelligence Battalion, which has received training in its use from US military personnel.

Sudan is known to field Iranian-made HESA Ababil series UAVs, several of

Preparing to fly: Cameroon BIR Air Observation Group's ScanEagle.

Inset: Cameroon BIR Air Observation Group personnel operate the ScanEagle simulator.

PICTURES: ERWAN DE CHERISEY.

which have been brought down or have crashed as part of combat operations conducted in Darfur, and now South Sudan, over the past decade.

Uganda bought several RQ-11Bs from the US for use in Somalia. It also reportedly placed an order for the Aeronautics Orbiter II UAV in 2011. It remains unknown whether the latter has been delivered.

Botswana is one of the oldest UAV operators in sub-Saharan Africa. In 2001, it placed its first order for a number of Israeli Silver Arrow Micro-V small UAVs.

In 2004, a contract for the Elbit Systems Hermes 450 medium tactical UAV was signed. To date, no pictures of Botswana's UAVs have ever been released.

It is likely that the different platforms in service are operated by the Botswana Defence Force Air Wing for border surveillance and counter-poaching.

South Africa was the first operator of military UAVs in sub-Saharan Africa, developing its own platforms in the late 1980s. The then Kentron (now Denel) Seeker was used operationally in Angola by the South African Air Force (SAAF) 10th Squadron.

In 1990, the unit was disbanded and the UAVs returned to Kentron, which



CONTINUED FROM PAGE 53

continued operating them in support of the military. By the mid-1990s, the aircraft were withdrawn. Denel developed the Seeker into the Seeker 2 and then the Seeker 200, eventually unveiling the Seeker 400 in 2008. The latter, which has a 16 hours' endurance, was sold to an undisclosed first customer in 2015, believed to be the South African Defence Intelligence unit. It is unclear whether the SAAF is to play any role in its operation though.

Small UAVs are also in service with the South African Army, which fields the Indiza, locally developed by the Council for Scientific and Industrial Research, and which is reportedly being deployed in the DRC with South African peacekeepers.

Zambia is the latest country in southern Africa to equip itself with UAVs. In late 2017, the then deputy commander of the Zambian Air Force (ZAF) confirmed that Hermes 450 UAVs had been received and were based at Mumbwa Air Force Base.

It is unclear how many have been procured, although footage of the type in ZAF service shows it is equipped with a satellite antenna. ■

SOMMAIRE

LES DRONES EN PREMIÈRE LIGNE POUR SÉCURISER LE SAHEL

La capacité des drones pour des missions de surveillance, de frappes aériennes et de reconnaissance intéresse de plus en plus de forces armées africaines confrontées à de multiples menaces en particulier au Sahel.

La Mauritanie a fait des efforts considérables pour renforcer ses capacités militaires en particulier pour des missions ISR. Fin 2018, plusieurs articles de presse ont confirmé l'achat de drones chinois CASC CH-4. Ils doivent servir d'appui à la force antiterroriste au Sahel.

L'armée sénégalaise utilise également des drones israéliens. Ils ont été déployés en Gambie en janvier 2017 pour appuyer l'opération militaire dirigé par la CEDEAO afin d'installer le président élu démocratiquement, Adama Barrow.

En 2014, la DGRE du Cameroun a déployé des drones pour soutenir l'armée dans sa lutte contre Boko Haram.

Le Nigéria est le seul pays d'Afrique subsaharienne à utiliser des drones de combat. Les premiers provenaient de la société israélienne Aeronautics Aerostar. Le Nigéria a ensuite augmenté ses capacités en 2014 avec le CASC CH-3A. La NAF a reconnu leur utilisation dans plusieurs frappes contre Boko Haram. Le pays dispose de sa propre capacité de formation de pilotes à Kaduna.

L'Éthiopie aurait acquis des drones auprès de la société israélienne BlueBird en 2011 mais aucun détail de ce contrat n'a filtré. Il est également difficile de

confirmer s'ils ont été déployés en Somalie dans le cadre de la mission AMISOM ou d'une opération de maintien de la paix des Nations Unies.

Le Kenya a commandé un système de drone ScanEagle en septembre 2015. La seule utilisation opérationnelle connue est survenue en mars 2017 pour une mission contre Al Shabaab. L'armée kenyane exploite également le drone RQ-11B d'Aerovironment.

L'Ouganda a également acquis plusieurs RQ-11B. Le pays aurait également passé une commande pour le drone Aeronautics Orbiter II en 2011.

Le Botswana est l'un des plus anciens opérateurs de drone en Afrique subsaharienne. En 2001, il a passé sa première commande de drones israéliens Silver Arrow. Un contrat concernant l'Hermes 450 a été signé en 2004. Ces drones pourraient être en opération lors des missions de surveillance des frontières et de lutte contre le braconnage.

L'Afrique du Sud a été le premier opérateur de drones militaires en Afrique subsaharienne. Le Seeker de Kentron (aujourd'hui Denel) fut utilisé en Angola par la SAAF. Denel a ensuite développé plusieurs versions : le Seeker 2, le Seeker 200 puis le Seeker 400 en 2008.

La Zambie est le dernier pays d'Afrique australe à se doter de drones. Le commandant adjoint de la ZAF avait confirmé fin 2017 la livraison d'Hermes 450. Ils étaient basés sur la base aérienne de Mumbwa. ■

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Turkish success: The Bayraktar TB-2 is being operated by Turkish personnel to support the GNA. Several are known to have been destroyed in attacks by the LNA at both Metiga and Misurata.



Strikes are taking place every day in Libya's deadly drone war. In the first conflict where unmanned aerial systems (UAS) are making up the bulk of the air operations, both sides have successfully attacked opposition aircraft. Alan Warnes reports.

INTERNATIONAL PLAYERS BEHIND LIBYA'S DRONE WAR

The war in Libya has international backers on opposing sides supporting their own interests.

Turkey has been propping up the Tripoli-based Government of National Accord (GNA), recognised by the United Nations as Libya's Government.

The GNA is trying to stem the advances of Benghazi's Libyan National Army (LNA), led by Khalifa Haftar and backed by the United Arab Emirates, Egypt and Saudi Arabia, and supported by the USA.

Turkey's President Recep Tayyip Erdogan is a supporter of the Muslim Brotherhood factions within GNA. Along with Qatar, he helped the rise of the organisation in Egypt during 2011, before it was crushed.

This saw both Turkey and Qatar ostracised by former Arab allies Saudi Arabia and the UAE. The latter, alongside Egypt, do not want Erdogan, funded by the Qataris, doing the same in Libya.

Ukraine has joined the Turkey and Qatar side and, according to one source, is now a huge source for weapons.

Against a backdrop of unserviceable old helicopters and combat aircraft, both the GNA and LNA have resorted to fighting each other with armed unmanned air vehicles (UAVs).

The Bayraktar TB2, operated by Turkey but purchased by Qatar, is the GNA's UAV of choice. The drones are thought to have been delivered aboard a ship in May and subsequently split between Misurata and Tripoli-Metiga, with Turkish personnel operating them.



As recently as June 21, the *Libyan Address* journal reported that eight GNA pilots went to Turkey to learn how to operate the Bayraktar UAS, although another 12 refused.

The Israeli Orbiter-3 UAS, manufactured by Aeronautics, has also been operated by the GNA, with two of three allegedly delivered to the GNA being shot down at the end of July. The Orbiter-3 can stay airborne for up to seven hours and is used in the intelligence, surveillance, target

acquisition and reconnaissance (ISTAR) missions. The drone was probably supplied by another supporting country.

On the opposite side, the LNA troops are being supported by the Wing Loong II, acquired from China by the UAE and Saudi Arabia. The aircraft has been heavily modified with a Thales data-link system and Israeli optics.

Since April, when Haftar started his march on Tripoli, both the Bayraktar and Wing Loong II have been involved in some significant attacks.

On July 25, several Bayraktars were used to attack and subsequently destroy two Ilyushin Il-76 military transport aircraft operated by Ukraine's Air Europe airfreight company, at Al Jufra Air Base. A hangar was also destroyed at the base, which was being used as a key staging post for supporters of General Haftar's LNA.

Haftar is also believed to have lost many of his top officers in the attack.

The LNA exacted revenge on August 6, when at least one Wing Loong II fired at and destroyed another Ukraine registered Il-76, operated by Cargo Alfa Air. The



CONTINUED FROM PAGE 55

aircraft had landed at Misrata Air Base from Ankara, at around 10.30pm, with ammunition and UAVs, when it was hit.

The LNA attacked Misrata twice on August 15 and 16 because, it says, the Turkish have a large presence where the drones are thought to be operating from. A warehouse there, housing Turkish unmanned combat aerial vehicles, was completely destroyed, according to the LNA.

Meanwhile, the attack was condemned by the United Nations Support Mission in Libya (UNSMIL) because of the destruction to the airport and the possible loss of civilian lives.

In a significant milestone in the drone war, a Wing Loong II, operated by the UAE, was taken down by an anti-drone system on August 4.

While flying an armed mission over Misrata, it suddenly plummeted and crashed into the desert, having been targeted by an anti-drone system.

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I understand that the Turkish Air Force has been operating Boeing E-7Ts off the coast of Libya to provide signal intelligence (SIGINT) capabilities to Turkish forces on the ground. These aircraft are tracking the Wing Loongs, allowing the Turkish anti-drone systems to be deployed to jam and bring them down.

It is unclear which system was used, although Aselsan, one of Turkey's premier defence companies, has among its range of products, the cost-effective HASAVAR system handheld-backpack anti-drone jammer.

With the proliferation of these armed drones, the race to acquire anti-drone weapons is now on. While the UAE Wing Loongs are being launched in Libya, they are actually being controlled by operators in ground control stations in the UAE.

The Bayraktar TB2 is the most successful indigenous armed unmanned aerial system built in Turkey. Having earlier produced the prototype Tactical Block 1 (TB-1) in 2005, the Istanbul-based Bayraktar company opted to develop a TB-2 variant for the army, which made its first flight in June 2009.

The first 12 were delivered in two batches – six by November 2014 and another six by June 2015. Initially they were used for the intelligence surveillance reconnaissance (ISR) role with the army, which started testing an armed version in December 2015, with the first firing in June 2016.

Bayraktar company general manager, Lufti Bayraktar, said: "Since the army first fired weapons in combat there has never been any collateral damage. High-



quality imaging by the L3 Wescam MX-15D easily distinguishes armed militia from civilians. And the weapon is small, so the impact area is small."

With weight being a critical factor, Roketsan designed the mini smart munition (MAM) with the laser version (MAM-L) now being mounted underneath the UAS. The drone was fitted initially with two pylons, but two more have since been added.

Without weapons it can fly 24 hours; with a full weapons payload for 14 hours. "But that's still a lot," Bayraktar said.

On July 16/17 this year, a Bayraktar TB2 achieved a significant milestone when it flew for 27 hours and three minutes during a demonstration in Kuwait.

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There are thought to be 86 armed Bayraktar TB2s operated by Turkey's Gendarmerie General Command, the General Directorate of Security Forces and the National Intelligence Organisation (MIT).

Both Ukraine and Qatar have also bought the Bayraktar TB2, with the latter probably sending them to Libya. Qatar is investing a lot of money into the Turkish systems and Turkey is operating them.

The Bayraktar company was developing a 5-6 ton UAS but has remained tight-lipped about its work since entering the Libyan theatre of operations.

The Bayraktar UAS saw service in Syria against Daesh, and its MX-15D electro-optical/infrared (EO/IR) turret can 'lase' for attack platforms. However, in Libya it is believed to be doing all the work itself.

China has made a lot of progress with customers in the Middle East and north Africa. The AVIC Wing Loong (Pterodactyl) II is highly sought after.

Deadly: The Chinese-built Wing Loong II is being used by the UAE and its allies to support Haftar's LNA. They have been significantly modified but still use Chinese weapons.

PICTURE: ALAN WARNES

To date, the China National Aero-Technology Import & Export Corporation (CATIC) has two customers for the unmanned combat air vehicle, Saudi Arabia and the UAE.

The WL II has a total armed payload of 480kg covering three hard points under each wing. Up to 100kg of weapons can be loaded on the two inside ones, and up to 50kg on the outside.

The 50kg anti-armour Blue Arrow-7 (BA-7) has, until recently, been the weapon of choice and played a massive part in customer campaigns, destroying pick-up trucks etc.

But CATIC is believed to have started replacing them with the smaller 16kg TL-2 bombs, and the two inside weapons pylons can carry three munitions each. A CATIC spokesman said: "You don't need such big weapons as the 50kg BA-7 to hit vehicles, and with TL-2s on board, the Wing Loong II can fly more than 20 hours."

CATIC is also planning to integrate the TY-90 air-to-air missile on to the WLII's outside hard points, which will give the UAV the ability to shoot down helicopters. These attributes should be ringing alarm bells for the GNA.

Another option could be the 50kg laser-guided AG300/M bomb, packed with a 26kg warhead with a longer range than the BA-7, which only has a 8-9kg warhead.

CATIC added: "When firing the BA-7, the WLII has to decrease its height, whereas the AG300/M doesn't because of its longer range. So, the WLII does not need to drop down into the range of the weapons that are being fired at it."

The UAE has significantly altered the Wing Loong IIs for its operations. The datalink has been enhanced with a Thales system, and the electro-opticals have been improved by the Israelis. They are being flown by controllers back in the UAE. ■

Thousands of lives are being saved in west Africa thanks to Zipline, the world's first commercial drone delivery service. Marcelle Nethersole finds out more from Dan Czerwonka. Pictures: Billypix

ZIPPING TO THE RESCUE

In 2014, Californian start-up company, Zipline, launched with a big mission – to provide ‘every human on Earth’ with access to vital medical supplies via the world’s fastest and most reliable delivery drone.

Three years ago, the company launched its first operation in Muhanga, a district in Rwanda, with the help of the Rwandan Government.

“We were looking for a country that had the kinds of problems we were trying to solve,” explained Dan Czerwonka, head of global regulatory affairs at Zipline. “We needed a country with a regulatory framework that would let us fly nationwide, plus we were looking for a customer and partner to try this service. Rwanda was perfect. It is probably the leading tech-savvy and forward-thinking country in Africa.”

The company works closely with Rwanda’s Civil Aviation Authority, the Ministry of Health, and the National Centre for Blood Transfusion.



Rwanda is known as the ‘land of a thousand hills’ due to its landscape. It has 3,000 miles of road, of which only 25% is paved. Much of the road system can get washed away during rainy seasons, making transportation difficult, particularly for urgent medical supplies, like blood, to outlying hospitals and clinics.

“This was the whole idea behind Zipline and it was a no-brainer problem-solver for the Rwandan Government,” said Czerwonka.

Today, remote clinics can place orders for lifesaving blood via text message, with drones dispatched from fulfilment centres dotted around the country.

Since its launch, Zipline drones have flown more than 10,000 missions, covering in excess of 500,000 miles, delivering thousands of units of blood.

In addition to Muhanga, Zipline also operates from its second Rwandan base in the eastern province of Kayonza. The two facilities serve around 98% of the country.

Czerwonka said: “Dozens of hospitals and health facilities in Rwanda now rely on Zipline’s vital service to improve patient care. Our drones now cover the country, giving doctors instant access to



critical medical products, like blood and vaccines, that were previously out of reach. Within half-an-hour, medical centres can receive what they need, as opposed to what could be up to five hours over rugged terrain via a truck.”

So how do the drones and the delivery process work?

“We have fully stocked laboratories, including blood banks,” said Czerwonka. “By holding the critical products centrally, all the hospitals can have equal access to the blood when needed. This helps eliminate waste.

“About a third of the deliveries are for emergencies, two thirds are re-supply.”

The facilities receive an order from a medical centre via WhatsApp.

“We then pack the order on to the drone, which has no pilot and is battery-powered, reducing both cost and emissions,” explained Czerwonka.

“We are then in touch with air traffic control to get permission to launch and, once granted, the drone races off at more

than 100kmh using automatic dependent surveillance-broadcast (ADS-B) technology. It is tracked as it flies at 500 feet and, once at the right destination, it descends, opens a set of doors in its belly, and drops a package that parachutes to the ground. The drone immediately begins to climb and return back to base as a hospital member collects the package.”

The drones only land at Zipline’s distribution centre, where operators quickly prepare them for their next flight.

“We’ve refined this process to support hundreds of deliveries per day, per distribution centre, in all weather conditions.”

Czerwonka said the drones don’t use cameras, ensuring that there are no surveillance worries.

“We limit the drone capability options for safety,” said Czerwonka. “We can tell the aircraft to go into a holding pattern, then we can tell it to come home, and thirdly to pull the parachute to land – that’s all.”



With such huge success seen in Rwanda, other African nations having been taking a keen interest in Zipline, and the company has now expanded its operations into Ghana.

“In April, we opened our first distribution centre in Ghana, a west African democracy of 29 million people,” said Czerwonka.

“We are expanding to provide most of the country’s population with access to any medical products they need, with four distribution centres spanning from the dense southern regions surrounding the capital, Accra, to the remote and arid north of the country.”

The four facilities should prove cost-effective to Ghana’s Government over the next four years, when the service will be available to more than 2,000 health centres across the country.

President Akufo-Addo opened the first of the four centres and said: “No one in Ghana should die because they can’t access the medicine they need in an emergency. We must do everything within our means to ensure that each and every citizen has access to the quality healthcare they deserve.”

Top: Dan Czerwonka: “Rwanda is probably the leading tech-savvy and forward-thinking country in Africa.”

Above: The 24/7 drone operation based in Muhanga district, southern Rwanda, has been saving lives every day.



WHALLEY SPARROWS IN ON HIS DREAM

Passerine Aircraft, a start-up based in Johannesburg and California, is developing an innovative drone concept that will require no infrastructure for taking-off and landing, writes *Anuradha Deenapanray*.

Matthew Whalley, Passerine Aircraft founder and CEO, is gradually realising his childhood dream. His fascination and passion for aircraft led him to a masters in aeronautical engineering from Witwatersrand University in 2015.

A team of aeronautical engineers has designed and built this high-performance long-range next-generation drone, which is able to operate without ground infrastructure due to a bio-inspired (leg) launch mechanism.

Sparrow drone will be used in pilot programmes for cargo delivery (medicine) and could easily be used for cargo transport, surveying, surveillance and infrastructure monitoring.

"Our vision is to revolutionise the commercial drone industry by providing aircraft that are capable of real world ranges and payloads without requiring ground infrastructure. We envision a future where drone is associated with small jumping



One jump ahead: Matthew Whalley, with the Sparrow.

aircraft, as well as short-range multi-rotors."

Sparrow is highly versatile, offering fixed-wing drone performance with the flexibility of a multi-rotor. It will take off and land like a bird, performing a flared landing and then dropping on to its legs. It has a unique launch mechanism removing the need for runways, catapults or recovery systems. It can operate without take-off/landing infrastructure and is capable of spot landings and standing take-offs.

According to Whalley, Sparrow would offer longer endurance, higher flight speed, longer

range and better scalability than its competitors.

"Our sales strategy and operational support is geared towards companies whose primary business is drone operations. Our predictions indicate a market for between 1.5 and 2 million commercial drones annually, just in the logistics space, and this means that, in order to innovate and stay ahead of competitors, we will have to focus on their strengths," said Whalley.

For him, a drone surveying company's strength is in its knowledge of how to conduct surveys. ■



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The booming use of unmanned aerial vehicles has now spread to security, with one South African company using the devices to protect residential estates. Alan Dron reports.

South Africa is, unfortunately, known for its high crime rate. Every cloud has its silver lining, however, and, in this case, that takes the form of business opportunities for a company like Drone Guards and its holding company, UAV Aerial Works.

With burglaries and house invasions a sad fact of life in the country, many middle-class residents have retreated to guarded estates. However, in most cases, the guard element is a single person who patrols the perimeter periodically – an insufficient deterrent to determined criminals.

Using remotely piloted air systems (RPAS) to provide an overwatch capability for residential estates is one answer.

An aerial watchman has two main benefits. Not only do residents feel safer, but their estates provide areas where wealthy incomers can make their homes. “Residents want to feel safe; if they feel safe in their estates, house prices will at least maintain their value,” said Drone Guards director, Kim James. “If we can secure high-value assets, the country will continue to attract capital investment.”

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A breakthrough moment for the company came at the Securex security exhibition, the largest in sub-Saharan Africa, earlier this year. “We had an absolutely amazing response,” said James. “We were overrun. We stood there for three days and we’ve not stopped getting enquiries.”

The company began operating residential RPAS patrols in June. The most difficult aspect of setting up the service, said James, was fulfilling the South African Civil Aviation Authority (SACAA) regulations for drones, which essentially were the same as for manned aircraft, but in many cases simply substituted the word ‘UAV’ for ‘aircraft’.

The process of getting licensed to offer the RPAS service was a time-consuming and costly exercise, said James.

Now that it is up-and-running, however, requests for Drone Guards’ services are rolling in from estate managements.

At present, the service uses readily available, Chinese-built DJI Matrice 200 RPAS, which have the advantage of being tried-and-tested but also have limitations, notably that their payload of a zoom camera cannot be swapped for other sensors.

For this reason, another UAV Aerial Works subsidiary, Sky Robots, is developing its own RPAS, which is being



Quick to move: The drones are easily transportable and managed by Drone Guards staff.

Inset: A picture taken by a thermal imaging camera on board an RPAS showing the presence of an intruder in a sensitive area.

THE DRONE RANGERS

designed specifically with the security mission in mind. At the time of writing, Sky Robots was working on its third prototype.

Inevitably, this has involved the time and expense of building a safety case for the new RPAS to satisfy the SACAA that the vehicle can operate safely over people, property and roads.

“We’re going to produce a drone that has a built-in parachute and other redundancies, like extra batteries,” explained James. These measures are intended to ease any concerns on the part of the regulator.

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Typically, when Drone Guards begins its duties at a residential estate, it will fly its drones at night, for around 30 minutes at a time, returning to their controller to have their batteries replaced. That routine continues through the night.

The company says it has already found that it can be tricky to remove batteries

from the DJI model and its own RPAS will be designed to be more ergonomically efficient in such matters.

The response from traditional security companies that supply guards for estates has sometimes been critical: “Sometimes they say, ‘You’re taking our jobs away,’” said James. “Our response to that is, ‘You can take us in as a service provider and you can provide a better service for your clients’. A guard walking behind an eight-foot-high wall can’t see what’s behind it. An RPAS can.”

Drone Guards deliberately randomises the timing of its patrols so that criminals cannot calculate when the next sweep will take place. Footage from the craft’s camera is streamed to a control room: “We monitor the screen and are in radio contact with security, or they have a security guard actually sitting in the van with us.”

Drone Guards is operating in five estates at the moment and is seeking permission to start operations in several more. ■

“A guard walking behind an eight-foot-high wall can’t see what’s behind it. An RPAS can.”
KIM JAMES

*Kasama Airport in Zambia's Northern Province is being upgraded as the country prepares to develop the northern tourism circuit. **Humphrey Nkonde** reports.*

High spot: Vintage facilities at Kasama Airport have been retained to show that the aerodrome started as a military facility.

PICTURE: HUMPHREY NKONDE.



KASAMA DEVELOPMENT TARGETS TOURISTS

Experts believe that visitors from Europe and other parts of the world spend less time in the wider Zambia region because tourism is concentrated in Livingstone, the seat for the Victoria Falls.

Now the Zambian Government is in the process of combatting that problem by placing Kasama Airport, a provincial aerodrome, into the hands of the Zambia Airports Corporation Limited (ZACL).

ZACL is already the custodian of the four international airports and now its remit will be extended to Kasama Airport, as well as other provincial aerodromes.

Zambia's international airports are Kenneth Kaunda in Lusaka, Simon Mwansa Kapwepwe in Ndola, Mfuwe near South Luangwa Game Park, and Harry Mwanga Nkumbula in Livingstone.



What is now Kasama Airport was built by the British colonial government during World War I as an air base to defend its territory of Northern Rhodesia, now Zambia, but it was mainly used by active squadrons during World War II.

That was done to deter Germany, which had established neighbouring German East Africa, presently Tanzania, in the northern part of present-day Zambia.

Even to this day, Nissen huts give Kasama Airport a vintage look – a preservation that has been made to show the historic heritage of the landing facility that started as a military aviation facility.

The air base was turned into a civil aviation facility after Northern Rhodesia gained political independence from Britain on October 24, 1964.

For the past 100 years, aircraft that have used the facility have landed and taken off using a gravel runway. Now the Zambian Government has engaged Chinese company, Anhui Shui'an Construction Group, to construct a 45m x 2.8km bituminous runway at an estimated cost of \$11,000.

Initially the runway was 4.6km, but the distance has been reduced to 2.8km so that funds, obtained through aid financing from China, can be used to construct a control tower.

The bituminous runway will be parallel to the old gravel one and the land where it is to be built has been cleared and the soil compacted to pave the way for surfacing.

Kasama Airport manager, Raphael Sakala, said the Chinese company was expected to complete the runway next year.

“It would have been completed this year but the contractor has not received the funds yet,” Sakala said. “All the series of the Boeing aircraft and other larger planes would be able to land at Kasama once the bituminous runway has been completed.”

There are plans to turn the old unpaved runways into aircraft taxiways once the new runway is complete.



Other plans include building a modern control tower midway up the new runway so that air traffic controllers can have a 360-degree view of the airport.

Kasama Airport was one of the local destinations for the defunct state-run Zambia Airways, until the carrier was liquidated by President Fredrick Chiluba's government in 1994.

Chiluba's administration decided to transfer an earlier fuel depot, which was run by British Petroleum (BP) Air, to the Zambia Air Force after Zambia Airways was liquidated.

At the time of writing, ZACL was in the process of selecting an aviation fuel supplier to Kasama Airport.

Meanwhile, a local contractor has erected a new terminal building with lounges for local and international passengers, as well as another one for the president or other VIPs.

The terminal building houses offices for airport management, the customs department of the Zambia Revenue Authority, immigration and customs, and ProFlight Zambia, the country's leading private airline.

Although Kasama is not yet being serviced by large aircraft, it has three Titan 4x4 fire (foam) tenders, a Land Rover Defender fire fighter and an ambulance.

Kasama Airport is strategically located between South Africa and east Africa and can be used as a stop-over for aircraft between air hubs in the two regions.

“It is being upgraded because it is the main international entry and exit in the Northern Province,” Sakala said. “This region has potential for tourism.”

Some of the tourist attractions include Lumangwe Falls, the second largest after the Victoria Falls, Kalambo Falls, the highest of all the falls in the country, and Lake Tanganyika, which forms part of the boundary with Tanzania.

Future developments at the airport would include establishing a fire and rescue station, given that the department is accommodated in an open-air facility. ■



Inauguration de l'Aéroport International Diori Hamani du Niger.

L'Aéroport de Niamey à l'heure de l'Union africaine

Le groupe turc Summa a tenu ses engagements pour la modernisation de l'Aéroport International Diori Hamani du Niger. Un reportage de Vincent Chappard.

Ce fut un grand moment le 12 juin dernier à l'Aéroport International Diori Hamani de Niamey quand le président nigérien Mahamadou Issoufou procédait à son inauguration suite aux travaux de modernisation au coût d'environ 154 millions d'euros. Ils ont été intégralement financés par Summa dans le cadre d'un partenariat public-privé. Le groupe turc a signé un contrat d'exploitation de l'aéroport pour trente ans.

Le président Issoufou s'est réjoui de cette nouvelle plateforme aéroportuaire qui fera de Niamey, un hub pour le transport aérien dans la région. Il a également salué la performance du groupe Summa qui a tenu ses engagements auprès du gouvernement nigérien.

« Cette inauguration est une grande fierté et nous sommes heureux d'avoir réalisé l'ensemble des travaux », a affirmé Envar Sayan, directeur exécutif de Summa. « L'Aéroport Diori Hamani de Niamey est le plus grand investissement du groupe en Afrique. »

L'aéroport a ainsi pu accueillir dans les meilleures conditions les délégations invitées au 33^{ème} sommet de l'Union africaine tenu en juillet dernier. Plus de 40 000 visiteurs y ont assisté dans la capitale nigérienne.

Ce fut une véritable course contre la montre engagée en juillet 2018 par Summa et les autorités nigériennes pour moderniser l'aéroport. L'infrastructure aéroportuaire n'avait pas bénéficié de travaux majeurs depuis sa mise en opération en 1972.

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Les travaux ont porté sur la rénovation de l'ancien terminal et la création d'une nouvelle aérogare d'une capacité d'un million de passagers. Le parking des avions et les voies de circulation ont été agrandis et la piste prolongée. Une aérogare présidentielle a également été construite. Ce ne fut pas l'unique réalisation de Summa en prélude du sommet de l'UA. L'hôtel 5 étoiles « le Radisson Blu » a également été livré et inauguré.

Summa est présent dans 12 pays africains dans des secteurs variés comme la construction, l'immobilier, la santé, l'extraction de l'or et l'énergie. Le groupe continuera à moderniser l'infrastructure aéroportuaire de Niamey avec notamment la construction d'un finance building.

« Nous comptons également développer nos activités dans le secteur aéroportuaire sur le continent africain. Des discussions sont en cours avec plusieurs pays. Nous avons d'ailleurs signé un partenariat avec l'Aéroport de Khartoum au Soudan où des échanges ont lieu avec le nouveau gouvernement », souligne Envar Sayan.

SUMMARY

PRESIDENT OPENS REBUILT NIGER AIRPORT

The €154 million (\$168m) refurbishment of Diori Hamani airport in Niger's capital city of Niamey was inaugurated by the country's president, Mahamadou Issoufou, in June – just in time for the country to host the 33rd summit of the African Union.

Completion was a race against time as the project only began in July 2018 – the airport's infrastructure having seen no major improvement work since opening in 1972.

The extensive modernisation work was funded by the Turkish Summa Group through a public/private partnership that will see the company operating the airport for the next 30 years.

"We are proud to have completed all the work on time," said Envar Sayan, executive director of Summa. "The Diori Hamani Airport project comprises the largest investment by our group in Africa."

The major works focused on the renovation

of the old terminal and the building of a new one with a capacity of one million passengers a year. Aircraft parking areas and taxiways were also enlarged and the runway extended. A VIP air terminal has also been built along with a five-star hotel.

Summa Group currently operates in a dozen African countries in various sectors such as construction, real estate, health, gold mining and energy. The group will continue its structural work at Niamey's airport, with the building of an administration building being next on the agenda.

It also plans to expand its work in the African airport sector and discussions are ongoing with several countries.

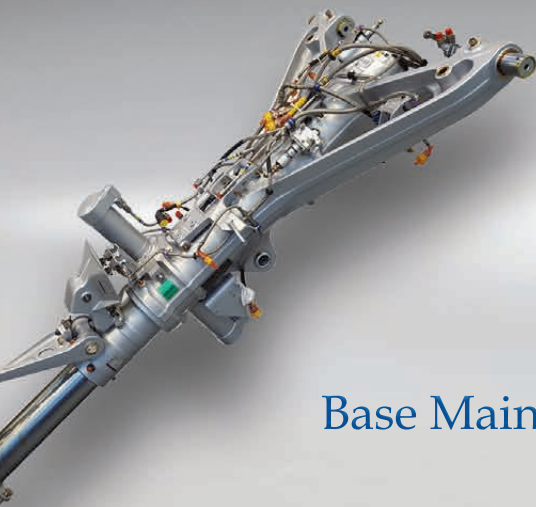
Sayan said: "We have already signed a partnership agreement with the Sudanese Government to undertake extensive work at Khartoum Airport."



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A price war has broken out between Nigeria's two main ground-handling organisations, leading some to fear that safety could be compromised. Chukwu Emeke reports.

Nigeria's battle-ground



Basil Agboarumi: "Ground-handling in Nigeria is still under-priced. The tariff we are using was last upgraded in 2009."

Inset: The cost of equipment bought by SAHCO, sometime in 2014, has tripled.

In the 1990s, the then Skypower Aviation Handling Company Limited (SAHCOL) was a subsidiary of the national carrier, Nigeria Airways, and handled all its cargo, while Nigerian Aviation Handling Company (NAHCO) was used mainly by foreign airlines operating into the country.

After the Nigeria Airways liquidation, SAHCOL was granted autonomy and became a competitor to NAHCO.

Eventually, both companies went to the stock market and have remained the major licenced players operating in Nigeria's ground-handling subsector.

Entry into the stock market was accompanied with rebranding into Nahcoaviance and SAHCO.

Over the years, SAHCO has grown rapidly and currently does business with 30 airlines, operating from 19 airports across the country and competing on market share with Nahcoaviance, which hitherto controlled the entire market.

Although there are only eight scheduled local passenger airlines, 22 foreign carriers and a few cargo and charter airlines operating in the country, some are advocating the granting of permits to more ground-handlers.

The subsector is beset with price competition between the two main players, which allows them to undercut one-another. There is no benchmark for ground-handling tariffs in Nigeria and stakeholders are worried that the persisting price war could jeopardise safety.

Basil Agboarumi, managing director of SAHCO, highlighted the pressures: "Ground-handling in Nigeria is still under-priced. The tariff we are using was last upgraded in 2009. The cost of equipment we bought, sometime in 2014, has tripled. Yet, we must provide excellent and quality services to our clients.

"The cost of certifications has also gone high; the costs of

maintenance, living and fuelling have increased. However, airlines are coming in and they are not expecting anything less than excellent service from a ground-handling company."

The group managing director of Nahcoaviance, Olatokumbo Fagbemi, said the price war had become inevitable because the handlers had found themselves in a business where the customers were very powerful. She said, because the airlines are powerful, there is pressure on the handlers to reduce prices in order to remain in business or to win contracts.

Both operators are calling on the regulator for assistance. "If an airline owes a ground-handling company money, they [the regulators] should make it impossible for the airline to move to the other ground-handler," said Fagbemi.

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Dr Segun Musa, former president of the National Association of Government Approved Freight Forwarders (NAGAFF), is one that has questioned the operation of only two handling companies, while Kingsley Nwokoma, president of the Association of Foreign Airline Representatives of Nigeria (AFARN), also believes government approval of more handlers would help to achieve competition that would yield better services.

Interestingly, the Nigerian Civil Aviation Authority (NCAA) already has other licenced ground-handling companies on its register, including the Precision Aviation Handling Company Limited (PAHCOL), which has not been able to commence operations, even with its licence.

Airports infrastructure still poses another challenge to ground-handling operators in Nigeria. Although the Federal Airports Authority of Nigeria (FAAN) has, in recent years, improved on its handling support facilities across the nation's airports, service providers are looking to see further technological upgrades and expansions.

Prospects of the aviation sector's growth are huge, considering Nigeria's strategic position in the market, said Agboarumi, citing the volume of Ghanaian yams, and pineapples from neighbouring countries like the Benin Republic, that are shipped out through Nigerian airports.

"So, it's just for people to do things correctly," he concluded. ■

**Becoming a reality:
The vision of a
seamless passenger
journey is now closer
than ever before.**

PICTURE: ONDA



Over the next 20 years, demand for air transport in Africa is expected to double, with 4.6% annual growth predicted – the second fastest of all the International Air Transport Association (IATA) regions.

Emad Muhanna outlines the steps that need to be taken to make seamless passenger journeys a reality in the continent.

FOUR WAYS TO CHECK IN TO SEAMLESS TRAVEL

Currently, there are 731 airports and 419 airlines on the African continent, with the air transport industry supporting 6.2 million jobs and contributing \$55.8 billion to Africa's gross domestic product (GDP).

Over the next 20 years, demand for air transport is expected to double. This translates to an extra 199 million passenger journeys per year in 2037 for a total market of 334 million passengers.

In addition, if a single air transport market (SATM) is implemented for the continent, it will give Africa the potential for economic transformation.

Placing aviation at the centre of African governments' agendas is key to unlocking the immense potential and generating the economic and social benefits of a safe, secure and sustainable air transport industry.

As passenger numbers increase, ensuring greater security over activities such as smuggling and illegal immigration, are imperative for the future of air travel worldwide. Continuing to rely on manual processes to achieve this does not necessarily lead to an increase in the accuracy of threat detection on the part of border control, while leading to further congestion in airports.

The vision of a seamless passenger journey is now closer to reality than ever before as airlines, airports, border agencies, governments and industry bodies continue to drive initiatives that will bring it about. Trusted global identity

management, enabled by biometrics, is the critical enabler.

The question is, how do you establish a scalable and globally interoperable identity management system for air travel where passengers enrol once and then use one digital identity to travel the world to different airports and across borders?

For this to happen, four ingredients are essential.

Firstly, collaboration among stakeholders is critical (including governments). Airlines essentially check credentials issued and vetted by governments, so it makes sense that governments, airlines and airports must work together to make passenger-processing more efficient.



Next, there is a need for standards and recommended practices that govern how biometric technology can be integrated into existing airline and airport business processes, infrastructure and business systems. This point is key – as passengers travel the world, they should not need to relearn the airport and airline processes at each new location. This means that biometric processes should look and feel the same wherever they go.

Additionally, with large international airlines operating in dozens of airports, the industry must ensure that existing infrastructure and business systems are compatible with whatever biometric

technology is used at each location.

Central to this is common-use technology, which can be extended to support biometric checks, as is the case for SITA Smart Path.

SITA Smart Path captures a passenger's biometric details through a facial scan to verify the traveller's identity at the first touchpoint in the journey, typically in five seconds or less

Thirdly, we require a trusted framework for data exchange that will facilitate collaboration among all stakeholders. This will allow airlines, airports and governments to share identity data in a secure and verifiable way so that biometric and biographic data captured in one airport can be used in another, while also facilitating the data exchange that must take place between airlines and governments in order to streamline identity checks.

Then there is the need for data to be protected and stringent privacy regulations to be met. All industry stakeholders are obligated to protect the private data of passengers in accordance with national and international regulations, such as the European General Data Protection Regulation (GDPR), among others. Systems that process passenger personal data must be built from the ground up to protect that data – a concept known as 'privacy-by-design'.

With these components in place, we'll reach the point where we really do have a seamless journey, using one digital credential integrated with airport, airline and government processes.



Of course, this will take some time, but the momentum is clearly gathering.

The good news is that, within air transport, biometric technology has garnered a great deal of interest. SITA's latest *Air Transport Insights* report shows that 77% of airports and 71% of airlines are planning major programmes or research and development (R&D) in biometric identity management over the next three years.

The other good news is that airlines, airports and governments can take steps today – many airlines and airports have already started to deploy seamless travel, with the first airport-wide implementations already online.



There is also movement in terms of standardisation. IATA's 'one ID' programme is developing standards that will govern how biometrics are used across the whole passenger journey. One ID relies on a collaborative approach between stakeholders in order to work.

The International Civil Aviation Organisation (ICAO) is also actively looking at creating standard digital identity credentials, derived from electronic passports, which can be stored in a secure wallet on a smartphone, for example.

Smartphones are set to be the key enabler to global interoperable identity credentials and travel processes. Eventually, as our lives move increasingly online, the use of biometrics on our

smartphone will be the way we identify ourselves whenever we access online services – whether that be for travel, banking, healthcare or a myriad of other services.

The good news is that this puts control in the hands of the passengers, who will be able to disclose as much or as little personal information as is required to prove who they are, under their control.

Momentum is gathering. Collaboration and smart technology are creating the foundations of a seamless passenger journey. But, as an industry, we must focus on standardisation to ensure interoperability and compatibility with existing airline and airport infrastructure and business systems.

We can now say with confidence that biometric technology is mature and capable of automating airport processes. Performance has improved dramatically in recent years, with a number of vendors offering algorithms that operate with up to 99% accuracy in normal airport conditions. It is no longer about the technology – the key success factor is how compatible the technology is with the airline and airport environment, especially considering that large international airports host dozens of airlines, each with their own business processes, systems and applications. ■

■ **Emad Muhanna is vice president, government sector, at information technology company SITA.**

SOMMAIRE

VERS UN DOUBLEMENT DU TRANSPORT AÉRIEN

La demande en transport aérien en Afrique devrait doubler au cours des 20 prochaines années selon l'IATA. Emad Muhanna, le directeur des programmes gouvernementaux de SITA, nous présente les éléments nécessaires pour fluidifier le trajet des passagers sur le continent.

La croissance annuelle estimée à 4,6% engendrera 199 millions de voyages supplémentaires en 2037 pour un marché totalisant 334 millions passagers. Placer l'aviation au centre des préoccupations des gouvernements africains est donc primordial.

Il est important d'assurer la sûreté des plateformes aéroportuaires. La gestion des contrôles d'identité via la biométrie est aujourd'hui un maillon essentiel. La question est de savoir comment établir un système à l'échelle mondiale permettant aux passagers d'utiliser l'identification numérique pour traverser différents aéroports et frontières.

Quatre conditions sont requises pour y arriver : D'abord, il faut une collaboration étroite entre les parties prenantes (gouvernements, compagnies aériennes et aéroports) afin de rendre le traitement des passagers plus efficace. Il faut ensuite établir des normes et des pratiques recommandées. Il s'agit de voir comment la technologie biométrique doit intégrer les processus, les infrastructures et les systèmes existants des compagnies aériennes et des aéroports. La troisième condition vise à établir un cadre d'échange de données fiable alors que la quatrième concerne la protection des données et le respect des règles strictes en matière de protection de la vie privée.



Le dernier rapport de SITA (*Air Transport Insights*) indique que 77% des aéroports et 71% des compagnies aériennes prévoient d'importants programmes de R&D sur la gestion de l'identification biométrique au cours des trois prochaines années.

Plusieurs compagnies aériennes et aéroports ont déjà commencé à déployer des déplacements dit « transparents ». Le programme « One ID » de l'IATA élabore des normes qui régiront l'utilisation de la biométrie tout au long du voyage. L'OACI s'attache également à créer des identifiants d'identité numérique standard.

La collaboration et l'innovation offrent ainsi une base solide pour fluidifier le trajet des passagers. Toute l'industrie doit se focaliser sur l'application d'un standard pour assurer une interopérabilité et une compatibilité avec les systèmes existants au niveau des compagnies aériennes, des aéroports et du business.

Il existe aujourd'hui une réelle dynamique autour de la technologie biométrique. Elle est mature et capable d'automatiser les processus aéroportuaires. ■



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It's crunch time for credit fraud

African airlines, facing an increasing problem of fraud, are seeking new payment methods to try to cut down on their financial losses.

Alan Dron
reports.

It is an indication of how serious a problem fraud has become to the African travel trade that it is now an almost permanent topic at conferences where airlines and travel professionals gather.

The problem has become so great that some airlines have started to take electronic ticketing systems off-line, forcing prospective passengers to go back to the traditional method of travel agents to book journeys, said one specialist in the field.

"It's standard credit card fraud," said Ciaran Wilson, sales and account director for Middle East and Africa of Cellpoint Mobile, which provides digital payment solutions.

Credit cards are stolen or cloned, he explained. The thieves or fraudsters buy an airline ticket with the card, then sell it on at cut-price rates to someone else, who uses it to fly. By the time the charge for the ticket has gone through the payment system and is discovered to be fraudulent, the passenger has made his trip and is untraceable, while the airline never gets paid for the trip.

With most airlines existing on slim profit margins, losing income like this is a significant problem.

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The situation is particularly serious in certain countries such as Nigeria and Morocco, said Wilson. Some carriers, particularly smaller ones, were either closing down online sales channels, or restricting them or banning online ticket purchases for certain particularly badly affected routes.

The International Air Transport Association (IATA) says that, while it cannot give specific examples, "We are aware of situations in which airlines have had to temporarily close some of their online channels (or call centre sales) because of the volume of fraud attacks."

Anca Dolocan, IATA's portfolio manager, card & fraud services, added: "No sooner does an airline manage to disrupt a fraud attempt than the fraudsters are at it again with a new method.

"It is also sometimes expensive for airlines to have the latest fraud prevention tools in place. Therefore, it can happen that they choose to suspend some sales channels while revamping their fraud prevention systems or training their call centre staff. However, these are very rare circumstances and also very specific to certain 'fraud-hot' destinations.

"It is an enormous challenge to be constantly under attack from fraudsters," Dolocan continued. "We often say that fraud has no boundaries. All airlines are hit by the same fraudsters. However, there are some locations more exposed than others in terms of fraud.

"In general, 'card not present' fraud remains one of the top trends and the reasons are obvious. But there are many more types of fraud out there and each one of them is equally important for our members."

Airlines often have teams that try to claw back money from banks after frauds are discovered, but this involves further costs in time and money.

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As a result, many African airlines are turning to additional forms of payment (AFPs) such as 'mobile wallets' like ApplePay or local equivalents, Wilson said. These tend to have higher levels of security, such as biometric identification, making it more difficult for fraudsters. They also have the advantage for airlines of having lower commission fees – typically half of the 2-3% charged by traditional credit cards.

Cellpoint Mobile gets involved as a technology partner: "We have a payment platform where we integrate with the airline's website or mobile app. We plug into the airline's platform and integrate payment methods on a website's payment page," explained a spokesperson.

While there are few statistics available on the extent to which AFPs can cut fraud, "where we see the significance of this is the number of requests [we have] coming from airlines."

Dolocan added: "The airline business is very complex and so is prevention. Refusing sales is definitely not an option. Joining forces, sharing best practices, educating the staff, these are appropriate solutions and at IATA we're working on offering our members the appropriate channels and environments to foster these activities.

"IATA encourages regional communities of fraud prevention investigators and subject-matter experts to meet and regularly discuss and share best practices and knowledge. We do this at regional but also at a global level as there are no boundaries when we talk about fraud." ■



Crabtree Capital's Mark Tierney argues the case for a disruptive change agent in the form of a public-private commercial aircraft finance enterprise (CAFE) for Africa and the Indian Ocean that is needed now more than ever before.

CAFE culture that could help Africa's businesses fly

The inadequacy of Africa's air transport system derives from the tendency of air transport policy and airline management practice to fragment the continent's small commercial aviation market.

It means that the economies of density and of scale that are necessary to create a virtuous circle of profit, reinvestment, growth, profit, reinvestment and so on, are rarely achieved – Ethiopian Airlines being the exception that proves the rule.

What might have been the outcome if the Chicago Convention [on International Civil Aviation, which established the International Civil Aviation Organization] had been agreed in December 1964 rather than in December 1944?

Might pan-Africanist leaders like Ghana's President Kwame Nkrumah have tried to marshal newly independent African states into a voting bloc to argue what, by the time of the Yamoussoukro Declaration in 1988, had become obvious: that Africa was particularly ill-suited to the concept of individual sovereign African nations profitably reciprocating international air services, both within the continent and without?

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Only four African countries were original signatories to the Chicago Convention: Egypt, Ethiopia, Liberia and South Africa.

While part of the convention's declared purpose was to facilitate the establishment of international air transport services, operated "soundly and economically" on the basis of "equality of opportunity", there is nothing in it to suggest that any signatories, African or otherwise, anticipated the later effects of the convention on African states as the unstoppable wave of independence rolled on in subsequent decades.

With very few exceptions, state-owned African airline managers and stakeholders came to learn that operating soundly and economically proved highly elusive, partly because, in an

industry with razor-thin margins, the 'equality of opportunity' envisaged in the convention proved more nominal than real.

Whereas similar lessons had been learned in North America and Europe by the 1980s and 1990s, ushering in an era of partial deregulation (still believed by some not to go far enough) and of continuing consolidation punctuated by occasional airline failures, African deregulation – first articulated in the Yamoussoukro Declaration of 1988, then in the Yamoussoukro Decision of 1999 and, most recently, in the single African air transport market (SAATM) of 2018 – is especially constrained by two significant factors: a shortage of dedicated capital on the one hand and, given the current context, a practical reluctance to consolidate on the other.

In 2010, I was set a challenge that I first aired publicly in Gaborone in August of that year: to design an innovative financing strategy for African airlines.

With the support of the then-CEOs of several African airlines, including Ethiopian Airlines, Kenya Airways and South African Airways, I proposed a disruptive change agent in the form of a public-private commercial aircraft finance enterprise (CAFE) for Africa and the Indian Ocean.

Crabtree's call to arms

An unsolicited phone call from Air Madagascar in 1998 gave rise to Crabtree Capital's initial interest in African commercial aviation.

On behalf of the airline over the next decade, Crabtree Capital sold one B747, two B737s, two ATR42s and one Twin Otter, and recovered monies from original equipment manufacturers and maintenance, repair and overhaul organisations in respect of out-of-warranty operational issues that arose during the period.

Additional challenging mandates with Air Malawi, Kenya Airways, LAM and others ensued, affording Crabtree Capital rare insights into the strategic and tactical difficulties of owning, directing and managing an African airline.

While a lot of time has passed since then, the basic premise of CAFE has not changed at all; if anything, given the continued fragmentation of the African market, the need for it has increased over time.

CAFE is intended to pave the way for airlines to rationalise their behaviour out of self-interest, self-selecting into three categories – major, regional/feeder, and niche – to qualify for the right-sized, right-priced aircraft that CAFE, with blue-chip shareholders and managers, will be well-equipped to supply.

CAFE will only do business with airlines that have commercial business models. To have a commercial business model, airlines must (by definition) address the failings of policy and practice to date.

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If a proposed airline business model is rejected by CAFE, what then?

Ideally, the promoters will go back to the drawing board and make suitable adjustments to make their business model 'fly'. If not, the promoters may encounter significant difficulty in getting the flawed business model 'off the ground' for the simple reason that the one-and-only dedicated supplier of aircraft to African airlines said 'no'.

By so doing business, or not doing business (as the case may be), CAFE will help to rationalise the market and to create the conditions for airlines to make safe, efficient and affordable commercial air transport available intra-Africa.

And, to establish CAFE, no pan-African agreement is required, just a small coalition of the willing.

Avid aviation enthusiasts may recall the World Bank bidding African governments to 'abandon their national airlines', where such airlines were a drain on sovereign resources.

What the World Bank did not take into account was that countries like Malawi, although willing to comply, came to a sort of



epiphany in due course: where vital city-pairs are concerned, having a national airline may be less bad than not having a national airline, if other carriers will not provide suitable connectivity.

Likewise Uganda, where President Yoweri Museveni is reported to have told his cabinet in 2016: “Ugandan travellers are suffering because of ... not having a national airline. I thought our brothers in Ethiopia, Kenya, South Africa etc having airlines would serve us all. That, however, is apparently not the case.”

The case of Malawi was particularly telling. While Air Malawi was being wound up (and before Malawian Airlines was under consideration), the national airline was unable to serve Blantyre-Johannesburg, arguably Malawi’s most important commercial route.



The only other airline on the route was South African Airways. But SAA was under significant commercial pressure on its international and intercontinental routes: in the 10 years from 2005 to 2015, whereas traffic at OR Tambo International Airport (JNB) had approximately doubled, SAA’s growth at JNB had more or less flat-lined.

So what should South African Airways do about Blantyre?

In context, the answer was simple and obvious: raise fares.

It would have been unreasonable to expect SAA to do otherwise. They saw an opportunity and they exploited it.

But spare a thought for anyone flying to or from Malawi back then. From his/her point of view, seats were scarce (as capacity had been halved), prices had gone up (by as much as 60%) and bookings had to be made at least six weeks before travel (to guarantee a seat).

In these circumstances, it didn’t take long for the Malawian Government to decide to get back into the commercial aviation business. And, in recent years, similar decisions have been made by governments across the continent.

From the narrow perspective of an individual

A long and extensive career

Mark Tierney has had a long and extensive career in the aircraft leasing and finance business. He worked as a senior executive at GPA in the mid-90s, where he was responsible for restructuring the company’s \$3 billion order book with original equipment manufacturers, and arranging bankruptcy-remote financing for the company’s remaining deliveries.

Since 2002, he has run Dublin-based Crabtree Capital, providing strategic advice, deal execution and troubleshooting services to airlines, lessors and financial institutions. He is also on the board of Dublin-based Santos Dumont, project manager to the aviation industry.

African country, it may seem – with apparent good reason – that re-birthing or subsidising its national airline is a necessary measure. However, from an overall African perspective, the trend does not amount to a coherent over-arching policy/practice that will deliver safe, efficient and affordable commercial air transport intra-Africa.

More probably, it’s a trend readily adaptable to comments by former BA boss, Rod Eddington, in 2008: “It doesn’t benefit anyone because it encourages inefficiencies, rewards bad habits, drives out good money and replaces it with bad.”



In summary, the status quo in African aviation tends to result in (a) the re-birth/subsidisation of airlines whose commercial viability is sometimes in doubt; (b) in the aggregate, a fit-for-purpose commercial air transport system cannot be expected to emerge from such an environment and; (c) without such a system, Africa’s economic growth and development (and, in particular, its success in creating new jobs across all industries) will be stymied at a critical time in the continent’s progress.

If you agree with the above summary, you will also hopefully agree that governments, multilateral development banks (MDBs), and development finance institutions (DFIs) should do far more to change that environment. Supporting CAFE would be a good start. ■



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On top of the world: Trainees gain their cabin crew skills and (right) MATA's helicopter engineering trainees.



South Africa goes Mega for engineer training

South Africa's Mega Aero Training Academy (MATA) is working with Swiss maintenance provider, SR Technics, to establish an EASA Part 147 programme that will cover type ratings, plus basic and specialised training, using web-based methods.

Dave Calderwood reports.

SR Technics is one of the world's largest independent MRO providers, servicing most Airbus and Boeing aircraft types. The company started out as the maintenance and engineering section of Swissair, previously Switzerland's national carrier, and has grown to be a global player. For MATA, the five-year partnership between SR Technics Training Services will add a recognised engineering training expertise.

SR Technics says the partnership will increase its presence as a training service provider in Africa.

Nora Pimont, strategic account manager at SR Technics, said: "MATA and SR Technics Training Services are moving fast with this opportunity to deliver European Aviation Safety Agency (EASA) examinations and training in South Africa. The first EASA examinations, in collaboration between the partners, successfully took place in July 2019.

"The agreement is very well perceived by the South African Government, which supports this major investment from a leading maintenance, repair and overhaul (MRO) provider with direct benefit for young people and professionals.

"We are proud to support the development of aircraft maintenance talent to address the shortage of EASA-certified engineers. We look forward to developing our partnership with MATA over the coming months and years."

MATA was founded in 2010 and is an aviation training academy based at OR Tambo International Airport, Johannesburg, with satellite training facilities at Grand Central Airport, halfway between Johannesburg and Pretoria.

It's also part of Safomar Holdings Group, a South African Aviation Group active in sub-Saharan Africa.

MATA offers training right across aviation, including apprentice technical training, flight crew, cabin crew, advanced technical training, regulatory training, ground school for pilots, technical type ratings (rotor and fixed-wing), dangerous goods for aviation, and airport worker training. It is also a trade test-certified preparation and examination centre.

MATA holds local accreditation with the South African authorities and several African countries.

"Our facilities consist of a three-storey building with 14 classrooms for theory classes plus a practical training hangar that has a variety of aircraft, helicopters and aircraft engines, structures, landing gear and spares," said the company. "These are used in the practical training modules for technical apprentice training, giving all MATA-trained aircraft maintenance engineer apprentices the closest experience to what they would be likely to encounter in an aircraft maintenance facility.

"For cabin crew training, MATA is proud to boast a complete Boeing 737 aircraft onsite. We are also equipped with fire pits for firefighter training and approved training aids for first-aid training.

"In addition to initial and recurrent training facilities, we have a fully approved aviation trade test centre for mechanical and avionics trades.

"With our focus on industry partnerships, graduate students have access to real-world projects, networking opportunities and up-to-date information that make them desirable future employees and leaders."

SOMMAIRE

UNE MEGA FORMATION EN AFRIQUE DU SUD

Mega Aero Training Academy (MATA) collabore avec SR Technics pour la mise en place d'un programme de formation certifié EASA Part 147.

Ce partenariat de cinq ans ayant reçu l'aval des autorités sud-africaines sera bénéfique pour les deux sociétés. Il permettra de renforcer l'expertise de MATA dans la formation des ingénieurs. Pour SR Technics, cela va étendre sa présence en Afrique.

Selon Nora Pimont, Strategic Account Manager chez SR Technics, MATA et SR Technics ont été proactifs pour proposer une formation certifiée EASA en Afrique du Sud. "Nous sommes fiers de soutenir le développement des talents dans le domaine de la MRO afin de remédier à la pénurie d'ingénieurs", affirme-t-elle.

MATA est basée à l'aéroport international O.R Tambo de Johannesburg et offre une large gamme de formation aéronautique. Elle possède des agréments auprès des autorités locales et de plusieurs pays africains.

MATA dispose d'un bâtiment avec 14 salles de cours, un hangar comprenant plusieurs avions, des hélicoptères, des moteurs d'avions, des aérostructures, des trains d'atterrissage, des pièces de rechange et même un Boeing 737 pour la formation des PNC. Elle est également équipée pour les métiers de la mécanique, de l'avionique ainsi que pour la formation des pompiers.

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Modernising: Ethiopia's airline and infrastructure is growing. Addis Ababa Bole International Airport's new terminal 2 was opened earlier this year.

Ethiopia to host Africa's top summit

Africa's most prestigious aviation event heads to Ethiopia for the first time, as Michael de Klerk reports.

Addis Ababa is becoming to Africa what Dubai is to the Middle East. A pro-aviation government, the continent's largest and most modern airline fleet, and an ambition to drive up standards through partnerships across the whole of Africa, means it is no surprise that the fifth annual Aviation Africa Summit and Exhibition is making its way to the Ethiopian capital.

The summit will take place at Addis' new and ultra-modern Skylight Hotel on March 4-5 2020 and will be hosted by Ethiopian Airlines and Ethiopia's Civil Aviation Authority. The event is bringing top names in the African industry to the nation's capital.

Ethiopian Airlines Group chief executive, Tewolde GabreMariam, said he is excited that the event is coming to the carrier's home base. "I will be encouraging Ethiopia's industry to join us at Aviation Africa 2020, both government and privately owned businesses. I will also be personally inviting friends, colleagues – and even competitors, to join us in Addis Ababa for the summit," he said.

Aviation in Ethiopia is a high-growth sector with increasing demand for air transportation, both passenger and cargo, meaning it is expanding at a staggering rate. Investment has been made in expansion and upgrades to the Bole Airport in Addis as plans are being developed for a new showcase hub at Abusera in Bishoftu, 50km from the capital, with a capacity of 80 million passengers per year.

This new major airport will be built at a lower elevation, reducing jet fuel consumption and enabling flights of a greater distance.

"Aviation is an important element of Ethiopia's economic growth plan," Tewolde said. "Ethiopian Airlines is a cornerstone of that plan, exhibiting sustainable fast growth to become Africa's largest airline, with multiple hubs established through strategic partnership with African national and local carriers. We are at an important point in Africa's whole aerospace industry transformation."

The airline and the government will be sharing the strategic plan and discussing some of the challenges ahead.

"Throughout our development, Ethiopian has raised and tackled issues affecting the potential of the industry. This

summit, we believe, will also help in facilitating a stage of engagement to positively change our industry," Tewolde said

"The international community will be present, paving the way for first-class opportunities to share ideas, debate issues and help shape a thriving African aviation industry."

Tewolde will appear on stage for a one-on-one discussion with summit chairman and *African Aerospace* editor-in-chief, Alan Peaford.

"There is a lot to talk about," Peaford said. "Ethiopian's model of partnership and investment in other countries, the opening up of the Ethiopian market and, of course, the rebuilding of the airline's spirit and confidence after the tragedy of flight ET302 in March 2019."

The theme of this year's conference covers sustainability and how the industry will create a viable long-term future.



Airline and other industry leaders will be taking part in the debate. "Last year we had around 60 airlines represented at the event," said Mark Brown, managing director of the event organiser, Times Aerospace. "One OEM fed back that he had meetings with 17 airline CEOs over the two days, the most he had done at any event."

With the plans for airport growth across the whole of Africa, a session on sustainable growth and social responsibility involving airport management from across the continent, as well as from Europe and the Middle East, is expected to draw a large audience.

A sustainable finance programme is also key to industry success and former CEO of Ethiopian Airlines and chairman of RwandAir, Ato Girma Wake, will lead a discussion with airlines, finance houses and manufacturers, about how this can be achieved.

Mark Tierney, director of Crabtree Capital, will be outlining how airlines can ensure survivability with a plan that works for the operators, as well as the banks.

The potential for Africa to lead the way in the development of unmanned autonomous aircraft and the new urban air markets will be explored in a business and general aviation segment.

"This is a great programme being developed with great speakers. I share Tewolde's view that this could be the most successful Aviation Africa summit yet," Peaford said.

Further details about the summit, the programme, and how to become an exhibitor or a sponsor can be found at www.aviationafrica.aero.

Abderahmane Berthe, secretary general of the African Airlines Association (AFRAA), announced the upcoming launch of two major projects to Anuradha Deenapanray and Vincent Chappard while looking forward to the annual general assembly (AGA) and summit being hosted in Mauritius from November 10-12.

En route for an integrated and interconnected continent

Abderahmane Berthe believes 2019 has been a very rich year as AFRAA continues to push for the transformation needed to unleash African aviation's untapped potential.

He also announced two new steps forward. "In the coming months we will launch a consulting unit in the field of aviation and an alliance of African airlines," he revealed.

The AGA, initially scheduled in Cameroon, will gather more than 500 air transport delegates, aviation leaders and stakeholders.

They will not only take stock of aviation milestones but also address the need to embrace disruptive trends, working and doing business differently. In short, they will reimagine Africa's vision for the future development of its aviation industry.

The theme is: 'Success in an integrated and interconnected Africa'.



"We are grateful to Air Mauritius and the people of Mauritius for their willingness to host this most important gathering of aviation stakeholders on the continent," said Berthe. "This is again a testament to their legendary hospitality and commitment to the development of the African aviation industry."

His words came after the country successfully hosted the 8th Aviation Stakeholders Convention in May.

For Berthe, African air transport needs both 'small' and 'big' airlines. "Africa is a vast continent and African airlines must cooperate to cover it efficiently. Partnerships and consolidation plans will certainly be necessary," he said.



MAURITIUS, A GATEWAY TO THE REGION

For Air Mauritius CEO, Somas Appavou (above), it is "a pleasure and honour" for the Mauritian flag-bearer to host the summit.

While Air Mauritius pursues its restructuring programme, the airline is also revising its business model to sustain its development.

Last July, Appavou presented the outlines of a new economic model to Air Mauritius shareholders during the annual general meeting, following the recommendation of the specialist Indian firm, CAPA.

He will unveil the airline's regional strategy at the end of 2019.

Cooperation will help them reduce costs and increase revenue (commercial and cargo).

Berthe thinks that air transport is often considered by some governments as a potential source for raising funds.

"While in Europe you can travel for less than \$100, in Africa taxes alone can cost between \$50 and \$100 depending on the country," he pointed out.

He strongly believes that the role of air transport in economic development must be better understood by governments and that this sector should be included in their national development policy.

Fuel represents, on average, 25% of operational costs of airlines around the world. In Africa, it is the highest and represents 35%. "At several stop-overs, we notice that price movements do not keep pace with prices on international markets due to opacity in the local pricing structure," underlined Berthe.



AFRAA and the International Air Transport Association (IATA) are working together to discuss this issue with states and fuel suppliers to find a lasting solution.

Since its launch in January 2018, 28 states have signed the single African air transport market (SAATM) agreement, representing 51% of African Union member states, 61% of the population and 65% of the continent's gross domestic product (GDP).

Ten signatory states have already fully implemented the immediate actions recommended by the African Civil Aviation Commission (AFCAC).

However, some states still hesitate to sign, fearing that their national airline might be

Abderahmane Berthe:
"We want an air transport
situation where African
companies will be economically
efficient with enhanced
connectivity and contribute to the
economic integration of the
African continent."

EN ROUTE POUR UNE AFRIQUE INTÉGRÉE ET INTERCONNECTÉE

Le secrétaire général de l'AFRAA, Abdérahmane Berthé, a annoncé le lancement de deux projets majeurs à **Anuradha Deenapanray** et **Vincent Chappard** en présentant les enjeux de l'assemblée générale et du sommet que Maurice accueillera du 10 au 12 novembre 2019.

Abdérahmane Berthé qualifie 2019 de très riche et assure que l'association continuera à jouer son rôle de pivot pour aider l'industrie de l'aviation africaine à débloquer son potentiel encore inexploité.

« Nous allons aussi lancer deux projets très importants dans les mois à venir : une unité de consulting dans le domaine de l'aviation et une Alliance des Compagnies Aériennes Africaines », dit-il.

Initialement prévu au Cameroun, l'événement réunira plus de 500 délégués, des leaders et partenaires du transport aérien.

Ils aborderont la nécessité de prendre une nouvelle orientation, de changer la manière de travailler et de faire du business, de repenser l'écosystème de l'aviation, bref réinventer la vision de l'Afrique pour le développement de cette industrie.

Le thème évocateur donne déjà le ton : « Succès dans une Afrique intégrée et interconnectée ».

« Nous sommes reconnaissants envers Air Mauritius et le peuple de Maurice d'accueillir la plus importante rencontre des partenaires de l'aviation du continent », affirme M. Berthé.

■ Coopération et intégration régionale

Pour Abdérahmane Berthé, le transport aérien africain a besoin de « petites » comme de « grandes » compagnies. « L'Afrique est un vaste continent et pour le couvrir efficacement, les compagnies aériennes africaines doivent coopérer. Des fusions et des consolidations seront certainement nécessaires. »

Elles pourront ainsi réduire leurs coûts et accroître leurs revenus.

■ Taxes élevées/compétitivité

Selon le SG, le transport aérien est souvent considéré par certains gouvernements comme une source potentielle pour lever des fonds.

« Alors qu'en Europe vous pouvez voyager pour moins de 100\$, en Afrique seulement les taxes peuvent coûter entre 50 et 100\$ selon les pays », déplore-t-il.

Abdérahmane Berthé estime que le rôle du transport aérien dans le développement économique doit être mieux compris par les gouvernements et qu'ils doivent désormais l'inclure dans leur politique nationale de développement.

■ Plus de transparence

Le carburant représente en moyenne 25% des coûts d'exploitation des compagnies aériennes à travers le

monde. En Afrique, c'est la plus élevée et représente 35%. « Sur plusieurs escales, on constate que l'évolution des prix ne suit pas l'évolution des cours sur les marchés internationaux en raison d'une opacité dans la structure de fixation des prix localement », souligne-t-il.

L'AFRAA et l'IATA conscientisent les états et les fournisseurs sur ce problème pour trouver une solution pérenne.

■ La libéralisation pour plus de progrès
Depuis son lancement en janvier 2018, 28 États ont signé le MUTAA, représentant 51% des états membres de l'Union Africaine, 61% de la population et 65% du PIB.

Dix états signataires ont déjà appliqué

intégralement les mesures immédiates recommandées par la CAFAC.

Toutefois, certains États font preuve d'inquiétude craignant la disparition de leur compagnie nationale en raison de la concurrence et du dispositif légal de régulation.

« Nous estimons que même si ces réserves doivent être écoutées et prises en compte, le MUTAA est un processus continu. La CAFAC est à l'œuvre pour faire avancer le processus dans les meilleurs délais et conditions. »

■ Un plan de vol étoffé
Les défis sont multiples : coûts élevés d'exploitation, du carburant et des taxes,

infrastructures inadaptées, restrictions sur l'octroi des visas et des droits de trafic...

Le financement de la flotte demeure « un défi critique » estime M. Berthé qui lance un appel aux banques africaines de développement pour concevoir des mécanismes appropriés aux besoins des compagnies africaines.

Durant les prochaines années, l'AFRAA va continuer à soutenir le développement des compagnies aériennes, renforcer la sûreté et la sécurité et investir dans l'innovation.

Abdérahmane Berthé estime que l'Afrique est un continent avec un fort potentiel de développement. Toutes les parties prenantes devront jouer leur rôle pour promouvoir un système de transport aérien durable et efficace.

« Nous voulons un transport aérien où les compagnies africaines seront économiquement performantes avec une connectivité renforcée et contribueront à l'intégration économique du continent africain. »

endangered due to competition and legal regulations. "We believe that, although these fears must be taken into account, the SAATM is a continuous process. AFCAC is working to make it progress under the best conditions to meet deadlines. SAATM will ensure a harmonious development of air transport," reassured Berthe.

There are numerous challenges facing the sector, he said, including high operational costs, oil prices and taxes, inadequate infrastructure, restrictions on visas and traffic rights.



Fleet investment remains "a serious challenge", added Berthe, who appealed to African development banks to devise appropriate mechanisms for African companies.

In the coming years, AFRAA will continue helping African airlines to develop their businesses, enhance safety, security and the passenger experience, and invest in innovation.

Berthe said that to realise the full potential of Africa, all stakeholders must play their part in promoting a sustainable and efficient air transport system.

"We want an air transport situation where African companies will be economically efficient with enhanced connectivity and contribute to the economic integration of the African continent," he concluded.

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Lively: Reunion has an active volcano.
PICTURE SERGE GÉLABERT.



The Airlines Association of Southern Africa (AASA) will hold its annual gathering on Reunion Island in the Indian Ocean on October 10-13.

CEO, Chris Zweigenthal, talked to Victoria Moores.

A GRAND REUNION FOR AASA DELEGATES

Q What do you hope to achieve from this year's AGA?

A This year's theme is 'What's Stopping Us?' We'll explore issues constraining development, as well as the vision for opening up markets, such as the single African air transport market (SAATM), African continental free trade area (AcFTA) and African Union (AU) passport initiatives.

We will explore the Indian Ocean island relationship with Africa to get a better understanding of the business models in operation and see if there is potential for greater synergies and cooperation. Ultimately, both African and Indian Ocean islands airlines need to grow.

Q How have your members performed since last year's AGA?

A It's been another difficult year for southern African airlines. Gross domestic product (GDP) growth in South Africa, at less than 1%, is well below what it should be. This has negatively influenced traffic and cargo growth between Southern African Development Community (SADC) states. Double-digit annual growth must be the goal for southern African airlines.

Within the 16 SADC and Indian Ocean Island states, there are 25 scheduled airlines, of which five are known to be profitable, eight are unprofitable, and the status of 12 airlines is unknown.

On balance, southern Africa is loss-making, with projections for a \$300 million loss for 2019. Taxes, charges and levies are still being implemented on airlines in the region. This raises the total cost of airline tickets. Increasing air fares reduce passenger demand.

Q What is the current mood around SAATM in your region?

A While there is an acknowledgement that liberalisation and implementation of SAATM must have long-term benefits for the industry, the answer can be found in the fact that, while 44 states signed the Yamoussoukro Decision (YD), 28 have signed the solemn commitment for SAATM.

Some states and their airlines still have reservations about how SAATM will be effectively implemented and the potential negative impact on their airlines.

The important issue is to ensure reciprocity, in terms of access and value, between states. There cannot be exceptions, conditions and barriers in the granting of rights and access. All states that participate in SAATM must have the same level of commitment to its success.

Q What is your (realistic) hope for the coming year?

A I would like to see airlines that are in financial difficulty implementing strategies to turn the corner towards sustainability and profitability. While this may take some time, we need to see movement in a positive direction. Ultimately, I would like to see a break-even result for SADC airlines in 2020.

Air Austral CEO Marie-Joseph Malé gives a sneak peak of Reunion.

Q Many AASA delegates will be setting foot on Reunion for the first time. How would you describe the island and what it has to offer?

A Reunion is a jewel of the Indian Ocean. Despite its small size, it is never the same. In just a few hours you can go from volcanic desert, with extraordinary lunar landscapes, to the deep blue lagoon with white and black sandy beaches. Reunion is enigmatic and multi-coloured, with natural spaces, towns, villages, veil-like waterfalls and even an active volcano.

Q Can you tell us about your airline and your 49% equity stake in Air Madagascar?

A Air Austral is a French airline, based on Reunion Island, serving mainland France and regional connections.

On November 30, 2017, Air Austral officially became Air Madagascar's strategic partner. Both Air Austral and Air Madagascar are the undisputed Indian Ocean leaders, offering the largest network of destinations in the region.

Air Austral and Air Madagascar signed a partnership with Kenya Airways in December 2018. Through this partnership, the three airlines have committed to develop codeshare agreements and increase connectivity from their three hubs of Nairobi, Antananarivo and Saint Denis de La Réunion.

Q Air Austral operates three Boeing 777-300s, two 787-8s, two 737-800 and one ATR 72-500. Are you considering any new aircraft?

A The objective is to have new-generation aircraft of intermediate capacity to develop the connections via our hubs of La Réunion, or even of Dzaoudzi (Mayotte). Discussions are ongoing and are expected to be completed within the next few months. The company plans to complete its medium-haul fleet by the end of 2020.

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Recent contracts signed between African airlines and international maintenance, repair and overhaul (MRO) providers confirm there is movement toward keeping more of Africa's maintenance spend in the region. Chuck Grieve reports.

Home run for MRO deals

What makes good business sense for Africa's airlines, military and private operators is proving attractive to big-name MROs and suppliers seeking to plant or extend their footprint in a market that, although small, is one of the fastest-growing, according to International Air Transport Association (IATA) statistics.

Among the global brands in recent moves are Lufthansa Technik (LHT), Collins Aerospace, Dassault Aviation, AFI KLM E&M, Embraer, and Russian Helicopters. Their partnerships with African players stand to benefit the whole aviation community.

This was emphasised in the ground-breaking deal that saw LHT set up shop last spring in South Africa, followed by the high-profile partnership agreement signed at the Paris Air Show between Collins Aerospace and Ethiopian Airlines.

Collins Aerospace's first MRO agreement with Africa's largest carrier, a 25-year deal valued at about \$500 million, will enable Ethiopian to service heat exchangers, air management systems and fuel metering units for its fleet of 60 Bombardier Q-400 aircraft.

Ethiopian Group chief executive, Tewolde GebreMariam, emphasised the win-win nature of the agreement when he said the airline envisioned making its MRO unit the leading service provider in Africa. "As our MRO continues to rapidly expand in line with our [vision 2025] strategy, the new partnership enables us serve other African carriers with their Q-400 aircraft maintenance needs," he added.

For US-based Collins, a unit of United Technologies (UTC), the deal furthered the company's strategy to grow its presence on the continent.

Another important development for Africa was Dassault Aviation's acquisition, earlier in the year, of the MRO activities of ExecuJet and their planned gradual integration through 2019. The new French owner saw it as an opportunity to "strengthen Dassault Aviation's global footprint" in key growth areas, as Eric Trappier, chairman and chief executive of Dassault Aviation, put it at the time.

Sources said existing customers are unlikely to see any difference in operations at ExecuJet's MRO facilities in Africa, other than a higher proportion of Dassault aircraft undergoing maintenance there than previously.

For the wider MRO community, the entry of another global player on to the field offers an insight into the way the aftermarket is going. It's the view of Dassault's Jean Kayanakis, senior vice-president of worldwide Falcon customer service and maintenance network, that the business is becoming more influenced by the aftermarket.

"For 40 years, we relied on third-party authorised service centres. But the market is changing. Customers are expecting original equipment manufacturers (OEMs) to have better control of their experience... MROs are becoming more important."

Embraer, with a growing fleet of its aircraft worldwide, was thinking along the same lines with its recent contract to support Air Botswana's single E170 aircraft. The multi-year deal includes full repair coverage for components and parts, as well as unlimited access to a large stock of components at Embraer's distribution centre.

□□□□□

AFI KLM E&M has added to its African business with an agreement, signed in June, to support operations through the new Dakar airport, Aéroport International Blaise Diagne (AIDB), in partnership with 2AS, AIDB's ground-handling service provider.

The companies will pool their expertise and resources in a joint venture called 2AS Technics to focus on line maintenance. The venture already supports regional airlines, including Senegal's new flag-carrier, Air Senegal. Authorities hope that the reputation and experience of AFI KLM E&M will help attract more airline customers at AIDB.

Earlier, Air Senegal added support for its two Airbus A330neo aircraft to the range of services and types already covered under agreements with AFI KLM E&M.

Fabrice Defrance, senior vice-president commercial AFI KLM E&M, said agreements underlined the company's commitment to nurturing African aviation, while expanding its own footprint.

Current and future opportunities were both drivers for the new MRO centre opened by Russian Helicopters near Cairo. Its immediate focus is on servicing the Mi-8T and Mi-17-1V helicopters of the Egyptian Air Force. But, with a reported strong interest in current and new models of the Russian workhorse rotorcraft, the base's scope could soon expand.

"Egypt is a long-standing and strategically important partner," said Viktor Kladov, director for international cooperation and regional policy.

After-sales service is one of the key areas of their cooperation. "Certification of the helicopter service centre in Egypt opens up new opportunities for expanding cooperation with local partners," he added.

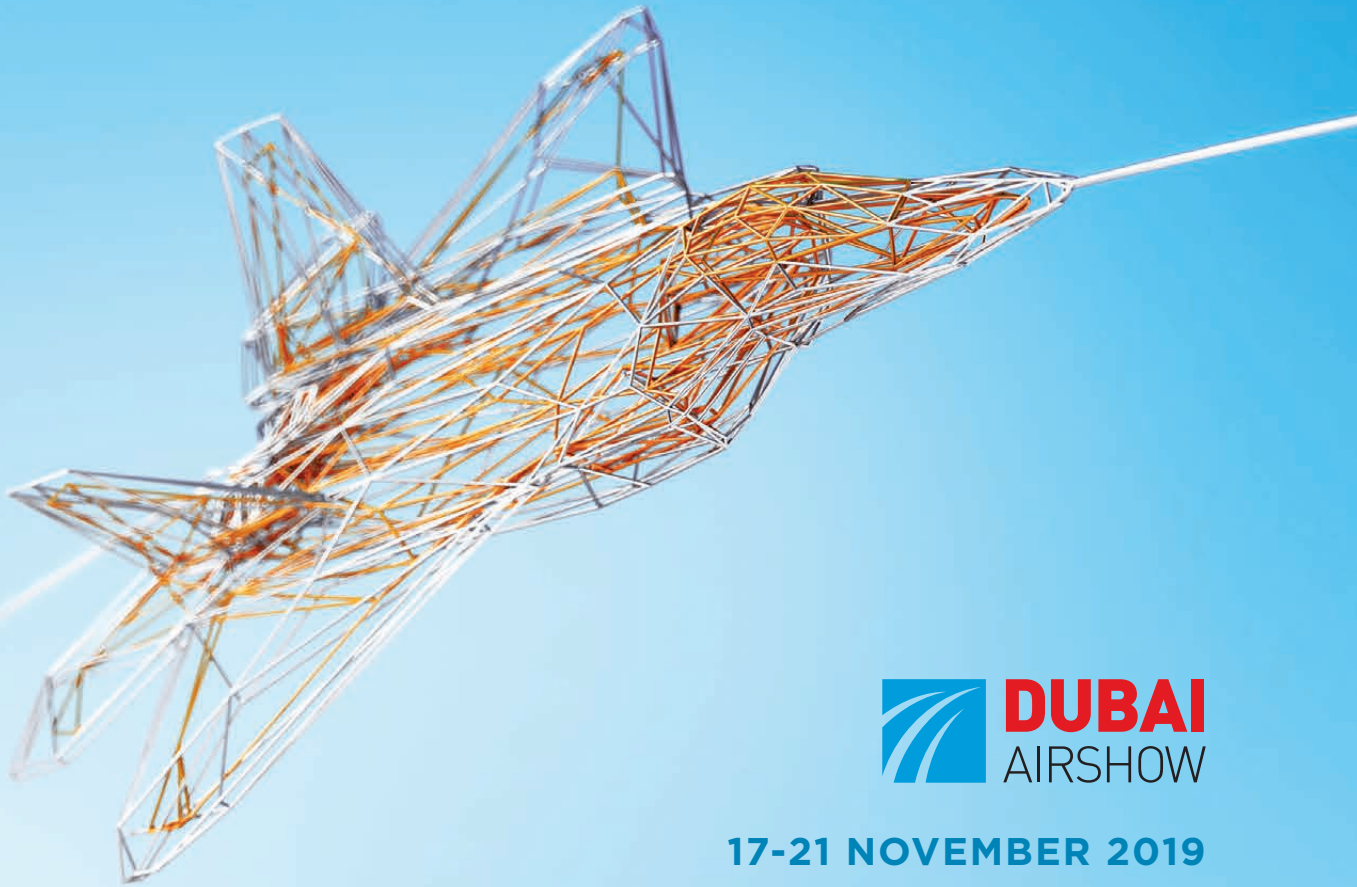
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Award-winning: Davenport principals Leah and Joao Simoes receive their president's 'E' award from US Commerce Secretary, Wilbur Ross, (left) and Acting US Under-Secretary for International Trade, Kenneth Hyatt, (right).

It's good to talk – in Portuguese...

In just 10 years, Davenport Aviation has developed into a global supplier of aircraft parts, supplies, and equipment. It has a special interest in Africa because, as Chuck Grieve finds out, that's where it all started.

Portuguese-speaking countries in Africa? There's only a handful of them. That was a very niche market.
LEAH SIMOES

Starting a small business has plenty of challenges, especially in as competitive a field as aviation parts supply. Just ask Leah Simoes.

The owner and chief operating officer of US-based parts supplier, Davenport Aviation, is candid: "Nobody knows who you are or if you'll last. It takes a lot of hard work to build relationships with vendors, customers and banks."

That was Davenport's situation just 10 years ago. Clearly, its management and staff (the same two people in the beginning) have put in the effort.

From effectively a standing start in 2009, it now sells parts, supplies and equipment to airline customers in 28 countries and is projecting revenue of \$17 million for 2019. It is also an approved US Government supplier to the Department of Defense and other government agencies.

Leah and her husband, Joao, who is the company's president and chief executive, founded their business on the strength of his experience in import/export and aviation and hers in emerging market strategy. Underpinning it all was a passion for business, the drive to build their own successful company – and an important competitive advantage.

Their African connections developed with the help of a common language, Portuguese – which happens to be Brazilian-born Joao's mother tongue – plus an understanding of the industry and the region from his earlier involvement there.

"Portuguese-speaking countries in Africa? There's only a handful of them," said Leah. "That was a very niche market."

But it provided an 'in', and was a big part of being able to start building relationships with the likes of TAAG Angola Airlines, Cape Verde Airline and Mozambique Airlines. Growth brought in business with airlines in Ghana, Kenya, Namibia, Nigeria, Rwanda and Tanzania, as well as Tunisair and Royal Air Maroc.

Africa remains a primary focus for Davenport's multilingual team of professionals, alongside Asia and Europe. From their base in Columbus, Ohio, they offer parts supply, round-the-clock aircraft-on-ground (AOG) support, global logistics and flexible payment terms. "We will always beat competitors' prices and payment options to make procurement faster and easier," said Joao.

It has proven a winning combination for African customers, one of whom said: "They are one of our main suppliers. They give us a good level of service."

The Simoes use international trade shows and missions to spread the word about their company. They follow up with tailored marketing material and outreach to specific regions and regular customer site visits.



Flexible finance is one of Davenport's key competitive tools and builds on the company's long-standing relationship with the Export Import Bank (EXIM) to provide credit terms to its customers. In the last five years, EXIM has reported more than \$18 million in export transactions for Davenport.

This was a factor in the winning of a prestigious president's 'E' award for exports from the US Department of Commerce in 2017 for the business's "significant contributions" to export growth. The award citation noted Davenport's "creative use of financing to grow exports to emerging markets".

Said Leah: "Our business was born on exports. We know international trade well. Our buyers come to us for our expertise in quality, procurement and trade finance."

Though still relatively small, the business has grown substantially from its origins as a two-person start-up in the depths of the global economic downturn to a "multilingual, multicultural company with global reach". It now employs 25 people and has developed a reputation for customer service alongside reliability and quick turnaround.

And it never stands still, seeking ways to improve service and diversify. As part of this strategy, Davenport has looked into buying a manufacturer of aviation components, and is considering the possibility of, itself, becoming a maintenance, repair and overhaul (MRO) specialist in the next three-to-five years.

Davenport defines its core values as customer, commitment, collaboration and change. "We strive for excellence in quality and service on every order," said Leah. "I drive growth in my company by bringing innovation and progress to our systems."

"We do what we say we will do. We make our promise our passion."

Membership on the up in east Africa's rotary club

East Africa has been witnessing significant growth in its helicopter industry. Githae Mwaniki takes a look at the sector.

Helicopters are flexible – they can do anything from VIP and tourist transport to medivac and, of course, oil and gas exploration support.

This has led to the total number of helicopters on the Kenyan civil registry crossing the 100 aircraft mark, with a similar trend being observed in Tanzania and Rwanda.

Supporting these growing numbers has led to an increase in demand of rotary-wing pilots and also for quality and reliable maintenance support facilities.

The most common types of helicopter in the east African skies are Bell Textron and Airbus (formerly Eurocopter), with MD Helicopters, Robinson, AgustaWestland (now Leonardo) and Enstrom all having a presence.

Its type popularity has led to Bell Textron, via its sales and support agent for Africa – Africair – refocusing on the need for effective maintenance support for Bell products in the region.

That led to the set-up of Africair Helicopter Support (AHS) Ltd as a maintenance facility.



Based in Ruiru Town, 30km from Nairobi central business district (CBD) as a dedicated Bell maintenance station, it is located near a long-serving Bell client – Devki Steel – and is the only such facility in east Africa. Devki operates a fleet of Bell helicopters, including a Bell 407.

AHS went through a rigorous quality process with the Kenyan Civil Aviation Authority and was granted its approved maintenance organisation (AMO) certificate in 2017, thus becoming the first such centre to be located outside an airport or airstrip in Kenya.

The AMO is approved to maintain a wide range of Bell products, including Bell 206 and 407 for overhaul, structural repair, non-



Popular: The Airbus H145 finds favour in Kenya.

destructive testing, component overhaul and maintenance, with parts support.

AHS is led by base maintenance manager, Simon Mugo, an experienced engineer, who previously led maintenance as KWS Airwing, a rotary-wing AMO based in Wilson Airport. AHS has also been used to assemble Bell aircraft that have been shipped in parts on behalf of its clients. Key local operators of the make include KWS, Kenya Police Airwing, Kenya Power, Muhwai and Penial Air.

In addition, AHS serves the maintenance needs of Bell helicopters operating in Tanzania, Uganda and Rwanda.

AHS now plans to expand its maintenance services to cover other aircraft types as it seeks to gain a wider foothold in maintenance support market.

Airbus Helicopters (formerly Eurocopter) has many aircraft operating in east Africa due to the ease of availability of this make in the used civilian rotary-wing market.

The AS350 is the most popular model with most commercial operators, including Lady Lori, Tropic Air, ProFlight, KIDL and Everett Aviation.

Airbus' penetration of the Kenya market was

further cemented when the Kenya Air Force acquired nine AS350 Ecureuil (Fennec) helicopters.

The Fennec is a single-engine light utility helicopter with a capability of anti-tank operations, air-to-air combat, ground support, a utility transportation role and training missions. It has an option of pre-fitted guns and rocket launchers.



Due to its sales success cutting across the civilian and military sectors, Airbus Helicopters, via its South African subsidiary – Airbus SA – has maintenance facilities in Midrand, South Africa. It also recently set up a new facility and mobile support unit in Wilson Airport, Nairobi.

The Airbus AMO further supports Airbus helicopter operations with a parts and components pool to assist other AMOs in maintenance.

The Wilson Airport facility is located in a section of hangar leased from Air Kenya and offers scheduled and unscheduled maintenance and parts for Airbus models, including AS350 and 130. However, it still forwards full overhaul to its South African facility.

The newest investment in dedicated helicopter

More back-up: A new facility and mobile support unit at Wilson Airport, Nairobi, will support aircraft like this Tropic Air Airbus H130.



maintenance facilities is at Helint Aviation, which recently built a new hangar and set up related maintenance facilities at the Aero Club of East Africa in Wilson Airport.

Helint Aviation aims to offer a wide range of services in the rotary-wing sector, including support of oil and gas/offshore energy, medevacs, charter, maintenance services, including support of third-party base maintenance, modifications and structural repairs.

Further, Helint Aviation has been appointed as an authorised maintenance centre for MD Helicopters, in addition to serving as a its parts centre.

Helint will serve as a distributor for MD Helicopters in the eastern Africa region.

The Arizona (US)-based manufacturer has identified Kenya as a centre for distributing its products into the region; its sales team has been making inroads into the Kenyan market with key sales to the Kenya Air Force and Kenya Army Garrison, which operates the MD 500.

Recently, the Kenyan Army ordered 12 new MD 530F Cayuse Warrior Scout light attack helicopters..

The Kenya Army has indicated that it plans to use the aircraft against the Mogadishu-based Al-

Shabaab militants and in support of the African Union Mission in Somalia. They are aimed to replace the MD 500 currently operated by the army's 50th Air Calvary Battalion.

Robinson, which has delivered more than 12,000 aircraft in 40 years, has also identified Kenya as a key target for making inroads into the African market.



After appointing NAC to handle sales of its aircraft in South Africa, the manufacturer appointed Helicopters Charters of East Africa (HCEA) as the distributor of the Robinson product range in the eastern African market.

HCEA is an approved helicopter operator with the R22 and R44 in its fleet. It is keen to facilitate sales of Robinson aircraft, from the piston-powered R22 and R44 to the new turbine-powered R66, in addition to providing parts to support Robinson operations.

Further, HCEA has partnered with local AMOs, like KWS Airwing, to provide comprehensive maintenance services for all Robinson aircraft. This includes scheduled and

unscheduled inspections overhaul, structural repair, non-destructive testing, component overhaul and maintenance, with parts support.

Robinson aims to capitalise on this with the supply of its R22 and R44 aircraft as the pilot trainers of choice.

The east African helicopter market relies heavily on the air force and the police airwing to provide pilots to serve the sector.

Kenya has only two approved training organisations (ATOs) offering helicopter pilot training – Sicham Aviation and Flight Training Center – with the latter operating the R44 as its trainer.

HCEA aims to facilitate deliveries of the R22 and R44 for training and charter roles, as well as the new R66, thus increasing Robinson's aircraft numbers in the region and serving as a basis for more investment in setting up an expanded maintenance base for the type.

Another helicopter manufacturer eyeing-up possible maintenance facilities in Kenya is Leonardo, which has made inroads into the Kenyan market with sales of its AW109 and AW139 models to Kenya Police Airwing and Kenya Electricity Transmission Company. ■

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AJW'S STAR PART IN AFRICA

*AJW Group chief executive, Christopher Whiteside, talks to **Chuck Grieve** about adding value to the business of supplying parts and spares through relationships, efficiencies and planning.*

Technology is important in the competitive business of aviation parts and spares, but not as important as relationships. That's why representatives of African airlines are frequent visitors to the headquarters of the AJW Group in West Sussex, UK.

AJW, a family owned business and leading independent specialist in the global supply and repair of spare parts, counts many of the continent's airlines among its clients – and works hard to keep it that way.

Chief executive, Christopher Whiteside, emphasises that AJW is “not in the spanner-and-hangar business”. The company supports its customers with tailored component supply chain solutions.

Relationships are important and rely on customers understanding how AJW works, hence the company's programme of site familiarisation visits. Recent guests have included key staff from Air Peace, Nile Air and EgyptAir.

“We equip them with knowledge of what we do and how we support them, so when we ask questions on the operations side, they understand how it all fits together,” explained Whiteside.

Knowledge transfer and training is embedded in AJW's engine management service. Opportunities are limited for airline staff in Africa to learn how to monitor work on their engines. So AJW engineers in Surrey work with them to help manage their engine shop visits and build a technological and commercial understanding of the process.



Clients also benefit from the supplier's rigorous follow-up procedures. AJW technical staff – who track every component that the company supplies – use their own strong database as a benchmark for the work carried out and associated costs. “If they spot an anomaly, they challenge it,” said Whiteside.

AJW is spending “a huge amount annually” on IT for infrastructure development. One of the objectives is to improve the efficiency of how owned inventory is utilised.

The so-called ‘monetisation of dead assets’ is unimaginative, said Whiteside. His preferred approach focuses on the use of stock as needed and fast replenishment – within 24 hours.

One suggestion is that operators of the same aircraft type serving common destinations should be able to share items on the minimum equipment lists (MEL); items which they are required to position there.

But operational data – such as that which AJW has gained from thousands of aircraft over dozens of years – will predict when a particular part on a specific aircraft is likely to need replacing. “So, you just position [the part] in for the time slot when it's going to fail,” he said. “That's smart in terms of deployment, capital efficiency and asset management.”

Close monitoring of assets supports efficiency. “I can tell you where one of our parts is in real time,” said Whiteside. “I know, for example, it's at junction five of the M25



“We equip guests with knowledge of what we do and how we support them, so when we ask questions on the operations side, they understand how it all fits together.”
CHRISTOPHER WHITESIDE



motorway, or it's going to land in Memphis in two hours. And I know the handover and when it's going to take place.

“So, we have complete integrity and efficiency of where our material is, and to a degree we have a large amount of knowledge about the repair cycle as well.”

This is invaluable in dealing with aircraft on the ground (AOG) situations. AJW's clear picture of where assets are enables the company to select the most efficient route to get parts to the affected aircraft.

Whiteside is mystified why others don't take the same approach. But he also sees the ‘Amazonification’ of asset delivery as “a very large opportunity”.

Where the automotive industry has, for many years, understood that the aftermarket can be extremely lucrative for manufacturers, the aviation industry has been slow on the uptake. “In our industry, it's \$65 million for an Airbus A320neo – see you in 20 years!”

Anecdotally, he says, an aircraft consumes as much in maintenance every seven years as its capital cost at the outset. The manufacturers and original equipment manufacturers (OEMs) have in some cases “very aggressive targets” for gaining market share.

“We've obviously been investing in that supply chain solution for many years. I think the way to deal with OEMs is to align with them as opposed to fighting them.

“I see our business as an enabler to their greater success and penetration, as opposed to being a competitor.” ■

With pressure mounting for more maintenance, repair and overhaul (MRO) facilities throughout the continent, Chukwu Emeke looks at the situation in west Africa.

LOCAL AEROS...

THE SEARCH IS ON TO PLUG THE MRO GAP



Saving millions of dollars: Aero Contractors' MRO facility, at Murtala Muhammed International Airport in Nigeria, became operational in 2018 and has carried out heavy maintenance for various airlines.

International Air Transport Association (IATA) forecasts show that, by 2028, approximately 35,000 aircraft – about 40% more than in 2018 – will be operating.

Manufacturers like Airbus and Boeing have full order books. Consequently, based on delivery dates assigned to years in the future, airlines will be needing to operate their current fleets for longer – and this increases the demand for MRO.

With oil prices increasing, salaries rising globally, and profit margins under pressure, maintenance costs have become a very significant cost for west African operators.

With the extinction of some national carriers, local airline capacities are reaching their limits, with some airlines continuing to send their fleet outside the continent for major maintenance. Manufacturers like Boeing and Airbus have said that a routine D-check can consume thousands of labour hours and approximately \$3 million, underlining the amount of money being pulled out of the region's market.



As the fortunes of African airlines' scheduled operations continue to dwindle – IATA forecasts that the continent's carriers will lose about \$300 million in 2019 – one major contributor to the anticipated massive loss is maintenance.

Currently, in west Africa alone, airlines spend about \$1 billion on aircraft maintenance outside the sub-region annually. And, according to ICF International, a global consulting and technological services firm, due to the expected influx of new aircraft that require new and more sophisticated technical skills and capabilities, African airlines' spending on MRO is expected to hit \$6 billion by 2025.

This has made it expedient for players to take desperate measures to localise maintenance.

Although Congo Airlines, Guinea Airlines and Asky, among others, have benefited from MRO agreements with Ethiopian Maintenance and Engineering Services, located in east Africa, establishing a major maintenance centre in the sub-region will help the airlines a great deal.

Apart from the need to save cost for the airlines and prevent capital flight from the region, investment opportunities in MRO can be translated into astronomical input into a nation's gross domestic product (GDP).

Nigeria, for example, has a fleet of more than 40 operating aircraft, which includes about 24 B737 classic jets. This is a country with the highest registered fleet numbers in west Africa. The country's airlines expend about \$90 million (N3.2 billion) on aircraft maintenance yearly.

On the average, airlines spend at least, \$1.8 million on each C-check on a Boeing 737 classic, the most commonly used aircraft for domestic flight operations in Nigeria.

To confront this challenge, some of the airlines have started diversifying their operations, with efforts to establish MRO facilities.

Aero, Medview Airlines, Arik Air, Jed Air, Caverton Helicopters and Dana Air, are among airlines investing in MRO.



Obi Mbanuzo, chief operating officer of Dana Air, said such investment would boost profit for the airlines, as he explained the carrier's plans to establish such a facility after 11 years of scheduled operations.

He said his airline was already completing A-checks but was looking to get land from the Federal Airports Authority of Nigeria (FAAN) to enable it to establish a facility for major maintenance C-checks.

Aero Contractors' MRO facility became operational in 2018 and has carried out heavy maintenance for various airlines from the Congo, Ghana and other west African countries.

The airline's chief executive officer, Captain Ado Sanusi, said the use of the airline MRO facility had saved the country millions of dollars in capital flight. He noted that, with 24 Boeing 737 classic aircraft in the fleet of some Nigerian operators, the maintenance facility would provide succour for operators who spend about \$1.8 million every 18 months to ferry their aircraft to different parts of the world for major maintenance.

Apart from Nigerian-registered airlines like Arik Air, Medview Airlines and Air Peace that currently use it, other airlines in west Africa have started patronising Aero's facility.



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Maintenance Repair & Overhaul

AFI KLM E&M a conclu un partenariat avec AIBD Assistance Services (2AS) pour la mise en œuvre d'une structure d'entretien en ligne sur la plateforme de l'Aéroport International Blaise Diagne (ADB) de Dakar. Un reportage de Vincent Chappard.

2AS se renforce à Dakar

2AS est le prestataire exclusif de services d'assistance aéroportuaire en escale sur la plateforme de l'ADB. Cette société a signé le 20 juin dernier au salon aéronautique de Paris-Le Bourget un accord de partenariat avec un acteur mondial de la maintenance aéronautique multi-produits AFI KLM E&M. Cette cérémonie s'est déroulée en présence d'Alioune Sarr, ministre sénégalais du Tourisme et des Transports.

Il s'agit d'associer l'expertise et les ressources au sein d'une coentreprise appelée 2AS Technics pour assurer un support de maintenance en ligne destiné aux compagnies aériennes sur l'aéroport ADB. 2AS apporte déjà un support à la compagnie Air Sénégal.

Selon Ibrahima Kane, son nouveau directeur général, ce partenariat entre AFI KLM E&M et 2AS est une opportunité majeure et représente une véritable valeur ajoutée pour les opérations d'Air Sénégal.



A noter qu'AFI KLM E&M et la compagnie nationale sénégalaise ont récemment signé un accord portant sur le support des équipements de la flotte A330neo.

Les modalités du contrat incluent les réparations à l'heure de vol, l'accès au pool de pièces de rechange et la mise à disposition d'un stock local d'équipements. AFI KLM E&M apporte également son support à la flotte ATR 72-600 de même qu'aux A319.

2AS Technics apportera non seulement son expertise sous forme de maintenance en ligne aux compagnies internationales opérant vers et depuis Dakar mais également à celles qui souhaitent intégrer la capitale sénégalaise à leur réseau aérien. Aujourd'hui, 33



Signature de l'accord entre AFI KLM E&M et 2AS au salon du Bourget.

compagnies aériennes opèrent au sein de l'ADB desservant 40 destinations.

Pour Anne Brachet, directrice générale adjointe d'AFI KLM E&M, les compagnies clientes sont assurées de pouvoir bénéficier d'un support fiable, qualitatif et compétitif sur l'escale en recourant aux solutions de 2AS Technics, plutôt que de mobiliser des ressources locales pour leurs opérations de MRO.

L'Aéroport International ADB a débuté ses opérations en décembre 2017.

Il a une capacité de 3 millions de passagers qui peut être portée à 10 millions, et à 20 millions dans sa phase finale. L'objectif est de transformer le pays en un hub aérien, touristique et logistique en Afrique tout en répondant aux standards internationaux.

Pour son directeur général, Xavier Mary, le bilan d'exploitation est positif dans son ensemble avec une bonne performance opérationnelle. « Nous avons fini l'année 2018 avec 2,380 millions de passagers et avons reçu des autorités notre certification selon les normes de l'OACI. »

Cette année, l'Aéroport ADB devrait démarrer les études pour l'extension de l'aérogare. ADB a également pour ambition de construire une ferme photovoltaïque et de mettre en service des taxis hybrides pour réduire le bilan carbone du site. A noter que l'aéroport a obtenu l'accréditation de niveau 1 du programme Airport Carbon Accreditation d'ACI.

Avec la signature du contrat avec AFI KLM E&M, le pays de la Teranga souhaite se positionner comme une destination de référence en Afrique de l'Ouest dans le domaine de la MRO.

Elle compte y implanter rapidement un centre de maintenance ainsi qu'une école de formation.

SUMMARY

DAKAR AT THE DOUBLE FOR 2AS

Senegal's Blaise Diagne International Airport (BDIA) in Dakar has joined forces with global MRO player, Air France International/KLM Engineering & Maintenance (AFIKLME&M), to provide support for both Air Senegal and airlines using the airport that opened in December 2017.

AFIKLME&M has a track record in MRO extending back more than three-quarters of a century and it's this international expertise that local airport ground-handling and MRO organisation, 2AS, is tapping into.

The partnership agreement was signed at the Paris Air Show, held at Le Bourget in June, in the presence of Senegal's tourism minister, Alioune Sarr.

The new joint venture is named 2AS

Technics and it will provide online maintenance support for airlines at BDIA, where it already has Air Senegal as a launch customer.

According to Ibrahima Kane, 2AS Technics' MD, this partnership is a major opportunity and represents a real added value for Air Senegal's operations as AFIKLM&E has already signed an agreement to support the national airline's Airbus A330neo, A319 and ATR 72-600 fleet that includes pre-take-off maintenance, access to the spare parts pool, and the provision of a local stock of equipment.

Today, around 33 airlines serving more than 40 destinations operate into BDIA and the new partnership will ensure that MRO support will be available as required.



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Assemblage d'aérostructures chez Stelia Aerospace Tunisia.

La Tunisie a bâti en l'espace d'une décennie une industrie aéronautique solide et reconnue. Vincent Chappard a voulu connaître les raisons de cet incroyable essor auprès de Thierry Haure-Mirande et Wassim Srarfi du Groupement des Industries Tunisiennes Aéronautiques et Spatiales (GITAS).

L'ESSOR RAPIDE DE L'INDUSTRIE AERONAUTIQUE EN TUNISIE

La Tunisie a démontré tout son potentiel et son attractivité dans le secteur aéronautique au dernier salon Paris-Le Bourget. Ce segment vital de l'économie nationale représente aujourd'hui plus de 80 entreprises (dont 90% sont offshore), 480 M€ d'exportations en 2018 et plus de 17 000 emplois directs. De grands groupes s'y sont installés à savoir Altran, Hutchinson, Latécoère, Paradigm, Precision, Sabena Technics, Stelia Aerospace ou encore plusieurs sociétés du groupe Safran.

Le pays offre de nombreuses opportunités dans un large spectre des métiers de l'aéronautique : composites aéronautiques, stockage et le démantèlement d'avions, aménagement d'intérieur, textile technique, fabrication de pièces et d'infrastructures ou encore la MRO.

Cette industrie est relativement jeune avec l'arrivée des premiers industriels en 1998 et une accélération en 2004. Elle est en pleine phase de croissance. Un exemple révélateur de ce dynamisme est celui de Zodiac Aerospace (aujourd'hui Safran Seats, Safran Cabin et Safran Aerosystems) qui a démarré ses opérations en Tunisie en 2004 avec 40 salariés.



Thierry Haure-Mirande:
« La Tunisie est l'une des plus belles chaînes de valeur au monde puisque nous pouvons y réaliser un produit de A à Z »

Wassim Srarfi:
« Nous ne pouvons pas uniquement nous baser sur une approche best cost, nous devons être également performant et compétitif »



Aujourd'hui, plus de 3500 personnes travaillent notamment dans la fabrication de « galleys », de sièges, de coffres à bagage, de cartes électroniques, des câblages 3D et des armoires électriques.

Le GITAS a deux principales missions pour favoriser le développement de la supply chain aéronautique tunisienne et attirer de nouveaux investisseurs. Son plan de développement vise en effet à booster la croissance du secteur.

Sa première mission consiste à créer des synergies inter industrielles. Aujourd'hui, la Tunisie est capable de réaliser les différentes étapes (R&D, conception, fabrication, assemblage) par le biais des acteurs aéronautiques présents sur place.

Et, sa seconde mission : être une force motrice pour promouvoir les sites tunisiens à l'international et développer cet écosystème aéronautique en permettant l'arrivée de nouveaux entrants et investisseurs.

Au fil des années, la Tunisie est devenue un maillon incontournable et reconnu.

Quelles sont donc les spécificités de l'industrie aéronautique tunisienne ?

La Tunisie assure une production

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avec un niveau élevé de conformité aux exigences mondiales.

Le pays est présent sur l'ingénierie et la conception, le montage électrique, la tôlerie fine, le câblage, l'assemblage d'aérostructures, le traitement de surface, les logiciels embarqués pour calculateurs, la mécanique ou encore la plasturgie.

La principale force du secteur aéronautique tunisien est sa capacité de gérer un produit dans son intégralité, de sa conception jusqu'à sa livraison, sur les chaînes de montage comme chez Airbus à Saint Nazaire.

C'est un gage de performance et permet de diminuer les coûts de transport en évitant les allers retours.

« La Tunisie est l'une des plus belles chaînes de valeur au monde puisque nous pouvons y réaliser un produit de A à Z », rappelle Thierry Haure-Mirande, le président du GITAS.

Vers une industrie 4.0

La Tunisie mène également une série de programmes visant à assurer un développement technologique et améliorer sa compétitivité. Le pays est ainsi en concurrence avec d'autres sites en Europe et en Afrique.

« Nous ne pouvons pas uniquement nous baser sur une approche best cost, nous devons être également performant et compétitif », souligne Wassim Srarfi, secrétaire général du GITAS qui a un rôle de catalyseur et œuvre pour un déploiement rapide d'une industrie 4.0.

Il s'agit par exemple de mettre en place des ateliers de réalité augmentée, de robotique, de l'intelligence artificielle, de maintenance prédictive ou de la digitalisation des supports. Cette performance industrielle et de productivité passe également par des partenariats et une montée en compétence pour les opérateurs, techniciens et ingénieurs.

Comme la population tunisienne est jeune, c'est plus facile d'intégrer les nouvelles technologies au niveau de la formation.

Des ressources humaines disponibles et multidisciplinaires

L'industrie aéronautique dispose de ressources humaines réactives, compétentes et compétitives.

Pour Wassim Srarfi, les écoles en Tunisie offrent aujourd'hui une formation de qualité adaptée aux besoins des entreprises. Cette ressource humaine a permis aux entreprises d'accélérer leurs projets et d'intégrer des produits de rang dans le pays.

La Tunisie détient la plus grande concentration de chercheurs parmi les pays arabes et africains.

Des leviers de croissance

Les autorités tunisiennes prospectent des opportunités de business auprès des entreprises qui recherchent une industrie compétitive, performante et de qualité. Selon un Benchmark du « Financial Times Ltd », Tunis est le site le

SUMMARY

FROM A-Z, THE SECRETS OF
TUNISIA'S RAPID RISE IN AEROSPACE

Over the past decade Tunisia has continued to build a solid, recognised and sustainable aeronautical industry and the leaders of the Tunisian Aeronautics and Space Industries Group – GITAS – have been explaining some of what's behind the success story.

President, Thierry Haure-Mirande, and general secretary, Wassim Srarfi, said the sector is now a vital part of the country's economy. It includes more than 80 companies (90% of which are offshore); exports worth around €480 million (\$525m) in 2018; and is currently responsible for more than 17,000 direct jobs.

Large international companies and groups have a presence including Altran, Hutchinson, Latécoère, Paradigm, Precision, Sabena Technics, and Stelia Aerospace, along with several companies in the Safran Group.

These companies cover many aerospace areas including aeronautical composites; aircraft storage and dismantling; interior design; technical textiles; parts; and infrastructure manufacturing – along with general and specialist maintenance, repair and overhaul (MRO).



The aerospace industry in Tunisia is relatively young with the arrival of the first companies in 1998. However, it is now in a 'full-growth phase', exemplified by companies like Zodiac Aerospace (Safran Seats, Safran Cabin and Safran Aerosystems) that began operations in Tunisia in 2004 with around 40 employees.

Today, more than 3,500 people work in the manufacture of aircraft galleys, seats, baggage containers, electronic cards, 3D wiring and electrical cabinets.

According to a recent report in London's *Financial Times*, Tunis is the most attractive site in world aerospace in terms of operating costs compared to six other competing sites: Bangalore (India); Beijing (China); Brasov (Romania); Casablanca (Morocco); Chihuahua (Mexico); and Plovdiv (Bulgaria).

Today, Tunisia is able to carry out the various stages in the industrial cycle, including research and development (R&D), detailed design, manufacture and final assembly – and all within the domestic industrial sector.

GITAS is also working to promote the country's aerospace credentials throughout the global industry by encouraging new companies – and investors – to exploit Tunisia's growing pool of expertise.

Tunisia ensures that it adheres to all global compliance standards for its engineering and design, including electrical assembly, sheet metal working, wiring, assembly of aerostructures, surface treatments, embedded software for computers and plastics.



GITAS believes its main strength is its aerospace sector's ability to manage products in their entirety, from conception to delivery, guaranteeing both build quality and performance.

"Tunisia is one of the most effective value-chains in the aerospace world since we can produce a product from A to Z," said Haure-Mirande.

Tunisia is conducting a series of educational programmes aimed at ensuring technological development and enhanced competitiveness as it competes with other locations and countries in Europe and Africa.

"We cannot rely solely on our competitive costs... we must be equally efficient and competitive," said Srarfi. For example, he explained, the sector is getting into augmented reality, robotics, artificial intelligence, predictive maintenance and media digitisation, and all these areas will enhance industrial and productivity performance and also generate new partnerships that will increase skills for operators, technicians and engineers.

And, as the Tunisian working population is relatively young, it is easier to integrate new technologies in training.

plus attractif de l'industrie aéronautique en termes de coûts d'exploitation par rapport à six autres sites concurrents : Bangalore (Inde), Beijing (Chine), Brasov (Roumanie), Casablanca (Maroc), Chihuahua (Mexique) et Plovdiv (Bulgarie).

Selon Wassim Srarfi, la Tunisie capitalise également sur son positionnement. « Nous multiplions les contacts et accueillons de nombreuses délégations en visite dans notre pays. »

La Tunisie dispose de quatre principaux pôles aéronautiques situés essentiellement autour du Grand Tunis, Le Sahel, Soliman et Zaghouan. La demande des entreprises pousse au développement rapide de ces technopoles.

Il y a un besoin de surface pour agrandir les

unités de production déjà implantées et permettre l'arrivée de nouveaux entrants. 20 hectares sont en cours d'aménagement près du Grand Tunis pour les sociétés aéronautiques.

Comme l'indiquait Thierry Haure-Mirande, l'objectif du GITAS est de doubler le nombre d'entreprises dans les années à venir.

Il est également vital que la Tunisie embarque sur les nouveaux programmes aéronautiques du futur. Il souligne que la Tunisie en a toutes les capacités.

Le pays bénéficie d'un environnement entrepreneurial de qualité qui favorise les gains de productivité dans l'industrie aéronautique. Tous ces indicateurs et le regain de stabilité politique augurent des années prospères pour cette jeune industrie.

Le Congo assainit son transport aérien

L'Agence Nationale de l'Aviation Civile (ANAC) du Congo s'est engagée à assainir le secteur du transport aérien et à améliorer les performances de l'aviation civile congolaise, malgré un contexte économique difficile. Romuald Ngueyap s'est entretenu avec le directeur général adjoint, Marcellus Boniface Bongho.

Depuis 2015, avec la chute du cours du pétrole, l'économie du Congo a connu un fort ralentissement, entraînant une baisse du trafic aérien. Ajouter à cela, la cessation des activités de la compagnie nationale ECAir, dont les avions sont cloués au sol depuis octobre 2016.

« Avec les effets de la crise, l'ANAC a constaté une frilosité au niveau de tous les exploitants », explique Marcellus Boniface Bongho.

Plusieurs acteurs interviennent sur les trois principaux aéroports internationaux du pays (Brazzaville, Pointe Noire et Ollombo) dont le gestionnaire, Aéroports du Congo (AERCO), la société d'assistance en escale, Congo Handling et les fournisseurs de carburant. « Il peut y avoir des conflits au niveau de la gestion des créances croisées. »



Pour Marcellus Bongho, « le grand défi de l'ANAC est d'assainir l'environnement du transport aérien dans le pays ».

L'ANAC prône ainsi la mise en œuvre d'un cadre de dialogue. « Nous travaillons au niveau du gouvernement pour établir un comité consultatif de concertation et de résolution des différends entre les principaux acteurs. »

La finalité étant de « définir une politique commune en matière des redevances et du carburant qui permettra in fine de réduire les charges opérationnelles qui pèsent sur les compagnies aériennes, et par conséquent sur les billets d'avions. »

L'autre défi de l'ANAC est de rendre l'aviation nationale plus performante.

Le Congo affiche aujourd'hui un taux de conformité de 47% suite à l'audit de l'OACI de 2008. Entretemps, le pays a connu deux missions (en 2015 et 2016) de validation sur



Marcellus Bongho: « Le grand défi de l'ANAC est d'assainir l'environnement du transport aérien dans le pays »

site. Les chiffres restent cependant « en deçà de la volonté des chefs d'Etats africains exprimée à travers la déclaration d'Abuja sur la sécurité de l'aviation qui voudrait qu'en 2017, tous les États africains atteignent au moins 60% de taux de conformité », reconnaît-il.

Au moment où le magazine allait sous presse, le Congo attendait une mission d'évaluation. « Tous les efforts sont mis en œuvre au niveau de la direction pour renverser la tendance et réussir cet audit. » L'ANAC bénéficie à cet effet de l'expertise des Autorités Africaine et Malgache de l'Aviation Civile (AAMAC) et de l'Organisation de l'Aviation Civile Internationale (OACI) à travers son bureau régional.

« L'Afrique se trouve au tournant de la transition du transport aérien. » Ainsi, l'ANAC se mobilise pour accompagner le Congo vers un ciel africain intégré et dont les retombées seront indéniables. « Le gouvernement a déjà signé plus d'une vingtaine d'accords aériens avec les pays frères et nous réactualisons d'autres par rapport au nouveau cadre juridique encadrant le lancement du Marché Unique du Transport aérien Africain, auquel le Congo a adhéré ».

Marcellus Boniface Bongho exprime son souhait de revoir la compagnie nationale décoller et trouver sa place dans la région et le reste du monde. ■

SUMMARY

CONGO CLEANING UP ITS ACT

Despite a difficult economic climate, Congo's National Agency of Civil Aviation (ANAC) is working to improve the performance of Congolese civil aviation.

The agency's deputy director general, Marcellus Boniface Bongho, says that since 2015 and the fall in oil prices, Congo's economy has experienced a sharp slowdown, leading to a decline in air traffic and the grounding of national airline, ECAir, in October 2016.

Several players are involved in debt management issues at the country's three main international airports (Brazzaville, Pointe Noire and Ollombo), including the managers of Aéroports du Congo (AERCO), the ground-handling company – Congo Handling – and the fuel suppliers.

Bongho said: "ANAC's big challenge is to clean up the air transport environment in the country.

"To this end, we are working with the government to establish an advisory committee for consultation and dispute resolution between the main players, with the aim of defining a common policy on fees and fuel that will ultimately reduce airline operating costs and cut the price of tickets."

Another major challenge for ANAC is to enhance the country's International Civil Aviation Organization (ICAO) rating to comply with the Abuja Declaration on Aviation Safety, which calls for all African states to achieve at least 60% compliance. A new ICAO audit is planned for the coming months.

*The Ethiopian Civil Aviation Authority is tasked with ensuring the development of a safe, reliable and modern air transport sector – but now new moves are also afoot in the country, as **Kaleyesus Bekele** found out when he spoke to ECAA director general, Colonel Wossenyeleh Hunegnaw.*

Ethiopia raises its hand for

Ethiopia has a long and proud aviation history that dates back to the 1920s when the first aircraft flew to the capital, Addis Ababa, 26 years after the invention of an aircraft.

That aircraft was a Patez 25 commanded by a French pilot named Andre Mayo.

Ethiopia was also among the four African states that endorsed the Chicago Convention in 1944, which established the International Civil Aviation Organization (ICAO).

The ECAA is mandated by law to audit and regulate the airline industry. It certifies and inspects airports, operators, aviation training and maintenance centres. It also licenses pilots, cabin crew and aircraft maintenance technicians.



“We are working to maintain ICAO standards and recommended practices (SARPS) and enhance the aviation sector,” said ECAA director general Wossenyeleh Hunegnaw.

He said that the authority had worked hard in the past 10 years to nurture inspectors in all the sector departments – operation, air worthiness, aerodrome, and standards. The authority had also trained an adequate number of young and qualified air traffic controllers (ATCs).

As part of the modernisation of the air navigation service, the ECAA has procured and installed modern radar and automatic dependence surveillance/broadcast (ADS/B) flight instrumentation at Addis Ababa Bole International Airport at a cost of \$10 million.

It had also installed a message-handling system (MHS) and communication, navigation and surveillance (CNS) system.

Last year it installed a multilateralisation system (M-LAT) at a cost of \$2.6 million.



Colonel Wossenyeleh Hunegnaw: “With the new proclamation and regulation we want to enhance the participation of the private sector. We also want regional states and cities to have a stake in the aviation sector.”

Currently, it is undertaking an expansion project at the Addis Ababa Airport ATC tower.

The acquisition of the modern air navigation equipment transformed the authority’s air space management capability. According to Hunegnaw, after equipping Bole International Airport with the radar and ADS/B, an aircraft can take off within 2.5 minutes and it takes only three minutes to land. It used to take more than 30 minutes.

“This has benefited the fast-growing national carrier, Ethiopian Airlines, in saving the cumbersome fuel cost,” Hunegnaw said.

The ECAA has also cooperated

with the aviation authorities in Togo, Malawi, Chad and Guinea – African countries where Ethiopian Airlines forged strategic partnerships – on capacity-building programmes.

Hunegnaw is proud of what he and his colleagues have achieved in upgrading the ECAA Training Centre. It has procured ATC simulators and, with the help of ICAO, has trained trainers.

Consequently, the training centre has become a full member of the ICAO trainer-plus programme. “We not only trained an adequate number of ATCs for ourselves, but we are now training ATCs from neighbouring countries

like Djibouti, Somaliland and Somalia,” he revealed.

The ECAA secured a category 1 status from the US Federal Aviation Administration (FAA) in 1998 when Ethiopian Airlines first began direct flights between Addis Ababa and Washington DC. After being audited by the FAA in 2014, ECAA retained its category 1 status.

The ICAO also audited ECAA in 2015 and it scored 65.14%. “We scored above the global average,” Hunegnaw said. “And we have improved a lot since then. We have been filling the gaps identified by ICAO’s inspectors,” he added.

Although Ethiopia has the largest carrier in Africa, the domestic

liberalisation

airline sector is under-developed. General aviation is at its infant stage, while business aviation is non-existent. There are only eight private airlines that operate charter flights. None of the private airlines operate scheduled flights.

There are two private pilot training schools in the country but there is no private maintenance, repair and overhaul (MRO) centre. The country has restrictive laws that limit private investment in the airline business – the law does not allow foreign nationals to invest in a domestic airline. Private airlines are not allowed to operate an aircraft which has more than 50 seats.

As part of the ongoing political and economic reform programmes being implemented by the new Prime Minister, Abiy Ahmed, the ECAA, in collaboration with the ministry of transport, drafted a new national aviation policy that enhances the participation of the private sector in the air transport industry.



Hunegnaw revealed that the government intends to open the air transport sector for investors.

The draft aviation policy proposes to lift the 50-seat limitation imposed on private airlines. “There will be no seat limit,” Hunegnaw said, adding that private airlines would be encouraged to operate scheduled flights. The draft regulation also allows foreign nationals and companies to invest in local private airlines.

Hunegnaw noted that the existing civil aviation law was enacted in 2001, adding that the global aviation industry had transformed a lot in the past years. “With the existing proclamation and regulations, we cannot meet the ICAO standards. Second, the participation of the private sector in

the aviation sector was limited. With the new proclamation and regulation, we want to enhance the participation of the private sector. We also want regional states and cities to have a stake in the aviation sector,” Hunegnaw said.

The draft regulation proposes small airports to be built and operated by the private sector, regional governments and city administrations. Foreign companies, in partnership with local investors, could develop and operate airports in Ethiopia.



The regulation would allow investors to engage in ground-handling services, aircraft parts designing, manufacturing and maintenance work. However, while the draft proclamation allows the participation of foreign companies and nationals in local aviation companies, the controlling stake (51%) should be owned by Ethiopian nationals.

According to Hunegnaw, investors are requesting to build their own small airports and heliports. “For instance, hotels and hospitals are demanding to build helipads. So far, we do not have a regulation that allows the private sector to build such facilities,” he said. “It is a big challenge for the government to build all the air transport infrastructure, administer and operate it all by itself. The way forward should be a public-private partnership,” he added.

Hunegnaw hopes that the new national aviation policy will be endorsed in 2020.

The Ethiopian Government is also contemplating partially privatising Ethiopian Airlines, which is wholly owned by the government. The government is considering floating some airline shares for sale. ■



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EWAYS AVIATION



Alain Tchale

Marcelle Nethersole speaks to Eways Aviation's business development and strategy director.

1

■ What does Eways Aviation do?

Eways Aviation is fully dedicated to aviation services in Africa and the Middle East. For commercial aviation, we provide spare parts (PMA and OEM), maintenance, repair and overhaul (MRO) services, ACMI leasing, aircraft interior design, on-board Wi-Fi installation etc.

We also provide some private jet charter for business and services and equipment for airports.

We are now at the heart of the African market and close to our customers, thanks to our new office in Marrakech.

Our aim has always been to provide the same quality of service and fast delivery as is available anywhere else in the world.

There is no reason why Africa should get second-rate service.

We are happy to work with customers who have high expectations and our job is to meet them.

2

■ Do you see business aviation increasing in Africa and, if so, why?

Business needs to be able to fly flawlessly over the continent, going from a capital or one big busy city to another. The economy in Africa needs it. The whole continent will benefit from it and not only a few countries.

It is not said often enough but aviation can be much cheaper for long distances than the road. Highways are very expensive to build and maintain. Aviation is more flexible and can be adapted to the reality of traffic between two destinations. So, there's a strong business case for aviation in Africa!

3

■ What challenges can the company face in Africa?

When you work in Africa, you have to be knowledgeable and ready to adapt very quickly to new situations.

We adapt our way of working to the daily operating difficulties related to the cultural factors that complicate the fluidity of professional exchanges.

Our understanding of cultural and geo-strategic aspects saves a lot of time because the efforts and the energy are concentrated on the essentials – providing a service in a fast, efficient way and at the best price.

4

■ Why is the African continent important to you?

Africa struggles a lot to build a strong economy and African countries must work together.

There are still many problems but this century will be African and I heartily feel that aviation deployment on the whole continent is an essential support and a key factor to its development and success.

In that regard, I think we all agree that the single African air transport market (SAATM) is an unmissable opportunity for the future of the continent. And to date, already 28 countries have signed up to the SAATM. So, I'm happy to say that, as an aviation business director, I have all reasons to believe that the future of aviation is in Africa.

5

■ What does a typical day involve for you?

A typical day involves being available for our teams, no matter if they are based in Paris, Miami, Dubai or Marrakech. I often go to Africa to meet customers, sound out the market, reinforce our relations with customers, supervise our African operations and to participate in the different aviation events.

We inaugurated our first office in Africa in Marrakech last year. This is a very important step for us. We strongly believe that to be able to work efficiently in Africa you need to have a continuous physical presence in the continent.



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