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## STANDARD BEARER

« LE PORTE-DRAPEAU »

**MULEYA FLIES  
THE FLAG FOR  
UGANDA'S NEW  
NATIONAL  
CARRIER**

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## Africa must work together to fight off this virus

The old Chinese adage, “We live in interesting times” has never been truer than today. Once the coronavirus, Covid-19, began its deadly journey from Wuhan in December, aviation began to feel the effects.

Although at the time of writing far fewer cases had been reported across the African continent, the relentless march of the virus has been striking airlines in its path and beyond.

At the continent’s major summit, *Aviation Africa*, held in Addis Ababa in March, it was the major focus of attention.

Unlike many other events around the world, the Addis showcase went ahead. But hand sanitizers at every corner, and an interesting variety of alternative greetings from traditional handshakes, suggested what was on everybody’s mind.

Having survived SARS, Ebola, and other disease-led problems, the African airline industry is resilient. But, reporting 20% decline in passenger demand, Ethiopian CEO, Tewolde GebreMariam, opened the summit with a warning that we could be in for more shocks.

As the global economy nosedived and panic and anxiety spread, so the International Air Transport Association (IATA) began to revise its industry outlook on almost a daily basis.

Within a month, potential industry profits had disappeared and moved quickly to an anticipated \$29 billion loss... and then \$113 billion.

“Previous disease outbreaks have peaked after one to three months and recovered to pre-outbreak levels in six to seven months,” IATA’s special envoy, Raphael Kuuchi, told delegates. But he warned this virus is expected to have a deeper impact.

Even the Gulf carriers are hurting. As much as 50% of their revenues rely on hub traffic from China and Asia Pacific to Africa, the Middle East and Europe. Flights were withdrawn. Ethiopian has continued to



keep routes open to China “it would be unethical not to”, Tewolde said.

Many airlines around the world will collapse during this period of anxiety and uncertainty, but if Africa keeps its head, the carriers with a decent strategic plan and right-sized fleets should survive.

Collaboration and partnership is essential. The message coming out of the Addis summit was just that.

In his opening address, Tewolde argued that African aviation has many opportunities, but also faces challenges that the sector must face together to ensure a sustainable aviation future.

“Our main challenges include the attitude to aviation by African governments. We need support from governments, taxes need to be reduced and infrastructure needs to improve. We depend on aviation to connect ourselves and the world. For trade, business investment and tourism, other modes of transport cannot serve us well. African governments have to support aviation,” he said.

“African airlines also need to cooperate with each other as there is a lack of it right now. We currently command only 20% of the market share between Africa and the rest of the world, and that is painful.”

Today, the skies above us may be quieter than since the middle of the last century. But African aviation will need to be planning NOW. Our goal will be survival and then recovery – and we must work together to achieve that.

Alan Peaford, Editor-in-Chief

**COVER: Uganda Airlines chief executive officer, Cornwell Muleya. PICTURE: BILLYPIX.**

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African Aerospace magazine is published in partnership with AFRAA



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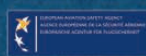


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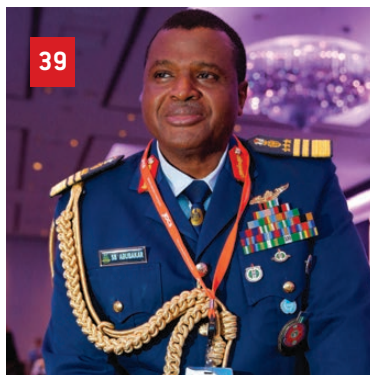




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## USAF C-130J supports Flintlock 2020

A US Air Force C-130J Super Hercules and personnel from the 37th Airlift Squadron, 86th Airlift Wing, at Ramstein Air Base in Germany, was deployed to Senegal and Mauritania to participate in Flintlock 2020, the annual African-led military and law enforcement exercise.

Flintlock is US Africa Command's premier and largest annual special operations forces exercise.

Hosted by Mauritania and Senegal, other African nations participating included Benin, Burkina Faso, and Cameroon.

The exercise is designed to strengthen the ability of key partner nations in north and west Africa to counter violent extremist organisations, protect their borders and provide security for their people.

**Herculean task: US Air Force airmen assigned to the 75th Expeditionary Airlift Squadron (EAS), prepare the C-130J Super Hercules in Djibouti.**

PICTURE: US AIR FORCE, TECH SGT RACHELLE COLEMAN.

## Subsidiary in Ethiopia

Bollore Transport and Logistics has opened a new subsidiary in Ethiopia.

It was created as part of a joint venture between Bollore and the Ethiopian company, CLS Logistics.

Teodros Abraham, founder and CEO of CLS, said: "We have been Bollore's exclusive agent in Ethiopia since 2008 and, through this partnership, we have successfully completed a number of projects. The joint venture will enable us to provide local industry with more infrastructure, technologies and equipment."

## Côte d'Ivoire boost

Ivory Coast carrier, Air Côte d'Ivoire, is extending its relationship with technology solution provider, SITA OnAir, across its new fleet of A320neo aircraft.

The deployment, due in September 2020, will see the new fleet enter into service with both Mobile OnAir and Internet OnAir Wi-Fi over Inmarsat's GX Aviation network.

The Internet OnAir portal also provides the carrier with a host of additional services, with the potential for new ancillary revenue, as well as personalised content for its passengers.

## Kings on patrol

Leonardo has revealed that two Beechcraft King Air 350ERs, equipped as maritime patrol aircraft (MPAs), have gone into service with an African navy following their delivery by the company, which acted as prime contractor and systems integrator for the aircraft. The MPAs, equipped with Leonardo's ATOS mission system and

full complement of sensors, including its Seaspray E-scan surveillance radar, will be used for a range of missions including search and rescue, littoral security, and the monitoring of illegal migration, fishing and pollution.

## Green growth

Nigerian airline, Green Africa, has ordered 50 A220-300s from Airbus by committing to lease an additional three aircraft from GTLK Europe.

The aircraft will allow Green to continue preparations for its planned launch of commercial operations this year.

Deliveries of the three aircraft – which are all new – will be completed by August.

Green Africa selected the A220 for its operational characteristics, financial performance and environmental benefits, with the added advantage of superior passenger satisfaction and wide-body style cabin comfort.

## Whale of a launch

The BelugaXL has entered into service, providing Airbus with 30% extra transport capacity in order to support the on-going production ramp-up of commercial aircraft programmes. The aircraft,

which is an integral part of Airbus' industrial system, made its first operational flight on January 9. This is the first of six BelugaXLs to begin work alongside its BelugaST predecessors, with the additional aircraft being introduced between 2020 and 2023.

## Codeshare deal

Kenya Airways has signed an enhanced codeshare agreement with Alitalia – a partner airline in the SkyTeam alliance. The move is set to boost business travel and tourism between African points into Europe, the Far East, and South America.

## EgyptAir celebrates with Airbus

An EgyptAir delegation celebrated with Airbus personnel at the original equipment manufacturer's factory at Toulouse after receiving their first A320neo aircraft. EgyptAir will be one of the first operators of this model in the Middle East and Africa.



## A towering safety move

Willis Towers Watson, a global advisory, broking and solutions company, has announced a partnership with AviAssist in Africa, an independent non-profit organisation dedicated to promoting aviation safety.

Simon Knechtli, executive director, aerospace for Willis Towers Watson, said: "With a global network of more than 280 aviation experts across 45 locations worldwide, we have strong partnerships with airlines and aviation companies of all sizes across Africa.

"It is exciting to further commit to supporting this organisation through insights and training for the foundation's membership and event delegates."

AviAssist director, Tom Kok, added: "This partnership enables us to empower even more safety champions throughout Africa. We will be focusing an important part of this support in our hub in Rwanda, from where we centre our aviation safety promotion."

## Jetex in Marrakech

Jetex has announced the opening of its latest VIP terminal at Marrakech Menara Airport, introducing a new world-class facility in the Moroccan market.

"We anticipate private aviation in Africa to continue its rapid growth. We want Jetex to help usher in that growth and better serve the market's increasing needs," said Adel Mardini, founder and CEO of Jetex.

"It is an honour for us to establish the first VIP terminal of its kind in north Africa and we are grateful for the ongoing support of the Government of Morocco."



## A right Royal get-together

Royal Jet, the Abu Dhabi-based VVIP aircraft charter operator, has announced a joint venture with Royal Eswatini National Airways Cooperation (RENAC).

This collaboration will see a Royal Jet Boeing Business Jet (BBJ) based in King Mswati III Airport in Sikhuphe, Eswatini. A VIP-configured MD 87 aircraft will also join the fleet and the two companies will jointly market both aircraft.

The strategic partnership between Royal Jet and RENAC is keenly eyeing a new market segment for generating interest in

private jet safaris and is actively seeking to leverage its connections with world-class tour operators and high-end boutique resorts to bring a revolutionary luxury product to market.

Royal Jet's commercial director, Simon D'Oyly, said: "We will begin with one 30-seat Boeing Business Jet, but the intent of both parties is to create jobs, transfer skills and build up maintenance and operational capability locally. We believe this will lead to increased opportunities for Royal Jet to serve its core heads-of-state from an African base."



**Memento:** Zuks Ramasia receives a gift from Ryan Goodnight, vice president customers, Rolls-Royce, in recognition of the delivery of the first A350 to SAA.

## SAA operates new Airbus A350-900 to JFK

South African Airways' (SAA's) new Airbus A350-900 operated its first international flight from OR Tambo International Airport to New York's John F Kennedy International Airport earlier this year.

"This inaugural flight was the first that we plan to introduce on our international routes in the near future," said Zuks Ramasia, SAA's acting CEO. "We are excited that our passengers will enjoy the A350's superior features, such as a quieter cabin and relaxing in-flight experience, including the all-new in-flight entertainment, extra-legroom seats in economy class, and lie-flat beds in business class.

"All the A350-900s are equipped with Rolls-Royce Trent XWB engines. Since entering service in 2015, the Trent XWB engines have flown more than five million hours, and are now regarded as the world's most efficient large aero-engines."

## RwandAir uses new solutions

Lufthansa Systems has announced that RwandAir is using its NetLine/Sched and ProfitLine/Price solutions. These products should optimise RwandAir's complex flight-scheduling, and efficiently determine the best ticket prices based on the current market situation, as well as supply and demand.

exclusive intellectual property, and the first technology of its kind to be developed and certified in business aviation.

Michael Amalfitano, president & CEO, Embraer Executive Jets, said: "Boundless imagination and intelligent engineering gave birth to the Phenom 300E, and it is with that same spirit that we continue enhancing the most popular business jet of the decade."

## RAM/BA codeshare

British Airways and Royal Air Maroc have announced a new codeshare agreement, which will open up new routes across Morocco, including Casablanca and Agadir.

Chris Fordyce, British Airways' head of alliances, said: "We are delighted to be partnering with Morocco's flagship airline to create our first African codeshare agreement.

## Female flight

Ethiopian Airlines operated an all-women flight to Washington DC on March 7.

Ethiopian Group CEO, Tewolde GebreMariam, said: "Ethiopian firmly believes that such remarkable flights inspire African women and young girls to dream big and realise their dreams, not only in aviation, but also in science, technology, engineering, art and other fields."

## Phenom 300E reaches Mach 0.80

Embraer's Phenom 300 is now the first single-pilot jet to reach Mach 0.80.

It offers a quieter cabin and upgrades to its avionics that include predictive windshear and a runway overrun awareness and alerting system, Embraer

Ethiopian's all-women crew flew the B777 from Addis Ababa to the US capital, while other female professionals handled all the ground operations, including flight dispatch, load control, ramp operation, on-board logistics, safety and security, catering, and air traffic control.

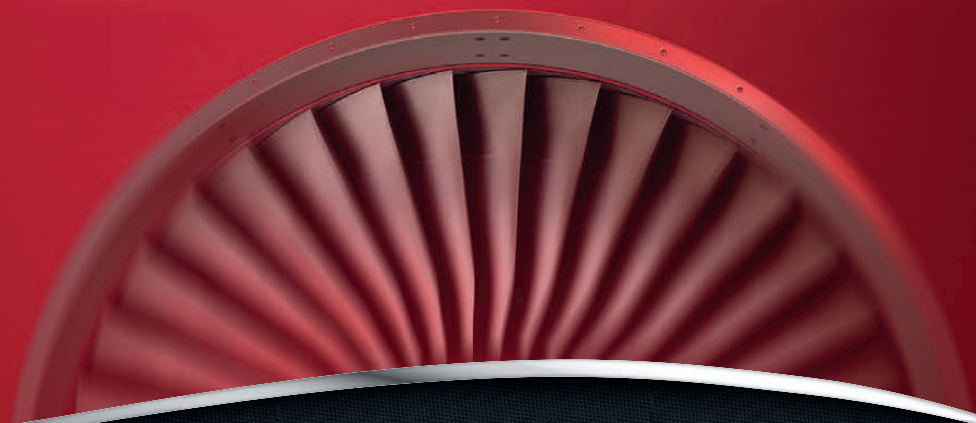


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## ATNS unveils bursary programme

South Africa's Air Traffic and Navigation Services SOC (ATNS) is in the process of assessing applications from 20 candidates, to be trained as target generating officers (TGOs).

ATNS introduced the TGO bursary programme in November 2019.

TGOs are required to perform simulator pilot roles in the training of air traffic controllers and air traffic services officers (ATSOs).

Training was expected start as *African Aerospace* was going to press.

"The training of TGOs, instead of ATCs and ATSOs, is as a result of the realignment of the air traffic services function within ATNS and to fully comply with the South African Civil Aviation Authority's reviewed operational legal requirements relating to simulator training," explained interim ATNS CEO, Thomas Kgokolo.

## AFRAA's collaboration call

The African Airlines Association (AFRAA) has urged stakeholders to work together to help the continent's carriers achieve profitability and sustainable operations.

Globally, the aviation industry is recording profits, while Africa is still considered the weakest

## Ethiopian /Sanad to create MRO centre of excellence

Sanad Aerotech has signed a landmark agreement with Ethiopian Airlines, which will pave the way for a collaboration to maximise untapped MRO business opportunities in the region.

The initial phase of the agreement will see the establishment of a centre of excellence for the repair and overhaul of auxiliary power units (APU) in Addis Ababa. It will start with APUs used on B737 and A320 aircraft.

Ethiopian Airlines Group chief executive officer, Tewolde GebreMariam, said: "Our MRO facility is ready to provide cost-effective and efficient overhaul services for African Airlines' APUs. We want to expand this cooperation with Sanad to cover other aircraft components."

Shake on it: Mansoor Janahi, Sanad Aerotech CEO, and Tewolde GebreMariam at the signing.



region, with losses registered yearly since 2010.

AFRAA's secretary general, Abderahmane Berthé, said: "African airlines are facing many challenges, such as the high cost of operations due to high taxes and charges imposed by governments, poor market access, blocked funds, and overpriced jet fuel, just to name a few. These conditions mean most airlines are unable to grow and offer competitive fares for more people to travel."

He urged regulators to closely engage with aviation stakeholders in order to establish and maintain a conducive environment for air transport growth; airlines on their side needed to cooperate more so the industry could advance and contribute significantly to national economies, he added.



## Kenyan CEO appointed

Kenya Airways has appointed Allan Kilavuka as chief executive. Kilavuka was formally the head of budget airline, Jambojet, but has been acting chief executive of Kenya Airways since December. It follows the departure of former chief executive, Sebastian Mikosz.

"During his short time as acting chief executive, Allan has thrown all his energy into this role, while still maintaining his position of CEO of Jambojet," said Kenya Airways chairman, Michael Joseph.

## Boeing slump

Boeing's gross aircraft orders for 2019 slumped to an all-time low, fuelled by a drop in orders for the 737 model.

Data gathered by [learnbonds.com](http://learnbonds.com) indicates that the gross orders declined from 1,090 recorded in 2018, to 246 for the last year, a drop of about 80%.

The slump was mainly fuelled by a significant drop in the orders for the 737 narrow-body jet airliner. Last year, Boeing received only 69 unit orders for the model.

## FTV10 maiden flight

Mitsubishi Aircraft has completed the maiden flight of Flight Test Vehicle 10 (FTV10), the first Mitsubishi SpaceJet M90 in final, certifiable baseline configuration.

FTV10 took off on March 17 from the Prefectural Nagoya Airport in Japan and conducted basic

aircraft performance tests in normal operating conditions over the Pacific Ocean. After approximately two hours of flight, the aircraft returned to Nagoya.

## Essential air cargo

The International Air Transport Association (IATA) has said it continues to support governments in their efforts to contain the spread of coronavirus.

"Since the crisis began, air cargo has been a vital partner in delivering much-needed medicines, medical equipment (including spare parts/repair components), and in keeping global supply chains functioning for the most time-sensitive materials," said IATA.

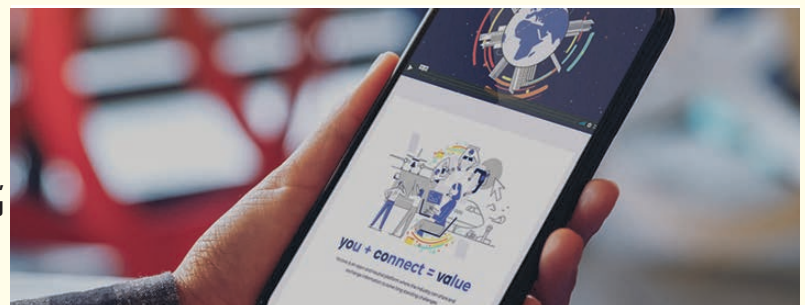
"This has been done through dedicated cargo freighter operations, utilisation of cargo capacity in passenger aircraft, and with relief flights to affected areas."

## Data-driven aviation platform launched by Rolls-Royce

Rolls-Royce data innovation catalyst, R2 Data Labs, has launched Yocova – a new data exchange and collaboration platform for the aviation sector.

The platform seeks to empower users by providing an online space for open, secure, data sharing and insight, while offering an exchange, through which users can sell their data-driven assets and software applications.

Caroline Gorski, group director, R2 Data Labs, said: "Since our launch, we have been committed to unlocking the value of data and encouraging collaborative innovation. This platform fits perfectly within that vision. We are already seeing great value in working with our industry peers to unlock our combined data sources and create unique digital service solutions that could truly enhance the future of aviation."





A stylized illustration of a man with a beard and sunglasses, wearing a dark blue suit jacket, a red vest, a white shirt, and a blue and red striped tie. He is standing with his hands in his pockets, looking to the left. The background is a vibrant red with faint gear and airplane icons.

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*Cornwell Muleya is no stranger to African aviation, after gaining senior leadership experience at Air Botswana, Air Tanzania, Air Mauritius and Zambezi Airlines. As Victoria Moores reports, his latest challenge has been setting up Uganda Airlines, an ambitious new national carrier, which launched operations in 2019 and plans to go long-haul in 2021.*

# Flying the flag for Uganda

**U**ganda Airlines CEO, Cornwell Muleya, originally trained as a chemical engineer. He may have ultimately chosen aviation over chemistry labs, but he still hopes to be a catalyst for change.

“At university, I read chemical engineering. I decided that wasn’t what I wanted to do, so I became a chartered accountant,” Muleya said. “I wanted a job where I could travel, so I thought accounting would give me that.”

Needless to say, his travel ambitions were more than met – but not quite as expected. Originally from Zambia, Muleya’s work with Deloitte & Touche and PricewaterhouseCoopers took him to several African countries – including Kenya and Tanzania – and ultimately into the aviation industry.

“I specialised in audit and then restructuring of companies,” he said. “That’s how I got into aviation. I was recruited as part of the team to restructure Air Botswana in 1995.”

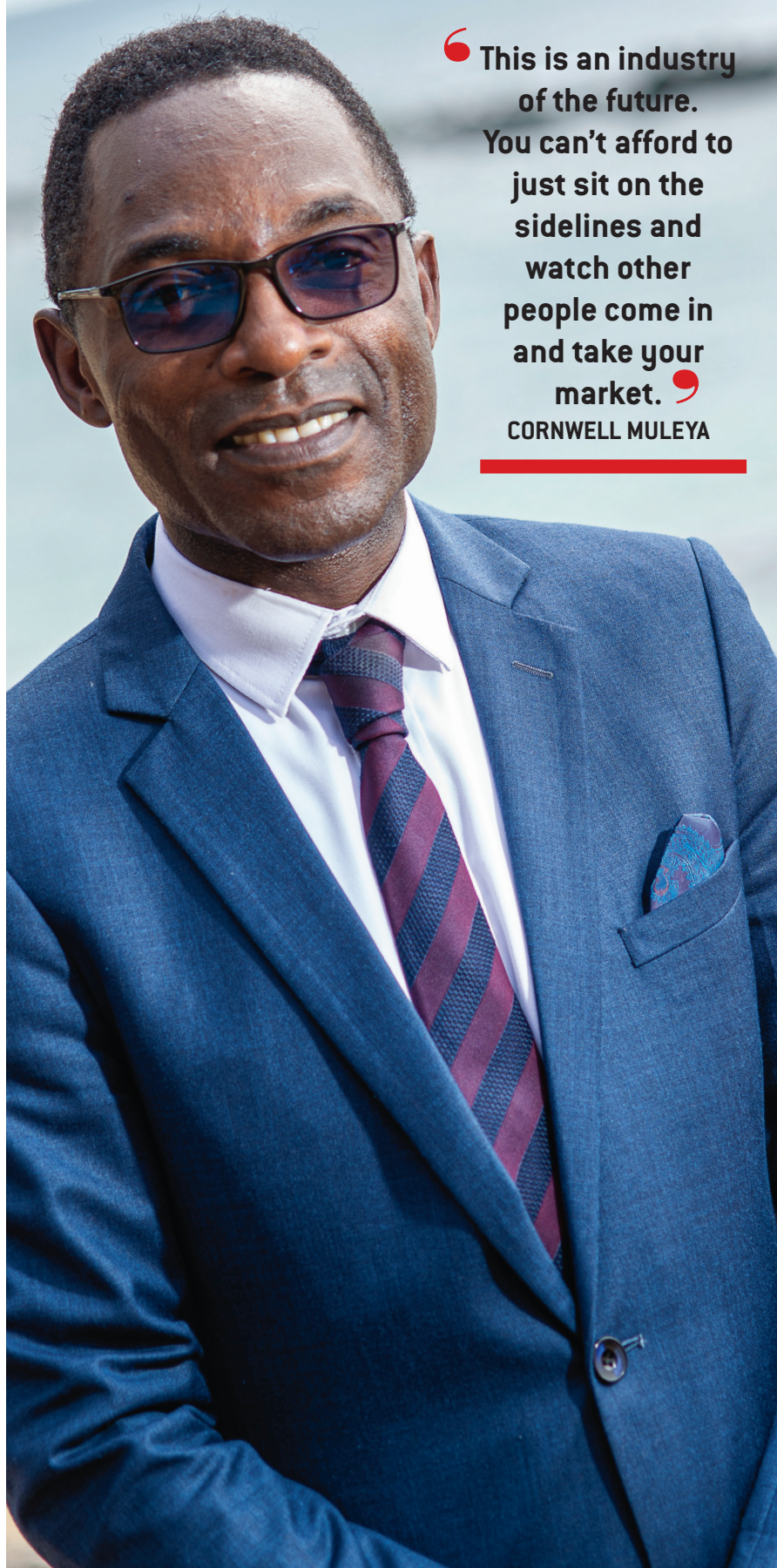
After joining Air Botswana as head of finance, Muleya became CEO. He stayed eight years, until 2002, restructuring the airline and achieving profits in seven of those eight years.

His next stop was Tanzania. When South African Airways (SAA) bought into Air Tanzania in 2002, Muleya became the latter’s managing director, handling its restructuring and integration until early 2005.

After that, it was on to Air Mauritius, as CFO. “I was there for six years, until 2009.” At the time, Air Mauritius was also restructuring, shifting from a three-class full-service model to a two-class leisure carrier.

Then Muleya went back to Zambia for a year, to set up and launch independent start-up Zambezi Airlines, before moving on to Kenyan wet lease (ACMI) operator, Aircraft Leasing Services (ALS), on another restructuring project.

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“This is an industry of the future. You can’t afford to just sit on the sidelines and watch other people come in and take your market.”

CORNWELL MULEYA



CONTINUED FROM PAGE 13

“From there, I was recruited by Aga Khan to go and restructure Air Uganda,” Muleya said.

Muleya joined Air Uganda in 2013, but one year later a decision was taken to close the airline. That process took until March 2015, but Muleya felt there was still a strong business case in Uganda.

“When I finished closing the airline, I decided we cannot remain without a carrier, so I started a project in 2015. I discussed it with the government and it became a government project.”

This project ultimately became Uganda Airlines.

Muleya performed a detailed feasibility study with the national planning authorities, before starting work on the final Uganda Airlines business plan in October 2017. The plan was signed off just three months later.

“The economy can’t do without the airline. It’s the biggest catalyst, in terms of attracting investment,” Muleya said. “Oil is supposed to start flowing in 2022, so there is a lot of investment to facilitate the development of the oil and gas sector.”

Uganda is landlocked, depending on air links for connectivity and to stimulate other sectors, like tourism, mining, oil and gas. The national carrier project had the potential to create direct jobs and to boost other sectors, with a knock-on effect on employment and on the government’s foreign exchange reserves.



“This is an industry of the future. You can’t afford to just sit on the sidelines and watch other people come in and take your market, which is what’s been happening since the last carrier was closed. It opens up all those opportunities,” Muleya said.

Uganda has a population of 40 million people and Entebbe Airport handles around 1.6 million passengers annually. “Some 60% of that is Uganda-derived traffic,” Muleya said.

“Over the next 10 years, traffic could double, so we’re talking 3.2 to 3.6 million travellers over the next decade.

“That’s the type of growth that we’re looking at. Currently, the average spend of those 1.6 million travellers is about \$450 dollars per passenger, which is quite high, so we are talking about a market of half a billion dollars at the moment, which is set to grow.”

Uganda Airlines was incorporated as a company on January 30, 2018. Then the real work began, creating corporate structures, acquiring aircraft, getting them added to the national register and applying for an air operator’s certificate (AOC).

The government had originally planned to fund Uganda Airlines with a mix of debt and equity, but the search for debt-financing for the aircraft took too long, so the start-up was ultimately funded with government equity and no debt.



**On the way: Uganda Airlines will take delivery of two A330-800neos in December 2020 and January 2021.**

“Because of the timelines in getting those structures approved, the government decided ‘look the project is too important, let’s fund it from our own resources’. That’s where we lost almost nine months to a year, on the [finance] structuring.”

Then there was the issue of introducing the Bombardier CRJ900 as a new type on Uganda’s national register. “We had to get type certification, so that meant everybody had to be trained, including the regulators,” Muleya explained.

After overcoming these challenges, Uganda Airlines performed its inaugural flight on August 27, 2019, becoming the country’s new national carrier and assuming route rights under Uganda’s bilateral agreements.

“It’s the only designated airline. There are other small private airlines in Uganda, but they are focused on domestic and small regional operations,” Muleya said.

The fledgling airline quickly took delivery of four new Bombardier CRJ900s and ramped up to seven destinations, serving Bujumbura (Burundi), Dar es Salaam (Tanzania), Juba (South Sudan), Kilimanjaro (Tanzania), Mogadishu (Somalia), Mombasa (Kenya) and Nairobi (Kenya).

But there is more. Uganda Airlines will take delivery of two A330-800neos in December 2020 and January 2021, putting pressure on the start-up to rapidly grow its regional feeder network, ahead of its planned long-haul launch in early 2021.

“We are still continuing to open routes, because the network has to be ready for the A330s,” Muleya said.

“Currently, we are the gateway for Somalia, South Sudan and Burundi. We want to be the gateway for eastern Congo, as well. We have

plans to go to three points in the Democratic Republic of the Congo (DRC) – Kinshasa, Goma and Lubumbashi.”

Other planned regional destinations include Addis Ababa (Ethiopia), Harare (Zimbabwe), Hargeisa (Somaliland), Johannesburg (South Africa), Khartoum (Sudan) and Lusaka (Zambia). “Those are some of the routes we are looking at to provide regional connectivity,” Muleya said.

The airline is going through a much faster ramp-up than originally planned, because the A330 delivery schedule remained unchanged, despite the nine-month financing delay.

“We have the issue of losing that nine-month period, because if we don’t have the network right with connectivity, then we lose out on feeding the A330s,” Muleya said. “Our shareholders said we can’t delay the aircraft, so the agreements are signed, all the deposits are paid, the money is ready to go for when we receive them, so our work is cut out for us.”



Depending on traffic rights, the first routes for the A330s will most likely be London (UK) and Dubai (UAE), followed by Guangzhou (China).

“Then we’re looking at routes also to India, where the traffic profiles are growing to Uganda. Depending on loads, we’ll also run it [the A330] north to southern [Africa], and to west Africa, to complete the connections across the long-haul market.”

By the end of 2021, Uganda Airlines plans to serve 20 destinations. This is an ambitious start-up.

So how will Uganda Airlines avoid the pitfalls experienced by other ambitious African carriers? “The reasons for setting up the airline have to be clear,” stressed Muleya. “The underlying reasons





were debated and studied over a period of two to three years – and it was four years between 2015, when the project started, and our launch in 2018. The government is very clear about its reasons for starting Uganda Airlines.”

Muleya is also assuming that it will take seven to 10 years for Uganda Airlines to make a bottom-line profit.

“The government is looking at the airline, not only for profitability, but also for infrastructure,” he said. “We expect that, within five to seven years, we can make the company cash positive. Thereafter, that’s when you target bottom-line profitability.”

However, partnerships could shrink that timeline. “Strong partnerships with carriers can strengthen your market presence, performance and payback,” Muleya noted.

With this in mind, Uganda Airlines is keen to work with existing carriers serving the region, such as Emirates, Ethiopian Airlines, Kenya Airways, Qatar Airways, SAA and RwandAir. This would initially take the form of interline agreements, until Uganda Airlines has secured its International Air Transport Association (IATA) operational safety audit (IOSA) approval.

“We want to do it [IOSA] in the next year or so, because we need it for when we go international, to avoid a lot of questions on our practices and standards. That’s another live project that we are starting now. There is no shortage of work at the airline at the moment.”

Some of this heavy workload includes setting up internal suppliers for the airline. To maintain costs and ensure quality standards, Uganda Airlines is planning to self-handle at Entebbe and create its own in-house catering and maintenance operations. This could also generate income from other airlines.

“On the maintenance side, instead of paying a

provider, the plan is to go into a joint venture with an international partner to set up a maintenance, repair and overhaul operation (MRO) in Uganda, which can employ our people,” Muleya said.

“I think, initially, it would be up to C-check, because our aircraft are still new. So, for the first six years there are really no heavy checks. After that, we can expand and tailor it according to our needs.”

The government has provided Uganda Airlines with a head office and hangars at Entebbe Airport.



These projects are happening in parallel with the rapid network expansion. “We are trying to remain calm and take it on board, but under the water there is a lot of paddling going on!”

Amid the flurry of activity, Muleya recalls three standout challenges – skills, systems and social media.

“In any new project, the greatest issue, having found the financing, is getting the skills. You need to get your pilots, your engineers, your flight attendants – everybody – and then train them to the standard that’s required for you to get properly licenced. That is one of the biggest challenges for airlines, even established ones.”

The next challenge is setting up the complex internal workings of an airline.

“An airline is never really the aircraft. An airline is structure and systems that enable you to be visible, to establish your brand, sell and be distributed across the world. These are the issues that we’ve had to grapple with and the issues that continue to be consolidated today.

“It takes time for you to be properly connected everywhere you want and for all the systems

across the industry to talk to each other. There are lead times for testing, connectivity, partnership discussions and agreements.”

Finally, comes a more modern hurdle – social media and its impact on public perception.

“Within the country, there has been a lot of debate, which has occurred mainly on social media. Social media catches worldwide attention and that is one of the biggest challenges. That debate has fuelled the discussions on almost every aspect of the airline.”

This means Uganda Airlines has been through all the normal start-up stages in the public eye. “First, there was scepticism that this project would start. Secondly, when the aircraft started arriving, people started believing, but they were never quite sure that we would fly. When we took off and flew, the question was ‘are we going to land?’ And now that we have taken off and landed, the main issue is, can we sustain this? Sustainability is a critical issue for the nation.”

While Uganda Airlines is important for the economy, it is also strongly linked to national identity and pride. “This is probably one of the important aspects that has come out of Uganda in recent years; it is a big milestone for our country,” Muleya said.



“In terms of airline development in Africa, most countries have tried and failed. The majority have given up, so now there is a new wave. It’s like a new dawn in the African aviation industry and, for that reason, it is not only important for Uganda, but also for the continent, to demonstrate that you can start and be successful in this industry – and sustain it for the benefit of your economy and your people.”

In his free time, which seems unlikely given the scale of this project, Muleya likes to reflect on life’s lessons. His first learning is that no challenge is too difficult. “Anything can be overcome if you apply due diligence, commitment and you go into the detail with a clear vision of what you want to achieve,” he said.

Muleya’s second piece of wisdom explains how he finds time to reflect on these lessons. “You have to enjoy what you do, but you need to be balanced about it. You need to give to yourself, and to the organisation, at the same time. It’s only when those two meet that you can be successful and be satisfied with what you have achieved.”

So how is Muleya finding his own balance? The answer lies in his original passion for travel. “I think I’m going to enjoy my time in Uganda. Our airline advertises the tourist attractions of Uganda. Maybe I have to get some personal experience of everything that the country has to offer, so that [advertising] comes from the heart.”

Last year, Uganda was voted the friendliest country in the world and – with up to 56 tribes and cultures – there is plenty more for Muleya to explore.

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*Like all Libyan carriers, Afriqiyah Airways is in a seemingly endless fight for survival. But chairman, Mustafa Maatug, tells Martin Rivers he's full of hope for the future.*

## Silver lining shines through the fog of war

**M**itiga Airport, Tripoli's only functioning gateway, resumed operations in December after it was closed for three months due to airstrikes by Khalifa Haftar, the country's most powerful warlord.

The disruption was just the latest blow for Libya's long-suffering airlines – their previous hub, Tripoli International Airport, was destroyed in 2014 – yet Mustafa Maatug, the chairman of Afriqiyah Airways, one of Libya's state-owned flag-carriers, is quick to find a silver lining.

"This sort of problem is happening very rarely," he said. "It happens from time to time, but these problems will not stop us from operating."

The reality is that Afriqiyah, its fellow flag-carrier Libyan Airlines, and a handful of private operators are used to such crises.

Libya began its slide into civil war in 2011 amid the Arab Spring uprisings that engulfed the region. Hopes were high that the oil-rich nation would embrace democracy after the overthrow of its dictator, Muammar Gaddafi. But the militias who toppled him fell back on to tribal loyalties and continued battling amongst themselves.

Power soon coalesced around two centres: a western government in Tripoli, which is backed by the United Nations; and an eastern government in Tobruk, which is allied to Haftar's troops and supported by Egypt and the UAE.

Fractured in this way, Libya's state-owned entities have found it difficult to stay impartial. The two national airlines are particularly exposed due to their operational presence in both Tripoli and the eastern city of Benghazi.

For Afriqiyah, these competing interests gave rise to "split administrations" in the east and the west, according to *The Libya Herald*, with rival managers steering the airline in two different directions. Once again, however, Maatug downplayed the problem and insisted that the leadership speaks with one voice.

"Afriqiyah is one company and there is no split between the east and the west," he said. "This rumour that you heard is not true. We did have some administration problems before, but now we have only one board and we



Aviation in Libya has nothing to do with the political side.

MUSTAFA MAATUG

are all together now. There is no split at Afriqiyah at all."

The chairman stressed that the Tripoli-based carrier has encountered "no problems" at its Benghazi station and that "aviation in Libya has nothing to do with the political side".

Although management have succeeded in keeping the airline alive, Afriqiyah's network is a shadow of its former self. Just seven overseas markets are operated on a scheduled basis: Tunis and Sfax in Tunisia; Istanbul in Turkey; Amman in Jordan; Alexandria in Egypt; Khartoum in Sudan; and Niamey in Niger.

Charter flights are also operated to Accra, Ghana.

The domestic network links Tripoli and Benghazi with Sabha and Kufra in the south, and Zintan and Misrata in the west. Misrata Airport, located 200km east of Tripoli, served as the capital's temporary hub during the closure of Mitiga Airport.

Lagos, Nigeria and Cotonou, Benin are among the markets being evaluated for future expansion – but the size of the fleet poses a challenge.

Afriqiyah currently deploys nine aircraft: five Airbus A320s, two A319s, one A330-300 and one A300 freighter. A second A330-300 has been leased to Turkish Airlines, while four or five

aeroplanes are inoperable due to damage sustained in the war.

Talks are now under way with Airbus about replacing Afriqiyah's historic commitment for 10 wide-body A350s with a mixed order that would lift the fleet to 20 units, likely including A321neos.

"We're a very good customer for Airbus," Maatug said, predicting an announcement in the near future.

However, deliveries are unlikely until the company receives assurances that it can return to Europe. All Libyan carriers have been banned from the continent since 2012, when Brussels voiced "serious concerns" about the oversight capabilities of the Libyan Civil Aviation Authority. On that front, too, Maatug is full of optimism.

"Shortly, Libya is going back to its normal position, so don't you worry," he affirmed. "We are very close to Europe. Shortly this embargo will be lifted... When they lift the embargo, we are ready to go."



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# Is Kane able to take Air



**Ibrahima Kane:** "We have a good geographical location, which allows us to use the same aircraft to combine day and night flights to connect our hub."

*Air Senegal is pursuing its roll-out with a well-defined strategy in line with the government's 'Emerging Senegal' plan.*

**Anuradha Deenapanray Chappard met with CEO, Ibrahima Kane.**

**T**oday, Air Senegal has one of the highest growth rates among African airlines, fuelled by a Senegalese gross domestic product (GDP) rate that is expected to reach 6.3% this year and 6.8% in 2021.

In 2019, the airline transported more than 400,000 passengers. It is modernising and adapting its fleet to its market.

It was the first airline to take delivery of the A330neo (Casamance) in Africa and, since then, a second one (Sine Saloum) has been added to its fleet.

According to CEO, Ibrahima Kane, this

"effective tool" will help the airline start a new phase of its development.

Since his appointment in April 2019, Kane has been regularly revisiting the operations strategy. "But the mission and the overall strategy do not vary. There is consistency. It's about managing efficiently the accelerated growth of the airline," he said.

Air Senegal's strategy is part of a broader national development plan, launched in 2014, which will extend until 2035.

The Dakar hub is one of the strategy pillars. Its three components include the new Blaise Diagne International Airport (AIBD), inaugurated in December 2017, the launch of Air Senegal, and the development/renovation of domestic airports.

Air Senegal took a further step in its development strategy in November by signing a memorandum of understanding (MoU) for eight A220s. According to Kane, these aircraft will help improve its competitiveness through fuel savings and enhanced profitability, as well as creating new routes to Europe and west Africa.

"We have a good geographical location, which allows us to use the same aircraft to combine day and night flights to connect our hub," he explained.



This new flight scheme will ensure operational efficiency through optimal fleet management. The airline's 2020 development plan targets a fleet of eight aircraft.

The CEO added that the main assets for the construction of a hub are government support, political stability, and the seriousness that the country inspires to attract investors.

Air Senegal currently serves around 12 destinations in the sub-region including Abidjan, Bamako, Conakry, Niamey, Ouagadougou and Praia. It has served Marseille (France) and Barcelona (Spain) since mid-December.

New routes have been added in the region to Abuja, Accra, Lagos, Nouakchott and Casablanca. Flights to London, Geneva and the United States (New York and Washington) are scheduled to start this summer.

Opportunities are huge but challenges need to be addressed.

"We remain focused on our mission. The success of Air Senegal's development strategy will depend on fuel costs, human resources, finance, maintenance, training and how we put

## SOMMAIRE

### AIR SÉNÉGAL, VECTEUR DE CROISSANCE ET ACTEUR INCONTOURNABLE

*La compagnie Air Sénégal, « est en train de se déployer » avec une stratégie bien définie en droit fil avec le projet Dakar Hub Aérien du Plan Sénégal Emergent (PSE) de l'État sénégalais. Anuradha Deenapanray Chappard a rencontré son directeur général, Ibrahima Kane.*

Air Sénégal entame une nouvelle phase de son développement « extrêmement rapide et accéléré ». Elle modernise et adapte sa flotte à son marché, pour réussir son expansion. Elle était la première à réceptionner un premier A330neo (Casamance) en Afrique. Un deuxième, Sine Saloum, est venu consolider sa flotte.

Selon le DG, cet « outil efficace » aidera la compagnie aérienne à entamer une nouvelle phase de son développement. Depuis son arrivée en avril 2019, Ibrahima Kane a eu comme mission de revisiter régulièrement la stratégie des opérations. « Mais la mission et la stratégie globale ne varient pas. Il y a une constance. Il s'agit de gérer le développement extrêmement rapide et accéléré », souligne-t-il.

Air Sénégal a franchi une nouvelle étape dans sa stratégie de croissance en novembre dernier avec la signature d'un protocole d'accord pour huit A220 qui permettront d'améliorer sa compétitivité grâce aux économies en carburant et à ouvrir de manière rentable de nouvelles routes vers l'Europe et l'Afrique de l'Ouest.

La compagnie dessert aujourd'hui une douzaine de destinations dans la sous-région dont Abidjan, Bamako, Conakry, Niamey, Ouagadougou et Praia. Elle dessert Marseille et Barcelone depuis la mi-décembre. De nouvelles dessertes ont été ajoutées dans la région et la sous-région (Lagos et Abuja au Nigeria, Accra au Ghana, Nouakchott en Mauritanie et Casablanca au Maroc). Londres,

Genève et les États-Unis (New York et Washington) seront ajoutées en été 2020.

Il y a certes des défis à relever pour réussir et soutenir une efficacité opérationnelle mais aussi d'énormes opportunités à saisir sur un continent en pleine croissance.

« Nous restons focalisés sur notre mission. Nous allons nous concentrer sur le coût du carburant, la main-d'œuvre, notre expertise et notre savoir-faire, le financement, la maintenance et la formation », ajoute Ibrahima Kane.

Il adopte par ailleurs « un discours assez raisonné par rapport aux taxes ». L'essentiel « c'est qu'il n'y ait pas un déséquilibre de compétitivité ». Selon lui, les taxes sont des éléments d'attractivité de la destination. « Il faut étudier l'impact de la taxe sur l'infrastructure. La taxation doit s'inscrire dans une politique plus large en termes d'attractivité pour le pays et sa visibilité. »

Pragmatique, Ibrahima Kane considère le SAATM comme un outil et non un dogme. « À terme, notre hub aura intérêt à s'ouvrir et à accueillir d'autres compagnies. Cependant, pour y arriver, nos compagnies, nos états et nos structures devront faire une évolution contrôlée. »

Fort d'une longue tradition aéronautique, le pays et Air Sénégal ont des capacités au niveau opérationnel, de la maintenance, de la réglementation, de l'autorité de l'aviation civile et des expertises nécessaires pour gérer cette montée en puissance. ■



# Senegal to the next level?



**Vital: Air Senegal is relying on excellence in human resources and training.**

forth our expertise and know-how," said Kane.

The CEO believes the single African air transport market (SAATM) is necessary. "Ultimately, our hub will need to open up to welcome other airlines. However, countries and organisations concerned will need a 'controlled evolution'," he explained.

Furthermore, he has a rational point of view on taxes. The bottom line "is that there is no imbalance in competitiveness". According to him, there's a need to study the impact of the tax on infrastructure. Taxation must be part of a broader policy in terms of attractiveness for the country and its visibility.

"We have almost two years of existence but 40 years of experience," he said. "Air Senegal is part of a long aviation heritage. We, therefore, have operational, maintenance and regulatory expertise in this area. This will allow us to manage this rapid acceleration."

Kane is confident that Air Senegal will have its role to play in the consolidation and integration of the aviation sector within the African continent. ■



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*En cessation d'activités depuis 2002, Air Djibouti a redémarré ses opérations commerciales en 2015, avec le soutien de Cardiff Aviation. Le transporteur veut désormais se faire une place de choix dans la corne de l'Afrique en s'appuyant sur un plan ambitieux. Un reportage de Romuald Ngueyap.*

## AIR DJIBOUTI AFFICHE SES AMBITIONS

**B**asée à Djibouti-Ambouli et relancée avec les opérations de fret, la compagnie membre de l'AFRAA, étend progressivement son réseau. Elle dessert actuellement la Somalie (Mogadiscio, Garoowe), le Somaliland (Hargeisa), l'Éthiopie (Addis-Abeba) et Yémen (Aden). En janvier dernier, elle a renoué avec Djeddah en Arabie Saoudite, sa première ligne hors du continent. « Dans les prochaines semaines, nous allons ouvrir la ligne Dubai », affirme le directeur général, Abdourahman Ali Abdillahi.

La liaison avec le Caire figure également dans son plan d'expansion à court terme. La compagnie lorgne des destinations européennes comme Paris et Londres « en activant des accords de partage de code avec des transporteurs comme KLM ou Kenya Airways ».

Suivant ses objectifs opérationnels, Air Djibouti ambitionne d'atteindre 240 000 passagers par an tout en



**Abdourahman Ali:**  
« L'horizon augure des lendemains meilleurs »

améliorant son taux de remplissage. Le transporteur vise un facteur de charge de 85 à 90% au terme de l'exercice clos au 31 décembre 2020, contre 74% en 2019 et 40% l'année d'avant.

Abdourahman Ali soutient que ces objectifs sont réalisables. « L'opportunité du marché est là [...] c'est à nous de travailler maintenant un peu plus. »

Avec ses 23 200 Km<sup>2</sup>, le Djibouti bénéficie d'une position géographique privilégiée dans la Corne de l'Afrique. Peuplé de moins d'un million d'habitants, le pays se situe au cœur des courants d'échanges entre l'Europe, l'Asie, l'Afrique et la Péninsule Arabique, tout en étant adossé à l'hinterland du géant éthiopien, un marché de plus de 100 millions d'habitants.



Pour soutenir ses ambitions, la compagnie mise sur le renforcement de sa flotte. Elle exploite actuellement deux Embraer E145, un Boeing 737-500 et un Airbus A320-200, récemment acquis en leasing. « Nous prévoyons mettre en service un second A320 d'ici la fin de l'année. »

Depuis le désinvestissement de l'État en mars 2017, le transporteur est détenu à 30% par l'aéroport de Djibouti et à 70% par Great Horn Investments Holdings dont l'unique actionnaire est l'Autorité des Ports et des Zones Franches.

La compagnie vise désormais la certification IOSA. « Nous sommes actuellement assistés par des experts venus du Kenya pour nous accompagner dans ce processus. »

À terme, Air Djibouti envisage d'ouvrir sa propre académie de pilotage. Les discussions sont également en cours avec l'ENAC de Toulouse pour la mise sur pied d'un Centre de Contrôle des Opérations à Djibouti.

Le transporteur peut compter sur la stabilité politique du pays, son économie libérale et son immense potentiel touristique. Deux aéroports internationaux sont en construction, l'un à 25 kilomètres au sud de la capitale et l'autre dans le nord, près de l'archipel des Sept Frères. « L'horizon augure des lendemains meilleurs », assure Abdourahman Ali.

### SUMMARY

#### AIR DJIBOUTI REVEALS EXPANSION PLANS

Having re-started commercial services in 2015, after more than a dozen years in the airline wilderness, Air Djibouti is embarking on ambitious plans to expand both freight and passenger services regionally and internationally.

Based at Djibouti-Ambouli International Airport, the airline is a member of the African Airlines Association (AFRAA) and it is now aiming for International Air Transport Association (IATA) operational safety audit (IOSA) certification.

The tiny Red Sea coastal country of Djibouti, with a population of fewer than a million, is strategically located in the Horn of Africa, bordered by Somalia, Ethiopia and Eritrea. Its privileged geographical position places it at the centre of trade between Europe, Asia, Africa and the Arabian Peninsula.

Currently serving Somalia (Mogadishu,

Garoowe), Somaliland (Hargeisa), Ethiopia (Addis Ababa), Yemen (Aden), and Jeddah (Saudi Arabia), the airline's general manager (GM), Abdourahman Ali Abdillahi, says it hopes soon to open routes to Dubai in the UAE and Cairo in Egypt.

The company is also eyeing code-share agreements to Paris and London in conjunction with carriers like KLM and Kenya Airways.

The GM claims these goals are achievable, saying: "The market opportunity is there, so now it's up to us to deliver."

This year Air Djibouti aims to carry 240,000 passengers and is targeting a load factor of 85-90% – impressive figures when compared to 74% in 2019 and 40% the previous year.

The airline currently operates two Embraer E145s, a Boeing 737-500, and a recently leased Airbus A320-200. There are plans to acquire a second A320 by the year end.

*Three years after America lifted most sanctions against Sudan, local carriers like Tarco Aviation are still in a fight for survival. Bushra Abushora, the airline's strategic planning director, told **Martin Rivers** how the sector is coping.*

# US/EU bans stunt Sudan's regeneration

Last November, Apollo Aviation Group, a US company that manages aircraft assets, was fined \$210,000 by the US Government for unwittingly leasing out engines that wound up in the hands of Sudan Airways, the flag-carrier of Sudan, in 2014.

The fact that America lifted its economic embargo of Sudan three years ago failed to deter the Office of Foreign Assets Control (OFAC), the wing of the US Treasury responsible for sanctions enforcement, from pursuing Apollo.

So, too, did the many mitigating factors that OFAC acknowledged of the case: Apollo had no advance warning that its engines would be passed via intermediaries to Sudan Airways; the engines were ultimately in Sudan for just four months on wet-leased aircraft; and the contract was immediately dissolved when Apollo discovered the slip-up.

To even casual observers, this heavy-handed response leaves little doubt about the seriousness that Washington attaches to violations – deliberate or otherwise – of its sanctions regime.

But it also partly explains why the removal of the decades-old US embargo has done little to ease Sudan's problems.

"The Americans declared the sanctions have been lifted – that's just on paper," said Bushra Abushora, strategic planning director at Tarco Aviation, one of the country's largest airlines. "Things are the same. We are still having problems. We can't buy spare parts; you can't even make a request. You have to go to Boeing, and Boeing refers to the sanctions that are still there.

"On paper, yes, it's true. But actually it's not true. All airline operations are sanctioned."

The hurdles Abushora was referring to include America's designation of Sudan as a state sponsor of terrorism – a historic classification slapped on Omar al-Bashir, the country's former dictator, in 1993. His removal from power in a military coup last year has not affected the designation.

Separate export requirements imposed by the US Department of Commerce also remain active, an OFAC spokesperson confirmed to *African Aerospace*.

These residual sanctions – coupled with Washington's strong appetite for retrospective enforcement – mean that it is virtually impossible

for western suppliers to enter into commercial agreements with Sudanese companies.

Put simply, nothing has changed for Tarco and the country's other airlines over the past three years.

Unable to work directly with Boeing or Airbus, they have no choice but to follow the rulebook laid out by Iran's heavily-sanctioned aviation sector. Second-hand aircraft are bought on the black market with the help of intermediaries – often based in the Gulf, Turkey or Ukraine – who hide their customers' identities behind shell companies and paper trails.

Sourcing spare parts to keep these aircraft airworthy is no easier. "That is why their prices are four, five, six, even 10 times more expensive than the global average," Abushora said.

Since launching in 2009, Tarco has defied these challenges and built up a sizable fleet of about nine Boeing 737 Classics and two Fokker 50s.

Several of its aircraft are registered in Gambia to Mid Africa Aviation Company, which is owned by Sudanese investors. Abushora did not clarify the nature of the relationship with Mid Africa, beyond confirming that the set-up has been instrumental in allowing Tarco to expand.



The Fokker 50s were acquired from Sudan Airways and have been placed with subsidiary, Eldinder Airlines. They will soon be joined by another two units purchased from Indonesia.

Alongside its domestic network, Tarco runs scheduled flights from Khartoum to 11 overseas points: Amman in Jordan; Asmara in Eritrea; Cairo in Egypt; Dammam, Jeddah and Riyadh in Saudi Arabia; Doha in Qatar; Entebbe in Uganda; Juba in South Sudan; Kano in Nigeria; and N'Djamena in Chad. Entebbe is operated as a fifth-freedom service via Juba.

As well as evaluating Sharjah and Dubai in the UAE, management are exploring the possibility of running transit flights from west Africa to Saudi Arabia via Sudan.

"West Africans all fly to Europe and then go to the Gulf. You can imagine the long way they have to go," Abushora noted. "Our geographical location is better for this; passengers can fly directly, save time, save fuel, get better prices."

He said Tarco is considering basing aircraft in either Kano or N'Djamena to collect passengers from across the sub-region, before transporting them to Saudi Arabia with a technical stop in Khartoum.

Muslim pilgrims are the target market, with Saudi Arabia pledging to triple the number of Umrah visas it issues by 2030. Dakar in Senegal and Lagos in Nigeria are among the spokes being considered for the west African hub, though Abushora stressed that the strategy is still under review and management will "study the whole" of the sub-region.

Elsewhere, flights to Europe are also high on Tarco's wish list – but only once Brussels has ended its decade-old blacklisting of Sudanese airlines.

"Personally, I think as soon as this ban is lifted we should be there, because so many Sudanese are there and they are suffering too much to come to Sudan," Abushora said. "Sudan used to have daily flights from London to Khartoum. There used to be connections to Frankfurt, to Paris, to Rome... wherever there are Sudanese communities."

Sudan Airways first entered Europe in 1959 with the launch of its 'Blue Nile' service to London, which included stops in Cairo, Athens and Rome.

The route was initially operated by British United Airways, whose predecessor, Airwork Services, helped to establish Sudan Airways in the aftermath of World War II. Subsequent decades saw the flag-carrier strike sales and purchase agreements (SPAs) with transatlantic airlines to extend its reach into America.

It is these sorts of commercial arrangements, Abushora believes, that will allow Sudan's airlines to begin rebuilding their networks.

"There are so many kinds of agreements we can have," he insisted. "We don't need to have our own station as long as we can have an agreement or a codeshare with someone."

Closer to home, the neighbouring country of South Sudan, which gained independence from Khartoum in 2011, is another important market.

Sudan's broader economy was hit hard by the secession of its oil-rich southern territory. But, with few locally based operators in Juba, Tarco is front of the pack to help South Sudan build links with the outside world. On top of its scheduled Khartoum-Juba-Entebbe service, the airline already runs charter flights to the north-western city of Wau.



**6 The Americans  
declared the sanctions  
have been lifted – that’s  
just on paper. 9**  
BUSHRA ABUSHORA



“Of course we are open for any mutual business,” Abushora said, when asked if he would consider basing an aircraft in South Sudan. “That’s an initiative that has to be taken by them.”

He added, however, that Tarco is not taking part in the Juba government’s efforts to launch a national flag-carrier.

Within Sudan itself, Abushora said there is little direct competition between Tarco, Sudan Airways and Badr Airlines – another privately owned carrier – because their combined operations “can’t even meet the minimum demand” in the country.

The poor state of Sudan’s road and rail infrastructure means that, for many citizens, flying is the only practical way of travelling across the vast desert nation.

But decades of economic isolation have cut services to the bare bones.



Sudan Airways, formerly the country’s largest airline, is now primarily a virtual carrier that depends on wet-leased aircraft from privately owned partners like Tarco. When the company’s last two working aircraft were grounded in 2018, Bloomberg quoted a government minister as saying that 1,200 of its 1,500 employees would be dismissed.

The flag-carrier was hardest hit by sanctions because of its status as a government-owned entity linked directly to al-Bashir. Its fate was sealed when Sudan liberalised traffic rights in a last-ditch effort to keep connected.

“The government didn’t open the skies because it was a policy,” Abushora recalled. “They did it because they were forced to, because of sanctions. They needed to keep people moving.

“Sudan Airways was a really good airline. Then everything stopped.”

Whatever benefits Tarco has gained from deregulation, a bigger prize awaits all Sudanese companies and citizens when the last sanctions are lifted. That is one of the messages that Abdalla Hamdok, Sudan’s Prime Minister, took to Washington in December on the first visit by a Sudanese leader for more than three decades.

The flag-carrier was able to return one aircraft to service exactly a fortnight later. ■



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*Three years after taking on the top job at Tunisair, Ilyes Mnakbi tells Martin Rivers the flag-carrier is still struggling to turn the corner.*

**Ilyes Mnakbi:**  
“We will make our own plan – not the government’s plan – for restructuring the company.”



## Triple targets as Tunisair turns to plan B

**T**unisair is working on a new restructuring plan after its government owner walked away from a proposed overhaul that would have cost \$1.3 billion Tunisian dinar (\$457 million).

“We will use another plan that doesn’t need for us this quantity [of money],” Ilyes Mnakbi, the airline’s chief executive, said on the sidelines of an industry conference in Kuwait.

“We will make our own plan – not the government’s plan – for restructuring the company. It will be less money than the other one. The government doesn’t give us this amount.”

Mnakbi provided few details about the revised plan, insisting that management were still weighing up several options. But he reiterated his support for three strategic priorities: fleet renewal; rationalisation of the workforce; and an increased focus on Africa.

Tunisair has signed a sale-and-leaseback agreement for five Airbus A320neos, the chief executive confirmed, with deliveries expected by early 2021. It also plans to dry lease six more current-generation A320s this year.

The existing fleet of 15 A320s, four A319s, two A330s and six Boeing 737-600s, has an average aircraft age of 17

years – explaining the airline’s reputation for delays, cancellations and poor on-board product.

Last October, Transport Minister Hichem Ben Ahmed admitted that only 22 of the 27 aircraft were operational.

As well as undermining flight schedules, the ageing fleet has exacted a heavy financial toll by pushing up maintenance costs and forcing management to rely on wet leases. Last summer, the flag-carrier sub-contracted two aircraft from newly resurrected Syphax Airlines, which is based in Sfax, Tunisia’s second city.

According to its 2017 financial statements – the most recent on record – the state-owned firm has now accumulated losses of 898 million dinars (\$308m).

A bloated workforce is, perhaps, the biggest factor affecting performance. In January, Mnakbi announced his intention to remove 4,800 of the company’s 7,800 employees.

But his ability to push through the crucial reform is in doubt. Earlier efforts to downsize the company by 1,200 employees were blocked by Tunisia’s powerful trade unions.

Expansion across Africa is another longstanding priority that has not yet borne fruit. Tunisair currently serves eight overseas points in west Africa and five in north Africa – a fraction of its western European footprint.



Management have been trying to pivot towards their home continent since 2017, when Tunisia finalised an open-skies agreement in principle with the European Union. Khartoum in Sudan, Douala in Cameroon, and N’Djamena in Chad were eyed for route launches two years ago, but none of the services got under way.

Asked for an update on the strategy, Mnakbi would only say that “about another six destinations” in Africa are under review.

Whatever the macroeconomic benefits of open skies, there is little doubt that Tunisair would struggle to hold its own against Europe’s budget airlines. Opposition by the flag-carrier has so far stopped the government from setting a date for the ratification of the treaty. When that eventually happens, Tunis, the country’s main hub, will be exempt for a period of five years.

The popular resorts of Djerba and Monastir will have no such reprieve, however, so Mnakbi is also evaluating plans for a low-cost subsidiary to defend market share in the leisure segment.

“We don’t approve it until now, but we are thinking to make a new strategy for low-cost, for the open skies,” he confirmed. “We are waiting for the agreement of the European Union as, until now, they didn’t give us this agreement.”

The low-cost venture would initially take the form of 737-600s borrowed from the flag-carrier and placed with Tunisair Express, the group’s regional operation.

Tunisair Express currently deploys four ATR 72s, including two brand new 72-600s that were delivered late last year. A third 72-600 is expected shortly. ■

*La nouvelle directrice générale de Mauritania Airlines, Amal Maouloud, croit dur comme fer dans la réussite et la pérennité de la compagnie.*

*Anuradha Deenapanray Chappard a voulu savoir de quelle étoffe était faite cette scientifique-gestionnaire qui impressionne les acteurs de l'industrie.*

# Mauritania Airlines compte profiter du vent favorable

**L**a Mauritanie, le troisième pays en termes de superficie en Afrique, a une très faible densité de population car le Sahara occupe les deux tiers de son territoire.

Même si la demande locale est faible, Amal Maouloud, est prête à relever le défi d'améliorer la connectivité de la Mauritanie malgré la durée de vie limitée des précédentes compagnies aériennes. Depuis dix mois, elle assume ses fonctions de gestionnaire avec détermination, dynamisme et lucidité tout en vivant au quotidien sa passion pour la science et l'aéronautique.

Depuis sa création en 2012, Mauritania Airlines connaît une croissance à deux chiffres en termes de nombre de passagers. « On a subi la crise du 737MAX. On était la première compagnie aérienne en Afrique à avoir le B737 MAX », explique la directrice générale.

La compagnie compte une flotte de six avions : un B737-700, un B737-800 et un MAX, 3 Embraer dont un 145 et deux 175.

« Cela nous permet de migrer vers un modèle mixte. Il fallait choisir des avions qui étaient compatibles avec ceux qui volaient dans la région et avec notre réseau (vols courts et multiple étapes) », explique-t-elle.

La compagnie étudie actuellement les possibilités de recourir au leasing.

## Développement du réseau

Mauritania Airlines possède un réseau nord destiné à une demande locale à partir de Nouakchott avec des dessertes vers Casablanca, Tunis et Las Palmas. La demande provenant des villes financières et minières justifie la présence de la compagnie selon sa DG.

Le réseau sud enregistre des taux de remplissage très faibles. Il permet de connecter certaines capitales africaines qui ne sont pas connectés entre elles ou en l'absence de demande. Les capitales desservies aujourd'hui sont Abidjan, Bamako, Brazzaville, Conakry, Cotonou, Dakar, Freetown, Libreville et Pointe Noire. « C'est Mauritania Airlines qui fait le lien entre ces capitales. Nous sommes en train de nous ajuster à la concurrence », souligne Amal Maouloud.

Il existe plusieurs opérateurs sur ce marché notamment Air Côte d'Ivoire, Air Sénégal, Asky, Ethiopian et RwandAir. « Je lance ainsi un appel à la complémentarité entre les compagnies qui exploitent les mêmes réseaux. »

## Alliance, partenariat et intégration

La DG de Mauritania Airlines est convaincue qu'il faut davantage de coopération pour permettre à l'industrie du transport aérien en Afrique de déployer tout son potentiel. « Il faut développer les connexions intra africaines. Je crois dans la complémentarité. Si on ne le fait pas, il y aura des guerres tarifaires et personne n'en sortira gagnant. »

La compagnie compte par ailleurs adopter une approche simple et pragmatique : consolider d'abord le réseau existant avant d'ouvrir de nouveaux marchés progressivement.

« Je reprendrai le proverbe : Le vent est favorable pour celui qui sait où il veut aller. Je sais où je veux aller. C'est une compagnie qui mérite sa place dans un marché avec un fort potentiel de croissance économique et démographique. La demande y sera. Mauritania Airlines doit être prête à prendre sa part du marché. »

## COMPLÉMENTARITÉ ET APPROCHE INCLUSIVE

**Q** Être une femme à la tête d'une compagnie aérienne, est-ce un atout ou un handicap ?

**R** Le fait d'être une femme n'est pas un handicap, bien au contraire, cela ouvre des portes. Nous les femmes, nous avons tendance à avoir cette étiquette de légitimité, à fournir plus d'effort pour être à la hauteur. Je le prends comme un élément catalyseur. Cela me propulse et m'encourage à faire mieux et à assumer pleinement les responsabilités qui me sont confiées.

**Q** Le contexte a été difficile avec des tentatives manquées dans le passé. Qu'est-ce qui vous donne autant d'optimisme ?

**R** La mise en place de cette nouvelle compagnie reflète une volonté politique affirmée d'avoir un opérateur national chargé de cette composante du transport aérien qui est indispensable pour un pays comme le nôtre. La connectivité de sa capitale avec les autres capitales d'Afrique est primordiale pour développer un réseau international. Le modèle est très simple. Il repose sur le soutien constant de l'État qui est le bailleur de fonds. On l'a vu au moment de l'acquisition de notre flotte. Nous sommes propriétaires de nos avions. Cela reste un prêt mais il se met en phase avec l'État et les capacités de remboursement de Mauritania Airlines.

**Q** Vous avez choisi d'adapter votre stratégie à la réalité du pays et du continent. En quoi est-elle différente ou originale ?

**R** En tant que compagnie, on doit être réaliste et en phase avec le marché. C'est souvent dans la mentalité africaine de voir un peu trop grand. C'est plus de l'affichage que du concret. Dès le départ, on a opté pour une structure très compacte et l'acquisition progressive des avions. Il fallait d'abord choisir les types d'avion pouvant opérer efficacement dans la sous-région avant d'envisager des accords et des supports techniques indispensables pour avoir accès à cette économie d'échelle.

Il faut construire et consolider un réseau efficace qui nous permettra de faire face aux exigences d'aujourd'hui et de demain, et de grandir.



**Amal Maouloud:**  
« Je lance un appel à la complémentarité entre les compagnies qui exploitent les mêmes réseaux. »



**Q** Que pensez-vous de la libéralisation du ciel africain ?

**R** La Mauritanie a signé le SAATM mais nous n'avons pas encore les outils pour l'appliquer. L'Europe a mis du temps à le faire, on ne va le faire du jour au lendemain. Il faut prendre le temps nécessaire. C'est ce qui a été décidé par le comité exécutif de l'AFRAA. Il faut considérer l'impact de cette décision globale sur l'ensemble des opérateurs et aussi par catégorie. Grâce à cette approche inclusive, on peut espérer un jour voir le ciel africain ouvert à tout le monde.

**Q** Quelles sont vos priorités ?

**R** Je veux faire oublier les expériences du passé et envisager l'avenir de façon plus sereine. Je veux que Mauritania Airlines puisse se développer dans le temps avec une stratégie de développement sûre et durable. Qu'elle ait une autonomie de gestion, une efficacité opérationnelle et qu'elle soit rentable. La formation est une action prioritaire. Aujourd'hui, nous formons nos employés et nos pilotes. Je suis très sensible également aux initiatives environnementales. ■

## SUMMARY

## MAOULOD TAKES ON THE CHALLENGE AT MAURITANIA

*The new CEO of Mauritania Airlines, Amal Maouloud, firmly believes in the success and sustainability of the company. Anuradha Deenapanray Chappard reports.*

Mauritania Airlines' new CEO, Amal Maouloud, believes the carrier is set for success – overcoming the problems of low population density in Africa's third largest country.

After around a year in post, she is ready to take up the challenge of improving national and regional connectivity.

Since its creation in 2012, Mauritania Airlines has experienced double-digit growth in passenger numbers. "Then we had the Boeing 737 MAX crisis, which was a blow, as we were the first airline in Africa to take delivery of the type," she explained.

The company fleet comprises one B737-700; a B737-800; one grounded MAX; and three Embraers, including a 145 and two 175s.

"This mix suits us as we selected aircraft that were compatible with others flying in the region, suiting a network that comprises short flights with multiple stages," she said.

□ □ □ □ □

Mauritania Airlines operates in two regions – a northern network for local demand from Nouakchott, with routes to Casablanca, Tunis and Las Palmas; and a southern network that has lower passenger numbers but allows flights to otherwise unconnected African cities, including Abidjan, Bamako, Brazzaville, Conakry, Cotonou, Dakar, Freetown, Libreville and Pointe Noire.

"Mauritania Airlines provides the link between these cities so we are adjusting to need as well as to the competition," said Maouloud. "There are several operators in this market, including Air Côte d'Ivoire, Air Senegal, Asky, Ethiopian, and RwandAir, so I'm calling for rationalisation between airlines operating similar regional networks."

Maouloud is convinced that more cooperation is needed to enable commercial aviation in Africa to realise its full potential. "We need to develop intra-African connections. I believe in complementarity. If we don't act, there will be tariff wars and no one will win."

The airline plans to adopt a simple and pragmatic approach – first consolidating the existing network before gradually opening up new markets.

"As my favourite proverb says: 'The wind is favourable for those knowing where they want to go', and I know where I want to go," said Maouloud. "Our airline deserves its place in a market with a high potential for economic and demographic growth." ■

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*Montasser Channoufi, founder and CEO of Carthage SKY Services, plans to launch a fixed-base operation in Tunisia this year. He told Vincent Chappard that the high-standard services provided will serve the country's growing business aviation industry.*

## NEW AGE AT CARTHAGE

**A**s 2019 came to an end, Tunisia looked set to break a record by welcoming nine million tourists in a single year.

In the tourism wake, the business aviation sector looks set to benefit enormously.

According to The Middle East and North Africa Business Aviation Association (MEBAA), markets for private aviation are expanding worldwide. While there are many private aircraft charter companies and related businesses already serving the major cities, demand is growing in many "smaller" markets like Tunisia.

Carthage SKY Services has been growing fast since its launch in 2014. The Tunisian start-up offers a wide range of services from VIP and VVIP flights to catering and fuelling at Tunisian airports.

Today, it is an international trip-planning and flight management company specialising in providing regulatory authorisations and ground support services to aircraft operators around the world.

The company is evolving from an airline representative into what is now a worldwide flight-support provider for a full suite of aviation services as well as FBO, general sales agent (GSA), operations control centre (OCC), air operations supervisor and executive lounge facilities provider.

Carthage SKY Services achieved ISO9001, ISO14001 and OHSAS 18001 quality certifications early 2019.

Located at Tunis Carthage Airport, it serves the main international airports of the country. These are managed by OACA, the public body in charge of the management, development and operation of the seven Tunisian international airports – Tunis-Carthage, Djerba-Zarzis, Sfax-Thyna, Tozeur-Nefta, Tabarka-Ain Drahem, Gafsa-Ksar, and Gabes Matmata.

According to CEO, Montasser Channoufi, the key



**Montasser Channoufi: "We must get prepared to get our share of the market."**

ingredients are there to make Tunisia an important business aviation hub.

The country benefits from its strategic geographical position, he believes. There are many flights in transit. Tunisia can become the centre of gravity for business aviation customers willing to travel to Africa or the US. Carthage SKY Services has, therefore, a huge potential to provide its services to worldwide operators.

"Today, the country welcomes 650 flights per year. This segment is expected to grow from 25 to 30%. We must get prepared to get our share of the market," he emphasised.

Carthage SKY Services aims at having a full FBO, integrating support and MRO activities, in 2020.

Channoufi added that, alongside positive estimates, the political situation is also moving in the right direction; the country has embarked on a new phase and its institutions are stable, with the highest level of security.

Carthage SKY Services is now a member of MEBAA. For its CEO, this is an opportunity to belong to an extended community of the world's future shapers and interact with a valuable international network.

Channoufi said MEBAA defends the interest of operators. "Networking is vital in this sector to learn, to know other members, share experiences, discuss important issues, and find adequate solutions to progress with a pragmatic approach."

Channoufi believes that 2020 will bring multiple emerging opportunities. This improvement will also be seen in the air transport sector, with the emergence of new airlines like Jasmin Airways.

Tunisia is preparing to sign an open sky agreement with the European Union after almost 10 years of discussion. A memorandum of understanding (MoU) was signed in December 2017. According to former Minister of Transport and Tourism, René Trabelsi, the agreement will be signed soon.

The support and commitment of the Tunisian Government and authorities, coupled with private initiatives, clearly carves the way for a flourishing business aviation sector.

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#### UN NOUVEAU FBO À L'AÉROPORT DE TUNIS-CARTHAGE

**Carthage SKY Services (membre de la MEBAA) se prépare à accompagner le développement de l'aviation d'affaires en Tunisie. La jeune start-up tunisienne est en forte croissance depuis sa création en 2014.**

**Selon Montasser Channoufi, la Tunisie est appelée à devenir un hub important dans ce secteur. La relance est réelle et prendra de l'ampleur cette année. Le pays bénéficie de sa**

**position géographique stratégique. Il y a beaucoup de vols en transit. La Tunisie peut ainsi devenir le centre de gravité pour les clients de l'aviation d'affaires qui peuvent ensuite voyager en Afrique ou aux États-Unis. Le pays accueille aujourd'hui 650 vols d'affaires par an. Cette activité devrait croître de 25 à 30%. « Nous devons être prêts à prendre notre part du marché. »**

*Gyrocopters – also known as autogyros – have become a notable fixture of the African aviation panorama.*

**Erwan de Cherisey reports.**

# GYRO CHECK

## The small aircraft paying big dividends

**C**heap and sturdy, gyrocopters offer much greater flexibility than fixed-wing ultralights and provide several features found in helicopters at a fraction of their cost.

These include short take-off and landing distances and an ability to climb, almost vertically, once in flight.

These strongpoints make the gyrocopter an attractive proposition, not just for recreational flying, but also to fulfil a growing number of commercial and public service duties.

It is little wonder that the number of these platforms in service has steadily increased in sub-Saharan Africa, where air support is often in short supply and funding constraints are an ever-present challenge, notably in such domains as public security, as well as wildlife and infrastructure protection.



Several companies have made notable headway on the African market.

These include Poland's Flyargo, which has taken over marketing and manufacturing of the Xenon family of autogyros, originally developed and sold by Celier Aviation.

The Xenon is one of the leading products found on the African market and is noteworthy for being in service in Burkina Faso, which procured four Xenon 2RST ECOs in 2009. These are used in the air surveillance role in support of police and gendarmerie forces, although they are operated by the country's air force.

A company spokesman explained, the Xenon and its successor, the Argon 915, offer much greater cost-effectiveness for such operations as air surveillance, medical evacuation or aerial spraying, than helicopters.

Where the latter use aviation fuel, gyrocopters employ standard gasoline, which is available from any petrol station and is, thus, both cheaper and easier to source, allowing the aircraft to

operate from almost anywhere, instead of having to fly from an airport.

The Xenon family's turbocharged Rotax 912 engine, which is used on many ultralights and autogyros, is another plus-point, since it is a highly proven, simple and robust design, which can be easily serviced with minimal infrastructure.

Last, but by no means least, the training of gyrocopter pilots is much cheaper and easier than that of helicopter aircrews. Flyargo even has its own school in Poland and can train a Xenon pilot in as little as three weeks.

Aside from Burkina Faso, Flyargo is present in several other African countries, including South Africa and Namibia, although in both cases customers are primarily commercial or private operators using the aircraft for recreational purposes.

Other notable stakeholders on the African gyrocopter market include Italian company, Magnigyro, which is present in South Africa and Senegal, with a growing footprint in the recreational segment.

Senegal's National Parks Directorate is also a gyrocopter operator, having acquired a single example for surveillance and liaison duties, which is believed to be a Magni M16.

In Kenya, Wildlife Works, a conservation management company, operates a Magni M24 for air surveillance and anti-poaching duties in support of its Elephant Protection Trust project to monitor the Kasigau wildlife corridor between Tsavo East and Tsavo West National Park.

The aircraft is used to monitor elephant movements, act as deterrent against poachers, and pinpoint the presence of intruders so that ranger patrols on the ground can be directed towards them.

South Africa is, by far, the country with the largest gyrocopter fleet in sub-Saharan Africa and, understandably, one where local development and manufacturing is now taking place.

The flagship of the country's gyroplane industry is Wagtail, which has developed a range of autogyros conceived specifically for the demanding African environment.

The company's main product, the Trojan, is a twin-seat design, which was developed to meet a South African special forces requirement, notably to support surveillance operations against poachers in the Kruger National Park.

As Braam Hechter, Wagtail's chief operating officer, explained, while the aircraft proved satisfactory, the special forces programme was eventually cancelled after extensive testing.

The project still left Wagtail with a proven platform, which the company sees as unique compared to existing competitors. It has a maximum all-up weight of 800 to 1,000kg, a payload of 300kg to 500kg, a sturdier assembly, larger cord and longer rotor, as well as a more powerful 260HP turbocharged Subaru EJ 25 engine driving a custom-designed five-blade pusher propeller.



The aircraft's design offers significant room for customisation, as Hechter highlighted: "We can optimise the platform in a commercial or military configuration. Commercial activities can range from spraying for malaria and mosquitos to agricultural usage.

"In the military environment, the gyroplane can be used as a platform for surveillance and patrol. It can interdict where any type of conflict occurs, from cattle theft to armed interference."

While the Trojan is currently Wagtail's star product, the company is also working on other models. These include a three-seat design, known as the Trooper, powered by a 300HP Subaru engine, which was also being developed for the special forces in close cooperation with Denel and the Council for Scientific and Industrial Research (CSIR).



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UN PETIT AVION  
PORTEUR DE  
GROS BÉNÉFICES

Peu coûteux et robustes, les gyrocoptères offrent davantage de flexibilité que les ultra-légers à aile fixe et offrent plusieurs fonctionnalités semblables aux hélicoptères. D'où, leur pénétration dans des secteurs autre que les loisirs pour des fonctions commerciales et de service public.

Ces plateformes augmentent en Afrique subsaharienne, où il y a un manque de support aérien et des contraintes de financement notamment dans des domaines comme la sécurité publique, la protection de la faune et des infrastructures.

La compagnie polonaise Flyargo a repris la commercialisation et la fabrication de la famille des autogires Xenon, initialement développée et vendue par Celier Aviation.

Le Xenon est l'un des principaux produits sur le marché africain. Il est en service au Burkina Faso, qui a acheté quatre Xenon 2RST ECO en 2009 pour la surveillance aérienne en appui aux forces de police et de la gendarmerie. L'armée de l'air l'utilise également.

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Selon un porte-parole de la compagnie, le Xenon et son successeur, l'Argon 915, sont plus rentables pour la surveillance aérienne, l'évacuation médicale ou la pulvérisation aérienne que les hélicoptères. Parmi les autres avantages : l'utilisation de l'essence standard, la robustesse du moteur turbocompressé Rotax 912 et la formation des pilotes.

Flyargo est également présente en Afrique du Sud et en Namibie auprès des opérateurs commerciaux ou privés.

D'autres compagnies ont aussi leur part de marché en Afrique comme la société italienne Magnigyro présente en Afrique du Sud et au Sénégal.

Au Kenya, Wildlife Works, une société de gestion en conservation, exploite un Magni M24 pour la surveillance aérienne et les opérations anti-braconnage en soutien au projet Elephant Protection Trust.

L'Afrique du Sud possède la plus grande flotte de gyrocoptères en Afrique subsaharienne, ce qui dynamise la production locale.

La société sud-africaine, Wagtail, a développé une gamme d'autogires spécialement conçus pour l'environnement exigeant du continent. Le Trojan a été conçu pour répondre aux besoins des forces spéciales sud-africaines, notamment pour soutenir les opérations de surveillance contre les braconniers dans le Kruger National Park.

Selon Braam Hechter, directeur des opérations de Wagtail, l'avion peut être configuré pour des opérations commerciales ou militaires. Wagtail travaille également sur d'autres modèles comme le Trooper.

Suite à l'annulation du projet par les forces spéciales, la société s'oriente vers le marché commercial. Le Light Delivery Gyro (LDG) est quant à lui conçu comme un avion de transport.



Innovative: Wagtail's Trojan has a robust design, which has already achieved success in the recreational and commercial sectors and is now geared towards the security and defence domains with the company developing an armed variant.

PICTURE: WAGTAIL

Following the cancellation of the special forces project, the focus for this model has now moved to the commercial market.

The Light Delivery Gyro (LDG) is, meanwhile, intended as a transport aircraft with the ability to lift up to 300kg of cargo, two passengers, or a litter.

Hechter added: "We are also working on an autonomous [gyrocopter] drone that is currently in the proof-of-concept phase."

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Wagtail is also outfitting its Trojan with weapons, and has carried out live-fire tests using a pair of Denel SS-77 7.62mm light machine-guns mounted on each side of the airframe, as well as rocket launchers.

Self-protection systems, including flare launchers, have also been integrated.

This solution, which provides a powerful punch in a relatively inexpensive aircraft, could prove an attractive proposition for African military users and is not without precedents, Botswana having successfully outfitted Bat Hawk fixed-wing ultralights with light machine-guns several years ago.

Wagtail is moving forward with international sales efforts and, according to Hechter, is already present in Botswana, Mozambique, Sudan, Tanzania, and Nigeria.

In the latter, it is aggressively marketing its designs to the police force, which is heavily committed to a string of internal security operations, including in the Niger Delta, to fight off oil theft, and in several northern states, where cattle rustling remains a major issue.

The Democratic Republic of Congo is also reportedly interested in the Trojan, although details are not available at this stage.

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**L-39NG**  
**NEXT GENERATION**





Days of plenty: Togo once operated five Alpha Jets alongside several EMB326 Xavante combat jets. These are now grounded and unlikely to fly again.



# Togo modernises in slow motion

«Le Togo s'équipe face à l'insécurité frontalière» – Page 38

*The rapid degradation of the security panorama in neighbouring Burkina Faso has served as a catalyst for a limited aircraft procurement effort by Togo. But, as Erwan de Cherisey reports, air force modernisation can be a slow, and often uphill, journey.*

**T**he Togo Air Force has faced significant challenges in recent years after an eventful history.

Launched on February 1, 1964, the official debut of military aviation in independent Togo saw the creation of an air section within the Togolese Armed Forces general staff.

Four Max Holste MH-1521 Broussard utility aircraft were delivered to Togo by France, as its initial complement, which was later supplemented by two Douglas C-47 transports, two Cessna 337s and a pair of Dornier 27s.

On July 1, 1973, the Togolese National Flight (ENT) was created, with the air section being disbanded. The ENT was tasked with operating all Togo's military aircraft. This restructuring heralded the beginning of a major expansion in capabilities, culminating in the procurement of Lomé's first jets.

On December 1, 1980, the ENT was disbanded and superseded by the new Togolese Air Group (GAT). The change was intended to reflect the expansion of the air arm, which purchased five Dassault Dornier Alpha Jet Es, delivered in 1981.

The infrastructure also grew, with the building of a new air base at Niamtougou, in northern Togo, where all fighter operations were

concentrated, while Lomé was retained as the main location for transport assets.

In 1985, an Alpha Jet was lost in a crash, with a second being destroyed in 1989. These were replaced with new aircraft purchased from France.

Four Socata TB-30 Epsilons, configured for weapons carrying, were received in 1985, while other types inducted during the 1980s and early 1990s included a pair of Beech Baron 58s, a Dassault Falcon 10, two Beechcraft King Air 200s, and an AS332 Super Puma for VIP transport duties.

□□□□

In 1997, the GAT was reorganised as the Togolese Air Force, becoming a full blown service alongside the army and navy.

A year later, a pair of SE3160 Alouette IIIs were obtained second-hand.

However, from the late 1990s, the air force underwent a gradual decay, with several aircraft being grounded and stored as they came up for servicing.

By the late 2000s, the Embraer EMB326GC Xavantes (six had been delivered between 1976 and 1978) were no longer flying, and only a couple of

Continued  
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Alpha Jets were still operational. These stopped in the early 2010s and have since been kept in a hangar at Niamtougou.

In 2010, the TB-30s were refurbished in France. One would subsequently be lost in 2017, leaving three examples operational. At present, only one is readily available while the other two require servicing.

In 2013, the purchase of a former Botswana Defence Force CN235-10 was abandoned. This aircraft had been intended to fill the longstanding gap left by the withdrawal of the Two DHC-5s.

Most helicopters were also progressively grounded, although Lomé did procure a used Mi-8T in 2013. It had a short-lived career – high operating and maintenance costs forcing its early withdrawal.

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With the current deteriorating security situation in the region, Togo realised it needed to rebuild its offensive capability.

Consequently, it signed a contract with French company, SECAMIC, in 2016, for the purchase of four modernised SA342L1 Gazelles, although delays in securing the export licence from the French Government postponed its implementation until early 2018.

The deal covered four Gazelles, armed with 20mm canons and fitted with a stabilised L3Harris Wescam electro-optic and infrared (EO/IR) sensor, with a laser designator, as well as three years of support.

A modernisation of the aircraft's cockpit,



**Problematic: Togo has four SA342L1s on order, which are being refurbished and modernised by SECAMIC in France. Delays and issues with the contract could, however, see it cancelled.**

adding a Garmin GPS, was also included. SECAMIC procured former French Army Aviation helicopters in 2017, initially planning to complete deliveries to Togo by September 2019. However, only two Gazelles were handed

over in October 2019, with work continuing on the remaining two.

The two SA342s were provided without their EO/IR sensor and with second-hand Nexter M621 canons, instead of the contracted brand-new examples. Delivery of the remaining aircraft is now expected by June this year, with integration of the EO/IR sensors to be conducted in Togo.

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This situation is reportedly not to the Togolese authorities' liking and they are concerned that delivery could be further delayed and that the sensor integration will lack the certification from the French Directorate General for Armament (DGA), as was originally intended.

The future of the contract, of which Lomé has already paid 80%, is now uncertain, with the Togolese authorities reportedly considering cancelling it and requesting full reimbursement.

In addition to the SA342 purchase, Togo has also procured two second-hand Mi-8Ts from a company based in the United Arab Emirates, which likely sourced them in the Ukraine. Both aircraft were delivered in 2019 and are based at Lomé.

The two Mi-8Ts now in service give the Togolese Air Force the needed air mobility to rapidly deploy troops and equipment throughout the country.

If the SA342s do get delivered, they will provide Lomé with a fairly capable patrol and light-attack platform, which can be used to further secure its northern border. ■

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# LE TOGO S'ÉQUIPE FACE À L'INSÉCURITÉ FRONTALIÈRE

*La dégradation rapide de la sécurité au Burkina Faso a servi de catalyseur pour l'achat d'avions par le Togo. Mais, comme nous le montre Erwan de Cherisey, la modernisation de l'armée de l'air est un processus lent et difficile.*

L'armée de l'air du Togo a été confrontée à d'importants défis ces dernières années. Lancé en 1964, les débuts officiels de l'aviation militaire au Togo virent à la création d'une unité aérienne au sein de l'état-major des forces armées togolaises.

Quatre Max Holste MH-1521 Broussard furent livrés, rejoints ensuite par deux Douglas C-47, deux Cessna 337 et une paire de Dornier 27.

La Togolese National Flight (ENT) fut créée en juillet 1973 Celle-ci entraîna une expansion importante des capacités du pays aboutissant à l'achat des premiers avions.

Le remplacement de l'ENT par le Togolese Air Group (GAT) en décembre 1980 devait refléter ce processus de changement. Le GAT acheta cinq Dassault Dornier Alpha Jet E, livrés en 1981. Une nouvelle base aérienne fut construite à Niamtougou.

En 1985, un Alpha Jet s'est écrasé et un second en 1989. De nouveaux avions furent achetés en France.

Quatre Socata TB-30 Epsilon furent livrés en 1985, tandis que d'autres types furent introduits de 1980 à 1990 dont deux Beech Baron 58, un Dassault Falcon 10,

deux Beechcraft King Air 200 et un AS332 Super Puma.

En 1997, le GAT devint la Togolese Air Force. Un an après, deux SE3160 Alouette III d'occasion intégrèrent la flotte.

Cependant, dès la fin des années 1990, l'armée de l'air connut une période de décroissance progressive. Plusieurs avions furent immobilisés.

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Fin 2000, l'Embraer EMB326GC Xavantes (six furent livrés entre 1976 et 1978) ne volait plus. Uniquement quelques Alpha Jets opérèrent jusqu'en 2010.

Trois des TB-30 furent remis à neuf en 2010 et cessèrent leurs opérations en 2017.

En 2013, l'achat d'un ancien CN235-10 des Forces de défense du Botswana fut abandonné. La plupart des hélicoptères furent progressivement immobilisés malgré l'arrivée d'un Mi-8T d'occasion en 2013.

Face à la détérioration de la sécurité dans la région, le Togo s'est rendu compte qu'il devait reconstruire ses capacités offensives.

Le pays a signé un contrat avec la société française SECAMIC, en 2016, pour l'achat de quatre Gazelles SA342L1 modernisées. Des retards dans l'obtention de la licence d'exportation du gouvernement français ont reporté sa mise en service jusqu'au début de 2018. Les appareils devaient être livrés en septembre 2019. Cependant, seules deux Gazelles ont été remises en octobre 2019. La livraison des hélicoptères restants est désormais attendue pour juin.

Les autorités togolaises craignent que la livraison ne soit encore retardée et que l'intégration des capteurs ne soit pas certifiée par la Direction générale de l'armement.

L'avenir du contrat, dont Lomé a déjà payé 80 %, est désormais incertain. Les autorités togolaises auraient envisagé de l'annuler et de demander le remboursement intégral.

Le Togo a pris livraison de deux Mi-8Ts d'occasion en 2019. Si les SA342 sont livrés, ils fourniront à Lomé une plateforme de patrouille et d'attaque suffisamment efficace pour sécuriser davantage sa frontière nord. ■



*Nigerian Air Force commander, Air Marshal Sadique Abubakar, talks to Alan Warnes about modernising the force's capabilities while, simultaneously, fighting Boko Haram terrorists.*

# Nigeria's fleet path to fight terror

**S**ince 2014, Boko Haram terrorists (BHT) have become a significant threat to Nigeria's security, particularly in the country's north-east.

As a result, Nigerian Air Force (NAF) fighters and combat helicopters have been playing a major role in Operation Lafiya Dole to stop their violence.

Air Marshal Sadique Abubakar, who has commanded the NAF since July 2015, said: "My primary concern is to ensure Nigeria's security and that the sovereignty of our country is not undermined by terrorism. That is why we have been working together with other agencies to degrade the capabilities of the BHT and reduce its effectiveness to what it was before 2014."



Abubakar has also been trying to return grounded aircraft to service. "We are aiming to build capacity within, and see how we can get our partners from outside Nigeria to complete upgrades, period depot maintenances (PDMs), or life extensions in Nigeria, so that our own personnel can get learn and get involved," he explained.

With the help of outside sources, working alongside NAF personnel in-country, he has seen Aero L-39ZAs, Dassault Alphajets and Lockheed C-130 Hercules aircraft returned to service.

"Revitalising our fleets is important. Working with Aero Vodochody, we have returned three L-39ZAs back into the air that are now doing a great job against the BHT.

"We have also contracted the company to return three more L-39ZAs and upgrade the old analogue cockpit with a new GenesyS system.

"I want the aircraft, not just for training, but to fight the BHT. My desire is to upgrade all six – with the additional three coming out of the 2021 budget. I am pleased we had so many NAF personnel involved in returning the aircraft to flight."

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**Air Marshal Sadique Abubakar: "My primary concern is to ensure Nigeria's security and that the sovereignty of our country is not undermined by terrorism."**

PICTURE: BILLYPIX.

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As recently as February 8, just five days into Operation Rattlesnake 3, L-39ZAs, working with Dassault Alphajets, “neutralised” Boko Haram terrorists at Alafa Yagayaga, on the outskirts of Sambisa Forest in Borno State.

“The Alphajets are doing their normal air-to-ground ops, while the F-7Nis, which we have worked very hard over the past five years, are now being overhauled by CATIC,” said the air marshal.

On the vital intelligence, surveillance and reconnaissance (ISR) role, the chief said: “We are using a Beech 350 King Air with the FLIR Star Safire, as well as [two] ATR 42s. One is currently undergoing maintenance at Rheinland Air Service at Monchengladbach, Germany.”

On the practical aspects of fighting the terrorist threat he added: “You must win the hearts and minds of the people and, by having a clear picture of what we are targeting on the ground, we ensure civilians are not hurt.”

The combat helicopter force has recently been reinforced with four AW109 Power gunships and a Mi-171E.



The first two Powers were delivered in April 2019 and, on February 6, two more (serialled NAF 578 and NAF579), as well as Mi-171E (NAF 581), were inducted into the service at Abuja.

Abubakar said: “We hope to build up the number of AW109 gunships over time. We have another 17 aircraft on order.”

He did not go into further detail but that number is believed to include the three JF-17s, 12 Embraer A-29 Tucanos, and, possibly, two Mi-35M Hinds.

The US State Department awarded Sierra Nevada Corporation a \$329 million contract on November 28, 2018, to supply the NAF with 12 A-29 Super Tucano counter-insurgency aircraft, with six of them being fitted with an electro optical/infra-red (EO/IR) turret.

All of them should be delivered by 2024, and the pilots are expected to be trained at Moody Air Force Base in Georgia.

The NAF has also purchased three PAC JF-17 Thunders from Pakistan Aeronautical Complex (PAC) Kamra.

“We are preparing for their arrival later this year [believed to be November] and, while the

**Intelligent: Two ATR 42MPAs are among the small number of ISR assets used by the NAF.**

PICTURE: LEONARDO.



pilots and technicians are being trained, the infrastructure is being built,” he revealed. “The JF-17s will be based at Makurdi Air Base, or at the new Bauchi Air Base, where we are building a new hangar.”

He did not supply details of the JF-17’s weapons but did say: “We want the best to support our efforts, because terrorism is a global threat. We need to get what it takes to solve this problem and we want the training to dovetail in with the time when the aircraft arrive.”

The NAF enjoys a good relationship with the Pakistan Air Force, which is also overhauling its C-130 Hercules, with NAF assistance.

A C-130H (NAF 913) was reactivated after PDM at 631 Aircraft Maintenance Depot in Ikeja, Lagos, on January 29. A low-resolution image, released by the NAF, showed at least six PAF personnel among the assembled dignitaries.

This is the second C-130H to be reactivated, following the return to service of NAF 917 on June 24, 2019. A third aircraft (NAF 918) should follow soon.

The NAF’s arrangement with the Islamabad-based Shaheen Foundation and PAF (SF-PAF) included on-the-job training, while also refreshing personnel knowledge on airframe, avionics/electrical and the T-56 powerplant.

During the January 29 ceremony, Abubakar said: “The 631 PDM could eventually transition to an authorised maintenance and repair organisation that wouldn’t just cater for the needs of the NAF, but also other countries in the region.

“Our revitalisation programme also currently includes three Alphajets and one Mi-35P helicopter.”

In October 2016, the NAF signed a deal with the PAF/Pakistan Aeronautical Complex for 10 new Super Mushshaks to help with their primary

flying training. Initially, they were loaned four in December 2016.

The new aircraft were delivered in two batches, in July 2017 and January 2018, and the commander is very happy with the results.

“They are doing an excellent job at Kaduna (with the 401 Flying Training School), where they are based. The Super Mushshak acquisition has increased our training capacity by 500%.”

He added: “If the pilots then head to fixed-wing, the next stop is Makurdi to fly the Do 228. If it is helicopters, then they head to Enugu Air Base (home of the 405 Helicopter Combat Training Group).”

Abubakar revealed that the US, India, China and the Czech Republic had all recently provided the NAF with training slots.



Four Nigerian Air Force instructor pilots, who had flown L-39s and Alphajets, visited LOM Praha’s CLV flight-training centre in the first half of 2018 to improve their air-to-air combat skills.

They were all skilled in air-to-ground operations and, according to one of the instructors, they learnt a lot in a very short time, training in one-to-one combat before stepping into more complex scenarios.

CLV instructors also help new pilots to cope with any G-forces they had not before experienced. They are trained to adapt with 90° left and right turns, but limited to a maximum 6G (even though the L-39C can reach 8G).

The commander was also pleased that the first female fighter pilot and first female combat helicopter pilot had graduated last October.

“We sent the female fighter pilot to the US Air Force to be trained after she performed so well at the 401 FTS at Kaduna,” he explained. “The helicopter pilot graduated from the [South African] Starlite International Training Academy.”

In more proof of the NAF’s capacity-building, 2,079 recruits graduated at the Kaduna-based Military Training Centre (MTC) on February 15, 2020. At the ceremony, Abubakar told onlookers: “It proves the efforts of the current NAF leadership to reposition the service into a highly professional force, ensuring it is appropriately manned and adequately trained to ensure that Nigeria’s territorial integrity and national sovereignty are not undermined or subverted by any individual or group of individuals.”

**Thunders set to strike: Nigeria is expected to receive three JF-17s by the end of the year.**

PICTURE: ALAN WARNES.





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*The announcement by the US State Department that it has approved a possible \$234 million foreign military sale (FMS) of 12 Textron Aviation Beechcraft T-6C Texan II trainers to Tunisia will undoubtedly lead to an improved relationship between the two countries. But, asks Jon Lake, what else could it lead to?*

# Tactical Texans fit Tunisia to a T

**T**he potential Tunisian T-6C acquisition is intended to improve the defensive capabilities of what the US calls “a major non-NATO ally and an important force for political stability and economic progress in north Africa”.

The US Defense Security Cooperation Agency (DSCA) confirmed that a potential sale would include related spares, ground-support equipment, and support (including technical documentation, pilot and groundcrew training and ferry flights).

It would require one contractor representative (from prime contractor Textron Aviation Defense of Wichita, Kansas) and nine US Government personnel to be sent to Tunisia.

The sale would, obviously, further strengthen the relationship between Tunisia and the US and provide additional opportunities for bilateral engagements.



Tunisia’s selection of the T-6C could also indicate that recapitalisation of the front-line fighter fleet is imminent, and there have already been suggestions that the proposed T-6C purchase could pave the way for a Tunisian acquisition of the AT-6B Wolverine for counter-insurgency (COIN) and light-attack duties.

The Wolverine is structurally reinforced and is powered by an updated 1,600shp Pratt & Whitney Canada PT6A-68D engine. It was designed as a dedicated light-attack derivative of the T-6. It is equipped with a datalink and integrated electro-optical sensors and several weapons configurations have been cleared.

The AT-6B is a candidate to meet the US Air Force’s long-running light-attack/armed reconnaissance requirement, which could lead to further export sales. The armed AT-6B would be an extremely useful addition to the Tunisian Air Force inventory, and would replace and expand upon the ground-attack capabilities currently provided by the SF-260WT and the MB326.

There have been reports that AT-6Bs could be

supplied to Tunisia in return for basing rights for unspecified US military aircraft.

The Al Quwwat al-Jawwiya al-Jamahiriyyah At Tunisia (Tunisian Air Force) currently operates a number of different aircraft types for training, and several of these also have an operational role.

The air force uses the Siai-Marchetti SF-260 as its basic trainer, though these are also used in the light utility and liaison roles and some can be armed for COIN and light-attack missions.

The air force received nine Siai-Marchetti SF-260CTs and 12 SF-260WT Warriors between 1974 and 1978; the Warriors having underwing hardpoints allowing them to be armed, if required.

About 18 SF-260s remain in use with Nos 13 and 14 Squadrons at Sfax-Thyna, with the SF-260WTs being concentrated within No13 Squadron.

Tunisian student pilots then move on to the jet-powered Aermacchi MB-326, some 10 of which serve with No11 Squadron at Sidi Ahmed. These are the survivors of eight MB-326Bs delivered in 1965, and five MB-326LTs and seven single-seat MB-326KT light-attack aircraft delivered in 1977.

The 12 new turboprop-powered T-6Cs seem most likely to replace these aging jets, filling the gap between the SF-260 and the nine surviving Aero L-59Ts (of 12 delivered) that operate in the lead-in fighter training and light-attack roles.

The L-59Ts equip No16 Squadron at Gafsa.

Though powered by a 1,100hp Pratt & Whitney Canada PT6A-68 turboprop engine, the T-6 has jet-like performance and handling characteristics, with a speed of 320mph, an initial rate of climb of 3,100ft (944.8m) per minute and the ability to reach 18,000ft (5,486.4m) in less than six minutes.

The aircraft has a pressurised cockpit and the pilots sit on Martin Baker zero-zero ejection seats, while the tandem seats provide a fighter-like environment for the student pilot in the front seat.

Although the Texan is not a jet trainer, it offers

tactical training capabilities that would previously have been confined to more expensive, higher-performance trainer aircraft.

The T-6 was originally developed to meet the US Air Force and US Navy joint primary aircraft training system requirement.

The T-6A was conceived as a relatively minimum change derivative of the commercial off-the-shelf Pilatus PC-9, with minor modifications to meet specific US requirements. These included a vapour-cycle air conditioner and on-board oxygen generation system and an increased canopy thickness. The latter was intended to prevent a 4lb (1.8kg) bird from penetrating the cockpit at a speed of 270kts (500km/h).

The leading edges of the wing, horizontal stabiliser and vertical fin were also strengthened with an additional spar to provide better bird-strike resistance.



The flight controls were modified to improve the aircraft’s flying qualities, while a number of modifications were incorporated to make maintenance easier, and to shorten turnaround times between sorties.

In the event, additional requirements resulted in delays, cost increases (from an initial estimate of \$3.9 million to almost \$6 million per aircraft), and weight increases, such that the production T-6A weighed 22% more (1,100lbs) than the Pilatus-built PC-9, while parts commonality was limited to the landing gear tyres.

The T-6A made its maiden flight on July 15 1998.

The T-6B was an upgraded version of the T-6A, with a digital glass cockpit (the result of a company-funded avionics upgrade), used by some US Navy units.

The T-6C is an upgraded export variant, with a digital glass cockpit (like that fitted to the T-6B) including a modern Sparrow Hawk head-up display, an upfront control panel, three colour flat panel multifunction displays, and hands-on-





**Upgrade:** Tunisia's 12 new turboprop-powered T-6Cs seem most likely to replace the air force's ageing Aermacchi MB-326s, and to act as a stepping stone between the SF-260 elementary trainer and the Aero L-59T advanced/lead-in fighter trainer.

throttle-and-stick controls in each cockpit, as well as a data transfer module. The aircraft also features an embedded synthetic air-to-ground and air-to-air training capability.

The T-6C is also fitted with underwing hardpoints (like those fitted to 20 T-6A NTA aircraft delivered to the Hellenic Air Force). This allows it to undertake live weapons training and COIN missions.

The underwing hard-points can also accommodate auxiliary fuel tanks.

For many air forces, the advanced glass cockpit of the T-6C would be broadly representative of the cockpits of current front-line combat aircraft.

This is not the case in Tunisia, where the air force's elderly Northrop F-5E fighters are equipped with old-fashioned legacy analogue cockpits.

Tunisia ordered 12 F-5s (eight single-seat F-5Es and four two-seat F-5Fs) in 1981, and these were delivered in 1984-85. Five ex-USAF F-5Es were delivered from the US Air Force's Alconbury-based aggressor squadron in 1989. Some 11 F-5Es and four F-5Fs remain in service.



In the MENA region, Tunisia is set to join Morocco as a T-6C operator. Morocco ordered 24 T-6Cs in October 2009 at a cost of \$185 million. These aircraft were delivered from 2011.

Iraq operates 15 T-6As, which were delivered between December 2009 and November 2010

to replace Cessna 172 Skyhawks and Cessna 208 Caravans in the training role. These aircraft were grounded for about four years before being returned to service this year.

The possible \$790 million sale of 24 AT-6Cs to Iraq was notified to Congress in 2014, but the deal failed to materialise.

The T-6 Texan II has logged more than 3.2 million flying hours around the world, and has been widely exported.

T-6As have been delivered to Canada (26, designated CT-156), Greece (45), Israel (20), and Iraq (15), while the T-6C has been exported to Argentina (10), Mexico (73), Morocco (24), New Zealand (11) and the United Kingdom (10). Some 372 aircraft were ordered for the US Air Force and 339 for the Navy. ■



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**Downed:** The LNA imposed a no-fly zone over Tripoli shortly after shooting down an Italian Air Force MQ-9 Predator-B, like this one.



## VICTIMS OF THE BATTLE FOR TRIPOLI

The no-fly zone over Libya has already claimed victims. General Khalifa Haftar's Libyan National Army (LNA) shot down two 'intruding' UAVs in the days before it declared a 'no-fly zone' over Tripoli, as part of its campaign to seize control of the capital from the internationally recognised rival Government of National Accord (GNA), also known as the National Salvation Government.

The LNA prohibited flying in its no-fly zone, "without prior coordination with the General Command of the armed forces".

Tripoli's Mitiga Airport, the capital's only functioning airfield, was exempted for humanitarian reasons. Despite this exemption, the GNA said that any threat to civil aviation was a crime that would be punishable under international law.

Since the toppling of Muammar Gaddafi in 2011, Libya has been wracked by civil war, with two rival

factions wrestling for control.

The GNA in Tripoli enjoys UN and international recognition, and is supported by Islamist militias and Turkish forces, while the LNA is supported by that part of the Libyan House of Representatives that meets in Tobruk, by Egypt and the UAE, and by Russian Wagner Group mercenaries.

With both sides using UAVs for reconnaissance and attack missions, it was perhaps inevitable that US and NATO unmanned intelligence, surveillance, and reconnaissance (ISR) aircraft would be mistaken for enemy assets and would come under attack.

On November 20 last year, an Aeronautica Militare Italiana (Italian Air Force) General Atomics Aeronautical Systems MQ-9 Predator B was shot down while flying near Tarhuna, about 65km southwest of Tripoli.

LNA social media channels initially claimed to

have shot down a Turkish drone operating in support of GNA-aligned forces, before the mistake was realised. The following day the US Air Force reported the loss of another unarmed remotely piloted aircraft over Tripoli.

The LNA subsequently apologised for shooting down the American drone and agreed to coordinate their operations over Tripoli and its surrounding areas to avoid similar incidents in the future.

The LNA have not had things all their own way. On December 7, an LNA AF MiG-23ML was shot down by Libyan Government of National Accord (GNA) forces using a 9K32 Strela-2 (NATO reporting name SA-7 'Grail') man-portable, shoulder-fired, low-altitude, infra-red (IR) guided, surface-to-air missile system.

The pilot, Major General Pilot Amer al-Jaqam al-Urfi, ejected but was captured by GNA-aligned fighters from the city of Zawiyah. ■

## TUNISIAN NATIONAL GUARD FORMS AIR UNIT

The Tunisian National Guard has formed an air unit equipped with three Bell 429 GlobalRanger helicopters, and this has now been declared operational.

The unit is a separate military force, not part of the Tunisian Armed Forces. It has a standing strength of 15,000 personnel and functions as both a defence force against external threats and as a security force protecting the nation internally, with a particular responsibility for border and coastal security.

Tunisia secured its land borders by declaring a closed military zone in some areas. It built a berm and an electronic fence to limit the infiltration of terrorists and insurgents from training camps in neighbouring Libya.

However, the coastline remained largely unsupervised, though the Tunisian National Guard now operates some 25 patrol boats donated by Italy between 2005 and 2015. These have helped to reduce the flow of illegal migration towards Italy and southern Europe.

Now the formation of the new air unit promises to help to secure inshore waters and Tunisia's tourist beaches, where vulnerabilities were highlighted in June 2015, when a Daesh-affiliated gunman killed 39 people during an attack on a tourist hotel in Sousse.

A Tunisian Government statement said that the



**Securing the borders:** One of the three Bell 429 helicopters supplied to the Tunisian National Guard.

\$17.4 million acquisition had allowed the formation of "the first air unit for the National Guard." It said that the unit would be tasked with monitoring Tunisia's coastline and preventing terrorist infiltration, as well as road traffic management, emergency response and medical evacuation.

The Bell 429 GlobalRanger is a light, twin-engine turboprop helicopter with a maximum take-off weight of seven tonnes. It was developed by combining the advanced airframe and rotor blades designed under Bell's modular affordable product line (MAPL)

programme with the engine and rotor system from the Bell 427.

The aircraft can accommodate one pilot and up to seven passengers (six in the passenger compartment; one beside the pilot). The cabin is large and unobstructed, with a flat floor and large sliding doors.

The Tunisian Bell 429s are fitted with a wire-strike protection system (WSPS), a rescue hoist above the starboard cabin door, a searchlight under the tailboom, and have provision for an under-nose forward-looking infrared (FLIR) turret. ■



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*The Moroccan Government is expected to procure transport aircraft, helicopters, multirole fighters, submarines, missile defence systems, frigates, and armoured vehicles, as the country's 2020 finance bill increases the kingdom's national defence budget by 29%.*

**Jon Lake** reports.

## Massive boost for Moroccan armed forces

**A**ccording to the new figures, Morocco will allocate 45.438 billion Moroccan Dirham (MAD) (\$4.728 billion) to defence this year.

In addition to the big-ticket items, the growing focus on strengthening border security will see increasing expenditure on security systems, motion sensors, alarms, and radar systems, as well as on military IT and networking systems.

Morocco is also expected to invest in a new state-of-the-art coastal surveillance system.

The wonderfully named Moroccan Centre of Conjunction (Centre Marocain de Conjoncture) has said that the country's national economic growth is expected to reach 4.6% this year, which it called "very promising compared to the weak results recorded in 2019".

This would suggest that gross domestic product (GDP) will reach MAD 1,196.62 billion (\$124.54 billion) in 2020, meaning that defence spending will equate to about 3.8% of GDP.

In 2016, Morocco spent 3.28% of its GDP on defence, putting it in 26th place in the list of defence spending as a percentage of GDP – just behind the USA (then at 3.29%).

The increase seems likely to improve Morocco's ranking, though it will remain behind Algeria, its eastern neighbour and rival, which spent 6.55% of its GDP on defence in 2016 – \$10.57 billion.

Morocco is ranked 55th among 136 countries in the 2018 Global Firepower (GFP) index – a ranking of comparative military strength.

MAD 700 million (\$73 million) of the 2020 defence budget will be exclusively allocated to the costs of conscription, following the passage of Law 44.18 by the House of Representatives. The law reintroduced mandatory military service for young people aged 19 to 25, starting from September 2019.

Most of the MAD 700 million (421 million) will go towards paying the conscripts' monthly wages, though MAD 288 million will be spent on rebuilding training and housing facilities, and MAD 61 million will be spent on logistics (medication and transportation).

Some 133,820 young Moroccans, including 13,614

female candidates (for whom the one-year military service is not compulsory), enlisted. Around 15,000 of these (including 1,100 women) were actually called up. Abdelatif Loudiyi, the delegate minister of the National Defense Administration, has predicted that 10,000 new conscripts will join the military each year.

Staff costs account for the bulk of Morocco's defence budget, and are set to rise from MAD 22.330 billion to MAD 33.167 billion due to increased numbers and pay increases across the Royal Armed Forces (FAR).

Investment spending will increase from MAD 4.773 billion to MAD 5.146 billion, with increased money on equipment repair and infrastructure.



The equipment budget is to increase from MAD 6.051 billion in 2019 to MAD 7.125 billion in 2020, as Morocco continues to modernise and strengthen through an ambitious procurement programme.

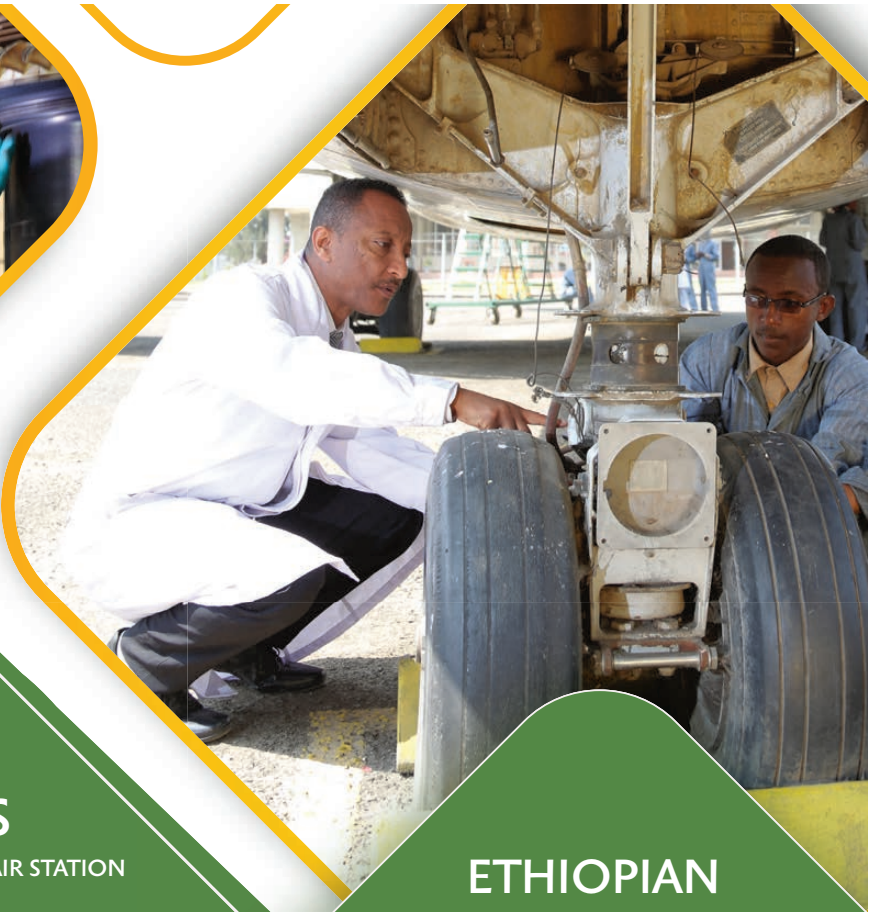
Morocco has been a key western ally in the international fight against Islamist terrorism, and is currently facing an increased threat of terrorism and insurgency. It is enhancing and improving its defence and internal security forces in response to a wave of unrest in the region, and, in particular, to the ongoing insurgency in the Western Sahara region, where the Algerian-backed Polisario Front is fighting Moroccan forces.

Relations between Morocco and Algeria deteriorated after Spain announced its intention to abandon the former colony of Western Sahara territory in 1975, proposing to divide the area between Morocco and Mauritania. Algeria supported independence for the territory and opposed its absorption by its neighbours.

Mauritania abandoned its territorial claims and withdrew in 1979, but Morocco then claimed the territory relinquished by Mauritania, and this led to renewed tension between Morocco and Algeria. There has been a long-running arms race between Morocco and Algeria, which has received a steady supply of modern weapons from Russia. ■

**On alert: A flight of Royal Moroccan Air Force Lockheed Martin F-16s. Despite a growing defence budget, Morocco continues to lag behind neighbouring Algeria when it comes to military spending.**





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# AVIATION AFRICA

The fifth edition of the Aviation Africa summit and exhibition took place in Addis Ababa on March 5-6 and, despite the global uncertainty over the Covid-19 virus, the show was a great success. Reports from **Kaleyesus Bekele, Victoria Moores, Marcelle Nethersole, Alan Peaford, Jane Stanbury and Chloe Wilson.** Images by **Ian Billinghamurst and Cyril Ndegeya.**

## VIRUS WOES REPELLED BY POSITIVITY AND PASSION

**R**epresentatives from 32 African countries were among more than 700 delegates from 81 nations who made the journey to the Ethiopian capital for the annual summit, which brought together governments, airlines, airports and the aviation industry.

Coronavirus was the main talking point within the conference, with the International Air Transport Association (IATA) special envoy, Raphael Kucchi, warning that airlines were facing a precarious position with passenger numbers in freefall.

Insurance expert, Simon Knechtli, executive director for aviation at Willis Towers Watson, outlined airline liability and

warned it was unlikely that many carriers would have insured against this risk.

The theme of the conference had been sustainability, covering environment as well as financial, operational and human capital sustainability, and the subjects were debated by top industry representatives.

Despite the threat from coronavirus, the mood was positive.

Ethiopian Airlines CEO, Tewolde GebreMariam, called for greater collaboration between airlines and a re-think on attitude from African governments.

"We need support from governments; taxes need to be reduced and infrastructure needs to improve," he said.

"We depend on aviation to connect ourselves and the world. For trade, business investment, and tourism, other modes of transport cannot serve us well. African governments have to support aviation.

"African airlines also need to cooperate with each other as there is a lack of it right now. We currently only command 20% of the global market share, and that is painful. This means we don't have the mass, so it is time for us to cooperate with each other."

Sean Mendis, chief operating officer of Ghana's Africa World Airways, also called on the industry to "take Africa seriously".

Criticising the attitude of some manufacturers and service providers, he said: "It is like they think they are being charitable by allowing us to give them money."

He warned them that African aviation is there for the long term. "There will be no benefits if you don't take us seriously," he said. "Those that do will benefit in the long run."

• Next year's Aviation Africa summit will be held in Kigali, Rwanda, on February 24-25.

Sean Mendis: Aviation industry should "take Africa seriously".

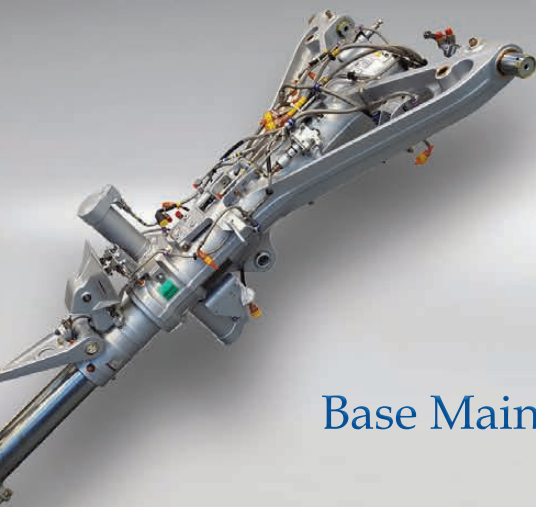




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**Abderahmane Berthé:** "With passenger numbers projected to double over the next 20 years, growth will only be realised if the regulatory environment is conducive."

## BERTHÉ: THE CONTINENT 'NEEDS A MASSIVE TRANSFORMATION'

A successful and viable African aviation industry requires concerted efforts and collaboration from governments, regulatory authorities, airlines, airports, air navigation service providers, suppliers of aviation products and services, and the passengers themselves. That was the conclusion from AFRAA secretary general, Abderahmane Berthé, as he delivered a keynote speech at the summit.

While Africa has 16% of the world population, it only accounts for a small proportion of air traffic – just 3% of the global market, he said.

Citing connectivity as one of the major challenges, Berthé added: "Currently, 22% of Africans travelling between two cities on the continent are forced to go through non-African hubs, often transferring in Europe or the Middle East. However, this situation can be reversed through network development and scheduled coordination at African hubs."

With the continent three times larger than Europe in terms of land mass and a population that's 2.5 times bigger, Berthé lamented: "Air transport activity in Europe is 11 times higher than in Africa." This, he said, was in part due to "the average air fare in Africa (including taxes) costing double the fares on equivalent distances travelled in Europe". Subsequently "air transport is simply not affordable for many African citizens", he added.

Berthé said: "It will require a massive transformation from stakeholders across the industry to push boundaries and think outside the box. With passenger numbers projected to double over the next 20 years, this growth will only be realised if the regulatory environment is conducive.

"The implementation of the single African air transport market (SAATM) will result in enhanced connectivity and reduced journey times, as well as lower fares. Additionally, the African continental free trade agreement and the free movement protocol for people and goods will increase intra-African trade. New routes will emerge and connectivity will improve." ■

## CORONAVIRUS THREAT DEEPENS FOR AFRICAN AIRLINES



**Raphael Kuuchi:** "Previous disease outbreaks have peaked after one to three months."

The International Air Transport Association (IATA) is estimating that coronavirus could narrow Africa's capacity growth by 0.4% and cost the region's airlines around \$40 million in 2020.

Speaking on the opening day of the summit, IATA special envoy to Africa, Raphael Kuuchi, gave the body's latest virus update.

In December 2019, IATA projected 3.8% African revenue passenger kilometre (RPK) growth for 2020, but this has been narrowed to 3.4% following the viral outbreak. African airlines generate 7% of their revenues from Asia Pacific and around 5% from China.

"Previous disease outbreaks have peaked after one to three months and recovered to pre-outbreak levels in six to seven months," Kuuchi told delegates.

IATA is basing its predictions on the 2003 SARS outbreak. However, coronavirus is expected to have a deeper impact, costing the industry around \$29 billion in 2020 and reversing a forecast for 4.1% traffic growth to a 0.6% contraction.

"Based on just SARS, we would probably be underestimating the impact that coronavirus will have on the industry today," he said. "We are hoping we would see a recovery, but whether that would happen within seven months we are unsure."

Kuuchi used the forum to call on governments to relax taxes and charges through this crisis. "We want governments to relieve these, so airlines can continue to operate."

He also called for air traffic control slot retention rules to be moderated. "It is impossible for airlines to maintain slots at some airports," he said. ■



## ETHIOPIAN BOSS TEWOLDE DIGS IN OVER CHINA

Ethiopian Airlines Group CEO, Tewolde GebreMariam (right), believes that isolating China because of the coronavirus outbreak would be neither fair nor ethical.

In a one-to-one interview with Alan Peaford, editor-in-chief of *African Aerospace*, Tewolde said he made the decision to continue flying to China as per the directive of the World Health Organization.

"Flying direct to China does not mean that we are going to import coronavirus because passengers from China travel to Africa and Ethiopia through various other hubs. That is what today's inter-connected world means," he said.

"Stopping flights is not the answer. European carriers stopped flying to China but Chinese carriers are flying to Europe. It is a paradox," he added.

Speaking at the impending first anniversary of the Ethiopian Airlines B737MAX crash on March 10, Tewolde said his airline had not yet made a decision

about whether it would ever fly the MAX again, or should go back to realising its MAX orders.

"That decision is not easy for us to make right now," he said. "The MAX has a problem and it is grounded for almost a year now. It has not been clearly decided or known when it is going to be back to the air.

"We are discussing with Boeing but, as an airline which, unfortunately, happened to be directly involved with the accident, our situation is different from other carriers that have aircraft grounded. As and when Boeing decides to return the aircraft to service, we will make the assessment.

"Will we be able to convince our crew, our pilots or our customers? And how long it will take us? Those kind of questions will be answered at that time. It will take some time before we make any decision. We have to be convinced beyond reasonable doubt that this aircraft is good to fly again."



## \$6.7 MILLION SAATM BOOST ANNOUNCED

African Civil Aviation Commission (AFCAC) secretary general, Tefera Mekonnen Tefera (right), told delegates that the body has secured \$6.7 million in funding to boost the roll-out of intra-African air transport liberalisation.



During an opening poll at the conference, 40% of delegates identified the lack of open skies as African aviation's biggest challenge, attracting more votes than any other issue.

"One of the primary challenges facing the industry is poor connectivity, which continues to contribute to Africa's low share of the international aviation market," Tefera said, in his keynote address.

He said AFCAC was continuing to take a leadership role in the single African air transport market (SAATM), with 33 countries already having committed to the initiative.

He used the summit to announce that AFCAC had secured \$6.7 million from the African Development Bank, under an agreement that will be finalised shortly. He said the funds would be used to fully operationalise AFCAC, as the SAATM executing agency, including the deployment of enforcement officers for consumer protection, fair competition, and dispute settlement.

Other targets for the funding include further advocacy efforts and more than \$500,000 to support airlines with SAATM implementation.

"The time now is fit to test the functionality of the single market. AFCAC hopes to work with African airlines to enjoy a fully liberalised market without hinderance," Tefera said, urging airlines to lodge complaints if SAATM states do not allow fifth-freedom access.

## Get the basics right, urges finance panel

Airlines need to get the basics right to access funding and leased aircraft.

That was the key message from a panel of finance experts at the summit.

The panellists looked at the flexibility of various leasing structures, the role of export-credit finance, and the involvement of development banks, which are increasingly viewing aircraft as part of national infrastructure.

"It is very difficult if you don't have the right number of aircraft," said Girma Wake, chairman of Ethio Lease. "If you don't grow, you will gradually die."

However, Africa World Airlines COO, Sean Mendis, observed how many African airlines "bite off more than they can chew", with over-ambitious expansion plans. "You can't go from flying a 737 on domestic routes to flying to New York overnight," he pointed out.

SMBC Aviation Capital SVP airline marketing, Cora

McCormack, agreed that steady growth was likely to be more attractive to banks and lessors. "Getting more use from the asset you already have, that's growth, but it doesn't capture headlines. Steady and reliable growth is what the leasing industry looks favourably on and also the financing industry as well."

"If you want to do a start-up, you should seriously consider the odds," offered Nedbank Corporate and Investment Banking head of aircraft finance, James Geldenhuys.

"You have to start with proper capital and the first door you knock on is venture capital and not finance. For finance, you need a track record. If you want to make money, you have to put money at risk."

Geldenhuys suggests airlines might, therefore, need to start with older, lower-risk aircraft, before building up to their preferred type, once they have a track record.

## THE CONTINENT OF OPPORTUNITY

Aerospace was described as "a great enabler for Africa", by Airbus Africa & Middle East president, Mikail Houari, as he shared his company's thinking on the main criteria that would drive opportunity across the continent.

A growing population, the vast size of the continent, and continued economic growth, are all key ingredients driving aviation development, he said.

With an anticipated 1,500 new aircraft joining the African fleet in the next 20 years, Airbus' global market forecast (GMF) predicts that the continent's rapid urbanisation, trade and tourism, will contribute to driving up passenger traffic by 5.0% annually over the next two decades.

"To make it successful, we need to bring together a selection of ingredients," said Houari,

pointing out that, along with traditional financing, original equipment manufacturers (OEMs) needed to get creative in terms of supporting sales because government and International Monetary Fund (IMF) funding alone wouldn't be enough.

In addition, collaboration through open skies and partnerships needed boosting to support industry growth.

Inspiring youth was also vital. "We need to focus, not just on the highly educated, but also on making the young people have stars in their eyes to create and inspire passion for aviation," he said.

Houari also stressed the need for sustainability: "This is not just an OEM issue; it's airlines, civil aviation authorities, regulators, and airports globally that will help solve the emissions issue. We have to work on this together."





Her Excellency  
Dagmawit Moges:  
"Modernising  
infrastructure and  
operations require both  
investment and  
expertise."

## MINISTER CALLS FOR INVESTMENT

Ethiopia's minister of transport called for investment in infrastructure by African countries if the continent is to live up to its potential.

"Airport infrastructure in most African countries is outdated and is now unable to handle the increasing volume of passengers or cargo," said Her Excellency Dagmawit Moges in her opening address to the summit.

"Modernising infrastructure and operations require both investment and expertise," she said. "These could come through public-private partnerships or through opening doors for private capital investment.

"This will bring innovative solutions; it will increase competitiveness; it will bring additional routes, more frequent flights, better connections and lower fares."

Outlining the performance of Ethiopia's national carrier, the minister said: "The success of Ethiopian Airlines also came as the result of the strong regulatory arm support of the Ethiopian Civil Aviation Authority, which recently received a 91% International Civil Aviation Organization safety audit."

She said: "I mentioned the success story of Ethiopian because it is possible to have this in other African airlines too."

## ANSWERING THE CALL FOR SUSTAINABILITY

A panel of experts, working across Africa's aviation sector, underlined the call for multilateral engagement to achieve sustainability.

"A big buy-in from all stakeholders is needed to achieve the International Civil Aviation Organization's

(ICAO's) carbon offsetting and reduction scheme for international aviation (CORSIA)," said Colonel Silas Udahemuka (above), Rwanda Civil Aviation Authority's director general. He stressed that the industry also needed to think longer term and "consider alternative means of carbon reduction through the deployment of new technologies and other means".

Chamsou Andjorin, Boeing director, sub-Saharan Africa, said: "Working together is key."

He also raised the urgent need to invest further in the development and supply of sustainable aviation fuel (SAF). "Biofuels are available, but the challenge with them is the supply chain and the need to scale up production."



□□□□

While Jason Sutcliffe, marketing director, Rolls-Royce, Africa and Middle East, agreed with the need to increase the supply and production of SAF, he also argued for the continued investment in the development of hydrogen-powered engines and the electrification of aircraft. There was also a need to consider the infrastructure that's required to support these developments and factor in what happens to batteries used in electric aircraft once they are no longer needed.

Sanjeev Gadhia, CEO Astral Aviation, explained that he faced increasing pressure from customers demanding transparency on the level of emissions in cargo operations. "It's not only the carrier that's held to question, it's the entire supply chain," he said. "We are looking at renewable energy sources, including solar, to power the cold store facilities for our cut flowers at Nairobi Airport. We're also exploring how we can offset our emissions and are working on a reforestation project in Kenya using drones to plant trees."

The use of drones is evolving across the continent, with Astral planning to introduce a cargo version. "We are confident that Africa will lead the way in the drone revolution and will set examples of how they can be used elsewhere in the world," he said.

Sutcliffe said Africa had a massive opportunity with electric vertical take-off and landing vehicles (eVTOLs), especially for regional connectivity, where rail links simply don't exist. "We could see the infrastructure jump going straight to eVTOLs capable of carrying 20-30 passengers. The technology and prototypes exist, it's the regulations and airspace protection around that that will cause the blockage initially," he said.



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## A CRACKING GOOD IDEA

Ethiopian company, Tay Test Engineering Solutions, was representing Japanese company, Olympus, with its triple kit generation 2 products that can detect cracks on aircraft.

"Three instruments that make up the triple kit are all designed to be rugged and reliable and share the same field-proven body," said Tay managing director, Yergalem Teklu.

"Each instrument is IP66-rated for resistance to dust and water, and operates in a temperature range of 50°F to 122°F (10°C to 50°C). They also share the same vivid screen, ergonomic knob control, direct access keys, and an easy-to-use user interface."

The kits are certified for both Boeing and Airbus.



Yergalem Teklu: "Three instruments that make up the triple kit are all designed to be rugged and reliable."



Anthony Leon: "Our carbon-neutral operations in Africa include both OR Tambo International and Cape Town International airports."

## IRISH EYEING UP BUSINESS

Dublin Aerospace was at the show hoping to increase business for its auxiliary power unit (APU) and landing gear offerings.

The company operates a four-bay base maintenance facility that can handle around 70 aircraft a year, a centre with capacity for 400 APU overhauls a year, and a landing gear service operation with capacity for 250 legs annually.

"On the base maintenance side, we do narrow-body 737 and A320 overhaul and landing-gear, and on APUs we cater for multiple types, including A330s, said Rob Cousins, senior sales executive.

"Work is completed at our base at Dublin Airport in Ireland, where we have 400 employees."

The company, which has been operating for 10 years, has customers all over the world.

"Our African customers include Air Algérie, South African Airways, and Comair. We are, hopefully, about to get a big contract with EgyptAir for landing-gear/overhauls too," said Cousins.

"Ethiopian Airlines is a big competitor for us – its maintenance division is very good and has captured a lot of business here, but that is a good thing from an African point of view as it's a very credible MRO.

"Countries such as Egypt and Algeria have a lot of red tape to go through, but it is about being patient and seeing it through with the right documents and making sure the regulatory authorities are satisfied. They tend to come to Dublin, do the inspections and give us approvals. Then it is quite a straight-forward process."

## FUELLING THE SUSTAINABILITY AGENDA

Anthony Leon, Air BP's general manager for southern Africa, was at the summit to highlight the company's low-carbon solutions and sustainability agenda.

"Air BP was the first aviation fuel supplier to achieve carbon-neutrality for its into-plane fuelling services across an international network of more than 250 operated facilities. Our carbon-neutral operations in Africa include both OR Tambo International and Cape Town International airports," he said.

The company has more than a decade of experience in the use of electric-powered vehicles and has also adopted innovative stop-start technology in its hydrant dispensers, which constantly monitor power demands and reduce vehicle idling.

"At OR Tambo, we deployed a bespoke engine start/stop system last year," explained Leon. "This has

been increased and extended to Cape Town International, with each airport now operating six such dispensers. It has reduced carbon emissions by around 20%."

Air BP has also rolled out its airfield automation digital technology to nine locations in Africa. "Designed to enhance safety, reliability and compliance in airport fuelling operations, it has been well received by operators, who have reported increased speed and efficiency in fuelling," said Leon.

In November 2019, the company signed a technical services agreement with Sonangol, the state-owned oil company in Angola, marking its entry into that country. "It will support Sonangol in assuring its operations to international standards, providing advice on product quality, operations, health and safety, and engineering," said Leon.



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## HIGH-TECH FILTERS TO PURIFY THE HIGH-FLYERS

US company, Pall Aerospace, was hoping to attract customers to two of its helicopter filtration products on display. "Pall specialises in high-tech filtration, separation and purification systems," said Guillaume Guyomar, business development manager MEA.

The company's new PA100 PUREair system features Pall's redesigned vortex tube technology and is used on Airbus Helicopters. "The system is compatible with AS350 and EC130 helicopter models equipped with Arriel engines," said Guyomar. "It provides a dramatic increase in dust and foreign object separation efficiency. Combined with the enhanced vortex tube technology, the system is self-cleaning, provides continuous protection and does not require removal for regular maintenance and cleaning."

Also on display was the PA120 – designed for Mi-8/17 helicopters.

"Research and field experience have established that airborne contamination entering helicopter engines and other fluid systems during high-intensity operations in harsh environments can cause wear and damage to critical components that can, in turn, result in operational problems and higher maintenance costs," said Nicolas Guillou, sales manager Middle East and Africa.

The company recently signed a contract with the Ethiopian Ministry of Defence. "Africa is a market where we want more business," said Guillou. ■

## VOYAGEUR CHARTING A NEW COURSE

Canadian company, Voyager Aviation, provides charter services throughout Africa.

"Our global clients around the world range from NGOs, corporate clients, governments and airlines," said Conor Sheridan, director of sales and marketing.

"Our fleet includes Dash 8-100 and 300s, CRJ200s, as well as a King Air 200, which we operate in an air ambulance configuration."

It is the Dash 8s that are particularly popular in Africa.

"We operate all over Africa, including in Uganda, Sudan, Mali and the DRC," said Sheridan. "We generally supply the Dash-8 and CRJs here."

"The Dash-8 is a very robust aircraft that can operate in remote, hostile and challenging regions, and remain reliable to the level our customers require."

"We also are looking to expand our dry-leasing arm, this should be of interest to Africa with the aircraft we have available."

The company has also recently partnered with UK firm, Segers, which will see the establishment of a regional aircraft parts depot in Dubai, UAE.

"This partnership includes a spare parts distribution agreement that will leverage Segers' experienced logistics and sales expertise to sell Voyager-owned spare parts to operators in the region and beyond," said Gary Gilbert, director part sales. ■

Sumam Datta:  
"We were one of the first companies to develop and introduce a web system to flight-planning."



## Flight-planning made simple

Flight-planning software doesn't come much simpler and quicker to use than Skyplan's Guru2 and Aurora 2.0.

"We were one of the first companies to develop and introduce a web system to flight-planning, making life for pilots and air traffic control a lot easier," said Sumam Datta, air transport director.

The Guru2 performance calculator presents a data card with the information needed for an approved take-off and landing. "There is also a back-office solution offering 'smooth' operations management and two-way communication," said Datta.

The Aurora 2.0 product is PC-based and web-based and covers all aspects of airline flight-planning for individual small carriers and larger aircraft operators.

"When an aircraft flies from A to B, it has to file a

flight-plan to air traffic control and that says what route it will go, what height it will fly at, the speed, how long the flight will take, and how much fuel it will burn," explained Datta. "These are the documents the pilots use to control their flights and the needed interaction with air traffic authorities."

"We offer it to smaller carriers on a per-flight plan basis, or larger carriers take the software themselves."

The Canadian company, a silver sponsor for Aviation Africa, has an office in Dubai, as well as a local company based in Beijing to cater for Chinese carriers.

It also has a large presence in Africa, including in Rwanda, Djibouti, and Ethiopia. ■



Looking to expand:  
Conor Sheridan (left) and Gary Gilbert.





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*As the national carrier, Ethiopian Airlines, is acquiring new fleet and opening new international and domestic routes, the Ethiopian Airports organisation is trying to keep up with the growth. Kaleyesus Bekele reports.*

# Creating Ethiopia's super Bole

**“W**ith the national carrier expanding, the demand for bigger and better airports is increasing,” according to Eskinder Alemu, CEO of Ethiopian Airports.

The organisation has been engaged in upgrading airports and undertaking expansion projects in the capital, Addis Ababa, as well as in the regional states.

In line with the growing demand, Ethiopian Airports launched the \$400 million Addis Ababa Bole International Airport expansion project in November 2014. It has three phases.

The first was the expansion of Terminal 2, which handles internationals flights.

Inaugurated in 2003, Terminal 2 had a floor area of 48,000sqm and a design capacity for six million passengers annually.

Under the expansion project, it was given an additional floor area of 74,000sqm. A large commercial duty-free area was added and the project was inaugurated last year.

When the expansion project is fully complete, the airport will have the capacity to handle up to 25 million passengers annually. It currently accommodates 12 million.

The China Communications Construction Company (CCCC) is the contractor, while the French firm, ADPI, is project consultant. The passenger terminal expansion building is designed by CPG, a renowned Singaporean company. EXIM Bank of China has financed the project.

The second phase is the construction of the VIP terminal. It has two floors featuring restaurants, a press briefing room, a meeting hall and cocktail ballroom, plus a VIP saloon. There will be three different access ways for diplomats, senior government officials, and heads-of-state. It will have its own car park and access road.

“Work began in 2017 and we hope to inaugurate either this month or next,” Alemu said.

The third phase is the expansion of Terminal 1, which currently handles domestic and regional flights. “Terminal 1 will totally be transformed and merged with Terminal 2. It will still be used to handle domestic flights but it will have a different look,” Alemu said.

The project is expected to be completed in 2021.

“We are not only expanding the passenger terminal but also working on the tarmac,” Alemu said.

The apron, which used to accommodate 53 aircraft, now can handle 75 at a time. It will also have a separate stand



for general aviation light aircraft, operated by private operators.

The runways have been upgraded and maintained. “Three new taxiways have been created and now we have six in total,” Alemu said.

The organisation operates 22 airports in the country and four of them are international – Addis Ababa, Dire Dawa, Bahir Dar and Mekelle.

According to Alemu, his company is also undertaking major upgrading and expansion projects in the regional towns. “We are building baggage-handling systems (BHS), ground-lighting systems, fence lighting, and other different facilities and infrastructure,” Alemu said.

Ethiopian Airports is installing BHS in Hawassa, Kebri Dar, Dire Dawa, Mekelle, Axum, Lalibela, Gondar, Arba Minch, and Semera airports. It is also

building ground-lighting systems in Jijiga and Jimma airports.

Perimeter fencing and lighting work will also be undertaken in eight stations in the regional states.

Ethiopian Airports is also in the process of launching construction for five new airports in the regional states – Mizan Aman, Gore Metu, Debre Markos, Negele Borena and Yabelo.

Even with all the ongoing expansion work, there is concern that Bole International will be congested again after few years. Consequently, the Ethiopian Government and Ethiopian Airports is planning to build a new mega airport outside of Addis Ababa.

According to Alemu, the planned airport will have four runways, one big terminal and a commercial area. It will have a capacity to handle 80-100 million passengers per annum.

“It will be comparable with all the major known international hub airports,” Alemu said. The total cost of the project is estimated at \$5 billion.

ADPI is working on the site selection and other preliminary studies with Ethiopian Airports and Ethiopian Airlines.

“We want to have airports that meet international standards and have operational efficiency. We want to have airports that passengers appreciate,” Alemu said.

Beyond Ethiopia, Ethiopian Airports anticipates the possibility of managing airports in other African countries under contract agreements.

**“We want to have airports that meet international standards and have operational efficiency. We want to have airports that passengers appreciate.”**

**ESKINDER ALEMU**



En 2014, le Congo dont l'économie dépend quasi exclusivement du pétrole, a été touché de plein fouet par la baisse mondiale des cours. Alors que la santé financière du pays s'améliore progressivement, le secteur du transport aérien affiche un bel enthousiasme. Un reportage de **Romuald Ngueyap**.



Au cours de 2019, les trois principaux les aéroports ont renoué avec la croissance avec Brazzaville (photo ci-dessus), Pointe Noire et Ollombo collectivement traitant plus d'un million de passagers, selon Daniel Lefebvre (également sur la photo).

## LA REPRISE EST EN MARCHÉ POUR LES AÉROPORTS DU CONGO

« **N**otre trafic tend à se stabiliser, ce qui n'était pas arrivé depuis plus de quatre ans durant lesquelles nous avons perdu plus de 40% de notre trafic passager », affirme Daniel Lefebvre, directeur général de AERCO (Aéroports du Congo), nommé en juillet 2019. « La tendance est désormais positive puisque la chute importante qui voyait chaque année une perte de plus 15% semble être enrayée. »

En 2019, les trois principales plateformes du Congo ont renoué avec la croissance. Les aéroports de Brazzaville, Pointe Noire et Ollombo ont traité plus d'un million cent passagers cumulativement. « La capitale administrative du Congo, Brazzaville a enregistré 622 200 passagers et la capitale économique Pointe Noire a totalisé 464 400

passagers. Ollombo, l'aéroport situé au centre du Congo, a vu passer environ 15 000 passagers. »

Pour l'exercice 2020, AERCO veut continuer sur cet élan. « Nous devons convaincre de nouvelles compagnies mais pour cela nous avons besoin d'une économie qui se redresse. Certains signes vont dans ce sens en ce début d'année. »

Daniel Lefebvre, à la tête d'une équipe de 250 collaborateurs, poursuit les efforts de modernisation des aéroports. Le gestionnaire portuaire s'active à obtenir la certification des plateformes de Brazzaville et Pointe Noire avec la collaboration de l'ANAC Congo et l'ASECNA. « Le processus est sur la bonne voie. Nous avons été audités en décembre dernier par un groupe d'experts de l'OACI qui nous ont encouragé en fixant un objectif atteignable à fin 2020 ».

Le patron d'AERCO veut aussi accompagner ses aéroports dans une démarche d'éco-responsabilité. « Nous sommes inscrits au programme Airport Carbon Accreditation de l'ACI et nous visons le niveau 1 d'ici la fin d'année. »

L'entreprise est soutenue dans cette dynamique environnementale vertueuse par EGIS, actionnaire à 55% avec SEGAP. « Nous cibons la neutralité avec le niveau 3+ comme l'aéroport d'Abidjan. »

Avec une économie qui se redresse et un trafic qui redécoule, Daniel Lefebvre vise désormais « l'équilibre budgétaire avec la maintenance, les investissements, la masse salariale et les recettes qui ont baissé drastiquement ».

Il compte à cet effet sur la redynamisation des deux principaux aéroports qui présentent les atouts pour être des hubs sous régionaux importants. « Il y a une vraie volonté de la part des autorités congolaises de voir renaître ces hubs qui du temps d'ECAIR commençaient à bien fonctionner », souligne-t-il. Lancé en 2011, le transporteur national congolais a suspendu ses opérations en 2016.

Selon Daniel Lefebvre, l'analyse du marché montre qu'il y a de la place sur des axes actuellement sous exploités comme l'Afrique du Sud ou le Moyen-Orient. ■

### SUMMARY

## THE RECOVERY IS ON FOR CONGO'S AIRPORTS

The economy of Africa's second-largest country, the Democratic Republic of Congo, depends almost entirely on oil and, consequently, has been hit hard by the global decline in oil prices since 2014.

But, while the country's financial health is only gradually improving, commercial aviation has been showing positive signs of recovery for more than a year.

"Our traffic is tending to stabilise, which had not happened for more than four years, during which we lost more than 40% of our passenger traffic," said AERCO (Congo Airports) general manager, Daniel Lefebvre. "The trend is now positive as the significant annual decline of more than 15% seems to have halted."

Indeed, during 2019, Congo's three main airports returned to growth with Brazzaville, Pointe Noire, and Ollombo collectively

handling more than a million passengers.

Lefebvre, who was appointed GM in July 2019, explained: "The administrative capital of Congo at Brazzaville registered 622,200 passengers, while the economic capital of Pointe Noire totalled 464,400. Ollombo, the airport in central Congo, saw around 15,000 passengers."

For the current year, AERCO intends to continue to stimulate this positive momentum. "We need to convince new airlines to fly here but, for this, we need a recovering economy. The early signs are positive," he said.

Lefebvre heads a team of 250 employees and they are continuing their efforts to modernise the airports, while working to obtain certification for Brazzaville and Pointe Noire.

"The process is on track. We were audited last December by ICAO and they set us achievable targets by the end of 2020," he said. ■



## MAUN TRIPS THE LIGHT FANTASTIC...

*Many people will never have heard of it, yet Maun Airport is one of the busiest in southern Africa. And now, as Alan Dron reports, it is receiving much-needed improvements to cope with growing numbers of travellers.*

In terms of the number of passengers passing through it, Maun Airport, Botswana, appears at first sight to be a minor regional air centre, handling fewer than 300,000 people each year. That number, however, disguises the true importance of the airport, some 600km north-west of Botswana's capital, Gaborone.

As the airport says in a large placard above its frontage, it is the gateway to the Okavango Delta and Moremi Game Reserve. And that is the secret to its popularity.

The delta is a huge network of inland rivers. In the dry season, the countryside takes the form of open, grassy plains. In the rainy season from December to March, however, those plains flood, making it hugely attractive to a vast variety of wildlife.

Tourists flock to the region for safaris to observe lions, hippos, buffalo and crocodiles, often traversing the flooded areas in canoes for a close-up look at the animals.

The easiest way of reaching those safari areas is to fly into Maun. South African Airways, its regional subsidiary South African Airlink, and the national carrier, Air Botswana, all operate into the airport, which has a surprisingly long (3,700m) single runway (08/26).



Passengers disembark and catch connecting flights on light aircraft operated by companies such as Mack Air and Wilderness Air, to be ferried off to landing strips serving safari lodges and camps in the delta and elsewhere.

It is this stream of light aircraft – mainly Cessnas of one type or another – that makes Maun so busy. In terms of aircraft movements, it is the busiest in the country and the second-busiest in southern Africa, after Cape Town International Airport.

Traffic has expanded steadily over the past five years and the small terminal handled 278,000 passengers in 2019, an increase of 2.5% over the previous year. This increasing popularity means that it is congested at peak hours.

It has become so busy, in fact, that the Civil Aviation Authority of Botswana (CAAB) has embarked on an \$11

million programme to improve its facilities.

The internal upgrade and rearrangement of services is designed to alleviate congestion for the medium term.

The existing terminal has basic facilities, including check-in desks, toilets, seating areas and a café. The light aircraft charter flights that ferry holidaymakers to their final destinations in the bush allow only a small amount of luggage per person (usually 15 or 20kg), with any extra baggage taken care of by the safari company being used. Typically, they will store the items on the travellers' behalf and then return them to them when they eventually depart.



The Maun Airport upgrade, as the CAAB refers to the project, entails the expansion of the current terminal through a range of measures.

A new, larger, international arrival hall and departure lounge are being created, facing on to the apron. These will help to manage existing passenger numbers and also to attract new air services – an important source of foreign currency for the country.

On the domestic side, there will be similar expansion of both the arrival and departure passenger facilities. Both the check-in desk area and the concourse will also be expanded, to ease pressure from departing flights and allow passengers more space in which to circulate.

New baggage facilities will be put in place and a larger number of toilets will be installed.

Generally, the terminal will be given a facelift to improve its appearance and make it more attractive to both staff and travellers.

Outside the terminal building itself, a range of external works will include new or improved roads, carparks, paving and fencing. Ancillary mechanical and electrical equipment – the essential behind-the-scenes systems without which no airport can operate – will also be installed.

When all these improvements are in place, Maun can look forward to years of continued existence as the gateway to the region. ■



# GROUND-HANDLING

The founding general assembly of west African ground-handling companies took place in Togo late last year. **Chukwu Emeke** was in Lomé to report on this historic event.

## GETTING TO GRIPS WITH TEAMWORK

«Les gestionnaires au sol se concentrent sur le travail d'équipe» – Page 64

**R**epresentatives of ground-handling companies from seven Francophone countries converged on Hotel 2 Fevrier, in Lomé, for the first day of the inaugural conference.

Interestingly, there were no representatives of handlers from Anglophone countries on the first day, although a representative of Aviation Handling Services (AHS), Ghana, brought the number of participating countries to eight on Day 2.

Marhouf Ayeva, director general of Societe Togolaise de Handling (ST Handling) in Togo, said invitations had been sent to all countries in west Africa.

However, from speaking to some absentee handlers in Ghana and Nigeria after the event, I understand that invitations and correspondences for the programme were sent to them in the French language without translation.

Notwithstanding that early hiccup, the conference proved a major success.

The three-day meeting, which featured a gala dinner and a tour of Gnassingbe International Airport, focused on the establishment of the association, agreement on its rules and regulations, and the creation of a provisional bureau and secretariat for the assembly.

□□□□□

Declaring the event open, Togo's Minister of Infrastructure & Transport, Zouréhatou Kassah-Traore, who was represented by his director of economics, Michel Tindano, said that the coming together of ground-handling companies in the sub-region would help to improve services.

Halidou Moussa, director general adjoint, Niger Summa Handling (NSH), said: "I think this event came at the right time because, for a long time, we have thought that we ought to have all the handlers together, as it is with other sectors in civil aviation like airlines, airport managers or air navigation service providers.

"We didn't have a forum where all the handling companies could meet and exchange experiences on the best practices. That is why this kind of cooperation has become necessary."

Emile Agboton, operations manager of Aviation Handling Services (AHS), Ghana, added: "The market is rough but we have to make it work. We have many ground-handling companies but we need to have a team, an umbrella association covering all the handlers, so that we are able to tackle existing grey areas and difficulties to ensure that the market is affordable and what it ought to be."

Basil Agboarumi, managing director, Skyway

Continued  
on Page 62



**Marhouf Ayeva:** "If airlines say that charges are too high, they are only doing what they have to do and saying what they have to say."

# GROUND-HANDLING

CONTINUED FROM PAGE 61

Aviation Handling Company (SAHCO), pointed out: "Some decades ago, handling was done strictly by airlines. However, the dynamic nature of the industry has helped us to learn lessons and gather experiences that have helped to better the system.

"Looking at the industry from the 90s, there have been a lot of changes. There came a time when the industry decided to leave airlines with the business of flying and have other companies to manage the handling business. Now we have advanced to the level of certification like IATA's safety audit of ground operations (ISAGO). Ground-handling started from a very humble beginnings but has grown into a very big business."

Moussa agreed: "I think the industry is growing very fast," he said. "There have been increases at all our airports.

"We now have new facilities in many of our airports. It means that we really need to improve our services. We have more and more aircraft coming – the regular flights for big airlines and the special flights that come occasionally. This is evidence that it is a good business but we need to carry out our services according to international



**Basil Agboarumi:** "Some decades ago, handling was done strictly by airlines. However, the dynamic nature of the industry has helped us to learn lessons and gather experiences that have helped to better the system."

standards in terms of safety, security and quality. Our clients and airlines also need to appreciate our services."

Akue Come Adovi, director of operations, NAS in Cote D'Ivoire, added: "In the last 10 years, the safety standard has improved beyond what it was in the past. The industry is giving us the opportunity now to be more efficient and upgrade our standards to what is obtainable in Europe



**Askin Demir:** "It is very important for a ground-handling company to do proper training for staff. That is one way to address manpower issues."

and the United States, so that we can build enough confidence and meet industry requirements. We have more requirements from the industry today than we had yesterday."

Virtually all the French-speaking west African countries have only one ground-handling company.

"Most handling companies in French-speaking countries emerged from the now defunct Air Afrique. What the companies inherited was obsolete equipment," stated Goama Nikiema, general manager, Burkina Handling Services (RACGAE) in Burkina Faso.

It was a point picked up by Maley Danfakha, director general, assistance Aeroportnaire du Mali (ASAMSA). "All companies have to adapt to the technology-driven world in order to evolve," he said.

"Technology has come to change the way things are done. We now have automated warehouses and sensors on our equipment," said Agboarumi. "IATA has created a deadline for the retrofit of old handling equipment. So, the impact of technology has come to stay and it is making our business costlier – particularly



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with the additional training now needed.”

Many airlines in west Africa have accused handling service providers of charging too high a price for their services. However, the handlers don't agree.

“If airlines say that charges are too high, they are only doing what they have to do and saying what they have to say,” said Ayeva. “They are customers, who buy our services, and they will always complain, whatever the cost. Even if it is low in the handler's estimation, they will find it costly.”

Nikiema added: “It is really not the case of charging too high because you need to renew the equipment.”

Moussa was more conciliatory: “I think there is a confusion,” he said. “When the airlines say that the cost is high, they are talking about the cost of the airports.”

“Comparing the costs, there are some standard charges, like the passenger taxes, landing charges, and air navigation charges. Then, we have handling charges.”

“Handling is to assist the aircraft on the ground. For us, we are not imposing charges. We have what is called the IATA standard ground-handling agreement. It is

## UNION'S GROUNDS FOR OPTIMISM

According to the statutes of the association, the union was formed to create, develop and maintain cooperation and assistance among handling operators of the west African region through:

- Formalised bilateral agreement protocols underlining the domains of cooperation;
- Periodic exchange of personnel for training in a specific area or for familiarisation visits;
- Assistance in the launching of new activity, quality management, and so on;
- Adoption and defence of a common stance on issues of common interest during meetings with airport managers and airlines;
- Adoption of common strategies on issues to press through during meetings with entities such as Airports Council International (ACI);
- Sharing of information and analysis of new trends on

airport certification, safety audits, implementation of safety management systems, and IATA's safety audit of ground operations (ISAGO) etc;

- Exchange of information relating to the improvement of handling operations;
- Setting up of a mechanism of evaluation to help members manage their handling companies efficiently from both financial and environmental perspectives;
- Paying special attention to human resources through the creation of long-term development plans; and
- Conducting of audits to check the implementation of resolutions voted on during meetings.

The association's membership is open to all handling companies but political, religious or trade union activities are not allowed within the union. Membership is subject to agreement to abide by the set statutes, rules and regulations of the organisation.

a standard. We prepare a contract based on that. Each airline, be it regular or special service airline, has the prices. Because it is a standard price and we all sign the contract and the contract is not closed, when the term is over, we can discuss the prices. So, it all depends on the relationship between the client and the handler.”

Askin Demir, director general, 2AS Assistance Services, in Senegal, said:

“There are a lot of fixed charges for handling companies like staff, equipment, maintenance and so on. These fixed charges we keep recovering. Then, you have to make some profits as well.”

“If an airline flies only once or twice a week, surely its own prices will be different from that of other operators. So, we cannot say the price is high or not. It varies from customer to customer.”

Continued on Page 64

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“The time of operation is also important. If it is peak time, when it is charging per hour, of course, the prices will be higher. That is why it is not easy to say whether it is high or not.”

Adovi added: “When you deduct all that we spend to be able to offer quality services to those airlines, you will discover that there is even a balance for them to pay. So, it is just an impression.”

Nigeria is one of the Anglophone countries that have multiple ground-handling companies, one of which is SAHCO. Agboarumi, its managing director, described handling charges as “peanuts”.

“The ground-handling rate being used in Nigeria today was the rate approved in 1986 by the then Nigerian Government. Instead of even charging the 1986 rate, we are charging below that amount due to local competition,” he said.

□□□□

The personnel challenge was also discussed by the conference, particularly as the old breed of handlers will need to be replaced within a generation.

“The challenge that we all face is the qualification of the personnel,” explained Moussa. “You have new technologies. Everything is computer-based and you have people who have worked in this area for 30 years but don’t know how to manipulate the computer.”

“This is the new reality but you can’t fire all the people; they have to stay. However, for the development towards the future, you need a new generation of handling professionals. You need to attract them to come into the field and then train them. You also have to retain them.”

“After training the new generation, you don’t want them to abandon you. You have to put incentives in place to make them stay in this field. Otherwise, if they see that, in mining or telecom, for instance, they have better salaries, they will leave you.”

“So, the challenge is finding the new generation, attracting them, training them and keeping them.”

“After Air Afrique disappeared, we have had, in many of our companies, senior people doing handling work. But, in one or two years, these people are going to retire and we need to replace them. Even though we are using them as seniors, it does not mean they have the qualifications they require for today’s operations. This is the challenge.”

Demir added: “It is very important for a ground-handling company to do proper training for staff. That is one way to address manpower issues.” ■

## SOMMAIRE

## LES GESTIONNAIRES AU SOL SE CONCENTRENT SUR LE TRAVAIL D'ÉQUIPE

*L'assemblée générale fondatrice des sociétés de manutention au sol ouest-africaines s'est tenue au Togo fin 2019. Un Compte-rendu de Chukwu Emeke.*

Cette conférence de trois jours, ayant réuni des sociétés de sept pays francophones et du Ghana (anglophone), a connu un succès retentissant.

Marhouf Ayeva, directeur général de ST Handling du Togo, a d'emblée souligné que des invitations avaient été envoyées à tous les pays d'Afrique de l'Ouest.

C'était l'occasion de définir les règles et les critères pour la création de l'association de même qu'un bureau et d'un secrétariat provisoires pour l'assemblée.

Dans son discours d'ouverture, le ministre togolais des Infrastructures et des Transports, Zouréhatou Kassah-Traoré, représenté par son directeur des affaires économiques, Michel Tindano, a fait ressortir que l'union des sociétés de manutention de la sous-région contribuerait à améliorer les services.

Halidou Moussa, directeur général adjoint de Niger Summa Handling (NSH), a affirmé que ce secteur avait grandement besoin d'un forum pour échanger des expériences, parler d'une voix commune et coopérer comme c'est le cas d'autres secteurs de l'aviation.

Emile Agboton, directeur des opérations chez Aviation Handling Services (AHS), Ghana, a ajouté que même si « le marché est difficile, il faut le faire fonctionner » et assurer qu'il soit abordable.

□□□□

Basil Agboarumi, directeur général de Skyway Aviation Handling Company (SAHCO) a souligné qu'il y a quelques décennies, la manutention était assurée uniquement par les compagnies aériennes. Cependant, le système a beaucoup évolué grâce au dynamisme de l'industrie et à l'expérience acquise. « Nous sommes maintenant passés au stade de la certification comme l'audit de sécurité des opérations au sol de l'IATA (ISAGO). De ses débuts modestes, ce secteur a gagné en importance et en taille. »

Halidou Moussa a ajouté que l'industrie se développe très rapidement, entraînant une recrudescence d'activités et d'installations dans tous les aéroports. Il est donc indispensable que la qualité des services, la sûreté et la sécurité répondent aux normes internationales.

Akue Come Adovi, directeur des opérations, NAS en Côte d'Ivoire a souligné que les normes de sécurité se sont améliorées au cours des 10 dernières années. « L'industrie nous donne maintenant la possibilité d'être

plus efficaces et de mettre à niveau nos normes comme celles en vigueur en Europe et aux États-Unis. Cela nous permet de bâtir la confiance et répondre aux exigences de l'industrie ».

« La plupart des sociétés de manutention dans les pays francophones sont issues de la défunte Air Afrique. Elles ont hérité d'équipements obsolètes », a déclaré quant à lui Goama Nikiema, directeur général de la société RACGAE du Burkina Faso.

Maley Danfakha, directeur général, de la société malienne ASAMSA a ajouté que le secteur doit s'adapter à l'évolution technologique. Comme souligné par Basil Agboarumi, l'IATA a fixé une date limite pour la modernisation des anciens équipements de manutention.

Le prix des prestations jugé trop élevé par de nombreuses compagnies aériennes a suscité des échanges intéressants. Or, il faut investir dans de nouveaux équipements.

Le prix élevé s'agirait davantage pour certains des charges aéroportuaires. Outre les frais standards comme les taxes sur les passagers, les frais d'atterrissage et les frais de navigation aérienne, il existe aussi des frais de traitement.

Les sociétés de manutention affirment qu'elles appliquent les standards de l'IATA. Les accords signés avec les compagnies aériennes dépendent aussi des clients et du relationnel. Selon Askin Demir, directeur général, 2AS Assistance Services du Sénégal, il faut aussi tenir compte de l'élément horaire (heure de pointe par exemple) qui a un impact sur le prix.

Le Nigéria est l'un des pays anglophones qui compte plusieurs sociétés de manutention au sol, dont SAHCO. Basil Agboarumi, son DG, a qualifié les frais de traitement de « cacahuètes ».

« Le taux de manutention au sol en vigueur au Nigéria aujourd'hui a été approuvé en 1986 par le gouvernement nigérian de l'époque. Nous facturons en dessous de ce montant en raison de la concurrence locale », dit-il.

Le secteur doit par ailleurs relever d'autres défis majeurs comme la formation de la nouvelle génération surtout en matière de nouvelles technologies et prévoir le départ à la retraite des employés qui sont là depuis trois décennies. Il faudra également augmenter l'attractivité du secteur pour garder les jeunes qui seraient attirés par des secteurs plus rémunérateurs. ■



Six of the best: Conference delegates (from left) Goama Nikiema; Octave Zoumenou, OSSE director, AHS, Benin Republic; Akue Come Adovi; Toure Abdulayi, project director, NAS, Cote D'Ivoire; Halidou Moussa; and Albinus Chiedu, of albinuschiedu.com.



*Akue Come Adovi, director of operations, National Aviation Services (NAS), the ground-handling company operating in Cote D'Ivoire, explains his company's twin goals of hitting tough targets while maintaining an emphasis on safety.*

# SPEED AND SAFETY, THE TWIN GOALS FOR NAS

Every month, the Government of Cote D'Ivoire checks up on the performance of NAS as it services the country's airports.

"We have what we call an on-time performance target. We are required to have 99%," explained Akue Come Adovi, NAS director of operations.

"Whenever we fall short of this target, we find out the cause and take corrective actions to ensure that we sustain this goal.

"At the same time, we have an eye on the safety aspect of operations because, without safety, we cannot reach the goal. So, the 99% on-time performance goal is being pursued together with the safety aspect of our ground-handling services."

Adovi said NAS is committed to complying with the service level agreements (SLAs) it signed with airlines and, so, takes measures to update its personnel with modern handling trends.



"In the past, you might have handled narrow-bodied aircraft within one hour. These days, the competitive nature of the handling business and emerging changes are such that you have 40 minutes to do the same thing," he explained.

In the light of evolving trends, NAS is giving serious attention to the training and experience of personnel. In October 2019, two of its managers were sent to Germany for a workshop with equipment providers to see new technologies and look at the possibility of acquiring some of them.

Adovi said his company was looking to acquire some technologically advanced handling equipment within the next few years.

Looking at safety on the ramp, he said: "Today, in Cote D'Ivoire, it is forbidden for handling staff to speed on the tarmac. In Abidjan, for instance, the speed limit is 20kph, but when you get to the area where an aircraft is parked, you have to go slowly as if you are walking.



**Akue Come Adovi:** "The 99% on-time performance goal is being pursued together with the safety aspect of our ground-handling services."

"There is a mandatory rule for staff that they have to be guided by somebody if they are to approach an aircraft. These measures are to avoid incidents and accidents.

"Also, we have sensors on our equipment. This helps to draw the driver's attention when he is getting too close to an aircraft. Some of our equipment also has automatic engine stops, which cut out when people are moving to a certain area without caution.

"All these measures have helped us to avoid incident and accidents on the field – and we have people that monitor the process."



NAS has passed its second certification for the International Air Transport Association (IATA) safety audit of ground operations (ISAGO). "The first one was in 2015; the second in 2018; and we are going to face another this year," said Adovi.

Félix Houphouët-Boigny International Airport in Abidjan is one of the airports where NAS supplies a wide range of services, including registration, boarding, luggage, transfers, track operations and support.

The company handles more than two million passengers at the airport, which is managed by International Airport of Abidjan (AERIA).

NAS runs things under a concession arrangement – initially from 1996 to 2010 and later renewed by the Ivorian Government to last for 20 years.

With the increase of passenger numbers at the airport from 600,000 in 1996 to more than two million in 2018, the task of handling services has increased for NAS over the years, alongside an increase in the number of cargo airlines operating into Cote D'Ivoire.

## SOMMAIRE

### RAPIDITÉ ET SÛRETÉ : LES DEUX OBJECTIFS DE NAS EN CÔTE D'IVOIRE

*Akue Come Adovi, directeur des opérations chez National Aviation Services (NAS) en Côte d'Ivoire explique que sa compagnie veut atteindre des objectifs difficiles tout en mettant l'accent sur la sûreté.*

**Chaque mois, le gouvernement ivoirien jauge la performance de la société gérant les opérations au sol dans les aéroports du pays.**

**Tout est mis en œuvre pour maintenir la barre des 99% au niveau du rapport performance-temps dans le respect de la sûreté, la sécurité et la ponctualité.**

**Elle s'est engagée auprès des compagnies aériennes à prendre des mesures pour former son personnel aux nouvelles technologies et acquérir des équipements modernes durant les prochaines années.**

**La société gère plus de deux millions de passagers à l'aéroport international Félix Houphouët-Boigny d'Abidjan.**

**Des règles strictes sont appliquées par le personnel aux abords des avions pour éviter tout incident ou accident.**

**La concession de NAS a été renouvelée par le gouvernement ivoirien pour une durée de 20 ans, après un contrat initial de 1996 à 2010.**

**La société a du pain sur la planche avec l'augmentation du nombre de passagers et de compagnies aériennes de fret opérant en Côte d'Ivoire.**

**NAS a obtenu sa deuxième certification ISAGO de l'IATA.**

# GROUND-HANDLING

*Lost luggage is the bane of air travel. Chloe Wilson reports on why a comprehensive IT backbone and community-wide collaboration is key for African airports in tackling the issue of mishandled baggage.*

## THE LOST WORLD – WE’RE ON THE CASE!

**T**here are currently around 1,140 international flights daily within Africa, while two-way seats within the continent grew by 19% to 112 million between 2015 and 2019, according to [anna.aero](#).

Add to this the 5% growth per annum forecast for Africa’s aviation sector by the International Air Transport Association (IATA) over the next 20 years and that’s a huge increase in passengers. And, with passengers, comes baggage.

While this influx of air passenger traffic has the potential to fuel economic growth, there are inevitably stumbling blocks. “Africa’s growth is slightly above the average for passengers globally,” said Peter Drummond, portfolio director for baggage at SITA – the global IT provider.

“Greater passenger traffic means increased baggage and increased risk. We are going to have to get smarter in order to move baggage through the system more efficiently and reduce capacity at airports.”

Capacity, alongside passenger flow and satisfaction, are major priorities for airports around the world. Research has shown that baggage collection and tracking has a profound effect on the overall passenger experience. Mishandled baggage is one of the biggest areas of complaint for passengers. And, for airlines, it can be a costly process.



Drummond pointed out: “As a passenger, you check your bag in with the airline. Airports and ground-handlers need to have the appropriate IT systems and infrastructures in place to support compliance, but the airlines bear the ultimate responsibility for delivering the correct bag to the correct passenger.”

He added that, while figures vary around the world, the average cost of repatriating a bag back to its passenger is \$100.

The whole baggage-handling process is

a complex ecosystem, with Drummond highlighting that various parties are involved, including the airline, airport, and ground-handling staff. “Transferring baggage from one aircraft to another or from one airline to another is a major pinch point in the system,” he said. “It accounts for around 46% of all delayed bags. It’s by far the most difficult stage to track a bag, as there can be multiple airlines and airports involved.”

In response to IATA’s Resolution 753 (introduced in June 2018) that bags should be tracked from start to finish, airlines and airports have stepped up their investment in increasingly innovative baggage-tracking and handling systems.



“In the context of the resolution, 68% of airlines have indicated that they plan to implement real-time bag-tracking information for passengers by 2021,” said Drummond. Additionally, 60% of airlines plan to implement information services, via mobile apps, to passengers for missing baggage and baggage location status updates.

“Airports are also upping their investment, especially with the implementation of bag-tracking services at loading, which has helped reduce baggage mishandling rates significantly.”

However, the big transition since the implementation of Resolution 753 has been the focusing of minds. It’s not rocket science, said Drummond. “If you track an item, you know where it is or where it was last seen. So, if that bag is mishandled or misplaced, it will be easier to locate and repatriate with the passenger.”

SITA’s analysis of baggage records reveals that total mishandled bags each year have plummeted 47% from 46.9 million in 2007 to 24.8 million in 2018. As a result, the annual bill footed by the industry has shrunk 43% to \$2.4 billion,



**“ We are going to have to get smarter in order to move baggage through the system more efficiently and reduce capacity at airports.”**

**PETER DRUMMOND**

down from a massive \$4.22 billion in 2007.

The resolution has certainly driven demand around the world, as Drummond admits that the number of competitors offering baggage-tracking solutions has increased over the last few years.

“The real issue that needs to be more widely addressed now,” he said, “is about partnerships and the sharing of data.” The main driver for airports to implement innovative new systems is the airlines. “They are driven by their reputation and the revenue they could lose if they don’t have a handle on problems at an airport,” said Drummond.

It’s one thing an airport tracking bags at check-in, through the baggage-handling system and during loading, but it’s no good if that data isn’t shared with the relevant parties, he added. “If that data stays at the airport, it’s not going to help the down stations or the airlines repatriate baggage or understand why or where that baggage went missing, or was mishandled in the first place. Data has to be shared with all the relevant parties.”



Operating in 45 of the 54 African countries, SITA already supports a growing footprint of airports across the continent, including key hubs such as OR Tambo in Johannesburg, Bole International Airport in Ethiopia, and airports operated by the Egyptian Airports Company (EAC), as well as the Moroccan Airports Authority, ONDA.

But, said Drummond: “West Africa is definitely a growth area for us.”

At the end of October, Ghana Airports Company extended its agreement with SITA to manage and support all airport passenger processing, baggage management, and airport operations systems across Kotoka International Airport’s newly commissioned Terminal 3 for the next five years.





The technology will be vital in positioning the airport as a primary hub in west Africa, leading the way in passenger automation and operational efficiency.

In addition to deploying common-use check-in desks and self-service check-in kiosks, the airport will make use of baggage-management technology to assist its airline customers in reconciling and tracking bags throughout the journey.

Drummond also pointed out that, in addition to growth in west Africa, he's also noticing "an increasing demand for lower-cost and lighter solutions, such as basic bag-tracking services at regional and smaller airports across the continent".

No matter where they originate, passengers are already embracing technology to ease and expedite their journey through the airport, and this includes baggage-tracking solutions.

As IATA's global passenger survey 2019 shows, 53% of travellers would be more likely to check their bags into the hold if they could track them.

The survey also found that 46% would like to track their bag and have it delivered to an off-airport location. SITA's own research supports this, indicating that the level of satisfaction among passengers receiving status updates on their baggage at arrival, via mobile devices, is higher

than among those relying on airport screens or public announcements.

The introduction of radio-frequency identification (RFID) is just one of the solutions that will help meet this growing expectation from passengers to have access to baggage-tracking information throughout their journey.

It uses radio-frequency electromagnetic fields to transfer data and automatically identify and track bags. Crucially, it enables a large number of tracking and identification tasks to be undertaken without human intervention. Consequently, the wider adoption of RFID by airports across Africa, and further afield, could also prove a positive return for airlines, both in cost and passenger satisfaction.



IATA has already committed to developing a standard for using RFID tagging to help increase the accuracy of baggage-handling and ease processes as passenger numbers continue to rise.

Additionally, the bag-tracking data generated from RFID technology also provides the air transport industry with a rich stream of data. This can be enhanced with artificial intelligence (AI) tools to create even greater efficiencies and,

**Pressure point: The main driver for airports to implement innovative new systems is the airlines.**

ultimately, to enhance the seamless passenger journey.

Drummond acknowledges that predictive analytics capabilities, which will help identify and address disruptions in baggage-handling before they occur, is an additional use case for AI implementation. "What's more, there is a proliferation of mobile devices across the African continent," he said. That, combined with the increased use of biometric technology to enhance passenger flow through the airport, could easily be extended to baggage-handling. "The industry is constantly looking at ways in which it can track baggage more efficiently and AI is certainly one way to achieve that," he added.

Smart technology and passenger-facing solutions are part of the response to this challenge. But, so too, is community-wide collaboration and a comprehensive IT backbone. "The latter needs to seamlessly relay information between all the key role players, regardless of their geographical location. But that's something we're seeing airlines and airports throughout Africa increasingly commit to," Drummond concluded. "We just need to ensure we continue working collectively to keep our eye on the bag!" ■

*Demand for simulators across Africa is growing. Keith Mwanalushi looks at a recent initiative to support Q400 pilot training in Kenya.*

# FSI SIMULATOR DEAL IS RIGHT ON Q

**F**ollowing the acquisition of the Q400 programme, De Havilland Canada aims to bolster its presence in Africa.

During the 2019 Dubai Airshow, it announced commitments for up to 37 Dash 8-Q400s and showcased an aircraft on static display operated by Jambojet, a brand of Kenya Airways.

The announcements included a mix of firm orders and letters of intent from various operators, including Nigeria-based Elin Group, and a handful signed by the Republic of Ghana for its own start-up carrier.



Also, the company reaffirmed its commitment to operators in the region with the addition of two authorised service facilities to its network.

The number of Q400s in Africa is increasing, with a limited number of simulators to support the training. The Dash 8-400 fleet in Africa today has 87 aircraft in service and on order with 20 operators, but is only served by around three simulators –



according to Jambojet.

Consequently, in July 2019, Kenya Airways, along with Jambojet and Flight Safety International (FSI), signed a tripartite agreement that will see FSI provide a Q400 simulator to support training of cockpit crew and maintenance teams.

“There’s a shortage of Q-400 simulators within a close proximity,” said Jambojet chief executive, Allan Kilavuka (now Kenya Airways CEO).

He added that the simulator would help enhance training and safety of Q-400 operators in the region, as well as reduce training costs. “We are glad to be in partnership with an organisation with similar commitment to safety as us, and we will rely on their knowledge and skills, which will help to enhance our continued focus on safety and reliability.”

Jambojet operates a handful of Q-400s; the fleet is expected to reach 15 aircraft by 2021 as part of



the airline’s expansion strategy.

Both Kenya Airways and Jambojet are looking to leverage on FSI’s wealth of experience in simulator technology to get more pilots trained up.

Kilavuka said the new simulator, installation of which is scheduled to be complete this month, will not only be used by Jambojet as the anchor tenant, but it will also be available to other Q-400 operators in Africa. The new equipment will further reduce training costs at the low-cost carrier by at least 10%, he indicated.

Todd Young, chief operating officer at De Havilland Canada, agreed that the new simulator is a significant step in developing local capacity within the region. “It also bolsters the support infrastructure for the aircraft from which to build a larger pool of pilots,” he said. “The Dash 8 is an entry-level aircraft for many commercial pilots, who will eventually move on to larger aircraft, so we are happy to support the overall development of the aviation sector.”

Before this most recent simulator addition in the region, operators would incur significant costs in travel, logistics, and incidental expenses associated with pilots and mechanics training.

Young said: “At the rate of

## AIRLINES BATTLE TO TACKLE PILOT SHORTAGE

**Kenya Airways has been making headlines recently as it battles with a shortage of pilots.**

**As a result, the carrier was forced to ground aircraft and cancel some of its flights.**

**A court order in mid-November 2019, as seen by local sources, is reported to have blocked the airline’s attempt to hire at least 20 foreign pilots.**

**Faced with a crucial pilot shortage dilemma, airlines are being forced into strategic recruitment planning. Career attractiveness and realistic financing for training have become crucial factors to attract young people. Therefore, airlines fund their future flight crew training with the intent of recruiting the next generation of pilots.**

**Kenya Airways recently said there was a deficit of around 60 pilots and aimed to continue hiring locally, as well as externally.**

**The airline has lost several pilots to Middle East airlines in the past 12 months, reportedly due to low salaries, according to the Kenya Airline Pilots Association (KALPA).**

**KALPA opposes the employment of non-Kenyan nationals, saying there are enough unemployed pilots in the country.**

**Getting more pilots into its training programme will be vital**

**as the Nairobi-based airline seeks to get back into the black after suffering significant losses in the last few years.**

**The solution for Kenya Airways must lie with agreement with its unions and an effective competency-based training programme, such as the multi-crew pilot licence (MPL) for new starts.**

**The MPL is designed to develop the abilities needed to fly multi-crew airline aircraft. Compared to traditional training pathways, it makes greater use of simulators, adopts competency-based training methods and further applies human factors and threat-and-error management in all phases of training.**

**Traditional training methods emphasise independence and individual skills. While appropriate for single-pilot operations, they can impede the transfer to multi-crew operations. Pilots moving to work in airlines have needed bridging training.**

**In the past, most pilots have had a military background and the system of private pilot licence (PPL) and commercial pilot licence (CPL) has been existing for the past few decades.**

**The MPL is implemented to skip the training for the current CPL with instrument rating, and allow the pilot to work towards the airline transport pilot licence (ATPL).**





Allan Kilavuka: "There's a shortage of Q-400 simulators within a close proximity." Left: The new simulator, based in Nairobi, provides training for multiple airlines.

PICTURES: JAMBOJET.

approximately 8-10 pilots and 3-5 technicians per aircraft, these numbers add up with the mix of initial type rating training, and recurrent training sessions. With the simulator capacity made available locally, African-based Dash 8 operators will benefit from savings on travel cost and pilot time away from the business."

The simulator is also expected to increase proficiency by enabling pilots to train more often.



"De Havilland Canada applauds FlightSafety International, Kenya Airways and Jambojet on this agreement to position a full-flight simulator for the Dash 8-400 aircraft in Nairobi to support high-quality crew training in the region," Young said. "This development is a testament to the growing size of the fleet, and the Dash 8-400's flexibility to meet diverse operating environments in Africa and the Middle East."

Kilavuka said his airline's focus was to ensure and maintain the highest possible safety standards in all operations. "We also look for opportunities to improve on our efficiencies and reduce our operating cost. One such way is to bring a simulator closer to our

operations. We would then pass on these cost savings and efficiencies to our customers, by improving our operations and making flying more affordable. A Q400 simulator that is easily accessible will be critical in up-skilling the new and existing pilots."

The new FlightSafety FS1000 simulator will be used by Jambojet and other airlines and will include instructor-led courses. It is installed at the Kenya Airways Pride Centre in Nairobi and qualified by the European Aviation Safety Agency (EASA) and the civil aviation authorities in Kenya.

There will be more than 150 Dash 8 100/200/300/400 aircraft once De Havilland Canada delivers the latest firm orders into Africa this year.

Young said: "This is a very interesting market for us where the Dash 8-400 has greatly outpaced its turboprop and regional jet competitors over these last 10 years." He anticipates this to be a market that will continue to select the Dash 8-400 based on its hot and high-performance characteristics, high payload and the need to fill in market gaps, where little to no air connectivity exists today but requires a cost-efficient and high performing aircraft. ■

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*Africa needs a continent-wide response to the growing demand for qualified MRO technicians. The challenge, as **Chuck Grieve** reports, is navigating a route to harmonisation and standardisation of training.*

# FUNDING IS KEY IN PLOTTING A ROUTE TO QUALITY TRAINING

**P**rojections about Africa's ability to supply enough technicians to service its own expanding civil fleet do not make comfortable reading for the continent's aviation authorities.

Figures from respected consultants Oliver Wyman, supported by Boeing and Airbus, suggest Africa will need about 30,000 new maintenance technicians by 2037 – an average of more than 1,600 a year. The forecasters predict Africa will lose about half its current workforce through retirement in the next 10-15 years.

Africa is not without a sizeable complement of training centres. A survey conducted by SITA in 2008 found more than 500 aviation training organisations (ATOs) providing instruction in various related disciplines.

The demands of maintenance make up 21.5% of the continent's current training requirements. However, efforts to harmonise and standardise technical training remain in limbo.

Margareth Kyarwenda, the founding secretary general of the Association of African Training Organisations (AATO), and a veteran of more than 34 years at the Tanzanian Civil Aviation Authority, said funding is a key issue.



AATO was set up in 2013, under the International Civil Aviation Organization (ICAO) comprehensive regional implementation plan for Africa, to help the continent's ATOs develop into centres of excellence, accredited under systems run by ICAO's global aviation training unit and AATO. Nine ATOs have, so far, received ICAO centre of excellence status.

The accreditation system – for African ATOs only – aims at ensuring that certificates from accredited bodies are accepted across the continent. However, said Kyarwenda, the programme hasn't started yet due to a shortage of qualified inspectors and, also, adequate funds for audits and accreditation.

She added: "AATO plans to train inspectors in 2020 and, thereafter, commence the accreditation of African ATOs."

The industry knows what needs to happen. In Nigeria, stakeholders were recently urged by the rector of the Nigerian College of Aviation Technology (NCAT) to combine efforts to develop standards. Addressing a meeting to set up a local chapter of AATO, Captain Abdulsalam Mohammed said better training was crucial to growth.

Ethiopian Airlines has invested significantly in its aviation academy, boosting its capacity from 200 to 1,000 students a year in pursuit of an annual target of 4,000 students – a large proportion of them mechanics – by 2025.



**Joseph Kofi Adda:**  
A supply of qualified personnel underpins safe and sustainable development.



**Dy Moonsammy:**  
Africa's aviation sector needs continent-wide measures to attract young people into the industry.

At AATO's third general assembly, held in Accra in October, more than 80 delegates from 25 countries heard keynote speakers stress the importance of training.

Ghanaian aviation minister, Joseph Kofi Adda, said: "Africa is today re-emerging from two decades of slumber in the aviation sector. Safe, secure, and sustainable development relies on the availability of qualified and competent employees and supervisors."

AATO president, Dy Moonsammy, Comair's senior manager for learning and development, stressed the pressing need for African aviation to develop continent-wide measures to attract young people into the industry.

Kyarwenda said the general assembly "resolved that AATO should work closely with regional safety oversight organisations to start the standardisation and harmonisation exercise".



Despite a membership of only 16 ATOs so far, AATO has made "tremendous strides" towards the realisation of its objectives. A tangible outcome is the African Aviation training roadmap, drawn up to provide guidance on the development of training aviation personnel in Africa to meet future demands for the industry.

The roadmap highlights a series of short, medium and long-term objectives and milestones on the road to a harmonised continent-wide network of technical training institutions.

Alongside the AATO work, international organisations, such as Lufthansa Technik Maintenance International (LTMI), are helping the effort as part of their commitments to regional airlines.

In South Africa, where LTMI established operations earlier this year, two cohorts of unlicensed engineers, who joined the company in April and July 2019, are undergoing training.

Christian Haas, Lufthansa Technik technical operations director Comair, said the top candidates are in the process of aircraft type training, leading to applying for their authority licences. The company recruited licensed, as well as unlicensed, engineers to start in February 2020, when the next internal development programme for unlicensed engineers began.

Hafsah Abdulsalam, group sales director of parts supplier, AJW, said in-house technical training is part of what she sees as a new drive by African airlines to develop their own MRO capabilities. "I hope it does go somewhere," she said.

A big challenge of non-destructive testing (NDT), long a staple in aircraft line and base maintenance programmes, is to find the right experts and tools when they're needed. Innovations in tools and training could help put African MROs on a winning path. **Chuck Grieve** reports.

# CAN AFRICAN MROs PASS THIS BIG TEST?

**T**here is said to be a view among managers at a certain level in airline operations that non-destructive testing is a complex process that doesn't add value to the business.

It's a necessity that often has to be outsourced by even moderately well-resourced airline MRO shops – mandated by original equipment manufacturers (OEMs) for safety and reliability reasons, but an invisible cost nonetheless.

This may be a reaction among managers to several 'pain points' related to testing and inspections, according to Teddy Canadas, chief commercial officer of the Airbus subsidiary, Testia, one of a small number of companies currently in the African aerospace NDT market.

It runs the African NDT Centre (ANDTc), a South Africa-based specialist in inspection, training and consultancy.

Canadas said it can, at times, be "difficult to find the right expert" to assess corrosion, dents, damage from lightning strikes, fatigue cracks, and so on. In the aviation community, only pilots have more rigorous certification and recertification requirements to remain current than NDT professionals. This leads to a scarcity of qualified technicians.

A related challenge can be making sure the

right tool or tools are available for the work to be carried out – all contributing to a perception that inspections are lengthy, costly, and prone to unplanned delays to an aircraft's return to service.

For example, said Canadas: "You have a C-check, which is on its final day, when someone opens a panel and finds corrosion." Dealing with this can add a further two weeks to a schedule while the MRO discusses with the OEM how to resolve the problem.

"I see this a lot with my customers, whether airlines or MROs," said Canadas. "We also see the other side with Airbus. There is a lot of back and forth to find solutions to deal with damage. Often it's difficult to have a quick answer from the OEM on the right way to proceed."

ANDTc was set up in 2003 as a centre of excellence in a discipline that deals with increasingly complex problems in aerospace manufacturing, as well as MRO. In 2007, the South African aeronautical engineering and manufacturing company, Aerosud, acquired a 50% shareholding.

Since 2012, ANDTc has been serving customers from purpose-designed premises in the Centurion Highveld Technopark, near Johannesburg. It deploys a team of "highly qualified" level 2 and/or level 3 inspectors, skilled in the use of NDT

methods, such as radiography, penetrant inspection, magnetic particle inspection, ultrasonic and eddy current inspection.

The African market is small, said Canadas. This creates its own challenges for NDT inspection work and training – and encourages innovative thinking.

Testia is a strong advocate of aerospace-specific testing devices for a fully connected 'ecosystem'. NDT, said Canadas, "should be a way of adding to the bottom line by saving cost".

An innovation that the company sees as the way forward in NDT combines eight tests on one tool, "like a Swiss Army knife". A further development has enabled tools to communicate with each other, and connected them all to the maintenance permission system to share information online with the supporting expert at base.



On the training side, ANDTc has custom laid-out inspection laboratories, X-ray bays, and well-equipped classrooms. Training qualifies NDT technicians at three stages of competence and responsibility, designated as levels 1-3.

"We're looking, not to shorten aspects of the training, but to bypass them with mature technology," said Canadas.

One potential approach is to 'uplift' the workforce. He explained: "One customer was telling me, 'You give me solutions for my 20 NDT guys but I have 700 technicians'. So we have looked at solutions to empower technicians so they can carry out routine tasks at their base and out-stations, supported via video link by an expert at a main base, around the clock."

Simplification of some of the tools is a key factor. By designing tools to show a 'go/no-go' result, where the task is suited to such black-and-white clarity, Testia transfers the responsibility from the technician, who may be only level 1-qualified, on to the tool. "We certify these tools so the technician does not have to be certified," said Canadas. "That's our strategy."

Tasks that can be handled successfully with this approach include cladding inspection, delamination and localisation of defects. "There are many things a regular technician can do, so it's a huge saving for the MRO to use all the technicians, not just the NDT guys."

## LOOP-TESTER BACKED BY BOEING

Testia is not the only company offering advanced solutions in the non-destructive and non-invasive space. Another is MK Test Systems of the UK.

MK has launched the ExLRT loop-tester, which it developed in collaboration with Boeing. It is being distributed in Africa by the global engineering service provider, Prime Aerospace, which covers Africa and the Middle East from its premises in Sharjah Airport free zone.

The ExLRT is described as lighter, safer, and more user-friendly than the current industry-standard LRT. It has been certified as 'intrinsically safe', so it is suitable for use in Zone 0 around fuelled or unfuelled aircraft.

Carl Bullock, MK managing director, said the ExLRT is a "much-needed replacement" that "eradicates the problems commonly associated with the current tool, which is heavy, uses ageing technology, and has obsolescence issues."

Boeing has a detailed programme of document updates under way to ensure operators have full confidence in the approval status of the tool.



**Intrinsically safe: The ExLRT loop-tester is certified for use in Zone 0 around fuelled or unfuelled aircraft.**

Sanjay Dutt, managing director of Prime Aerospace, said the company expects to see good uptake of the ExLRT from MROs around Africa, where Prime counts among its customers some of the biggest and most successful airline-linked and independent MROs, from Ethiopia to South Africa. ■



Eight is enough: Teddy Canadas with Testia's new eight-in-one NDT tool.



## BUILDING A CONTINENT'S COMPETENCE

The African Federation of Non-Destructive Testing (AFNDT) takes a leading role in the expansion of NDT competence on the continent, mainly through training and certification.

The federation – one of the four regional bodies affiliated to the global trade organisation the International Committee for NDT (ICNDT) – counts the national organisations of at least 13 African countries among its members.

AFNDT spokesman, Harold Jansen, current president of the Non-Destructive Testing Institute of South Africa (SAINT) and systems and quality manager of the Southern African Institute of Welding (SAIW), said the size of domestic markets is holding back the development of many members.

He said the smaller NDT communities “find it difficult to even sustain one industrial sector”, making expansion of NDT capabilities in Africa “even more challenging”.



**Critically important:** Harold Jansen believes knowledge transfer in NDT is vital for the development of what's seen as a scarce skill in Africa.

Partnering with international companies working in Africa is a possible solution to expanding the NDT community. “Since NDT is regarded as a scarce skill, knowledge transfer in South Africa and Africa is critical to enhancing a particularly underdeveloped set of skills,” he said.

The key to improving the competence of NDT personnel, he added, was a professional designation that incorporated training, qualification and certification to a recognised standard. Regional and international harmonisation of training, examination and certification, was among objectives of the AFNDT.

Former SAIW executive director, Sean Blake, told a forum in Vienna that the growth of NDT in Africa faced several challenges. These included political and financial instability, the lack of a formal NDT infrastructure or industry, logistics (travel, language, safety of personnel), staff turnover and limited resources for training and examination.

Developing an African qualification and certification scheme, he said, would minimise the need for expatriate labour and skills but would require regional harmonisation, mutual recognition and high-quality training, especially in advanced techniques. There, help from developed nations would be welcome. ■

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*Ethiopian Airlines is investing heavily in information and communications technology (ICT) development to boost its sales revenue. Kaleyesus Bekele reports.*

## WHY \$40M INVESTMENT MAKES ETHIOPIAN SO APPY

**E**thiopian Airlines has invested more than \$40 million in the past five years on the latest ICT technologies to boost online sales.

The airline made the investment to acquire and develop a data centre, systems and software.

The airline digital department has internally developed a mobile application that enables customers to book a flight, pay and check-in using their mobile phones.

Miretab Teklaye, director integrated marketing communication, explained that ICT is one of the four pillars of the airline's 'vision 2025' 15-year growth roadmap programme – the others are fleet, human resource and network.

"We are in the digital era and we are providing our customers with seamless operational services using the latest communication technology," he said.



Ethiopian launched the mobile app in 2018 and, today, has close to one million users. Online sales represent 25% of the total volume. "Our online sales have grown from 11% in 2017 and we plan to increase this figure to 50% by 2022," Teklaye added.

The airline's online sales in Ethiopia alone have grown from 4% to 40%.

"Ethiopian Airlines' corporate strategy is to be a cost-leader by providing global-standard service. To be a cost-leader, one of the drivers is the operational excellence that we offer using communication technology," said Teklaye.

The mobile app offers three local languages and a number of local payment options. In Ethiopia, the airline offers 12 payment options by collaborating with local banks and CBE Birr, M Cash and Hello Cash.

Throughout Africa, it offers 35 payment options including M Pesa, Air Tel, MTN and ECO Bank. In China it uses Ali Pay and We Chat. It also provides local payment options in Brazil.



**“We are in the digital era and we are providing our customers with seamless operational services using the latest communication technology.”**  
MIRETAB TEKLAYE

"We use localised features. We are providing operational excellence using IT technologies," Teklaye said.

The mobile app also offers 11 foreign languages including English, Italian, French and Portuguese.

The airline digital team is now developing another mobile app, named Feel Addis, which enables layover passengers staying a night in Addis Ababa to secure their transit visa, hotel voucher etc. "The layover passengers can also use the app to see around Addis Ababa. It helps them experience the nightlife and go out shopping. We also have a chatbot on Telegram and Messenger called Lucy," Teklaye said.



"Our every process uses best-of-breed technology. All the booking, payment, ticketing, checking in and immigration processes, plus boarding end-to-end experience, is digitised. We are providing a personalised service for all our customers. We are reachable from any part of the world at any time," he added.

Teklaye said that, though the airline has had a website for many years, the growth of users on desktop was static, while mobile app utilisation was growing fast. "We are investing a lot to diversify our channels," he added.

"In Africa, Kenya Airways, South Africa Airways and EgyptAir started using mobile apps between 2013-2015. We started in 2018, but now we are the biggest in terms of number of users. In terms of penetration, ours is the biggest," Tekelaye said.

Today, 15% of Ethiopian's sales are done through the mobile app and it has 960,000 users, which is increasing every day.

"Our plan is now to include internet of things (IOT) on the app," said Tekelaye. "We also want to have a feature on the app that enables travellers at Addis Ababa Airport to navigate through the airport and locate their boarding gates easily as the app reads the beacons."

**Nicolas Boyet: « Notre objectif principal est de tirer le meilleur parti de la technologie dans le traitement des revenus des compagnies aériennes, en mettant l'accent sur la productivité et la qualité. »**

**Nicolas Boyet: "Our main aim is to make the most of technology in the processing of airline revenue, with a focus on productivity and quality."**

# UNE PÉPITE DE L'IT MADE IN MAURITIUS

*Maureva, une pépite mauricienne spécialisée dans la fourniture de logiciels et de services aux compagnies aériennes, poursuit sa croissance à l'international avec la création d'un bureau à Montréal et une filiale à Séoul. Un reportage de Vincent Chappard et Anuradha Deenapanray Chappard.*

**D**epuis sa création il y a 15 ans, Maureva s'est forgée un nom et une réputation d'excellence dans le domaine du management services (ex BPO) au niveau international.

Les pionniers de cette start-up mauricienne dont son directeur général, Nicolas Boyet, viennent du monde de l'aérien. Ils ont un but précis : développer des applications métiers qui interagissent et qui permettent de structurer et de faciliter la gestion des compagnies aériennes.

« Notre objectif principal est d'arriver à utiliser au maximum la technologie dans le traitement des recettes commerciales des compagnies aériennes en misant sur la productivité et la qualité », soutient Nicolas Boyet.

L'avènement d'Internet, des billets électroniques et des PSS a changé la donne du « Revenue Accounting ». L'industrie a vu des gains importants grâce à ces outils structurants en termes de productivité et d'augmentation des recettes. Aujourd'hui, les opérateurs traitent plus de transactions avec moins de personnel et toujours plus d'IT.

Maureva est l'un des rares centres de management services (autrefois BPO) qui maîtrise à la fois ses propres logiciels et les traitements de données. La société a en effet

développé une gamme complète de produits : la première brique fut le Revenue Accounting avec le logiciel EDGAR, puis MARGO (système de gestion du fret), ALEXIS (solution de planification des vols et de gestion des équipages), ANDIE (NDC / récemment certifié niveau 4) et MATIS (Business Intelligence).

Maureva assure aujourd'hui des « management services » de plus de 60 compagnies aériennes dans le monde.

« Nous travaillons à la fois avec des petites compagnies qui n'ont pas de ressources internes pour faire de l'IT mais également avec de grandes comme Cathay Pacific ou Air New Zeland sur certains applicatifs », rappelle Nicolas Boyet.

## **Une croissance soutenue à l'international**

Maureva est devenue une grande PME avec plus de 300 salariés principalement des Mauriciens dont de nombreux talents féminins y compris à des postes clés. Elle dispose d'une base principale à l'île Maurice (développement, support et processus) et de deux centres de développement à La Réunion.

Fort de ses succès commerciaux, la société a renforcé sa présence internationale en 2019 en ouvrant un nouveau bureau à Séoul et une filiale à Montréal.



Pour Nicolas Boyet, Maureva est géographiquement bien positionnée pour répondre à ses clients en Europe, en Afrique et au Moyen-Orient. Il était très difficile de couvrir l'Asie et l'Amérique du Nord et du Sud. D'où, l'implantation de ces structures qui permettront de répondre aux besoins des clients dans ces régions en termes de support et de déploiement des solutions. « Nous couvrons aujourd'hui l'ensemble des zones horaires depuis Séoul, l'île Maurice et Montréal. »

L'Asie est un relai de croissance dans les années à venir. « Il y a des achats d'avions importants et de nouvelles compagnies qui investissent et se développent très vite. Elles ont besoin rapidement de solutions et d'applicatifs pour assurer une gestion optimale », souligne le directeur de Maureva.

Maureva a récemment remporté plusieurs contrats : Bamboo Airways, Air Peace, Proflight Zambia, Air Creebec et Cayman Airways.

## **Un partenaire stratégique de l'IATA**

Depuis plus de 10 ans, Maureva est un partenaire stratégique de l'IATA. Elle est ainsi impliquée dans les groupes de travail pour faire évoluer les standards pour rendre l'industrie plus performante et plus productive. Idem pour One Order.



Notre passion: répondre aux exigences des compagnies aériennes.

The Maureva team: Passionate about solving airlines' complex challenges.



Pour Nicolas Boyet, le commerce mondial a adopté de nouveaux « business model », le commerce électronique à l'instar d'Amazon. Le secteur du transport aérien est toutefois resté en marge.

« IATA One Order a pour objectif de faire rentrer le transport aérien dans ces nouveaux standards du commerce mondial », rappelle-t-il. « Même si le transport aérien a ses spécificités, il existe beaucoup de similarités en termes de commercialisation des offres ».

Selon Mladenka Vukmirovic, responsable de l'innovation chez Maureva, il s'agit d'introduire la vente au détail au cœur des systèmes électroniques de vente des billets d'avions.

IATA One Order est une norme permettant à la compagnie aérienne d'utiliser ces nouvelles technologies.

Elle donne à l'utilisateur une expérience qu'il peut obtenir sur un site de commerce électronique classique.

Cela multiplie les différentes façons d'acheter un billet d'avion permettant ainsi de diversifier et de personnaliser les offres, de mieux visualiser les produits et de communiquer directement avec les passagers, et de mieux cerner leurs besoins.

L'objectif pour les compagnies aériennes est d'intégrer et de simplifier ces processus dans

leurs systèmes informatiques pour piloter leurs recettes et réduire leurs coûts.

C'est là, qu'intervient le programme One Order.

#### Toujours plus de services innovants

Les compagnies aériennes ont aujourd'hui des difficultés à recruter ou à gérer leurs « Revenue accounting ».

Ce sont en effet des métiers spécifiques et techniques. Maureva assure de plus en plus le traitement des recettes commerciales des compagnies aériennes. C'est le cas pour la moitié de ses clients.

« Maureva a la capacité d'adapter ses effectifs pour réaliser le traitement des données de nos clients. Nous pouvons constamment réallouer ou renforcer nos effectifs selon les besoins », fait ressortir Nicolas Boyet.

Elle assure aussi des missions ponctuelles de conseil à la carte : contrôle qualité, audit et formation du personnel.

Maureva a de nombreux challenges à relever pour soutenir ses activités.

D'où, le déploiement de ses applications sur le cloud ainsi qu'une partie de son « management services ». Cela offre davantage de possibilités en termes de sécurité et de disponibilité des données. ■

## SUMMARY

# MAURITIAN TECH COMPANY EXPANDING AROUND THE WORLD

Maureva, a Mauritius-based company that specialises in the provision of software and follow-up services to airlines, continues to grow internationally with the opening of offices in the Canadian city of Montreal and a further subsidiary in South Korea's capital Seoul.

Since its inception 15 years ago, Maureva has forged a reputation for excellence in the field of international management services.

The pioneers of this Mauritian start-up, including its director general, Nicolas Boyet, come from the world of aviation and they have a specific goal to develop interactive business applications that facilitate airline management. "Our main aim is to make the most of technology in the processing of airline revenue, with a focus on productivity and quality," explained Boyet.

The advent of the Internet and e-ticketing has changed the face of revenue accounting, and the industry has seen significant gains from these structuring tools in terms of productivity and revenue growth.

Today, operators handle more transactions with fewer staff and more IT.

Maureva is one of the few management services centres that create both its own software and data processing systems, and the company has developed a complete range of products.

The first component was revenue accounting with EDGAR software; then MARGO, a cargo management system; followed by ALEXIS (flight planning and crew management solutions); ANDIE (new distribution capability recently certified level 4); and, finally, MATIS (business intelligence).

□□□□

Maureva currently provides management services to more than 60 airlines worldwide.

"We work equally well with small companies that don't have in-house IT resources and also with major international airlines like Cathay Pacific and Air New Zealand," said Boyet.

Maureva has become a larger SME, with more than 300 employees, mainly Mauritians, including many talented women in key positions. It has a main base in Mauritius for development, support and processing, with two development centres on the relatively nearby French island of Réunion.

For Boyet, Maureva was already well-positioned geographically to service its clients in Europe, Africa and the Middle East, but it was challenging to cover Asia, along with the Americas. So the company's new offices will allow it to meet the needs of customers in these regions.

Maureva has recently won several new contracts, including Bamboo Airways, Air Peace, ProFlight Zambia, Air Creebec and Cayman Airways, and for more than a decade it has been a strategic partner of IATA, being involved with running working groups designed to develop standards to help make the industry more efficient and productive. ■



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# A NEW LIFE OF LEASE?

*One of the challenges for African airlines is gaining access to suitable aircraft. Now, as Victoria Moores reports, leasing-support company, Six West, has an idea that could help.*

**T**he problem is quite simple. African airlines want aircraft. Lessors want to place aircraft. But lessors are risk-averse and repossessing aircraft in Africa can be challenging, so neither side gets what they truly want.

This is where Six West comes in...

A normal mainstream lessor and an African airline sign a regular lease deal, but a condition is added to the contract stipulating that the aircraft must be placed on Six West's Maltese air operator's certificate (AOC) and operated by its crews on a wet-lease basis.

The lessor's risk is minimised, because the aircraft is not placed on the local register, making it easier to repatriate if things go wrong. This gives the lessor greater control of the asset – without having to take on day-to-day control – and removes the need for legal counsel in every country. Six West also manages the maintenance records, which are a major pain point in aircraft repossessions and lease transitions.

Meanwhile, the African airline gets access to a broader range of lessors, making it more likely to secure the aircraft it wants.

The aircraft is operated by Six West, so the airline does not need to find crews and has the flexibility to change types further down the line, if needed. It also avoids the time delays and complexity of adding new aircraft types to the local register.



Six West director of operations, Matt Gee, said this concept is geared towards up-and-coming markets, like Africa. It could also be a good fit for African start-up airlines, looking to lease an initial fleet for five years, before receiving ordered aircraft.

"It's a region that needs connectivity, because there are some quite sparsely populated areas that are underserved, or even unserved," he said. "There's huge opportunities within – I wouldn't say the whole of Africa – but certainly targeted regions. There's a lot of interest into the region, for sure. It's not unexplored or untapped, but it's probably less explored and tapped into by lessors."

However, most lessors have a limited number of African airlines that they would do business with, such as EgyptAir, Ethiopian Airlines, Royal Air Maroc and a few regional carriers.

"Lessors aren't that favourable to simply put an aeroplane on lease on a local register in Africa, because, if things go wrong for the airline, it just gets harder and harder to deregister and you can be caught for quite a period of time trying to get your aeroplane out," he said.

While lessors may still be reluctant to enter completely unexplored markets, Gee said the Six West model could open up "less explored" regional markets as an option for aircraft placements.

"They've got requests from airlines that they sometimes can't fulfil, or don't want to fulfil. They are very interested in this type of market, because it opens up opportunities that they perhaps haven't been able to look at," he explained.

Six West is in "very serious" talks with three lessors, which are looking to use the company's model in Africa, spanning a mix of aircraft types.

Dublin-headquartered Six West's fee is typically paid by the airline, but it might also be covered by the lessor, depending on how keen it is to place the aircraft. The airline pays the direct operating costs.

Gee acknowledged that airlines could simply take a direct wet-lease, without involving Six West, but wet-lease aircraft are in short supply. The choice of types is limited and it might be hard to secure modern aircraft on a mid- to long-term wet-lease.

Six West is currently operating from a Maltese European Aviation Safety Agency (EASA) AOC. In the longer term, Gee said, the company is looking to also secure a Cayman Islands AOC to give greater scope across regulatory jurisdictions. ■

**There's huge opportunities within – I wouldn't say the whole of Africa – but certainly targeted regions.**

MATT GEE



# all in a day

PEOPLE / PERSONNALITÉ

## Catherine Buchanan

Marcelle Nethersole *speaks to Vertis Aviation's COO.*

1

■ Can you tell me a little about Vertis Aviation?

Vertis is a boutique charter specialist.

We focus on ensuring our customers have a high-quality travel experience every time we arrange a charter on their behalf. There is no single formula that satisfies every client and we pride ourselves on providing each and every one with custom solutions to complete whatever mission they request.

Demands are diverse; in a single day we could be managing a financial roadshow, a circumnavigation for a honeymoon couple, or efficiently transporting heads-of-state safely, securely and discretely, between meetings.

We also support aircraft owners and operators with our Vertis charter management programme (VCMP). The VCMP proposition positions Vertis as an external charter marketing and sales division, liaising with the operator to generate revenue through charters.

2

■ Can you talk about some of your projects in Africa?

Some of the first aircraft we signed to our VCMP services are based out of Johannesburg, so Africa is in our DNA.

Today, we market a Bombardier Global 6000 and Bombardier Challenger 350 based in South Africa, and we recently added a Bombardier Global 5000 to our portfolio.

Many of our customers fly internationally on long-range aircraft originating outside of Africa. We also have clients that demand complex intra-Africa charters to support business development.

Africa is growing as a tourist destination and we often arrange flights to remote safari lodges.

While charter is our main focus, we have developed a network that includes professional, reliable, suppliers, and have advised on fixed-base operations (FBO) standards and developments in a number of countries.

3

■ Why is Africa seeing a big growth in business aviation?

Growth is being driven by a number of socio-economic factors. The rise in the mining of natural resources such as oil, gas, gold and minerals, stimulates business aviation. These, along with industries such as construction and telecoms, are receiving a lot of international and national investment, leading to more businesses and economic growth.

Africa has become a prime location for new business and international investment, with seven of the 10 fastest-growing economies being there. Naturally, where there is growing commercial development, business aviation follows.

The commercial sector is still very restricted in terms of freedom of flight regulations, and commercial airline reliability is not always great. So, for executives, business aviation is often the only reliable, safe means of travel.

Aside from economic growth, Africa is also seeing an increase in charters for leisure and tourism purposes.

5

■ What is next for Vertis in Africa?

Our main goal is to expand our operations, growing the client base, finding more owners that can join the VCMP programme, and enhancing the business aviation offering. We have also just launched VA Footprints – a programme to support the industry move towards a lower carbon future. We will pay for carbon offsetting on behalf of our clients for every charter flight we arrange.

6

■ What does a typical day hold for you in your role?

I am responsible for planning and executing Vertis' global development strategy. On a daily basis this entails managing the international team, planning marketing activity and creating operational efficiency. Operationally, I oversee complex charters, and regularly meet customers and operators to ensure there is open communication, because so much of our work relies on developing and maintaining strong relationships.

Auditing our suppliers is also part of my work.

Regular networking at conferences and industry events is also key.

4

■ What challenges do you face in Africa?

Initially, one of the biggest, was access to quality aircraft. A decade ago, the African business aviation fleet was fairly old, which made it difficult to offer clients the high-quality experience that is associated with Vertis.

Thankfully, this is not such a prevalent issue now, with younger pre-owned aircraft and new types regularly being added to the continent's fleet.

We still face issues around currency exchange. Working in different countries makes it difficult to move money, and it is one factor that would boost the industry even further if we were able to achieve some stability. Tied in with money exchange is the political uncertainty experienced in some nations.





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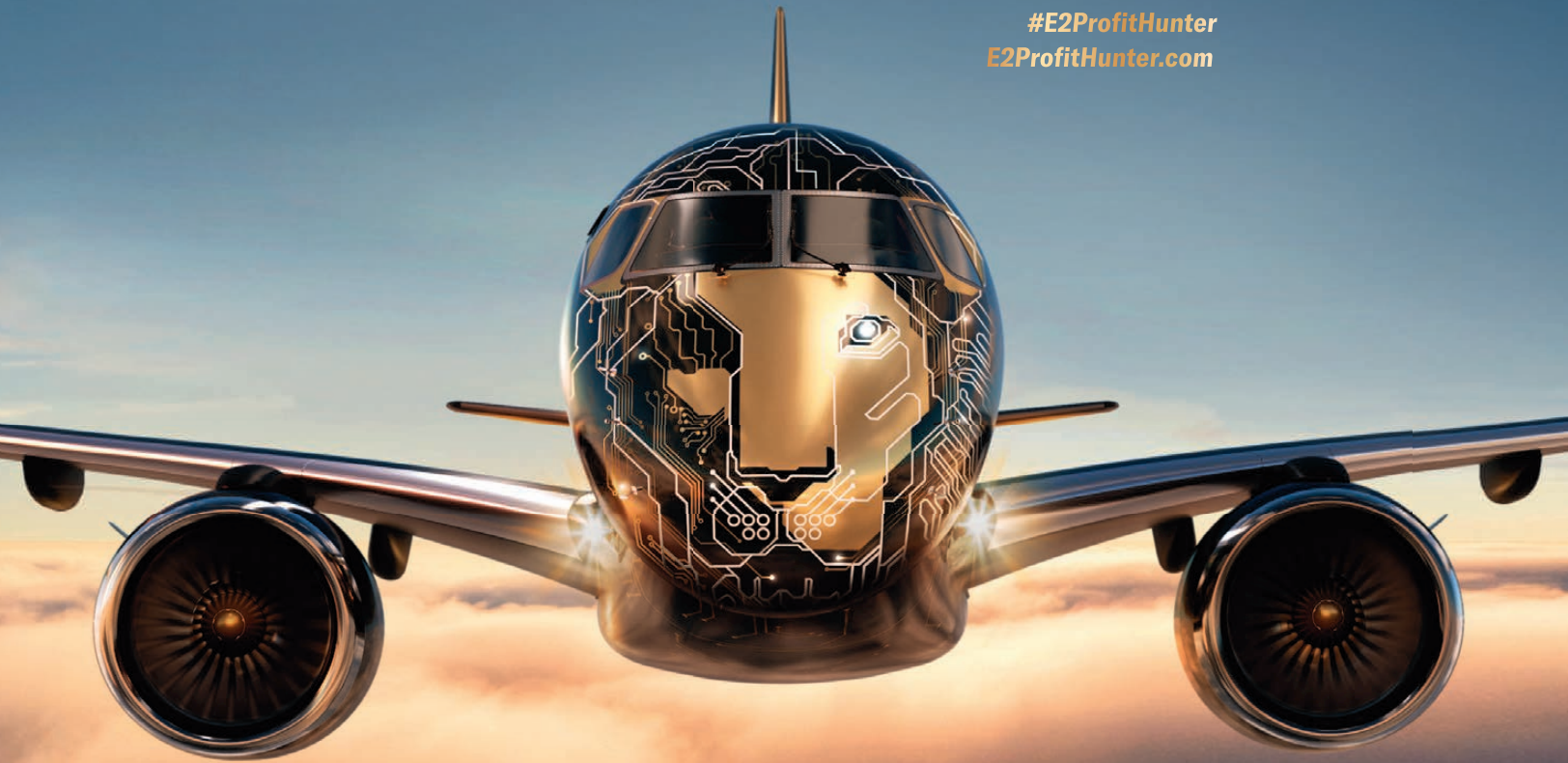
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