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AFRICAN **AEROSPACE**

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When East meets West

he news that Ethiopian Airways appears to be pushing on with its pan-African expansion ambitions with a proposed management deal for the former Nigerian independent carrier. Arik Air, is meeting with mixed reaction.

Having flown Arik a number of times myself from London to Lagos, it was obvious that the airline had massive potential to take on international competition.

With the failure of the West African nation's 'flag-carriers' in the past, Arik defied the odds and now carries about 50% of the Nigerian passenger market.

Sadly, however, it hit major cash-flow problems as the

Nigerian economy collapsed and the crisis with paying debts for fuel and even its staff meant its very survival was threatened.

Arik was rescued through a cash injection by the Government through its Asset Management Corporation of Nigeria (AMCON), which ensured that staff were paid and operational commitments met. But now it seems the Government is ready to become directly involved with a management contract to create a national carrier.

With the largest population in Africa, Nigeria is a great prospect to support a well-run airline. But there is still the issue of a reported \$800 million debt sitting on Arik's books.

There is also opposition in the country to any involvement from Ethiopian. Anietie Okon, the former Arik vice president and now a government senator, was quoted in the Nigerian media as calling the deal an "appalling desecration of national decency and honour", blaming a "lack of patriotism and shamelessness by some people in government offices".



But I would ask the senator, if Nigeria has failed in the past to sustain a national carrier, shouldn't a different model be considered?

Girma Wake, the former CEO of Ethiopian and now chairman of RwandAir, spoke at the Aviation Africa summit in Kigali last year and warned against government interference in managing airlines. He is right. Airline professionals do a better job and, for many years, there have been calls for consolidation in the African airline industry.

Ethiopian has developed a pedigree of maintaining national carriers 'patriotism' but improving their financial position through its 49% stake

in Malawian Airlines and 40% holding in Togo's Asky Airlines. Arik could be the big prize.

The model worked for Lufthansa and its ownership of Austrian Airlines and Swiss International, But, at the same time, the UAE national carrier. Etihad, is currently licking its wounds from equity investments with Alitalia and Airberlin and may explain why the Addis airline is steering clear of equity investment at this stage.

Nigeria is a difficult place to work. The country is already failing its aviation industry as its international airports did not meet security and safety standards during the recent audit carried out by the America's FAA for the renewal of its category 1 safety status. Without this, flights to the lucrative US market are banned.

Nigeria's aviation authorities need to be getting their house in order and the Government needs to look at clearing the Arik debts, to at last give the country a carrier that it surely deserves.

Safe landings

Alan Peaford, Editor-in-Chief

COVER: Kenya Alrways CEO Sebastian Mikosz. PICTURE: MHIC CHAMBERS, BILLYPIX

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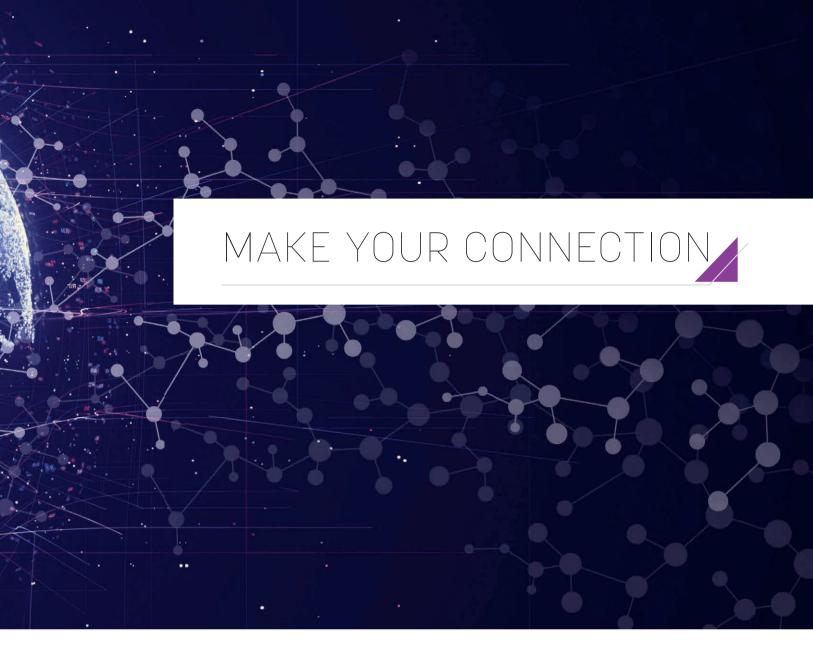
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AfBAC set to take business aviation in Africa to a new level

Africa's first ever dedicated business aviation conference, expo and static display – AfBAC Expo – will take place at Lanseria, South Africa, with the Montecasino property in Johannesburg's upmarket Sandton area, selected as host venue.

The one-day convention, to be held on November 29, is the first day of a three-day event that will include workshops, a static display of aircraft, and an exhibition showcasing leading suppliers in African business aviation. Meanwhile, the African Business Aviation Association has appointed Dawit Lemma as director of memberships and events.

Lemma will be responsible for exploring new benefits for members, supporting growth in the organisation's events and respective offerings, adding value through his technical know how, and instigating new research and white papers.

For the last two years, Lemma has been advocating and promoting the growth of business aviation in Ethiopia.



Safran monitors success

Safran Electronics and Defense has announced the selection of its wireless extension aircraft condition monitoring system (WEFA), which is dedicated to the capture and the transfer of flight data, on the A320ceos of its long-standing client, Air Cote d'Ivoire.

Caverton expands fleet

Caverton Helicopters has entered a purchase agreement with Dallas-based Bell Helicopters for eight new Bell 407GXPs. The addition will be deployed throughout the company's West African operations.

"Caverton offers marine and aviation logistics and support services to oil and gas companies located along the West African shelf," said managing director Josiah Choms. "Identifying the best aircraft to effectively carry out the mission is key and we believe the Bell 407GXP's proven track record, particularly its

speed and efficient operating cost, make it the perfect light single helicopter for this job."

EAN achieves IS-BAH rating

EAN Aviation, the Lagosbased business aviation services company, has become the first West African IS-BAH Stage 1 registered FBO, and only the second organisation to earn the status in Africa.

Egyptian tourism recovery

Egypt's tourism revenues jumped by 170% in the first seven months of 2017, reaching \$3.5 billion, according to Reuters.

The number of tourists visiting Egypt rose by 54% in the same seven-month period to reach 4.3 million, with Germany and Ukraine leading the way.

That number is still well below the 14.7 million who

visited Egypt in 2010, ahead of the 2011 uprising.

Europeans made up 75% of visitors, while Arabs totalled 20%.

Cargo cooperation

Etihad Cargo and Royal Air Maroc Cargo signed a memorandum of understanding in June, which will see the two airlines cooperate in a number of areas including network development, freighter deployment, and increasing traffic on several trade lanes over the next nine months.

Amine El Farissi, vice president cargo, Royal Air Maroc said: "Thanks to the geographic and commercial synergies that will result from this game-changing partnership, we will take our performance to the next level, mainly in the African and American markets."

Air Burkina buyer wanted

The Burkinabe Government has begun its search for a new buyer for recently nationalised carrier Air Burkina.

The Aga Khan Foundation sold its 51% shareholding to the Government for a symbolic 1 CFA franc as part of its strategy to reduce its exposure to the volatile African aviation industry.

It is reported that Burkina Faso President, Roch Kaboré, confirmed he has reached out to Qatar Airways "to see how far cooperation can be achieved by the end of the year".



Mauritania Airlines teams up with Hahn Air

Mauritania Airlines International has begun an interline partnership with German schedule airline Hahn Air.

This agreement enables the national flagcarrier of Mauritania to tap into new markets, expanding its commercial reach to more than 100,000 travel agencies in 190 markets worldwide, while its flights are now available on the HR-169 ticket in the global distribution systems Amadeus and Galileo.

"With this new cooperation, we aim to access new streams of revenue while giving passengers worldwide the opportunity to benefit from our travel offerings in Africa and beyond," said Mohamed Radhy Bennahi, CEO of Mauritania Airlines International.





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Embracing Embraer

Budget carrier Fastjet will transition to an Embraer Regional Jet fleet during the last quarter of the year.

Fastjet Group said its
Tanzanian unit's only
remaining active Airbus jet,
an A319-100, was
scheduled to be returned to
lessor, ICBC Financial
Leasing, by late September.
A pair of EMB-190s were
due to be inducted into
service in early October.

Along with a pair of ERJ-145s, wet-leased from equity partner Solenta Aviation and in service for Fastjet Zimbabwe, Fastjet's fleet will consist entirely of Embraer aircraft.

ACI and ICAO training boost

Airports Council
International (ACI) and the
International Civil Aviation
Organization (ICAO)
signed a memorandum of
understanding in June to
work together on a wide
range of aerodrome training
services to benefit the 1,940
ACI member airports
worldwide, and to support
the 191 ICAO member
states.

The MoU will see ACI and ICAO working together to develop new joint aerodrome training programmes and courses in general airport management, airport economics, environmental protection, operational safety, security procedures, and other subjects as they are identified.

Cape Town coup for Air BP

Air BP has taken over the management and operation of fuel services at Cape Town International Airport.

The operation, which will be managed through the Cape Town Airport Fuelling Services joint venture, will remain under



Mauritius aids Ghana national carrier plan

Air Mauritius has signed an MoU with Fly Safe Ghana to help the West African nation develop a national carrier. The deal was signed at the headquarters of the Mauritian carrier in the presence of the chairman of Air Mauritius, Arjoon Suddhoo, along with the airline's new director general, Somas Appavou, and Cecilia Abena Dapaah, Ghana's Minister of Aviation.

Air BP's management for three years.

Mark Maclean, assistant general manager operations, Cape Town International Airport said: "Air BP have an experienced team and we have no doubt that they will ensure the continued success of our airport. We look forward to working with them."

ExecuJet adds UAV service

ExecuJet has added unmanned aerial vehicle (UAV) services at its African facilities in Cape Town, Johannesburg and Lagos.

Gavin Kiggen, director aviation Africa, said: "The market for drone technology in the commercial sector has been increasing in recent years and is expected to grow at more than 19% between 2017 and 2020 as the technology becomes more widely utilised. In South Africa, the drone market is expected to create more than 24,000 jobs by as early as the end of 2018, contributing more than two billion Rand (\$155bn) to the economy."



Ethiopian and Nigerian government officials meet to discuss the deal.

Ethiopian looks set for Arik management contract

The Nigerian Government is in talks to award Arik Air's management to Ethiopian Airlines on an aviation cooperation contract.

Officials are shuttling between Abuja and Addis Ababa to hammer out a deal. Godfrey Odudigbo, Minister Plenipotentiary, said the deal would also allow Ethiopian Airlines to provide technical assistance to Nigeria in relaunching its national carrier.

Arik Air is the largest private airline in Nigeria and has been serving as a de-facto national carrier since Air Nigeria ceased operation in 2012 (see story page 42).

Early this year, the Nigerian Government asked the management of Ethiopian Airlines to take over Arik Air on a management contract basis and to forge a partnership to reestablish its national airline.

According to Odudigbo, the joint commission negotiation would be held in November in Abuja.

The founders of Arik furiously protested the Government's decision to take over the airline. In fact, the founder of Arik Air, Joseph Arumemi-Ikhide, warned that he would sue Ethiopian Airlines if it dares to take over.

Lanseria hangar upgrade

South Africa's Comair Flight Services (CFS) has completed renovations on its south side hangar at Lanseria International Airport in Johannesburg and has welcomed seven additional charter aircraft to its fleet since May of this year.

CEO, Justin Reeves, said: "Our market is considerably smaller than the US and Europe, where it is possible to focus solely on VLJ air taxis or large jets; in South Africa we need to be a onestop-shop and offer a larger selection of products to a smaller market."

Ethiopian's freight news

Ethiopian Airlines opened its Cargo Terminal-II at Addis Ababa in June.

CEO Tewolde GebreMariam said: "The new terminal, combined with our existing Terminal-I, will give us a total capacity of around 1 million tonnes per annum, which is the largest in Africa. Moreover, upon completion of the second phase, which adds 600,000 tonnes of annual uplift capacity, Ethiopian Cargo and Logistics Services will have one of the world's largest cargo terminals; a capability equivalent to cargo terminals in Amsterdam Schiphol, Singapore Changi, and Hong Kong."

Nigeria to receive Mi-35Ms

The Russian Federal Service for Technical-Military Cooperation (FSTMC) says it will complete the delivery of 12 Mi-35M attack helicopters to the Nigerian Air Force in 2018, correcting earlier reports suggesting the sale involved (Sukhoi) Su-30M fighter jets.

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Navigating change

Libya Telecom (LT) will roll out the installation of new navigation systems combining VHF omnidirectional radio (VOR) and direction measuring equipment (DME) to improve air traffic management at four major airports.

Company chairman, Faisel Gergab, said the programme would cover Mitiga, Benina, Tobruk and Labraq airports. He added the company would train airport staff in the use and maintenance of the equipment.

Afrijet extends ATR fleet

Afrijet Business Service, the specialist regional airline in Gabon, took delivery of an ATR72-500 (MSN 715) on lease from Aergo Capital, in a deal arranged by AELIS Group in June.

"We appreciate the great support from Aergo and we are excited by the new expansion possibilities offered by the ATR72-500, including a new business service and additional capacity for the sub-region of Central Africa," said Afrijet Business Service CEO Marc Gaffajoli. "We know we can rely on AELIS Group to support our fleet development and take care of the deal arrangement."

Blaise of glory

Senegalese Minister for Tourism and Air Transport, Maimouna Ndoye, has reaffirmed the West African state's commitment to see national carrier, Air Sénégal, be the first airline to use Dakar's new Blaise Diagne International Airport.

Ndoye said the opening, and therefore the start-up's inaugural service, have been scheduled for December 7, 2017.



VIP delegation from Ghana visits UAE

His Highness Sheikh Ahmed bin Saeed Al Maktoum, chairman and chief executive, Emirates Airline and Group, welcomed a VIP delegation from Ghana to his offices in July for a meeting. Sheikh Ahmed, accompanied by Adnan Kazim, DSVP strategic planning, RO and Aeropolitical Affairs, Emirates, and Orhan Abbas, Emirates' SVP, commercial (Africa), met with the Ghanaian Minister for Aviation, Cecilia Abena Dapaah, together with a number of high-ranking officials.

Original projections had aimed for a September or October launch at the latest.

"The company will start with two aircraft but the state intends to lease three more to serve African as well as European destinations," she added.

Comoros opens up to foreign operators

The Government of the Comoros is planning to open up the Indian Ocean archipelago's domestic market to foreign operators.

The deputy chairman of the Comorian cabinet in charge of the ministry of transport said the relevant measures needed to grant 7/8/9th freedom rights to operators, such as Air Tanzania, were already in the pipeline.

Lighting up Ghana runway

ADB Safegate has installed the runway lights at Ghana's Tamale Airport using CAT II LED airfield ground lighting to enable night operations.

Alexander Herring,

director of sales Africa, ADB Safegate said: "We have a strong presence in Ghana, having already worked with GACL at Accra Kotoka International Airport, Kumasi Airport and Takoradi Airport.

"Equipped with ADB Safegate airfield ground lighting, the Tamale Airport will experience increased throughput, longer operational hours and, most importantly, night time operations."

EgyptAir expands cooperation

EgyptAir and Aegean Airlines have expanded their codeshare cooperation to include new routes.

Captain Sherif Ezzat,
EgyptAir chairman and
CEO said: "The expanded
codeshare will initiate
commercial opportunities
for both airlines and, more
importantly, unleash the
true benefits of the
partnership by offering
optimum connections to
business and leisure
travellers. Cairo and Athens
have close cultural and
business cooperation in
various areas including

aviation. The expansion of this codeshare will add more value to our commercial ties and will be equally beneficial for our customers."

AAR contract extended

AAR has secured an extension of its contract supporting Air Austral's fleet of B737NG aircraft, which began in 2009.

The renewal is a testament to the excellent customer service and flexible component support AAR has provided to Air Austral over the last eight years," said Nick Price, senior vice president, operations, commercial programmes, AAR. "Air Austral is positioned in a geographically challenging location but AAR's customer support network works seamlessly to ensure service levels are exceeded."

Instructor killed

A senior Nigerian Air Force pilot instructor has died after the Air Beetle trainer aircraft he was flying crashed near the city of Kaduna on August 1.

Syphax approval for reorganisation

Syphax Airlines is on track for its planned relaunch late this year after a court approved the airline's reorganisation plan. Syphax has been in judicial administration since 2015 after accumulating debts of more than TND230 million (\$93.9 million). The court-approved plan will settle debts with foreign creditors over repayment periods of 7, 10 and 15 years. It will also ensure the airline's registration with appropriate aviation authorities in order to resume operations later this year as Maghreb Airlines (Sfax).

Easy does it for Fastjet

Fastjet plc, the Londonlisted co-parent of Fastjet Zimbabwe and Fastjet, has announced plans to acquire the rights to the Fastjet brand from EasyGroup Holdings for \$2.5 million.

The firm said that the two parties have already entered into an agreement which, once finalised, will result in "savings" to Fastjet over the next five years.

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Safety violation appeal fails

A panel upheld a decision in August to fine Nigeria's FirstNation Airways for safety violations, after one of its pilots was found to have let his medical certificate lapse.

The expired certification cost the airline NGN32 million (\$101,000) and the pilot NGN1.5 million (\$4,800).

"The pilot operated with an expired licence from November 2-8 2016, and there are indications that the airline knew about this. This is a very serious safety issue. Therefore, the moderate sanctions applied by the NCAA were reasonable under the circumstances," the panel found.

French Blue's first flight

French Blue launched the first commercial flight of its first A350 XWB between Paris-Orly and La Reunion Island in August.

CEO, Marc Rochet, said: "In less than two years, we have built an innovative and modern airline with new and high-performance aircraft, to meet the demands of customers. With the arrival of our second A350-900 in 2018, French Blue will have an efficient and appropriate fleet as part of its Paris/La Réunion project, which is to boost the traffic with a new offer of quality travel and an aggressive pricing policy."



EgyptAir receives sixth Boeing 737-800 NG

EgyptAir received its sixth Boeing 737-800 NG aircraft at the end of July. The aircraft, one of nine that EgyptAir plans to acquire in 2017, passed an official registration procedure to join the fleet that now includes 26 aircraft of the same type. It became the 66th aircraft of the fleet.

The airline is currently looking at several transactions offered by major manufacturers and lease-funding companies in a bid to add 33 more aircraft of different types that will be able to operate short-, medium-, and long-haul routes, in accordance with the company's renewal plan.

Cargolux grows market presence

Cargolux Airlines has introduced two new destinations in Africa – Douala in Cameroon and Lubumbashi in the Democratic Republic of Congo (DRC). Services to Lubumbashi began on September 15 while Douala is served as of October 3.

Ghana to partner with Air Mauritius

Air Mauritius has signed a memorandum of understanding with the Ghanaian Government to provide expertise as a new Ghanaian national carrier is established.

"This is a first," said Air Mauritius chairman, Arjoon Suddhoo. "Ghanaians are very interested in the model of Air Mauritius, which is a company whose majority shareholder is the government. It is also listed on the Mauritius Stock Exchange. We are a commercial aviation company that creates value for our shareholders. We also have a mandate to contribute to the development of the country."

Laptop ban lifted

EgyptAir has disclosed that a ban on electronic devices on board its services to the UK has been lifted as of September 1.

SAA to cut fleet by almost 20%

South African Airways (SAA) will cut capacity at its mainline operation as part of an overall downsizing of the carrier's network.

The changes are part of

the cash-strapped airline's implementation of its newly developed five-year turnaround plan.

Jimmy Conroy, chairman of the SAA Pilots Association, said that the pilot corps had been informed that SAA's fleet could be reduced by up to 20%.

Mozambique's magnificent seven

The Mozambican civil aviation authority (Instituto da Aviação Civil de Moçambique – IACM) has awarded seven carriers domestic Mozambican passenger traffic rights following a tender held earlier this year.

Though IACM's chairman, João Abreu, did not specify the routes allocated, he did state that Ethiopian Airlines wants to offer extensive coverage of

Mozambique, while Malawian has applied for only a select number of routes.

SSJs for Zambia

Sukhoi Civil Aircraft has signed contracts with customers in Zambia for the supply of five SSJ 100-95s.

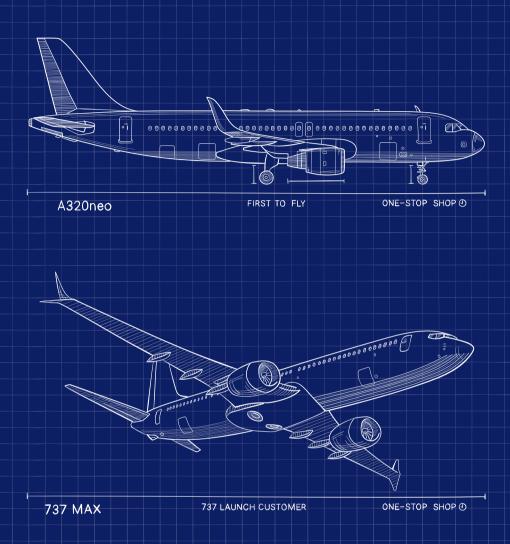
The order entails four SuperJets for a planned start-up carrier and a VIP-configured jet for use by Zambia's President Edgar Lungu, with delivery of the aircraft due to take place as early as next year.

Precision move

Precision Air is to keep Sabena technics for the component support of its entire fleet of ATRs. This selection marks the extension of an existing contract signed with Sabena technics in 2010.



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The African Airlines Association (AFRAA) will hold its 49th annual general assembly (AGA) in Kigali, Rwanda on November 12-14.

Victoria Moores

caught up with outgoing AFRAA secretary general, Dr Elijah Chingosho, to find out what's in store.



PROFITABILITY IS TOP OF THE BILL



Outgoing secretary general Dr Elijah Chingosho: rethinking strategies.

What is the theme of this year's AGA and what do you hope to achieve?

The theme is 'rethinking strategies for African airlines' profitability'.

According to IATA, the global air transport industry will report a \$34.8 billion net profit for 2016 and \$31.4 billion for 2017.

In stark contrast to global trends, African airlines made a record \$1 billion loss in 2015, followed by a \$100 million loss in 2016. The outlook for 2017 is for another \$100 million loss. In light of this, the CEOs will share ideas on strategies to turn around the poor financial performance of the African airline industry, to make it viable, competitive and profitable.

■ What concrete progress has there been since last year's AGA?

One major achievement was that in 2016 there were zero safety-related fatal airline accidents in Africa, the first time the continent has achieved

this. The challenge now is to avoid complacency and to keep the momentum up.

There has also been some progress in the single African air transport market; the number of states that have committed to fully open their skies has increased to 22 in July 2017, from 11 in January 2015. This constitutes more than 80% of international traffic to and from Africa.

■ Liberalisation was meant to have already happened. How far along is the process and what are the next steps?

The launch of the single African air transport market was originally scheduled for mid-2017, but has now been moved to January 2018. The delay was largely due to some regulatory texts that need to be finalised, but it is our belief that the liberalisation process is now irreversible.

Although full liberalisation has not yet been achieved, there has been slow but significant progress



AFRAA PREVIEW

CONTINUED FROM PAGE 19

over the years. Airlines enjoy fifth-freedom traffic rights in most African states and there has been progress in relaxing visa requirements in a number of countries, including Rwanda, Benin, Seychelles and Ghana.

What external challenges are your member airlines currently facing?

One major challenge is blocked funds, where money from foreign operations cannot be moved from one country to another, adversely affecting airline cashflow.

Some governments, notably those largely reliant on oil exports for their foreign currency earnings, were significantly affected by oil prices falling steeply from an average of \$116.60 per barrel in 2014 to around \$50.00, one time dipping as low as \$30.00.

In Africa, the worst-affected countries are Angola, Algeria, Nigeria and Sudan. Our combined lobbying efforts with IATA and various stakeholders have had some impact. Egypt, which used to be among the states with the highest amounts owed, cleared its arrears in May 2017 and Nigeria has significantly reduced its amounts, as shown in the table.

With continued low commodity prices, more countries are having foreign currency challenges and this may increase the number of states where airlines cannot repatriate funds. Some countries, such as Tunisia, Uganda and Zambia, have been included in the IATA watchlist, based on different indicators (bank reserves, country credit rating downgrades, credit default swap movements and forward curve).

What do you think will happen to African airlines in 2017-18?

We will continue to see some airlines in Africa – those that are committed to full liberalisation of African skies, are bold and do not fear competition – prosper in an increasingly liberalised operating environment. These include Ethiopian Airlines, RwandAir and Royal Air Maroc, among others.

Restructuring in some airlines will also bear fruit. As a result, we foresee more routes being opened between African cities, improved connectivity and better-harmonised networks, as African carriers cooperate for their mutual benefit.

■ What still needs to change for African airlines to succeed?

African airlines have made significant losses since 2014, while globally airlines have been making significant profits. The causes of these losses need to be urgently addressed. These include costs – such as passenger and fuel taxes, fees and charges – well above the global average.

Blocked funds need to be urgently addressed and liberalisation needs to be completed, facilitating consolidation.

Most government-owned airlines suffer frequent top management changes and several

TOP COUNTRIES – BLOCKED AMOUNTS REVIEW				
Rank	Country	\$m (Feb 2017)	\$m (May 2017)	\$m (Jun 2017)
1	Angola	326	340	477
2	Sudan	227	247	190
3	Nigeria	259	313	171
4	Egypt	149	CLEARED	CLEARED
5	Algeria	146	146	146
				SOURCE: IATA

airlines, large and small, are headed by acting CEOs for long periods. Top management stability is critical to allow the CEO to come up with strategies and implement them.

Load factors, at around 68%, are well below the 80% global average, because some airlines use large aircraft for thin routes, rather than smaller regional aircraft performing more frequencies.

Infrastructure at some airports also needs to improve, ensuring that international airports are open 24 hours a day and have uninterrupted power.

■ This will be your last AGA before you step down. What changes have you seen among African airlines since you became secretary general in January 2011?

I have witnessed a significant improvement of safety standards, culminating in 2016 having zero safety-related accidents, as well as increased willingness among airlines to cooperate.

In the past, some airlines viewed liberalisation as a threat to their existence. The majority now view liberalisation as critical to the development of the industry.

AFRAA member airlines are also much more demanding in terms of tangible results, so I came up with a business plan with key performance indicators for the first time, including joint projects to enhance airline revenues and reduce airline costs.

AFRAA launched a fuel project for African airlines in 2012, followed by a ground-handling project in 2014, a network coordination and collaboration project in 2015 and a cargo cooperation project in 2016.

Joint training, under the auspices of AFRAA, has allowed experts from African airlines to help in all areas of airline operations.

How is the search for a new secretary general progressing?

The post was advertised in April 2017 and employment agency Spencer Stuart is helping the AFRAA committee identify the right person to take over. My replacement will be announced in the next few weeks/months.

'African airlines
have made
significant losses
since 2014, while
globally airlines
have been making
significant profits.'





UNPARALLELED SUPPORT





Kenya Airways (KQ) has been navigating through turbulent times in the past five years but now it has a new man at the top whose mission is to turn around the loss-making airline.

Kaleyesus Bekele talks to new CEO, Sebastian Mikosz.

CEO with a LOT to offer...

ne of the leading airlines in Africa, KQ has been making losses in recent years, which might be one of the reasons that led to the early retirement of Titus Naikuni in 2014.

His deputy, Ngunze Mbuvi, took over the hot seat in the same year and began implementing a comprehensive turnaround strategy dubbed 'operation pride'.

The programme aimed at taking the airline back to profitability by undertaking financial restructuring, cost-cutting measures, staff retrenchment and fleet downsizing programmes. According to KQ's management, the double impacts of terrorism and fuel hedging were the major causes contributing to the airline's poor financial performance.

Though Mbuvi managed to achieve some encouraging results in reducing the airline's heavy losses, employees were not happy with the staff retrenchment programme and were at loggerheads with the management.

The disgruntled Kenyan Pilots
Association accused KQ of bad
management decisions and demanded
the removal of the executive management
members. A series of strikes forced the board
chairman, Dennis Awori, and Mbuvi, to resign
at the end of 2016.

Kenyan President, Uhuru Kenyatta, appointed former Safaricom boss, Michael Joseph, as KQ board chairman but Mbuvi had to soldier on until the board could find the right person to take over the hot seat.

After a long and thorough evaluation, the board elected Sebastian Mikosz, the Polish CEO



Mikosz
has a personal
passion for
growing and
developing
airlines

who turned around LOT Airlines, as KQ's new CEO and group managing director, in May this year.

Mikosz, who oversaw the successful turnaround strategy of LOT, Poland's national flagcarrier, took up his new appointment in Nairobi on June 1.

Although it is still early days – too soon for him to discuss any detailed plan of how he will revive Kenya Airways – Mikosz has two clear priorities.

"At the moment my vision for the airline is general. There are two things that I want to focus on," he said. "First, I want to continue the job that was started by Mbuvi, my predecessor, and the board since 2015. There were a lot of very positive changes made during the restructuring programme."

Mikosz's second task will be focusing on work to be done in the coming years. He has a personal passion for growing and developing airlines.

According to Mikosz, the African air transport market is very challenging. However, he said there were many encouraging developments taking place. In his view the African middle class population was growing and more people were using air transport.

"Kenya Airways has a modern fleet. We have very good personnel. We have experienced pilots. There is a very good MRO. There is a new modern airport. It is rebuilt and opened recently. So I believe we have all the ingredients to make a success of a nice airline."

For Mikosz, the most important thing is the determination that KQ personnel have to change the airline.

Continued on Page 24

"All the staff I have met and

STRATEGY



AIR TRANSPORT

CONTINUED FROM PAGE 22

discussed things with are determined to work hard to change the situation," said the CEO. "My plan is to help them change the airline – to turn around and grow the airline."

Since he took office, Mikosz has been meeting members of the management team and other staff to learn about the airline and discuss the way forward.

He does not want to talk about the factors that made KQ a loss-making airline. "I do not have any idea about that and I do not want to speculate. I will have my vision on that but my job is not to analyse the past. I have to prepare for the future and implement."

Mikosz wants to focus on what the management is going to do in the next three or four years. He said they should turn the airline back to profitability in a permanent way. His task includes growing the airline, increasing connectivity and creating jobs.

"We have to make the shareholders happy – make them feel comfortable about the airline and their investment. At the end of the day, that is the most important thing; it is business."

Mikosz said Kenya Airways is a business entity with broad scope and vision. "An airline with the name of a country in it is always very important for the country. It is a symbol. Emotion is connected to the airline. But then we always come down to money. So my job will be to combine all of these elements," he said.

The Kenyan Government and Air France KLM, which have a 29.8% and 26.7% stake respectively, are the major shareholders. The remaining shares are held through the Nairobi Stock Exchange.

"You should not forget that we have shareholders. For me, all the shareholders have equal importance. My focus will be on making their investment profitable. That is my job as a CEO."

Aviation stakeholders wondered if Mikosz would introduce a new turnaround strategy or if he would think more on 'operation pride'. However, the CEO said: "I have not made up my mind on that. We are really in a transition period."

Mikosz said Kenya Airways has a business strategy. "There is a business plan. If I decide to change that and to introduce something new then I will start a discussion with the board and management team. I have not yet decided. As soon as I have something new on the table I will communicate it but for the time being I have not developed a new plan."

When asked why he decided to take the hot seat at KQ, Mikosz explained that every decision is made out of two elements – the rational and emotional approach. "The rational approach is that my experience in the airline industry can help me change the situation in KQ. Turn around strategy is something I have done in the past."



"There is also a growing manufacturing sector.
Considering all these facts, with the right business strategy and committed staff you can grow the airline."

SEBASTIAN MIKOSZ

Speaking of the emotional approach Mikosz said Kenya Airways was a symbol of Kenya and Kenyans wanted their airline get out of trouble and fly high again. "And I want to help them do that. As a CEO my task will be coordinating the various efforts to change the airline. That is the emotional part."

According to Mikosz, Kenya Airways has an immense potential to grow. "Kenya has a big tourism industry. Nairobi, with all the big financial institutions and international organisations, is an important city in the region. There is also a growing manufacturing sector. Considering all these facts, with the right business strategy and committed staff you can grow the airline.

"It is going to be a beautiful challenge for me," he added.

Mikosz is optimistic that, together with his management team and the board, he can take the airline back to profitability. "I am always optimistic. Optimism is part of my structural DNA. I believe that when people have good will and work together they can make a difference."

When Mikosz joined LOT as CEO, the airline almost went bankrupt. He said there were long list of problems with the airline. "Honestly, I could list only few good things. With team optimism and support we achieved a lot. An airline business has never been a one-man show.

You need a board, you need management team. You have employees and shareholders of the company. All should work together to change the situation. That is what we did at LOT. And I

think we can do the same in Kenva."

STRATEGY

Mikosz said there is enough market, fleet and educated people with KQ. "So we have all the ingredients required to make the airline successful. My job is to coordinate and make people support us. I have more than optimism. I have confidence and certainty that we are going to be successful."

Mikosz declined to put specific date on when the airline would return to profitability or break even. "The sooner the better," he replied.

While KQ was traversing through turbulent times it has lost many key professionals. In the past two years, senior pilots and technicians have left the airline to join Middle Eastern carriers. As part of the turnaround strategy Mbuvi's management has sold and leased out B787 and B777s.

Operating with fewer aircraft and filling the shoes of the staff that have left could be a challenge for the new management. However, Mikosz said that there are adequate numbers of both aircraft and staff.

"People always change jobs. That is a managerial issue that we are going to tackle the same way we tackle any other issues. Airlines are surrounded by difficulties. That makes the job interesting. I am concerned by anything harmful to the airline but, as managers, we will manage it."

Mikosz said any CEO can have a nice vision but the biggest challenge is to execute it. "The most important thing is execution. What matters most is what you can deliver to your customers and shareholders. It is not your vision or promise."

The 44-year-old is married with three sons. He was born and raised in Poland and educated in France. "I have very strong French connections," he said.

He will soon move his family to Nairobi. "When I took office on June 1, the reception was very warm. The employees of KQ have been very good to us. Honestly I felt at home quickly."

Mikosz has had several meetings with the KQ management and held formal and informal discussions with the employees. He said that the employees were very frank with him. "They really want to move forward. That is why I am feeling optimistic that we can make it together. I am not scared at all. I do not underestimate the challenges but, for the moment, it is really nice."

Under Mikosz's leadership, LOT made its first profit for seven years in 2014.

Kenya Airways currently has more than \$1 billion debt. Its main creditors, the Kenyan Government and 11 local commercial banks, recently agreed to change the debt to equity.



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La nouvelle compagnie aérienne Guinea Airlines a été présentée en février dernier à Conakry en présence du président Alpha Condé.

Vincent Chappard s'est penché sur le pourquoi et le devenir de ce projet. uinea Airlines est une compagnie privée de droit Guinéen qui a été dûment agréée par l'Etat pour assurer le transport public de passagers et de fret depuis janvier 2017. La compagnie aérienne est accompagnée par l'Autorité Guinéenne de l'Aviation Civile (AGAC) pour sa mise en œuvre effective.

En ce moment, elle a engagé la procédure d'obtention de son permis d'exploitation aéronautique (PEA). Dans un premier temps, elle aura pour vocation la desserte des vols domestiques et de voisinage.

« Pour ce faire le gouvernement s'est engagé à réhabiliter et à moderniser les aéroports domestiques pour les mettre aux standards exigés par l'OACI en matière de sécurité et de sûreté dont les études sont déjà entreprises », a déclaré à *African Aerospace*, Mamady Kaba, directeur général de l'AGAC.

Basée à l'aéroport de Conakry-Gbessia, Guinea Arlines est le fruit du partenariat privé entre le groupe du Guinéen Business Marketing (GBM) d'Antonio Souaré et le groupe Regourd. Elle dispose d'un ERJ145 et d'un ATR 72-500 pour les routes domestiques (Kankan, N'Zérékoré et

SUMMARY

GUINEA AIRLINES READY FOR TAKE-OFF

Plans for Guinea's new airline, the eponymously named Guinea Airlines, were presented to the West African country's president, Alpha Condé, in Conakry during February 2017 and progress towards launch appears to be on track.

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

For its part, the Guinean Government is upgrading the country's main airports to meet ICAO standards and sees the new airline as a catalyst for the country's local and regional development.

Based at Conakry-Gbessia Airport, Guinea Airlines is the result of a private partnership between the Guinean Business Marketing Group (GBM) of Antonio Souaré and the Regourd Group. It has one Embraer ERJ145 and an ATR 72-500 for domestic routes that will include Kankan, N'Zérékoré and Labé and regional flights to Labé-Dakar-Banjul, N'Zérékoré-Abidjan and N'Zérékoré-Monrovia-Freetown.

Regourd Aviation will contribute its operational expertise, aircraft and organisation to ensure reliable services. The Regourd Group has been present in Africa for more than 40 years and is experienced in operations for oil and mining companies.

Studies have shown significant potential for the domestic market and it only remains for the airport modernisation project to permit flights to begin.

Labé) puis régionales (Labé-Dakar-Banjul, N'Zérékoré-Abidjan, N'Zérékoré-Monrovia-Freetown,...).

Regourd Aviation apportera pour sa part son expertise, ses avions et l'organisation nécessaire pour assurer un service aérien régulier. Le groupe Regourd est présent en Afrique depuis plus de 40 ans. Spécialisée dans l'aviation d'affaires et celle destinée aux entreprises pétrolières et minières, elle dispose d'une flotte d'avions (Falcon, Embrear Legacy, ATR, Dornier et Embraer 145) adaptée pour chacune de ses activités.

Les autorités guinéennes souhaitent « pouvoir assurer le désenclavement des régions et développer une activités aérienne en particulier pour le marché domestique ». Elles perçoivent en effet la nouvelle compagnie comme un acteur de développement économique et commercial.

Guinea Airlines symbolise ainsi la politique d'ouverture du pays et espère profiter de la libéralisation graduelle de l'espace aérien (Déclaration de Yamoussoukro) pour se faire une place dans le ciel africain.

Des études ont montré un potentiel important pour le marché domestique. Reste toutefois la modernisation des infrastructures aéroportuaires pour permettre à Guinea Airlines de dépasser la période de « gestation ».

Le directeur général de l'Autorité Guinéenne de l'Aviation Civile et les actionnaires de Guinea Airlines ont fait le point sur la situation en juillet dernier lors d'une conférence de presse. Il en ressort que la compagnie est prête à fonctionner avec une condition préalable au démarrage de ses opérations ; l'aménagement de pistes praticables et l'obtention de l'autorisation de se poser sur les aéroports domestiques et régionaux.

L'audit vient confirmer une situation déjà connue. Il est donc dans l'intérêt de l'ensemble des décideurs et

des partenaires que les projets de rénovation des infrastructures aéroportuaires domestiques du pays (hormis Conakry) et les procédures de certification se concrétisent au plus vite.

Le décollage et le plan de vol de Guinea Airlines en dépendent.



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LEAP



Investing in people

The Airlines Association of Southern Africa (AASA) will hold its annual gathering in Port Edward, South Africa on October 12-15. AASA CEO, Chris Zweigenthal, shared his thoughts about the event and the year ahead with Victoria Moores.

■ What do you expect from this year's AGA?

The theme is 'building human capital for African airlines'. While our conference could deal with many challenges affecting industry sustainability, we decided to focus on the critical area of skills development, retention and transformation, equipping our aviation personnel to meet future challenges.

In a fast-developing technological environment, including digitization, the African airline industry needs strong leadership and specialist skills to keep pace with its global competitors and build a sustainable future. This assembly will assess the current status of skills in Africa, its challenges and seek solutions to put control of human-capital development in the hands of African airlines.

■ Have you seen any major changes – regulatory, in terms of the market, or among your members – over the past year?

The airline industry in the southern African region has become more challenging. Cost control remains a concern for airlines and industry growth remains moderate, mainly due to low GDP growth in South Africa. This impacts the rest of the region, with only a third of the airlines being profitable.

Liberalisation of the African skies through the Yamoussoukro Decision/single African aviation market remains a work in progress, with a new target date of the beginning of 2018 being proposed.

■ What are the prime challenges for southern African airlines right now?

Firstly to achieve profitability and then to maintain it. This includes maintaining a stable cost base – which is largely dollar-based for jet fuel, maintenance, distribution, aircraft purchase and lease costs – and increasing revenues through passenger and yield growth.

While Africa has recorded a significantly improved safety record, particularly for IATA airlines, it is important to maintain focus on improving safety and working together with civil aviation authorities (CAAs) as they exercise their oversight and compliance mandate.

■ Demand has been stagnating. Do you see any signs of market recovery in 2017-18? Stagnating demand has been the result of the



moderate economic growth outlook for South Africa, affecting the rest of the region. We expect passenger growth of around 3% per annum in South Africa to continue for the next three to five years.

GDP growth forecasts are mixed, with nine of the 20 fastest growing economies situated within Africa. However, low economic growth in large economies such as South Africa and Nigeria negatively affect the growth outlook for the continent as a whole to around 5.5%. It should be far higher, coming off a low base.

AASA foresees that the status quo will largely continue during 2017-18.

However, airlines will continue to review their cost bases and look for improved efficiencies to reduce unit costs.

■ What are you seeing in terms of local airline start-ups and failures?

Many airlines in the region are facing challenges because of the tough, competitive environment. While these challenges remain, I don't foresee any start-ups, until there is evidence of an economic recovery. Start-up airlines introduce additional competitive elements and there is no doubt that established airlines will respond to new competitors, should there be a start-up. It is hard to see airlines that are currently in difficulty failing while there continues to be support from their government shareholders.

■ What is AASA's strategy? What major projects are you currently working on?

AASA's mandate is to work with all stakeholders to promote airline industry growth and development,

the key to growth

to achieve profitability and sustainability. We represent member airlines in areas of mutual interest and get directly involved in the following major projects, enabling them to concentrate on their core business of running their airlines:

- User charges: representing airlines in consultations with airport authorities, air traffic service providers, CAAs, weather service providers and ensuring value for money;
- Active review of policies, legislation and regulations and their impact on the industry;
- Directly supporting IATA's environmental programme and promoting awareness of environmental initiatives within the southern African region, focusing on the implementation of the carbon offsetting scheme for international aviation (CORSIA) where applicable and opposing the introduction of regional initiatives like carbon taxes;
- Working to improve the self-service offering for passengers in local airports; and
- Supporting initiatives to improve safety and security in the region.

■ Is there scope for AASA to add new member airlines, or is everyone already involved?

All South African scheduled airlines are members of AASA.

There is scope to add additional regional airline members and we are in contact with a number of these.

■ Do you see any scope for formal tie-ups or mergers with other African associations, or does southern Africa need its own airline body?

AASA is the recognised regional airline association for southern Africa. We support the global initiatives of IATA and work closely with the African Airlines Association (AFRAA).

There is a mutual recognition between AFRAA and AASA that our focus areas are different, notwithstanding that there is an overlap of some common membership.

Our view is that there is justification for separate airline associations.

It is important to maintain good communication

between the associations on the respective agendas and to ensure that, where there may be overlap, there is a mutual understanding of respective roles, responsibilities and positions to be taken.

■ How long have you headed the association? Do you have a favourite memory from your time there so far?

I joined AASA as deputy CEO in February 2002 and was appointed CEO in March 2009.

I have really enjoyed my time at AASA and consider it a privilege to have worked across the entire spectrum of the aviation business with so many government, public and private stakeholders.

I think memories of our annual general assemblies stand out, with the privilege of visiting so many destinations in our region and providing our guests with unique and special experiences, while dealing with the important business of the airline industry.



AIR TRANSPORT

Johannesburg-based South African regional operator, CemAir, is poised to be the host carrier for the Airlines Association of Southern Africa (AASA) annual general assembly. But what is CemAir and where is its niche? Victoria Moores has been finding out.

CONCRETE FOUNDATIONS

emAir CEO Miles van der Molen cringes when quizzed on why his airline is called CemAir. "It's amazing how often people ask," he commented before being forced to reveal that CemAir stems from the words 'Cement Air'.

Unsurprisingly, the story has odd roots. Van der Molen started CemAir with 50:50 partner Brian Bendall, whose other business was cement walling and floor finishes. It was called Cemcrete, from the words cement and concrete.

"When we started in aviation, CemAir was the logical name. You don't want to be called Cement Air, but that's where the name came from and we're certainly not going to change it now," explained van der Molen. The name is pronounced SemAir, not KemAir.

CemAir started life in 2001 as a lessor, placing a single Cessna Caravan on wet lease with Precision Air in Tanzania. "We grew from there and got involved in other stuff," he said.

Around 2005, CemAir bought three Beech 1900s from a company that was being liquidated. These aircraft did contract work across the continent and as far afield as Afghanistan, performing missions for the US Agency for International Development (USAID). The Caravan left the fleet and another six Beech 1900s joined, taking the total to nine.

"In 2008, we had a bit of a wobble when my business partner (Bendall) passed away in an accident, so we needed to decide where to go next," van der Molen explained. Those decisions were implemented in 2010. Against the backdrop of a saturated narrow-body market, CemAir picked regional flying as its niche.

"The [Bombardier] CR] was the direction we wanted to go in, so we started collecting those between 2010 and 2016," he said. "They mostly came from Delta [Air Lines]. We became a fairly



significant CRJ100/200 operator and started development in aircraft, crew, maintenance and insurance (ACMI) leases."

By 2011, the US campaign in Afghanistan was beginning to wind down, releasing the Beech 1900s. There was a glut of small aircraft in the market, so CemAir used the Beech 1900s to serve obscure routes within South Africa. These included mining towns and a site where a power station was being built. This kept things ticking over.

"We were flying to a lot of places that weren't served by other airlines. We built the business hand-by-hand. We found opportunities here and there and built capacity," he said. This also marked CemAir's scheduled flight debut.

Van der Molen said this was where the "alphabet soup" of certifications began, referring to industry acronyms like IATA and IOSA. "It's a long path for a small organisation. We learned a number of lessons about the difference between contract and scheduled flying and we collected approvals and routes one by one as we went," he said.

Once a year, the airline would add a scheduled route, which would require additional infrastructure. That infrastructure demanded more routes to spread costs, and so that pattern continued.

By 2014, CemAir had run out of Beech 1900 capacity, but some of its destinations were not suitable for CRJ operations. "We traded the last two Beech 1900s to get a Bombardier Q100 and, a little later, we got two Q300s," van der Molen said.

Two-and-a-half years ago CemAir was listed on the global distribution services (GDSs) and, in February 2017, it secured IOSA certification and joined IATA.

"The scheduled side tends to attract contract work. We get enquiries from mainstream airlines that require IOSA certification. We wouldn't have access to that if we hadn't done scheduled services. We continue to grow the scheduled side on a managed basis."

Today, CemAir operates 21 aircraft, which will be joined by a used Q400 by year-end, as well as a CRJ900 and two new Q400s scheduled for



delivery in 2019. Beyond this, it has five ex-Delta CRJs in storage in the US, which it will either bring online or part out. "The CRJ 700/900 and the Q400 seat class is where we see ourselves over the next five years." Meanwhile, the Beech-1900 fleet will remain stable at around 10 aircraft.

CemAir's revenue is now evenly split between lower-yield but dependable domestic scheduled flying and less consistent, but higher-yield, contract work with greater geographical spread. "We've done contract work in some dodgy places, but exposure to both markets creates a nice balance, which tends to work quite well for us."

This is a necessity in the South African market, which has a chequered history of government-backed goliaths and stagnant demand. This results in market cannibalisation between carriers, rather than market stimulation.

"Growth in passenger numbers normally tracks economic growth. Since we don't have much on the second, we're not going to get much on the first. I don't see our numbers growing much. The political situation in the

CEMAIR FACTS

■ THE CEMAIR FLEET

- 9 Beech 1900Ds
- 9 Bombardier CRJ100/200s
- 1 Bombardier Dash 8 100s
- 2 Bombardier Dash 8 300S
- 21 aircraft in service

CONTRACT FLYING

CemAir is active in the following markets: Zambia with Proflight

Zambia with Proflight South Sudan

Tunisia for the UN

Algeria

Nigeria

Mali

Botswana with Air Botswana

Ghana

country isn't great and there are a lot of reasons why the market is stagnating. We are due a big correction at some point, it's not sustainable in its current form."

Van der Molen said the South African market is "very skewed" because government-owned South African Express (SAX) and South African Airways (SAA) can accrue on-going losses. "The driver is largely politics, not economics," he said.

This makes survival extremely tough for independent airlines like CemAir and British Airways franchise carrier Comair, which van der Molen said is doing a "brilliant job".

"There have been a lot of failures. I think 15 airlines have started over the last 20 years and there are only two left – us and Safair. It is a confidence battle when you are a new name to passengers. We've been around a long time, but we're not high-profile, so we need to build confidence and capitalise on it. If you enter a market and then withdraw [from the route], it sends a negative signal.

You have to be very cautious and

AIR TRANSPORT

REGIONAL AIRLINES



CONTINUED FROM PAGE 31

fight it out to the bitter end, even if it's expensive," he said.

Contract work allows CemAir take on these battles, flexing the combined muscle of its two business areas. Using this strategy, CemAir has encroached on some of SAX's routes and hired some of its rival's employees. "To me, a company is nothing but a collection of people. People are the business. If you have good people, you will have a good company."

Van der Molen said he "wouldn't close the door" to the idea of acquiring SAX, but he thinks it is unlikely. However, he recognises the value of partnerships with other airlines. Capacity agreements, codeshares and interlines are all more likely now CemAir is IATA and IOSA registered.

"We have been an IATA member for six months, so we are at an early stage, but this is a direction we'd like to take," he said. "We believe interlines could give us around a 20% increase in passenger numbers."

CemAir carries around 130,000 scheduled passengers a year, rising to around 600,000 including its ACMI work. More importantly, the airline is seeing consistent growth in turnover and profits, and has had a "strong financial performance the whole way through."

So would 100% shareholder van der Molen consider selling the business? "Quitting isn't in my nature," he said. "I could never close the door to any conversation that made sense, but I'm not sure I'd play well with others if you put me in a board room. You can't corporatise me

Living with the CemAir challenge

"We don't own a single aircraft in production," van der Molen said. "Buying an aircraft is the easy part: living with it is where the challenge is."

He said Bombardier's support has been exceptional. "Bombardier has been really great and I am certain our future growth will be with Bombardier products. It has become a partnership and we reach out for help frequently."

The Beech 1900 aircraft are also well supported and CemAir has just done an avionics overhaul to extend their lives. "We see the fleet staying with us for a while. The Beech 1900 is a great all-rounder; it's fast enough, economic enough and make sense."

When quizzed on the potential of newproduction Twin Otters, van der Molen replied: "You can land the Twin Otter on a football field, but you can overtake it in your car. It has exceptional [operational] performance, but doesn't get going."

and I'm happy going it alone."

Instead, he is looking at regional expansion and is seeking permission to fly between South Africa and Botswana, where CemAir has historically flown for Air Botswana. "We are looking to dip our toes in the market. We would probably be operating as ourselves, as CemAir. I see us operating under our own name in the next six months."

Beyond this, CemAir plans to stick with what it knows. "We are not going into the narrowbody market, even in the long term. In terms of long-haul, we don't have delusions of grandeur. We want to go with what we know and build depth, rather than jump into long-haul, which is

a romanticised market that you enter more based on ego than economics. I see us as a bit more grounded than that. Jumping into a market that we know nothing about would be commercial suicide."

That said, CemAir is looking to expand its regional work by seeking a Maltese air operator's certificate (AOC) to broaden its geographical spread. It hopes to secure the AOC by February next year.

"We have a member of our team that moved there a month ago, so it is actively being pursued. We will use it to pursue ACMI work in Europe and North Africa. In time, a scheduled regional operation will be considered, but not for now." he said.

Running a South African airline is not an easy career path, so why do it? For van der Molen, genetics were partly to blame.

"I grew up in aviation. My parents were involved in leisure aviation, so I used to bounce around small airports. Instead of getting a real job, I went into aviation. I started as a pilot on piston-engined charters, but I found the business side more exciting. At one point, I thought I'd go and do something else, but I got sucked back in. It's my choice somehow, even if it adds to my grey hair collection."

A tech aircraft tested van der Molen's stress levels when planning this interview. "Problems come in bunches, like bananas," he joked. "Obviously, it's pretty stressful, but I have to put my best foot forward every day. Once it's in your blood, it's very difficult to leave."





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With its traditional long-haul routes facing ever-increasing competition, Air Seychelles is looking east for a possible new source of revenue.

Alan Dron *reports.*



ROUTES TO NEW MARKETS...

t's no easy matter predicting whether a new route will be successful. Every airline undertakes careful research before embarking on the cost of opening services to a new destination. But sometimes, external factors intervene to render that research obsolete.

In 2016, Air Seychelles looked at a number of potential new European destinations in France, Italy and the UK before settling on the German city of Düsseldorf. Part of the reasoning behind the choice was that Düsseldorf was on the route map of Airberlin – like Air Seychelles, an Etihad Airways partner airline. Air Seychelles believed that the German carrier would be able to channel traffic on to its route down to the Seychelles.

However, Airberlin is in the throes of a major reorganisation in an attempt to stem heavy and persistent financial losses. "A key codeshare partner, for their own understandable reasons, changed their intra-European network. That, unfortunately, negatively hit our Düsseldorf flights," said Air Seychelles' CEO, Roy Kinnear. "Airberlin wasn't delivering as much throughput as we had anticipated." Added to that, "Fuel prices are significantly higher now than they were 12 months ago. Quite frankly, it wasn't covering the cost of the fuel and the crew and, once you reach those situations, you're better leaving the aircraft on the ground."

Air Seychelles announced in July that it was dropping the German city from its network.

The marketplace is currently "incredibly competitive" and many carriers are cutting prices and stepping on each-other's toes to deliver passengers out of Europe to the Seychelles, said Kinnear.

The Middle East 'big 3' of Etihad Airways, Emirates Airline and Qatar Airways, together with Turkish Airlines, all have flights out of their respective hubs to the Indian Ocean archipelago and, in many ways, they have an easier task in filling their flights to Mahé than the islands' own national airline, said Kinnear.

Taking advantage of their huge networks, they only need to have a few passengers coming off multiple flights transiting their hubs that can then connect on to their Seychelles flight, "whereas I've got to find 200 direct passengers".

In its efforts to find new passengers, Air Seychelles is attempting to tap the burgeoning tourist flow from China.

Over the summer, Air Seychelles ran a sixweek series of charters from Chengdu, plus three services from Beijing in September and October. The airline is talking to several partners and organisations about creating a future flight programme from China, either seasonal or year-round and on a scheduled or charter basis.

The Indian Ocean carrier has three distinct strands to its operation: long-haul services to Paris are





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handled by two Airbus A330-200s; Indian Ocean 'regional' routes to places as far apart as Johannesburg and Mumbai, as well as to neighbouring islands such as Mauritius and Madagascar, are covered by a pair of A320-200s; and island-hopping services within the Seychelles archipelago are handled by six DHC-6 Twin Otters.

The 'Twotters' are the new Series 400 models, manufactured by Canada's Viking Air, which took over production of the rugged 19-seater twin turboprop from Bombardier some years ago.

The latest two examples arrived in March this year and slotted into the busy schedule that sees some 300 inter-island flights every week.

Some of the new arrivals replaced Twin Otter models that had been in service for 30 years, so Kinnear is looking forward to a long period of gainful employment for the new fixed-undercarriage aircraft – probably 20 years or so. Their short take-off and landing (STOL) capabilities make them ideal for short island airstrips.

The Twin Otters fulfil two very different roles; they are used by islanders to get around the archipelago on business or to visit friends and relatives, but are also an important method of moving tourists around the islands.

"The Twin Otters carry a fairly even split between locals and tourists – about 52% to 48%," said Kinnear. Long-haul services usually leave Seychelles International Airport near the capital, Victoria, each evening, while incoming services arrive in the early morning.

Air Seychelles builds banks of flights around those times. It is not unusual to see a queue of Twin Otters departing from the main international airport at 15-minute intervals in the morning for Praslin and the outer islands, taking

tired tourists on the last leg of their long journey to a fortnight of relaxation on the islands' beaches.

In the evening, the Canadian turboprops converge on the international airport once again, this time bringing in passengers departing for Europe or the Middle East.

Meanwhile, locals head to Johannesburg for shopping trips, while Seychellois business travellers make trips to regional destinations to purchase materials or goods for sale in the islands.

The Twin Otters also fulfil an important function in creating employment opportunities for young Seychellois pilots.

When the airline replaced its elderly Boeing 767s with the A330s in 2012, followed by the A320s, Airbus pilots were notably scarce in the Seychelles, leading to a pilot force that was heavily biased towards expatriate crews.

"To balance this we went out on a very heavy domestic recruitment campaign on the Twin Otter fleet. You ramp up [the young pilots], get them to 1,500 hours flying time and you have a ready-made pool of pilots you can then put through Etihad's simulators and drip-feed them, two at a time, into the Airbus fleet. We're now at the point where around 73% of the Airbus pilots are Seychellois. That's good for us as an airline and for Seychelles as a country."

Since 2011, Air Seychelles has been an Etihad partner airline and has derived considerable benefit from the arrangement. Etihad has a 40% shareholding in the company and, earlier in 2017, renewed a management contract for a further five years. Kinnear was, himself, previously with Etihad, where he latterly held the position of senior vice-president – revenue management and planning.

Air Seychelles can use its association with Etihad to cut unit costs through bulk-buying supplies ranging from engine spares to photocopiers.

It also has access both to Etihad's simulators and cabin mock-ups in Abu Dhabi for training pilots and flight attendants and to skill sets and knowledge in fields such as reservations and ticketing: "We have a partner where we can use some of their base procedures and adapt them to the Seychelles environment."

The next few years will throw up both challenges and opportunities, said Kinnear.

Competition between Indian Ocean tourist destinations – Seychelles, Mauritius and the Maldives, for example – is increasing. Tourism is the lifeblood of the Seychelles and other airlines are launching services into the region, so competition will hot up.

On the regional front – Africa and the Indian Ocean – there will be a challenge to find more growth, as some bilateral air service agreements are reaching their limits in terms of the number of frequencies allowed, while Africa presents a challenge in visa restrictions in many countries. (The Seychelles is a visa-free area.)

And there are industry-wide challenges such as airport security and rising fuel prices.

In many ways, Air Seychelles has grown up in the past few years. Kinnear's predecessor, Manoj Papa, introduced technology to help keep headcounts under control and moved the company on to its own air operator's certificate (AOC), whereas previously all its aircraft were leased.

"We introduced our own AOC and, once you start to do that, you have to really develop a company in terms of creating an operations control centre, safety guidelines, IATA operational safety audits, etc. We've really moved forward as an airline."



AIR TRANSPORT GROWTH



Air Arabia develops multi-hub strategy

North African low-cost airline, Air Arabia, is continuing its ambitious plans to expand into under-served markets while maximising its operational efficiency.

Vincent Chappard found out more from group CEO, Adel Al Ali. ir Arabia currently operates a fleet of 47 new Airbus A320s serving a network of 130 routes in 35 countries from its five hubs in the UAE, Morocco, Egypt and Jordan.

The company is confident of the growth prospects of the low-cost travel segment in North Africa and the Middle East.

"Our business model is such that we look at destinations that are within 4-5 hours flying radius from our hubs; our growth strategy and product offering allow us to deliver on this unique model," explained group CEO, Adel Al Ali.

The current multi-hub operations have not only enabled the company to meet its targets efficiently, but have the benefit of spreading services across several regions with a high density of potential travellers.

While expanding in these markets, the company concentrates on profitable routes to meet its financial targets. "Our hubs have catalysed our expansion and provide more options to our passengers. They allow us to cater for a larger number of travellers, enhance our connectivity and focus on offering comfortable, reliable and value-for-money air travel," explained the CEO.

The new route to Baku in Azerbaijan, launched recently, is already gaining popularity as a summer getaway for families. Air Arabia has also expanded its operations in Turkey (Trabzon).

The company is continuously working towards developing the network from all its hubs. Air Arabia Jordan, for example, recently inaugurated its services from Amman to Tbilisi and to Sohar, becoming the first carrier to link the two countries with a direct flight.

Meanwhile, Air Arabia Maroc continues to grow apace. The airline now operates from five airports in Morocco, with direct connectivity to Europe thanks to the launch of its latest base in Agadir.

There has been a recent boost in tourism activity in Jordan and the demand for point-to-point destinations looks

promising. More specifically, Eastern European holiday destinations have gained interest among Levant travellers, offering potential future travel trends in the market.

"In all hubs, we place great importance on studying interests and market demands to develop operations that are convenient to our customers and beneficial to Air Arabia," said Al Ali.

In addition to serving the North African market from its main hub in Sharjah, UAE, Air Arabia also has two hubs in Morocco and Egypt that are strategically located to serve the African market. Currently, both connect North Africa with Europe and the Middle East regions.

"We aim to expand our operation from North Africa by serving the rest of the African markets once we are granted the necessary traffic rights approvals."

The company has launched its fifth base in Morocco Agadir, with direct flights to Dublin, Cologne, Copenhagen, Stockholm, Toulouse and Manchester.

Agadir joined Casablanca, Tangier, Fez and Marrakesh, where the airline currently offers direct flights to more than 25 routes in Europe. "Expanding our operation in Morocco is in line with our business strategy to support the tourism vision set for the kingdom by offering more air accessibility from and into the country," explained Al Ali.

The airline's expansive route network, with its multi-hub strategy, enables it to reach its targets in an efficient manner. With plans to expand and grow in the region, backed by the expansion of its main hub in Sharjah, it aims to become the low-cost carrier of choice among passengers, and maintain a sustainable growth across the entire operation.

Air Arabia received two new Airbus A320s in the first half of 2017 and added 12 new routes.



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As low-cost carriers develop across Africa, **Githae Mwaniki** talks to Jambojet CEO, Willem Hondius, about the airline's operation plan in Kenya and the East African region.

Jambo makes a Dash for expansion

ambojet has been on an expansion drive recently, witnessed by the delivery of a new Bombardier Dash 8 Q-400 Turboprop airliner. The aircraft's arrival has been key to the company's fleet reorganisation programme, which enables it to serve more destinations using airports/airstrips with short runways.

Earlier this year, the airline celebrated flying its millionth passenger.

It has also turned a profit for the second successive year, seemingly able to steer its own path and not be affected by the operational challenges faced by its parent airline, Kenya Airways (KQ).

Now Jambojet is set to begin operations to reach more destinations within Eastern Africa, so what's the basis for its operational strategy?

"We operate the so called low-cost model, which was introduced elsewhere in the world a long time ago," explained Jambojet CEO Willem Hondius.

"This allows us to introduce low fares, which can't be matched by existing operators. These attract new customers, who didn't fly before, and existing travellers, who fly more often. You grow the market rather than redividing it.

"In Europe, the market on routes where low-cost airlines (LCCs) operate tripled or even quadrupled. The share of LCCs in intra-Europe traffic is now about 45%. The market in Kenya grew by 35% since Jambojet started. Although the group of people who can afford to fly is growing, the absolute number is still low compared to Europe and the US."

Looking at the driving factors behind the airline's fleet choice, Hondius explained: "The most important factor is the cost per seat. Most LCCs operate the Boeing B737 (300, 700, 800) or the Airbus A319/A320 as these aircraft give the best market demand/seat cost ratio. Normally you



WILLEM HONDIUS

Willem Hondius is a seasoned airline professional, having worked in the industry for more than 32 years. His entry into aviation began in 1984, when he was based at KLM's head office in various commercial functions.

From 1990, he worked for KLM in the Dutch Antilles, Hungary, South Africa and Kenya.

Between 1996 and 1999 he worked for Kenya Airways to build up the cooperation with KLM from a Kenyan perspective. Then, in mid 1999, he moved back to the Netherlands and worked for Transavia (a 100% KLM subsidiary) until 2012. During the last seven years there he was commercial director.

In 2012, Hondius moved back to Kenya as KLM GM for Eastern Africa and then, in 2013, he switched to Kenya Airways to implement the Jambojet project and become the CEO.

Hondius is married and has two grown-up

operate only one type of aircraft in order to keep the cost down. With one type you only need to train pilots for that type, you only have to do maintenance and have spare parts for one type etc.

"We started with only Boeing 737-300 (142 seats) aircraft, leased from Kenya Airways, our parent company. However, we noticed that this aircraft was too big for most of the domestic routes in terms of demand and in terms of airport infrastructure (short runways). Therefore, we introduced the Bombardier Dash 8-Q400 NG (78 seats) turboprop aircraft. We now operate two Q400s and will add another two by the end of the year."

Jambojet is now planning to operate additional destinations.

"We now operate to six domestic destinations – Mombasa, Ukunda, Malindi, Lamu, Eldoret and Kisumu," said the CEO. "Recently we received permission to operate to destinations outside Kenya. We will introduce international routes by the end of this year, when we receive the additional aircraft."

But how will that affect the relationship with KO?

"We already market Jambojet separate from KQ. We have our own brand, different distribution (more than 60% via the internet), a different pricing model, with much lower one-way fares etc."

Turning to other market opportunities Hondius added: "There are currently no other real low-cost carriers in Kenya. The existing carriers might have lower cost that the mainstream carriers, but they are not true low-cost. In East Africa, we only have Fastjet operating in Tanzania, but they have reduced their network and number of aircraft.

"In this region, you have two bigger network carriers – Ethiopian Airlines (ET) and KQ. ET is profitable and KQ is on its way back. Other

LOW-COST AIRLINES



national carriers are RwandAir and Air Tanzania (which recently resumed operations). All other carriers are smaller domestic/regional operators.

"Competition is strong, especially from the Middle East and European carriers, which puts pressure on the prices. The cost of operating is also quite high in Africa, which makes it more difficult to compete on price."

Jambojet's rise to prominence has been quick – a point acknowledged by the CEO.

"The Jambojet business plan was approved by the KQ board in September 2013 and we started to operate in April 2014," he said.

"The first year we only operated to Kisumu, Eldoret and Mombasa. Then, in the second year, we introduced the Dash Q-400 and added Lamu, Malindi and Ukunda to the network.

"In the beginning, the Kenyans had to get used to the low-cost model but we see that now most people understand how it works and are happy with the affordable fares Jambojet offers. In our first year of operation about 30% of our passengers had never flown before. We are still welcoming a considerable number of passengers who are flying for the first time. Overall I think that we are quite successful with this low-cost model."

Jambojet is currently 100% owned by KQ and Hondius said there were no plans for this to change.

But will the fact that a legacy carrier owns the airline restrict its growth – particularly as in other markets LCCs in this position tend not to grow beyond a certain point (regional/intercontinental)?

"In Africa, it is a big advantage to be part of the national (legacy) carrier," said Hondius. "We introduced Jambojet to complement KQ in a market segment it didn't cover. Being part of the KQ group means that we have to grow in a smart way. We are not there to compete with KQ, but you can never avoid the fact that passengers switch from it to lambojet.

"In the airline business 5-10 years ahead is difficult to predict. Jambojet will grow steadily with the expectation that the airline will increase to about 10 aircraft in the next five years, becoming a strong operator in the East African region.

"We combine one of the most fabulous countries with affordable domestic fares. I can't think of a better reason to visit Kenya on your next holiday."

Jambojet is definitely on the rise, enjoying operational independence due to its own air operator's certificate (AOC) and growing brand status. Its much-awaited debut to fly to international destinations within Eastern Africa is set to further cement its key role as an African LCC.

Like his nine predecessors, Nigeria's Aviation Minister, Hadi Sirika, is championing a process of creating a national carrier capable of filling the void left by the liquidation of Nigeria Airways in 2003. But, as **Chukwu Emeke** reports, it won't be easy.

Turbulence ahead on the route to a national carrier



Hadi Sirika: a new national carrier is on the present administration's priority agenda.

igeria Airways was liquidated following mounting insolvency, mismanagement, inefficiency, corruption and poor safety records.

At the point of liquidation, the airline had debts of \$60 million and a single aircraft flying domestic routes, as well as two leased aircraft operating the international network.

Since 2004, attempts by various administrations to establish another national carrier under various names, ranging from Nigeria Eagle to Nigeria Global, Virgin Nigeria and Air Nigeria, have all failed.

The minister has, however, reassured sceptics that a new national carrier is on the present administration's priority agenda and, therefore, won't go the way of previous plans.

He says the federal executive council has approved N1.5billion (\$4.99 million) for the proposed national carrier project, while advisers have been appointed – Lufthansa Consulting/TN Aero for the national carrier; Infrata Dantens for airports concession; and JBB for the aerotropolis and agro cargo terminals.

Many of the country's previous aviation problems were summed up by John Tambi, a senior official from the new partnership for Africa's development (NEPAD) – a socioeconomic flagship programme of the African Union (AU).

Tambi, coordinator, presidential infrastructure champion initiative for the NEPAD planning and coordinating agency (NPCA), said: "I think, in Africa, we have unfortunately missed the point. We have spent too many years trying to develop national airlines with the main focus on serving our colonial masters by ensuring connectivity to their major capitals, rather than serving our people.

"I think we should have paid more emphasis on developing our national route network and regional network. We should have built airports or airstrips to serve our local markets and open up our countries, rather than concentrating on overseas."



Because of the failed national carrier projects in recent years, there are fears that the Government may not be able to generate a new strong airline unless it empowers existing scheduled operators by providing an environment conducive to their operations through favourable policies.

Since the 1960s, more than 50 Nigerian-registered airlines have suspended operations due to faulty business plans, poor management skills and other factors.

Today, the domestic airlines operating flights in the country include Air Peace, Dana Air, Arik Air, Aero, Medview Airlines, Overland Airways and First Nation Airways.

Aero, the oldest domestic airline, and Arik Air, were both taken over in 2016 by Asset Management Corporation of Nigeria (AMCON), because of huge debts.

So what are Nigeria's options?

Olu Ohunayo, business manager for Zenith Travels, believes a government-private sector arrangement, with government keeping a minority share in the proposed airline, could work. Examples abound where national airlines are largely managed by private concerns. African airlines, like Ethiopian, Kenya Airways and South Africa Airways, are strictly run along commercial models that emphasise profits, and without government interference in operations.

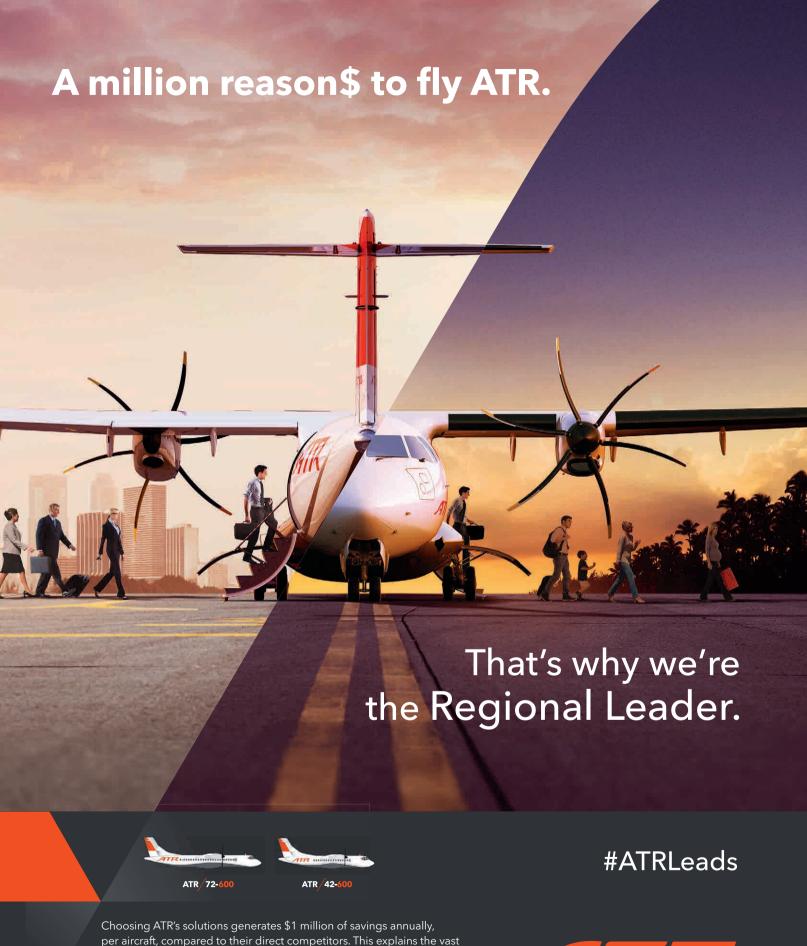
Meanwhile, Gbenga Olowo, president of travel marketplace specialist, Sabre West Africa, which hosts 400 airline inventories, believes that Nigerian Government still has a key role to play in influencing the success of the anticipated new national airline project. He proposes the collapse of all existing local airlines into three flag-carriers to service the nation's international routes.

It's a point somewhat shared by Captain Usman Murtha, director general of Nigerian Civil Aviation Authority (NCAA). He has advised Nigeria's licensed domestic carriers to form mergers in order to gain economic strength for competition and survival, as the efforts to generate a new national carrier progress.

Air Peace chairman, Allen Onyema, points out that airlines' survival will remain a challenge in Nigeria until the government reviews legislation that forces them to pay up to 37 different charges.

And Captain Dele Ore, the president emeritus for the aviation safety round table initiative (ASRTI), advocates a renegotiation of the existing air services agreements, a strict implementation of the nations' local content policy in recruitment processes for the proposed national airline, and a reliable MRO arrangement before commencement, to avoid the errors of the past.

Whatever the minister decides to do, it looks like a tough road ahead.







success of the program and its leadership in terms of orders, deliveries, backlog, operator base, investor's opinion and residual value retention.



Air Sénégal SA relancera les services aériens du pays en décembre prochain. Un reportage de Vincent Chappard.

e rétablissement d'une compagnie aérienne nationale s'inscrit en effet dans le plan gouvernemental baptisé Plan Sénégal Emergent (PSE). Il est soutenu par le Président Macky Sall comme l'a souligné récemment la ministre sénégalaise du Tourisme et des Transports aériens Maimouna Ndoye Seck en présence de son homologue française, Elisabeth Borne

La nouvelle compagnie commencera ses opérations en décembre prochain lors de l'inauguration du nouvel aéroport international Blaise-Diagne de Diass.

Air Sénégal a signé un contrat portant sur une commande ferme de deux ATR 72-600 d'une valeur estimée à environ 50 millions d'euros au prix catalogue lors du dernier Salon du Bourget.

La compagnie exploitera un réseau hybride avec une flotte mixte. Son développement se fera en trois étapes : le marché domestique puis régional et enfin l'international. Elle projette d'acquérir par la suite des appareils monocouloirs, puis des gros porteurs pour connecter le pays au reste du monde avec notamment l'ouverture de la ligne Paris-Dakar en 2018.

La naissance d'Air Sénégal redonne confiance au secteur surtout après les échecs des compagnies précédentes. Selon des spécialistes en stratégie et finance dans l'aviation, « la

Un changement qui précède un autre!

Au moment où le magazine allait sous presse, Air Sénégal SA a connu un changement surprenant à sa tête, avant même le démarrage de ses activités. Aux commandes de la compagnie depuis sa création il y a un an, Mamadou Lamine Sow a été écarté et remplacé par le français Philippe Bohn (ancien directeur Afrique et du développement d'EADS, aujourd'hui Airbus group). Il ne quitte pas pour autant la compagnie puisqu'il est nommé président du conseil d'administration. Selon la presse locale, le président Macky Sall mise sur « l'expérience et le networking » de son nouveau DG pour mener à bien ce lancement tant attendu.

nouvelle compagnie est structurée autour d'un plan plus solide que ses ancêtres ».

Mamadou Lamine Sow, nouveau président du conseil d'administration d'Air Sénégal SA (voir encadré), est d'ailleurs optimiste face aux opportunités qui se présentent, son fort vivier de personnel navigant, commercial et technique et le soutien des autorités.

« L'échec sera le fondement de la réussite. Air Sénégal International était sortie du marché du fait des difficultés croissantes avec la maison mère, Royal Air Maroc. La RAM est ensuite partie avec ses actifs. On ne va plus commettre cette erreur, c'est pour cela qu'aujourd'hui on s'est doté d'actifs propres... Nous sommes autonomes. Pour Sénégal Airlines, la stratégie de développement a été contrariée très vite par des défauts de fond propre. Le capital social a été appelé mais jamais libéré », explique-t-il.

Il existe un potentiel énorme en Afrique de l'Ouest, qui compte des pays ayant signé la Déclaration de Yamoussoukro et qui libéralisent leur secteur aérien.

Créée en avril 2016 par l'Etat sénégalais dans le cadre du projet de hub aérien, Air Sénégal SA ambitionne de faire de Dakar le premier hub aérien régional et compte jouer un rôle prépondérant dans l'intégration régionale en Afrique de l'Ouest.

La nouvelle compagnie repose sur un modèle économique qui se veut performant avec une maîtrise des coûts d'exploitation permettant d'offrir une grille tarifaire simple et compétitive, une proximité avec le client et de l'innovation au niveau des services.

Après une année d'évaluation menée par une équipe d'experts assistée du cabinet d'étude londonien Seabury, et sur la base du business plan, le choix s'est porté sur ATR pour desservir le réseau domestique et les pays limitrophes.

Les ATR d'Air Sénégal SA seront livrés en novembre prochain.

« Ces deux actifs ont été acquis en propre. Pour le reste nous allons attendre d'ici trois à cinq ans. Nous souhaitons à termes avoir deux

SENEGAL



avions moyen-courriers en location pour le marché régional et un long-courrier pour l'international. »

Il s'agit donc de positionner le Sénégal comme un hub avec comme objectif d'accroître la capacité du trafic de 2 à 5 millions de passagers en 2023 et à 10 millions en 2035.

« Nous sommes persuadés qu'ATR représente le meilleur choix pour répondre aux exigences du marché », soutient Mamadou Lamine Sow.

L'avion peut se poser sur des pistes courtes, non asphaltées et par météo défavorable. Autres atouts ; un faible coût d'opération avec 40% de consommation de moins qu'un jet de la même taille et son autonomie.

L'avionneur estime que l'Afrique aura besoin de 300 avions d'ici à 2035, ce qui correspond à 11% de la distribution géographique mondiale. Plus de 400 routes y seront créées.

« Le potentiel de l'Afrique est particulièrement intéressant, d'autant plus qu'il y a encore beaucoup de développement régional à faire, et que les ATR sont des avions très pertinents pour desservir des petits aéroports avec des installations sommaires et même opérer sur des pistes non préparées », affirme Christian Scherer, le Président Exécutif d'ATR.

L'achat par le Sénégal des ATR sera accompagné des prestations comme la formation du personnel technique et des mécaniciens, et en matière de gestion aérienne.

« Grâce aux ATR, les passagers sénégalais bénéficieront d'une offre de transport permettant de générer de nombreuses opportunités commerciales, contribuant ainsi au dynamisme de l'économie locale. »

Pour développer le hub de Dakar, Air Sénégal SA reste ouverte à toutes formes de partenariats que ce soit « capitalistique ou opérationnel ». Mamadou Lamine Sow est d'avis que l'aérien est un secteur très capitalistique et qu'on ne peut pas développer une compagnie sans avoir des capitaux.

« Nous sommes en discussion avec beaucoup d'opérateurs. Cette sous-région n'a pas la capacité de développer trois hubs. Nous avons intérêt à coopérer, à harmoniser nos programmes et nos fréquences pour créer la complémentarité et une synergie aussi bien de coûts que de revenus pour nous consolider et faire face aux concurrents venus d'ailleurs. Ces grandes compagnies n'ont pas vocation à faire du « porte à porte » (point à point) sur le plan régional. Elles doivent laisser les compagnies « feeder » locales faire le reste du travail. Elles souhaitent avoir des partenariats avec nous pour qu'on puisse desservir le marché domestique et la sous-région. »

Le Sénégal est déterminé à consolider l'un des piliers de son développement, le transport aérien, pour se doter d'une économie émergente. Ministerial approval as Senegal's minister Maimouna Ndoye Seck and France's minister Elisabeth Borne celebrate the contract.

L'approbation ministérielle, le ministre sénégalais Maimouna Ndoye Seck et la ministre française Elisabeth Borne célèbrent le contrat.

SUMMARY

AIR SENEGAL SET TO RELAUNCH NATIONAL AIRLINE

The reinstatement of a national airline is part of the Senegal Government's 'Plan Emergent Senegal' (PSE) and is keenly supported by the country's president, Macky Sall, along with the Senegalese Minister of Tourism and Air Transport, Maimouna Ndoye Seck.

The new airline will start operations in December, when the new Blaise Diagne International Airport in Diass is inaugurated.

At this year's Paris Air Show at Le Bourget, Air Senegal signed-up for two ATR 72-600s and it intends to operate its network with a mixed fleet as it expands. Initial development will be in three phases – domestic, followed by regional and finally international.

Future plans include acquiring further single-aisle aircraft before flying twin-aisle aircraft once its Paris-Dakar route opens in 2018.

As African Aerospace was going to press, it was announced that Philippe Bohn, formerly of Airbus Group, has been appointed CEO of the new company, with Mamadou Lamine Sow moving to become chairman of the board.

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The creation of a new Air Senegal should generate confidence following the failure of previous attempts and the chairman is optimistic about the opportunities and says that the fresh team of commercial, technical and operational personnel have full support from the relevant authorities.

"Failure will be the foundation of success," he explained. "Air Senegal International's previous problems resulted from trying to operate with outside partners so that's why today we have acquired our own assets. We are autonomous."

He believes that there is enormous potential in West Africa, particularly among the signatories of the Yamoussoukro Declaration, which should liberalise the entire commercial sector.

Created in April 2016 by Senegal as part of its 'air hub' project, Air Senegal SA aims to make Dakar the first regional air hub and intends to play a leading role in regional integration within West Africa.

Following a year's evaluation by a team of experts, assisted by the London-based research firm Seabury, and on the basis of the business plan, two ATR turboprops were selected to serve the domestic network and routes to neighbouring countries. These will be delivered in November and plans for further aircraft will evolve over three to five years, with the intention of acquiring two medium-haul aircraft for regional routes and a long-haul airliner for international sectors.

The objective is to position Senegal as a significant hub, increasing passenger capacity from two to five million by 2023 and up to ten million by 2035.



AIR TRANSPORT FREIGHT



«Air Cargo Express prête pour de futurs combats » — Page 48

Tunisia's new all-cargo airline, Air Cargo Express, is now operating a second freighter and plans to have another three by the end of 2017. **Tom Pleasant** reports.

ir Cargo Express gained its air operator's certificate in September 2016 and launched its first flight, using a 737-300 freighter, from Tunisia's Enfidha-Hammamet International Airport to France's Paris Charles de Gaulle in February 2017.

It now has a second of the aircraft type, flying to Germany's Cologne Bonn Airport.

CEO, Anis Riahi, said the airline would continue to focus on the 737, adding another three to the fleet by the end of the year.

Unlike the -300s, these will all be 737-400s, with the airline leasing one and buying the other two. The long-term goal, he said, was to reach 12 aircraft by 2020.

As well as for its own flights, these will be used to service interline-agreement partners, such as AirBridgeCargo, Air France, American Airlines and Cargolux. The airline has also partnered with one integrator, UPS, and Riahi hopes to secure more of these.

The airline is busy building a 2,000sqm warehouse at Tunis-Carthage International Airport, due to open before the end of 2017, to handle its increasing cargo shipments. As well as the usual electronics and perishables, such as mobile phones, fruit and vegetables, it will also be fully certified to handle pharmaceuticals, a profitable cargo, but one that requires extremely precise care throughout its journey.

For the moment, Riahi is concentrating on consolidating the core freighter flights, using Tunisia as a stepping-stone for air cargo between the two continents. "We won't only focus on the Tunisian market, because Tunisia's geographical position gives us a competitive advantage for pushing in both directions between Africa to Europe and Europe to Africa."

The path to these first-year operations has not been easy. The launch of Air Cargo Express was first announced in October 2015, with the first flight

AIR TRANSPORT FREIGHT

CONTINUED FROM PAGE 47

planned for January 2016, using a 737 and a CRJ 200. The fleet was then due to grow to six aircraft, adding a 767, another CRJ 200 and two Cessna 208B, by April last year, and a 767 five months later in September.

Riahi hints at meddling from a particular individual within the Tunisian Government for the delay and these subsequent fleet changes. While he didn't say so, it is likely that much of that interference came from Mehdi Ben Ghrabia, a Tunisian Government minister currently defending himself against allegations of corruption. One of his companies is World Freight Services (WFS, not to be confused with several other companies by the same name around the world), which was planning to start up its own cargo airline, in partnership with Tunisair, at the same time that Air Cargo Express was announced.

Even when Air Cargo express was launched, it faced additional problems over unfair competition, with allegations that the Ministry of Transport awarded licences to a European company that were not mutually respected in bilateral agreements.

Looking to the immediate future, Riahi, remains optimistic. "We want to have daily flights between Tunisia, and France and



Germany and then expand to daily flights to Algeria and Morocco in North Africa and three or four destinations in West Africa, probably Cameroon, Ivory Coast, Nigeria and Ghana. Later, we would have [secondary] cargo hubs in Ivory Coast, Cameroon and Guinea-Conakry."

Eventually, he wants the airline to be able to fly to 51 countries within Africa by the end of 2018, but securing the traffic rights for these, and anywhere else in Europe, will be "a big headache and a big fight".

That fight has already drawn blood in Malta, which withdrew permission for Air Cargo

Express to fly there, refusing to honour the two countries' bilateral agreement. "We are working with our transportation authority to return to Malta and we're confident that will happen soon." said Riahi.

He remains philosophical about the overall rights situation, though: "If there's any issue with the fleet, crew or maintenance, those are things we can control. But, honestly, the only thing we are not able to directly control is securing traffic rights, particularly in Africa.

"This is an issue that affects the development of all airlines, not just us. We need to open the market to everyone so we can all operate on the same level. Competition needs to be transparent and it's too easy for political interference to get in the way of that.

"Securing full authorisation for traffic rights could actually be the main issue we focus on next year and also be the biggest challenge for us. That is why we are working with the Tunisian transport authority to secure the Yamoussoukro Decision. We are doing our best to convince [other countries to accept this], but now it's just down to politics."

SOMMAIRE

AIR CARGO EXPRESS PRÊTE POUR DE FUTURS COMBATS

La nouvelle compagnie tunisienne de fret aérien, Air Cargo Express, exploite maintenant un deuxième avion, et prévoit d'en avoir trois autres d'ici la fin de 2017. Un reportage de **Tom Pleasant**

La compagnie aérienne fut certifiée AOC en septembre 2016 et inaugura son premier vol avec un Boeing 737-300 de l'aéroport international Enfidha-Hammamet en février 2017. Un deuxième avion de ce type relie Cologne-Bonn en Allemagne.

Son PDG Anis Riahi a déclaré à African Aerospace que la compagnie aérienne continuera à se concentrer sur le 737 et ajoutera trois autres à sa flotte d'ici la fin de l'année. Ce seront des 737-400. L'objectif à long terme étant d'atteindre 12 avions d'ici 2020. Ils seront également exploités par ses partenaires comme AirBridgeCargo, Air France, American Airlines and Cargolux.

La compagnie construit un entrepôt de 2 000 m2 à l'aéroport international de Tunis-Carthage, qui devrait être opérationnel avant fin 2017 pour gérer le volume de fret croissant. Pour l'heure, elle consolide ses vols de fret de base en utilisant la Tunisie comme un tremplin entre l'Afrique et l'Europe.

Ses premières années d'opération n'ont toutefois pas été faciles. Le lancement était annoncé pour octobre 2015, avec le premier vol prévu pour janvier 2016, avec un 737 et un CRJ 200. La flotte devait alors passer à six avions, en ajoutant un 767, un autre CRJ 200 et deux Cessna 208B, jusqu'à l'an dernier et un 767 en septembre. Les retards seraient d'origine politique.

Air Cargo Express travaille sur des vols quotidiens entre la Tunisie et la France et l'Allemagne, pour les étendre vers l'Algérie et le Maroc et trois ou quatre destinations en Afrique de l'Ouest, probablement le Cameroun, la Côte d'Ivoire, le Nigéria et le Ghana. Et, éventuellement avoir des hubs de fret secondaires en Côte d'Ivoire, au Cameroun et en Guinée-Conakry. La compagnie souhaite desservir 51 pays en Afrique d'ici la fin de 2018.

Il faudra avant cela obtenir les droits de trafic qui reste un « véritable obstacle » et un « défi majeur ». Il est impératif selon Anis Riahi d'ouvrir le marché, d'éliminer les interférences politiques et rendre la concurrence transparente. La compagnie travaille ainsi avec les autorités tunisiennes, l'AFRAA et l'AACO pour garantir la Déclaration de Yamoussoukro.

Par ailleurs, la compagnie prévoit de fournir des services de maintenance à d'autres compagnies aériennes. L'accord signé avec FL Technics va dans ce sens. En juillet dernier, Air Cargo Express et Boeing ont signé un accord pour ouvrir un centre de maintenance de 12 000 m2 à l'aéroport d'Enfidha à la mi-2018.

La compagnie compte sur la compétence tunisienne en matière d'ingénierie et de maintenance pour concurrencer avec les acteurs européens de MRO et obtenir des contrats avec d'autres compagnies africaines. Aviation associations are also hard at work on this same issue, which is why, due to its North African heritage, as well as being a member of the African Airlines Association (AFRAA), Air Cargo Express is also a member of the Arab Air Carriers Organization (AACO). "We are very happy to work with both associations. We want to consolidate our relationships with them, either with procurement or any other services."

As well as cargo, the airline is also planning to provide maintenance to other airlines. Currently, it has a deal with FL Technics to provide it with maintenance services. However, in July of this year, Riahi was part of a Tunisian trade and political delegation that flew to the US. Among the agreements signed on the trip was one between Air Cargo Express and Boeing to open a 12,000sqm maintenance centre at Enfidha Airport, scheduled to start operating in the middle of 2018.

"Tunisia is a low-cost country but we also have good aeronautical engineers and maintenance knowledge," says Riahi. "We are confident that we will not only be able to look after our own fleet, but also to compete against European MRO providers for contracts with other African airlines."



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DEFENCE

A US Air Force competition to find a new light attack aircraft could open new doors in Africa for Embraer's Super Tucano. Alan Dron reports.

Nigeria sales lights the way for Super Tucano

he US Government's approval in August of the sale of Embraer Super Tucano light attack aircraft to Nigeria was another milestone in the West African nation's attempts to improve its counter-insurgency capabilities against the Islamist Boko Haram movement.

As African Aerospace went to press, there were still some hurdles to be negotiated before the turboprop aircraft could be delivered. The US Congress, some of whose members are opposed to the deal, had 30 days in which to block it. Only if the Government's decision survived that period would detailed negotiations then begin, which could see both the number of aircraft and the price Nigeria pays for them, changing.

At the time of writing, Nigeria was seeking 12 Super Tucanos and associated equipment for \$593 million.

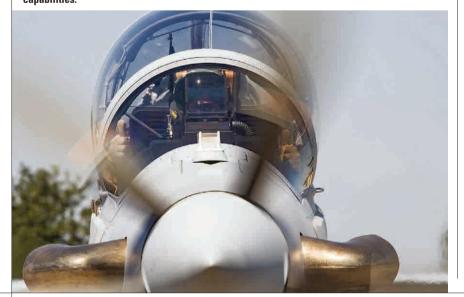
If it goes through, the contract will be another success for Embraer in finding Super Tucano buyers in Africa. Angola, Burkina Faso, Ghana, Mali and Mauretania have all bought the aircraft, which can undertake light attack and surveillance sorties for much lower costs than heavier, more complex jets.

The Super Tucano is manufactured in Brazil and at Embraer's US facility at Jacksonville, Florida. US-built aircraft are assembled in cooperation with Embraer's US partner, Sierra Nevada Corporation.

If the Nigerian deal is finally confirmed, it will keep the Jacksonville production line ticking over; in June this year, Embraer Defense & Security CEO, Jackson Schneider, said that if more new orders were not received by the time 20 aircraft for Afghanistan and six for Lebanon were completed by year-end, Embraer might have to look at moving some production north from its Brazilian assembly line.

The Super Tucano's prospects in Africa will get a major boost if it triumphs in the current United States experimental attack contest (OA-X). The aim of the contest is to find a

Success in Nigeria would spur other African nations to look at the Super Tucano's capabilities.



simple, rugged design that can be used in permissive air environments, notably counter-insurgency roles, for missions that currently require the use of sophisticated and much more expensive aircraft, such as F-16s, F-15Es and even the current close air support aircraft, the A-10.

The US is seeking a more basic aircraft that can operate out of rough airstrips with minimal infrastructure and maintenance facilities, at a fraction of the cost of existing frontline types.

The OA-X competition pits the Super Tucano, jointly entered by Embraer and Sierra Nevada Corporation, against three US designs – Beechcraft's AT-6 Wolverine, L-3/Air Tractor's AT-802L Longsword, and the sole jet in the competition, Textron's Scorpion.

The US Air Force (USAF) conducted a series of sorties with each aircraft in August from Holloman Air Force Base, New Mexico, both in daylight and at night, dropping a variety of weapons and testing various on-board sensors. Few details have been released, but if the USAF decides to make it a formal programme, the winning company could find itself supplying around 300 aircraft to the US.

That seal of approval would undoubtedly help the winning contender find more international contracts in Africa and elsewhere.

US commentators have noted that the Scorpion cannot operate from unimproved runways and that the AT-802L does not possess an ejection seat, which is thought to be an essential requirement of the design.

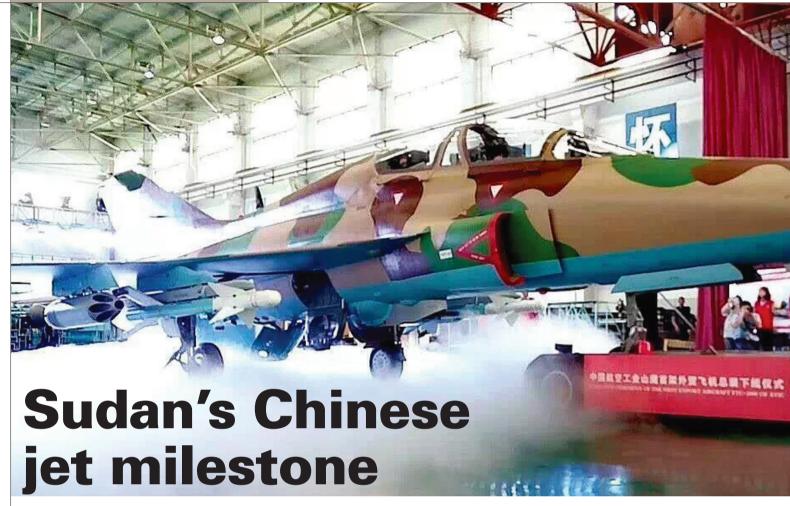
Additionally, the Super Tucano defeated an earlier version of the Beechcraft some years ago in the US light air support competition to find a simple attack aircraft for US allies, notably Afghanistan's fledgling air force. The Super Tucano won an initial contest; Hawker Beechcraft (as it was then known) protested over alleged irregularities in the contest, which was ordered to be run again. The Embraer design won out once more and, despite a further legal protest from Beechcraft, was finally selected.

Sierra Nevada is known to have made 'adjustments' to the Super Tucano for the OA-X contest. Embraer declined to give details, although the changes are thought to involve communications equipment and software.

The OA-X mission "is exactly the type of mission the Super Tucano was designed to fill", said Schneider. "It was aimed at guerrilla movements that were springing up in Latin American countries."

While Embraer declines to comment on possible future sales of the Super Tucano in Africa, or even to confirm where the aircraft has carried out demonstration flights in the last year, the company says that its previous successes on the continent have aroused considerable interest from other countries. The Nigerian order, if it finally goes through, will only intensify that interest.

DEFENCE



On June 5, China's state-owned Guizbou Aircraft Industries Corporation (GAIC) rolled out the first production FTC-2000 Mountain Eagle (Shanying) from its plant in Anshun. It was a particularly significant moment for Sudan, as **Jon Lake** reports.

he FTC-2000 is an advanced and lead-in fighter trainer and ground-attack aircraft marketed by the Aviation Industries Corporation of China (AVIC) and intended for the export market.

It is a derivative of the Guizhou JL-9 used by China's PLA Air Force.

The aircraft rolled out in June was destined for the Sudanese Air Force, though this was not officially confirmed, with officials referring coyly to "an undisclosed export customer". It wore the characteristic camouflage colours used by Sudan.

AVIC officials revealed that an undisclosed African country had ordered the FTC-2000 during the 2015 Paris Air Show. This marked GAIC's first export order for the type, though the company has supplied small numbers of FT-7 trainers to a number of customers – most of them operators of the F-7.

Until now, the Hongdu Aviation Industry (Group) Corporation – formerly known as the

China Nanchang Aircraft Manufacturing Corporation or CNAMC, GAIC's sistercompany within AVIC, has been responsible for most export sales of new generation Chinese jet trainers, selling large numbers of K-8 and L-15s.

Sudan was formally revealed to be the first customer for the FTC-2000 in an interview with GAIC director general, Wang Wenfei, published by *China Aviation News* on November 3 2016. He revealed that Sudan had ordered six FTC-2000 jet trainers.

Sudan is expected to use the type to replace its ageing Nanchang A-5 'Fantan' fighter-bombers, which saw extensive service during the war in Darfur, but which have been sidelined in more recent operations in Yemen.

The FTC-2000 is the export version of the JL-9 trainer, which is, in turn, a derivative of the JJ-7/FT-7 – the Guizhou-built trainer versions of the Chengdu J-7/F-7. The J-7 was China's unlicensed copy of the MiG-21, which spawned a

succession of lightly modernised and improved versions over the years.

The JJ-7 has been retired from Chinese service, though some later single-seat variants remain in service with the Chinese Peoples Liberation Army Air Force and Chinese Peoples Liberation Army Naval Air Force.

Though the JL-9 made its maiden flight on December 13 2003, and entered People's Liberation Army Air Force service in 2011, the aircraft is very much a J-7/MiG-21 derivative. It retains the Guizhou Liyang WP-13 turbojet engine, empennage, and mechanical flying controls of the original JJ-7/FT-7, married to a new cranked Delta wing and a new forward fuselage with a large nose-mounted multi-mode radar and redesigned side-mounted bifurcated air intakes, and accommodating a new glass cockpit.

By comparison, the rival Hongdu L-15 is powered by a turbofan engine and has a modern digital flight control system and a clean-sheet aerodynamic and structural design.

As a relatively inexpensive and low technology J-7 derivative, the FTC-2000 is at the lower-end of AVIC's portfolio, and is intended for developing nations and for existing users of the F-7, who can use much of their existing logistics and maintenance infrastructure to support the FTC-2000.

It is worth noting that Sudan is an existing F-7

ROUND-UP



operator, with about a dozen F-7s in service.

Wang Wenfei has indicated that other African countries, including Nigeria, have shown interest in acquiring the FTC-2000, but, even in Africa, the aircraft faces competition from more advanced Chinese jet trainers.

AVIC has sold six Hongdu L-15s to Zambia and is offering the JF-17 Thunder (in partnership with the Pakistan Aeronautical Complex) in the region.

Since the JL-9/FTC-2000 is intended to train pilots for aircraft like the Chengdu J-7, Shenyang J-8, Chengdu/Pakistan Aeronautical Complex JF-17, and Shenyang J-11, it has to offer a modern cockpit environment and representative systems.

The aircraft is, therefore, fitted with a modern multi-mode pulse Doppler radar, and features an integrated avionics suite with head-up displays, modern multi-function displays, mission and weapons computers and a GPS-aided inertial navigation system, as well as an electronic warfare suite with integrated countermeasures.

The aircraft has five hard points and a twinbarrel 23mm cannon for weapons training, and three of the pylons are 'plumbed' to allow the carriage of fuel tanks. All of these features give the FTC-2000 a robust secondary combat capability, with potential in both air-to-air and air-to-ground roles.

RUSSIAN AIRCRAFT LINK TO SUDAN CRASHES

The Sudanese Air Force (SAF) continues to lose most of its Russian-made aircraft to crashes, with the majority of the incidents being blamed on technical failure, writes Oscar Nkala.

Sudan's Russian fleet has been decimated by crashes.

In the latest incident, all five crew died in late June when their Mi-17 helicopter crashed shortly after take-off from the Dongola Airport in the Northern State.

Armed forces spokesman, Colonel Ahmeda Khalifa al-Shami, said the Mi-17 came down in bad weather. A board of inquiry has been set up.

The accident was one of many that have dogged the SAF fleet of Russian-made fighter jets and helicopters in recent years. Although several rebel groups operating in the west of the country claim to have downed some of the aircraft, the air force has frequently identified technical problems among the causes. African Aerospace examined some of the recent accidents:

2012

In February, three Sudanese Government officials died when a military helicopter (of undefined make) crashed into the Fao district of Gedarif State. A former minister and five others survived unhurt.

In July, a Russian-made military transport helicopter (undefined make) killed all seven people on board when it crashed in North Darfur State. Technical faults were blamed for both disasters. In August, 32 people were killed when a civilian An-26 passenger aircraft crashed near Talodi in South Kordofan. Three government ministers and some top army and police officers were on board. Bad weather was blamed.

In October, 12 people died when an An-26 military transport aircraft crashed into the city of Omdurman. The air force said it developed a technical fault, which stalled the engines mid-air.

2013

In June, two crew were killed when a Russian-made SAF Mi-8 helicopter crashed in the war-torn Blue Nile State. It happened a week after another Russian-made military helicopter, of undefined make, crashed in South Kordofan State. Rebels said they shot down both helicopters but the air force dismissed the claims, blaming mechanical faults.

2016

In April, a SAF Antonov An-26 fighter jet crashed during a botched landing at El Obied in North Kordofan State, killing all five crew.

In October, a SAF Bo 360 trainer helicopter crashed in the Um Hani area of the White Nile State, killing the pilot and injuring two crew. The air force blamed a technical fault.

ANGOLA REVAMPS ITS HELICOPTER FORCE

The Força Aérea Nacional de Angola (FANA), the country's national airforce, is in the midst of a major reequipment and reorganisation programme, writes Jon Lake. A large proportion of FANA's aircraft and helicopters are stored or are grounded due to a lack of maintenance, and the air arm is attempting to recapitalise some of its fleets, while also replacing older, maintenance-intensive aircraft and helicopters with more modern, more maintainable more economical types.

The FANA's current helicopter inventory includes about 15 Mi-24/35 'Hinds' and as many as 38 Mi-8 and Mi-17 'Hip' variants. These are augmented by between 10 and 20 Aérospatiale SA316B Alouette IIIs, eight Bell 212s, and eight \$A342M Gazelles.

Previously based at Huambo in central Angola, the FANA helicopters now appear to have moved to Base Aérea No3 Negage in the northern part of the country, and operate under a new organisational structure.

Angola signed a \$1 billion deal with Russian export agency, Rosoboronexport, in 2013, and this included a number of helicopters.

Eight armed Mil Mi-171Sh 'Hip' aircraft were delivered in 2015 and 2016. They were built at the

Ulan-Ude Aviation Plant (UUAZ) and were fitted with additional internal fuel tanks, extending the range to more than 1,000 kilometres, as well as a 300kg capacity rescue hoist.

Angola will also receive a number of refurbished Mi-24P 'Hind-F' attack helicopters from Russian Helicopters.

In June 2016, it was announced that Angola had ordered six examples of the Leonardo AgustaWestland AW109E Power, along with radar systems and patrol boats.

The first of these, wearing a brown, green and sand camouflage colour scheme and Angolan national markings, was seen flight-testing in Italy in June 2016, and in February and October two AW139s (both in search and rescue configuration with winches and under-nose FLIR turrets and wearing Angolan national markings) were also spotted flying in Italy.

Delivery of these aircraft is now imminent.

■ Formed in 1975, FANA's original name was the Força Aérea Popular de Angola/Defesa Aérea e Antiaérea (the People's Air Force of Angola/Air and Anti-aircraft Defence).

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DEFENCE

Confusion surrounds the latest reports about Nigerian aircraft procurement. **Jon Lake** reports.

Mystery of Nigerian fighters

n late June 2017, press reports emerged of a Nigerian order for 12 Sukhoi Su-30 multi-role fighters, with some sources even reporting that Nigeria had already received two examples of the big Russian tactical fighter.

The announcement was unexpected, as a \$15.88 million order for three Pakistan Aeronautical Complex (PAC) JF-17 Thunder multi-role combat aircraft had been included in the official Nigerian Appropriation Act for 2016 (the 2016 Nigerian federal budget), along with 10 PAC Super Mushshak basic trainers.

Many questioned the need for even these relatively inexpensive Chinese-designed fighters, since the campaign against Boko Haram militants had shown that attack helicopters and armed trainers, like the Alpha Jet, were much more useful than the Nigerian Air Force's Chengdu F-7NI supersonic fighters.

The more expensive and more sophisticated Su-30 would seem to make even less sense than the JF-17.

The press reports all stemmed from a release by Russia's *Sputnik* news agency, which quoted Anatoliy Punchuk, the deputy director of Russia's Federal Service for Military-



Confusion reigns over Nigeria's JF-17 order numbers.

Technical Cooperation (FSMTC), as the source of its story. Subsequently, *Sputnik* said that it had made a mistake in its report – referring to the Su-30 instead of the Mil Mi-35M attack helicopter.

In Nigeria's 2017 budget proposal, \$68.76 million was allocated for what were referred to as "platform acquisitions... for counter air, counter surface, air ops for strategic effect and air support operations". But rather than covering the purchase of further JF-17s, this is understood to be for the purchase of the Mi-35Ms, the first pair of which were inducted into service in April 2017, with 10 more due to follow during 2018.

Nigeria has also been seeking to buy 12 Embraer-Sierra Nevada A-29 Super Tucano light attack and close air support aircraft since 2015 – a planned \$600 million acquisition that was blocked by the Obama administration, but which the Trump administration has now indicated would be approved.

The Mi-35Ms and A-29s are both better suited for counter-insurgency missions than JF-17s or Su-30s, and some senior Nigerian officers have indicated their hope that the JF-17 deal has been "quietly parked".



Around 1,200 US military personnel from bases in the US, Africa, and Europe travelled to different destinations in the Kingdom of Morocco to take part in the latest multi-arms exercise of the Exercise African Lion, writes Jon Lake. In addition to Morocco, other participating nations included Mali, Mauritania, Senegal, Tunisia, Canada, France, Germany, Spain, and the United Kingdom.

The exercise and accompanying seminar helped participating units and personnel to gain useful exposure to each-other's tactics, techniques and procedures, and to forge stronger bonds.

The exercise is a wide-ranging annual bilateral training operation intended to improve interoperability and mutual understanding between US and Moroccan armed forces — one of the USA's most important African partner nations (APNs).

US Marine Corps Major General, Burke W Whitman, was the senior officer in charge of the US participation, with General Belkhir El Farouk acting as his Moroccan counterpart.

The week-long exercise was sponsored by US African

Command (Africom) and encompassed a command post, live-fire and manoeuvring, low-level flying training, air dropping and aerial refuelling, peace-keeping operations, countering violent extremist organisations and even medical and dental assistance projects, while divers from the US Navy and the Royal Moroccan Navy undertook training on a sunken vessel.

Aerospace elements in the exercise included low-level air drops by three C-130H Hercules deployed from the 165th Airlift Squadron, 123rd Airlift Wing, Kentucky Air National Guard, helicopter operations by the Royal Moroccan Air Force (RMAF), and even a fly-over by a Boeing B-52H Stratofortress from Barksdale AFB, Louisiana.

Interestingly, the US Air Force chose to deploy C-130H 'heritage Hercs' on the exercise – a variant also used by the Royal Moroccan Air Force – rather than the newer C-130J. The Hercules crews were able to practise low-level navigation through the mountains and flew in several different training scenarios to prepare for future deployments.

A Royal Moroccan Air Force Aérospatiale SA330F Puma landing in the desert during African Lion 2017. The Pumas serve with the Escadre Hélicoptère at 1 Air Base Rabat/Salé.

DEFENCE



LEGACY OF GHAV'S

For more than a decade, the Ghana Aviation Unit (GHAV) was deployed in Côte d'Ivoire as part of a UN peacekeeping force. **Erwan de Cherisey** looks at what was achieved and the legacy left by the unit as it finally went home earlier this year.

n January 20, the last elements of the GHAV, deployed since 2006 under the United Nations Operation in Côte d'Ivoire (UNOCI), departed, putting an end to more than 10 years of continuous Ghana Air Force (GAF) helicopter operations in the country.

Throughout its decade-long deployment, the GHAV provided sterling air support in trying conditions to the military and civilian components of UNOCI.

It also established a historical precedent as the first African military helicopter unit to be deployed in a UN peacekeeping operation, paving the way for subsequent deployments by other African countries such as Ethiopia, Rwanda or Senegal.

The establishment of UNOCI was authorised through the UN Security Council resolution

1528 of February 27, 2004, with the responsibility of facilitating the implementation of the peace agreement signed in 2003 by the belligerents of the Ivorian Civil War.

UNOCI formally began its operations on April 4, 2004, replacing the United Nations Mission in Côte d'Ivoire (MINUCI), which had been active since 2003.

As a long-time contributor to peacekeeping operations worldwide and a proponent of regional stability, Ghana, which shares a border with Côte d'Ivoire, pledged significant support to UNOCI, deploying a medical unit and an infantry battalion under its banner.

With UNOCI in dire need of military air support assets, Accra soon decided to further increase its contribution by committing an aviation unit to the operation.

While the GAF had already deployed air assets

in support of the Economic Community of West African States ceasefire-monitoring group (ECOMOG) in Sierra Leone, in the 1990s, it had never done so as part of a UN-sponsored peacekeeping operation.

The GAF was, thus, tasked to prepare a helicopter unit for deployment, which would comprise of an Agusta A109AM and two Mi-17V5s hailing from the GAF's 3 Squadron, headquartered at Air Force Base Accra.

'As one former GHAV commander explained: "An advance party of three officers and 17 men was deployed in the UNOCI area of operations on July 20, 2006. The main body of 16 officers and 84 men and women was deployed on August 10, 2006."

The unit established itself on the Bouake Airfield, 350km North of Abidjan.

According to to the same former GHAV commander, the unit's mission statement was: "To provide long-term helicopter support operations in support of UN peacekeeping activities as mandated by the UN Security Council."

MILITARY



PIONEERS OF PEACE

In operational terms this meant conducting a wide variety of tasks, including troop transport, troop insertion and extraction, armed escort, quick reaction force (QRF) response, aeromedical evacuation, search and rescue (SAR), reconnaissance, patrol, logistics support, cargo transport, and training support.

In its first years of operation, the unit used its A109AM in the transport role, as well as for armed reconnaissance or escort, with the aircraft being equipped with a pair of light-machine gun pods for such duties. However, by 2011, the type was due for major servicing and the decision was taken to withdraw it from operational service.

The two Mi-17V5, which had, hitherto, provided the bulk of the unit's operational capability, were withdrawn from Ivory Coast back to Ghana in 2013 and replaced with a pair of more capable Mi-171Sh, of which 3 Squadron had received four examples that same year.

As the former GHAV commander highlighted, the Mi-171Sh featured several improvements over the older Mi-17V5: "They were fitted with armour plates and had an endurance of five hours [thanks to a pair of externally mounted additional fuel tanks], compared to the Mi-17V5, which had three hours' endurance.

"The five hours' endurance allowed the unit to conduct operations across the length and breadth of Côte d'Ivoire without refuelling."

Additionally, like the Mi-17V5s, each of the new aircraft was equipped with a Spectrolab Nightsun spotlight under the fuselage.

On October 28, 2008, the GHAV lost one of its Mi-17V5s. The helicopter was on a personnel transport flight between Daloa and Danane when, on approach to the Danane helipad, it lost tail rotor authority. The aircrew's swift decision to execute a forced landing allowed for the survival of all on board with only minor injuries, while the helicopter was written off due to extensive damage.

While the unit started out with a complement of 120 men and women in 2006, the subsequent reduction of the number of aircraft in service from three to two meant that these numbers were eventually reduced and that, by 2016, its personnel strength stood at 91.

Prior to their deployment to the mission area, GHAV personnel underwent a three-week preparatory training in Ghana, which included lectures on the context of the UNOCI presence, the mission's purpose, its rules of engagement, as well as field training in weapons handling and helicopter operations, including gunship training.

GAF personnel were initially deployed to Côte d'Ivoire for six months. However, the duration was eventually extended to 12 months, in line with UN requirements.

Two female pilots took part in GHAV deployments, the first one in 2006. She is notable for being the first female military helicopter pilot to have taken part in a UN peacekeeping operations.

The maintenance of the GHAV fleet was conducted in Bouake by the unit's technicians up to level 2. Major servicing required sending the aircraft back to Ghana, at which time a replacement helicopter was provided. Over its decade-long deployment, through successive aircraft rotations, the GHAV operated one A109AM, three Mi-17V5s and four Mi-171Sh.

In more than 10 years, the GHAV had only four different commanders, including Group Captain Augustine Holm, Air Vice Marshal Maxwell Mantserbi-Tei Nagai, who headed four deployments and is now the chief of Air staff of the

DEFENCE MILITARY

CONTINUED FROM PAGE 57

GAF, and Group Captain Elvis King Arneson. Group Captain Joshua Mensah-Larkai, who commanded the unit in the course of seven tours of duty, is notable for having clocked a record 1500 flying hours in its time in Côte d'Ivoire.

"Flying in the Ivorian airspace was quite challenging due to the non-availability of navigation aids nationwide, and the hostile environment that the unit operated in,"he said.

The GHAV was noteworthy for being the only helicopter unit within UNOCI having the capability to fly night sorties using night vision goggles (NVG). The Ghanaian aircrews used third-generation NVG binoculars for such missions.

Due to the elevated threat environment, all GHAV aircraft were armed. In the case of the Mi-17V5s and Mi-171Sh, a pair of cabin-mounted Denel SS77 7.62mm light machine-guns was always fitted.

logistical link supplied most of the crucial assistance needed by President Ouattara's government."

The situation at the time was extremely tense and the danger to UN aircraft and personnel at its highest point in years. This made for some very dangerous flying operations, as the former former GHAV commander further highlighted: "The risk assessment made on March 21 2011 indicated the presence of anti-aircraft weapons at strategic locations of the adversaries [armed supporters of former President Laurent Gbagbo].

"A civilian helicopter was hit in the skies above the Golf Hotel by suspected machine gun fire, causing it to make an emergency landing.

"In a similar incident, one of GHAV's Mi-17 helicopters was hit by a bullet on approach to landing, missing the fuel tank by inches."

Medevac and logistics flights were also high on

leave the country, refused to communicate with the crew. Some obnoxiously played music on their designated frequencies to ward off the helicopter flights," said the former GHAV commander.

Other notable operations involving the GHAV included the conduct of night flying surveillance operations over the town of Bouna, in the far north of Côte d'Ivoire in March 2016 in the midst of a series of deadly confrontations between cattle breeders and farmers.

Up to its last days of operations, GHAV flew operationally, as as the former GHAV commander detailed: "In January 2017, soldiers in Ivory Coast organised a mutiny over unpaid salary arrears. Due to this, the main entry and exit points to the central city of Bouake were blocked amid mass protests.

GHAV was heavily relied on by UNOCI force headquarters to provide timely situation reports, detailed aerial images, show-of-force flights, and

prompt response for aerial reconnaissance above Bouake and the Korhogo to Ferkessédougou axis. It also performed troop insertion and logistics resupply flights for Senegalese battalion troops after they were inserted into Bouake to protect UN installations."

Indeed, the GHAV worked closely with the Senegalese troops under UNOCI. During the constitutional referendum, which took place between October and December 2016, the GHAV deployed its two aircraft to Yamoussoukro alongside Senegalese battalion troops to provide a rapid response force in case of crisis.

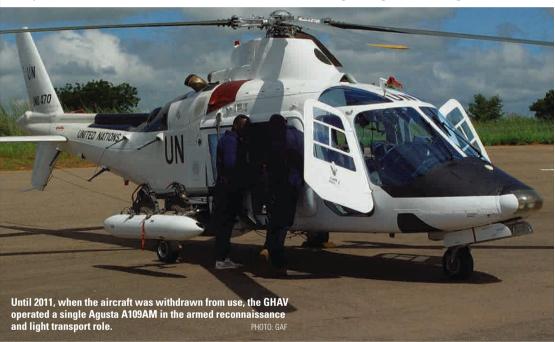
Between August 2006 and January 2017, GHAV flew a total of more than 11,181 hours in the course of 3,292 missions.

The deployment with UNOCI provided the GAF with significant

experience in UN aviation mission procedures and in the field of multinational interoperability.

The former GHAV commander said: "GHAV served as a cradle of on-the-job leadership training for most young leaders in the Ghana Air Force today. These leaders gained invaluable experience that has been beneficial to the Ghana Air Force, in particular, and the armed forces as a whole. The operations in Cote d'Ivoire also afforded the GAF the opportunity to enhance its image globally as a nation that supports peace efforts and has currently deployed a fixed-wing aviation unit to Mali."

made any commitment for the deployment of helicopters to a new UN operation, the country remains committed to contributing its quota to world peace through participation in regional or international peacekeeping efforts.



In March 2011, when the Ivorian electoral crisis reached its apex and made ground movement almost impossible in Abidjan, the GHAV was tasked with participating in a helicopter air bridge between UNOCI's headquarters at Hotel Sebroko, the Golf Hotel, which served as HQ for the elected President Alassane Ouattara, and Felix Houphouet-Boigny International Airport.

The former GHAV commander said: "GHAV detached a helicopter to the UN mission headquarters at Sebroko in Abidjan. This helped evacuate a lot of foreign nationals from a bloody massacre that ensued during the peak of the crisis, when all other operators refused to fly.

"The support of the UN [to the then newly elected Ouattara government] was only made possible thanks to the air bridge established by the UN with GHAV as the lead aviation unit. This

the GHAV's agenda at the time. "Appalling episodes of more 100 badly wounded combatants who needed urgent medevac from the Golf Hotel to the only hospital that would accept them at Sebroko was a daily occurrence," he said.

"A mere five-minute flight was all that stood between a casualty and the hospital. Those particular express sorties, which numbered about 35, were normally impromptu, leaving the cabin stained with blood."

Cargo resupply was yet another daunting task, with more than 50 tonnes transported daily during the peak of the crisis. Routine and impromptu reconnaissance flights were interspersed with VIP and passenger airlift of stranded nationals, who needed to leave the country urgently.

"Air traffic controllers at the Abidjan Tower, with the earlier declaration that all UNOCI elements must

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Discover



Afrijet passe à un modèle hybride

«Afrijet targets business and commercial sectors » - Page 62

Acteur incontournable dans l'aviation d'affaires au Gabon et dans la région, Afrijet développe ses prestations et explore de nouveaux borizons pour faire face à la conjoncture.

Vincent Chappard nous présente cette compagnie bybride.

frijet Business Service a été créée en 2004 par un groupe d'investisseurs gabonais. Rentable depuis sa création, Afrijet, compte désormais parmi les dix principales compagnies opérant sur le continent. Cette compagnie purement africaine (200 collaborateurs) se veut « intransigeante » en matière de service et de sécurité.

Basée à Libreville et N'Djamena, Afrijet opère ou affrète des avions d'affaires depuis ou vers l'Afrique Centrale. Parmi les prestations offertes ; un handling sur mesure à l'atterrissage comme au décollage, prise en charge des demandes d'autorisation et des formalités d'immigration, un salon VIP pour les passagers et les équipages et des FBO à Libreville et Port-Gentil.

La philosophie de la compagnie est de tirer le meilleur des valeurs africaines et des pratiques européennes.

Afrijet arrive à manœuvrer durant des périodes

difficiles grâce à son caractère hybride, un fait assez rare, qui lui confère plus de flexibilité.

« L'aviation d'affaires et l'aviation commerciale sont deux mondes qui s'ignorent. Nous sommes hybrides. En arrivant, j'ai eu cette tâche passionnante et compliquée de diversifier une compagnie qui était une pure compagnie d'aviation d'affaires, mono produit et mono client. On l'a graduellement transformée en une compagnie capable de faire les deux et en particulier l'aviation commerciale », explique Marc Gaffajoli, directeur général d'Afrijet depuis 2010.

La crise pétrolière de 2014 amena la compagnie à adapter sa stratégie de développement face à la baisse des contrats des entreprises pétrolières et minières.

Le caractère hybride de la compagnie s'installa au moment propice. « On s'est aperçu que les





CONTINUED FROM PAGE 61

contraintes imposées par les compagnies pétrolières en termes de standard, de ponctualité et de disponibilité, de normes pour les navettes d'entreprise, ont été un excellent exercice pour nous préparer à l'aviation commerciale ».

Ainsi, au fil des années, la compagnie est montée en puissance en consolidant son image. « La qualité, la ponctualité et la disponibilité de ses opérations ont fait la différence face aux compagnies aériennes opérant déjà dans la région ».

En 2012, Afrijet développa une nouvelle offre destinée à sa clientèle pétrolière et minière avec l'exploitation de navettes d'entreprises reliant les

centres d'affaires aux sites de prospection et de production.

Trois ans plus tard, la compagnie élargit ce service au Tchad en reliant N'Djamena à Moundou, principal aéroport desservant les champs pétroliers du sud.

« Nos parts de marché ont grandi. Nous sommes le leader gabonais avec 60% de PDM sur le marché domestique. En période de crise, la concentration du marché sert les plus résistants. On se sent suffisamment fort aujourd'hui pour développer notre réseau », affirme Marc Gaffajoli.

Le fait d'être une compagnie aérienne opérant dans un pays figurant sur la liste noire de l'Union

européenne est une source de pression constante. Ce qui expliquerait ce souci permanent de rigueur.

« Nous sommes un des rares opérateurs à entrer en Europe », souligne Marc Gaffajoli. « Le fait de travailler avec des compagnies pétrolières et d'avoir des audits réguliers ont été des gages de sécurité et de confiance en matière de certification ».

Afrijet continue de développer son modèle hybride (75% affaires et 25% commercial) avec l'objectif d'arriver à un rapport équilibré en 2018. Elle a élaborée une stratégie pour les trois à quatre prochaines années pour mettre en œuvre un plan de développement sur dix escales.

Ce plan concernera l'aviation commerciale tout en gardant « l'état d'esprit initial », en offrant « un produit premium » et des services FBO haut de gamme. L'accent sera mis sur la rentabilité et l'exposition au risque, la concurrence et la consommation de cash.

SUMMARY

AFRIJET TARGETS BUSINESS AND COMMERCIAL SECTORS

Afrijet, a key business aviation player in both Gabon and the general region, is reacting to commercial opportunities by expanding into new fields of commercial flying.

Afrijet Business Service was founded in 2004 by a group of Gabonese investors, who adopted a mantra of 'service and safety' from day one.

Profitable since its creation, Afrijet is now one of the top ten business jet operators on the continent, boasting more than 200 employees.

Based in Libreville and N'Djamena, Afrijet operates – or charters – business aircraft within Central Africa, offering a range of services including handling for take-off and landing, dealing with authorisations and immigration, providing a VIP lounge for passengers and crews, and FBOs in Libreville and Port-Gentil.

The philosophy of the company is to provide a unique combination of African values and European practices.

Managing Director Marc Gaffajoli explained: "Business and commercial aviation are two separate worlds that often ignore one another. We are hybrid. When I joined the company in 2010, I had the exciting and complicated task of diversifying a company that was purely into business aviation – with a single product – into something entirely different.

"Since then we have transformed Afrijet into a company capable of operating in two separate fields, with the emphasis, going forward, on commercial aviation. We intend the balance between business

and commercial aviation to be 50-50 by 2018."

The oil crisis of 2014 led the company to adopt its development strategy in the face of declining business from oil and mining companies. "We found that the criteria imposed by the oil companies in terms of standards, punctuality and availability were an excellent preparation for our foray into commercial aviation," said Gaffajoli.

In 2012, Afrijet developed a new 'offer' to its oil and mining customers by operating shuttles to link business centres with exploration and production sites and then, three years later, by expanding this service to Chad by linking N'Djamena to Moundou, the main airport serving the southern oil fields.

Being an airline operating in a country that's 'blacklisted' by the European Union is a constant source of positive pressure and this explains the company's rigorous emphasis on safety until now, said Gaffajoli. It is one of the few regional airlines operating into Europe.

The company's six-strong fleet comprises two Falcon 900s for charter flights and VIP services, two ATR42-500s, and two ATR72-500s, with the turboprops destined for domestic flights from Libreville to Franceville/Mvengue and Port-Gentil and for regional services to Sao Tome and Pointe Noire.

Afrijet is also seeking investors who are keen to share in its future success, including operating regional routes from Abidjan to Lagos and Ndjamena to Luanda.

La flotte de la compagnie compte six avions : deux Falcon 900 pour les vols charters et les services VIP ainsi que 2 ATR42-500 et 2 ATR72-500

Les turbopropulseurs sont destinés aux vols domestiques reliant Libreville à Franceville/Mvengue et Port-Gentil et pour des services régionaux à destination de Sao Tomé et Pointe Noire.

Afrijet vient récemment de louer deux ATR (remplacement de 2 Falcon) auprès d'Aergo Capital basée à Dublin pour assurer le développement de ses activités régionales.

Afrijet souhaite avoir un partenaire non pas industriel mais plutôt un bailleur de fond.

« On est à la recherche d'un partenariat pour lever des fonds, 20 millions de dollars auprès d'un partenaire financier, en contrepartie d'une part de notre capital. C'est pour nous donner des effets de levier pour accéder à des modules et desservir des destinations régionales dans un arc de cercle qui va d'Abidjan, Lagos, Ndjaména jusqu'à Luanda. »

La compagnie est déjà en partenariat avec Sabena Technics, DFS, Solenta Aviation pour sa MRO.

Afrijet, en avance sur son business plan, compte maintenir le cap en s'enracinant dans cette « terre africaine regorgeant d'opportunités ».



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Falcon 8X



BUSINESS AVIATION

SUPPORT

As flight planning and trip support company, Signum Aviation, looks forward to celebrating 10 years in business, it hopes to further spread its capabilities in Africa.

Marcelle Nethersole speaks to managing director, Jonathan Gill.

SIGNUM'S SIGNIFICANT MOVE IN AFRICA

ignum Aviation might be based at a small grass airfield near Manchester in the UK but it has been making an impact in Nigeria for the last seven years and is now looking at tapping into other African countries.

"I set Signum Aviation up 10 years ago this November with the aim of providing operations support flight planning, handling arrangements and overflight/landing permits to the corporate and business aviation sector," said managing director, Jonathan Gill.

"We started with one client and we thought we would cater to local operators, but we just grew and grew. I never imaged we would become a global company."

Today, Signum Aviation has a team available 24-7 and is responsible for the handling of more than 7,000 global flights per year, providing support for a wide variety of aircraft types, from Citation Mustangs to Boeing 747s. It manages missions ranging from short domestic flights to complex long-range operations.

The company has clients located in North America, Europe, China, the Middle East, and Africa – a continent Gill says is "exciting to work in".

"Africa is a developing market that has huge potential and we are already making a mark on the continent with 20% of our turnover coming from the region," said Gill. "We regularly do support flights over West African countries, including Ghana, São Tomé and Príncipe, Algeria, Burkina Faso, Ivory Coast, Cameroon, Guinea, Gambia and Sierra Leone. But we are most well known in Nigeria, where we have been doing business in Lagos for seven years."

Gill explained that an aviation company from Lagos cold-called Signum one day and this turned out to be its first client in Africa.

"Since that day, seven years ago, it has been word of mouth how we have got our business out there," said Gill. "It went from one aircraft to, currently, 11, ranging from Hawkers up to Global Express.

"We look after a range of things at Lagos, including flight-planning, fuel, over-flight permits, and landing



"As a company, we can bring worldwide experience to the region — something that is actually lacking in Africa."

JONATHAN GILL

permits. We are very experienced in Lagos, which has been noted."

The company, which boasts an African government as a client, is looking to further spread its wings on the continent and already has its eye on two countries.

"While Nigeria is already big in the business aviation market, so is South Africa, so we will look to work there too," said Gill. "Also, Angola has seen a rise in business aviation in the last few years, so this definitely a country to keep an eye on.

"While we have a lot of exposure to Africa, these two countries are of interest. As a company, we can bring worldwide experience to the region – something that is actually lacking in Africa."

Gill travels to Lagos to visit clients as often as he can.

"Members of the team and I fly all over the world to make sure our clients are happy. This is a very important part of who we are," said Gill. "As private jet travel is a growing sector of the aviation industry, we understand the specific needs of our operators and clients. We pride ourselves on our bespoke and flexible service – and offering tailored packages to clients also sets us apart.

"Our friendly and personal service enables us to establish and retain excellent relationships with our clients, who decide to stay with us for one simple reason—we've earned their trust by providing the quality they expect. It's something we look forward to maintaining and growing in Africa."

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BUSINESS AVIATION



The Range Rover of the skies

No fewer than five Pilatus PC-24 jets are already on order for operations in Africa – and the company has now stopped taking further orders until the first deliveries of the twin-engine aircraft start, expected to be the last quarter of 2017. **Dave Calderwood** reports.

he orders, through the Pilatus Centre at Rand Airport, Germiston, South Africa, just outside Johannesburg, confirm what many operators think – the PC-24 is ideal for the mixed conditions found all over the continent.

Gerry Wyss, sales director of the Pilatus Centre South Africa, said he wasn't able to reveal who the customers are or what the aircraft would be used for. However, it's clear that the PC-24's unique combination of the ability to operate from short, unmade strips and cruise at jet speeds, plus the versatility of its cabin configuration, make the aircraft a special all-rounder.

Swiss manufacturer, Pilatus, has made a name for itself with the rugged, go-anywhere Porter PC-6 and PC-12 single-engine turboprops. The PC-12's long-time customer, the Australian Royal Flying Doctor Service, when asked what it wanted from the PC-24, told Pilatus "a PC-12 with more speed". And that's pretty much what the PC-24 is.

The super versatile jet (SVJ) is what Pilatus says it has created with the PC-24. It's been carefully designed to be able to operate on runways as short as 820 metres (2,690ft), including, grass, gravel or dirt. That's around 21,000 airports worldwide, including 2,477 in Africa alone. The nearest

competing aircraft can operate from just 815 African airports (Pilatus figures).

Those African locations include the famous Seronera Airstrip, the main airport for Tanzania's Serengeti National Park. It's a gravel strip, with a good length at 2,280 metres, but it's also at an elevation of 1,588m (5,080ft). Those hot and high conditions, which make the air less dense, can cripple the performance of many aircraft, but not the PC-24. It's almost as though the aircraft was built for this very airstrip.

One of the key attributes of the PC-24 is the way the cabin can quickly and easily be reconfigured – a cabin that is bigger than some business jets costing much more. The PC-24 can seat up to eight passengers, with two pilots, or be stripped of seats to carry up to 14.2 cubic metres (501cuft) of cargo.

There's even a dedicated air ambulance version of the PC-24 – up to three wheeled stretchers can be carried in the cabin, along with seats for medical staff and space for medical equipment.

The large 1.3 x 1.25m cargo door can be equipped with either an electrical lift system or a ramp to help board stretcher patients, and details include ceiling rails with IV

INNOVATION



hooks, storage cabinets, shelves and work table, separate medical electrical system, and washable interior. Yes, this is an emergency ward in the air.

Plenty of thought has been applied in the cockpit, too. First, the PC-24 can be flown single pilot - as can all Pilatus aircraft - and it's been designed specifically to reduce pilot workload and improve safety, while providing full situational awareness under all circumstances. Pilatus calls the flightdeck 'advanced cockpit environment' (ACE). It's based on Honeywell's proven Primus Apex avionics and has four 12-inch screens displaying everything the pilots(s) could want to know in a user-friendly, highly intuitive way.

Standard equipment includes synthetic vision, giving a 3D display of terrain – useful when finding a way round high ground into a tricky airstrip – plus autothrottles, graphical flight planning, traffic collision avoidance system (TCAS II), and localiser performance with vertical (LPV) guidance capability. That means it can use a GPS precision approach, again, useful for airstrips with no other navigation aids.

No wonder the PC-24 is in demand. It's unique and versatile – the Range Rover of the skies. Pilatus' biggest problem will be keeping up with demand.

A SUPER PUMA FOR THE PRESIDENT



A single Airbus Helicopters EC225LP Super Puma Mk II+ helicopter, acquired second-hand from Spain, is now in full service with the Botswana Defence Force Air Wing, writes Jon Lake. The aircraft is serving as the presidential helicopter with Botswana's VIP Flight at Sir Seretse Khama International Airport Gaborone, operating alongside single examples of the Beech Super King Air 200, the Bombardier Global Express, the Gulfstream IV and the Dornier Do-328-110.

The new presidential Super Puma was formerly flown by the Spanish Cuerpo Nacional de Policia – the national civilian police force, which acquired it in 2010 to support the Policia's Grupo Especial de Operaciones (special operations group), equivalent to Germany's GSG-9.

In 2013, the aircraft was returned to Airbus Helicopters in part payment for a new batch of Eurocopter EC135s for the Spanish police. Its smart blue and white colour scheme was removed and it was subsequently stored for some time before being sold to Botswana.

The aircraft was overhauled by Airbus Helicopters at Albacete in Spain and was delivered to Gaborone in

Botswana on board an Antonov Airlines An-124 transport aircraft, leaving Albacete on September 13 2016.

The new helicopter flew in the Independence Day fly past on September 30 2016 (part of Botswana's golden jubilee celebrations at the National Stadium in Gaborone). It was still in a plain white colour scheme, with the serial OL1, and with Botswana's coat of arms – a central shield supported by two zebras, with the motto 'Pula' (rain) below – hastily added behind the rearmost cabin window.

But initially President Ian Khama continued to use his Bell 412, one of eight similar aircraft delivered to Botswana, two of them in VIP configuration.

Meanwhile, the Super Puma was flown to Lanseria in South Africa on February 16 2017, where it was stripped for a full re-spray, re-emerging in May in a smart VIP colour scheme, with cheatlines in the national colours (a white-outlined black stripe on a pale blue field), with a black spine on the tailboom and a pale blue upper tail rotor pylon.

On its return to Botswana, the Super Puma finally took on its new role as presidential helicopter.

BUSINESS AVIATION



Ferid Kamel: "Africa is a very promising market."

AVIONAV SWITCHED ON

Tunisia is growing its own indigenous aircraft manufacturing business and is now looking for wider market reach, as **Vincent Chappard** discovers.

eveloping light aircraft in Tunisia has been a challenge met by Sousse-based Avionav, despite being in a segment of the market where it is competing with wellestablished manufacturers.

However, the company has bigger ambitions, according to its founder, Ferid Kamel.

Avionav was set up in 2007 by two Italian manufacturers in Mateur. It was later bought by a group of Tunisian engineers and shifted to Sousse.

"Since then, we have been doing our very best to give entire satisfaction to our clients through high quality and top-of-the-line products at very reasonable prices, 30% less than our competitors," Kamel said.

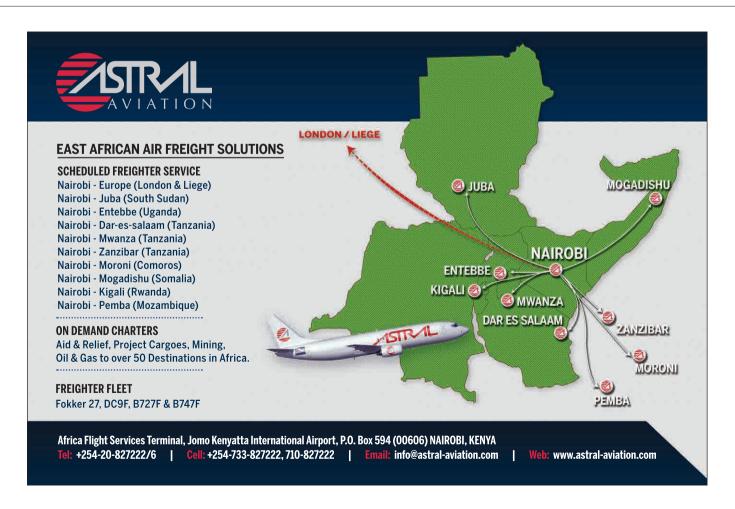
More than 1,300 of its models are now flying and around 40 light aircraft (two-four seats) come off its production line each year.

The aircraft are involved in many different missions, from training and agricultural roles through to advertising banner towing and leisure flying.

The company has a diversified and broad market including the US; Europe (Belgium, France, Italy and Spain); Latin America (Brazil and Argentina); Asia/Middle-East (Pakistan, UAE and Iran); and Africa (Tunisia and Algeria). New markets are being tapped like Costa Rica, Czechoslovakia and Qatar, according to Kamel.

"Africa is a very promising market. We are currently in discussions with Senegal and Mauritania," he said.

This development shows the determination of Avionav and other flourishing North African companies to have a role in the aviation sector by emphasising their strengths of tradition and



TO MAKING THE LIGHTS WORK



geographical location, at the crossroads between the Middle East and Mediterranean Europe.

Avionav has five models, of which four are on the production line. Its design and engineering team is presently polishing a fifth prototype, the Sea Xilon, a four-seater amphibian seaplane that has been specifically designed to land on lakes and the sea as well as on a hard runway. There will also be a two-seat version. "It's a very ambitious project, which requires much resource. Hopefully, the first two prototypes will be ready in a year," said Kamel.

The company can deliver any of its aircraft one month after being ordered. Which is "quite rare" in this sector, says Kamel proudly.

For its high-winged Rally aircraft, the company has chosen carbon fibre for its numerous advantages. It is ultralight aircraft manufacturers (ULM) and light sport aircraft (LSA) certified.

Century (low-wing) with the same certification, has proven to be robust since 1991 when it came on the market.

Certified experimental in the US, Fury is an

extended variant of the Century. It can accommodate two more seats.

The RG is another variant derived from the Century. This two-seater, with a retractable gear, needs another certification.

Avionav also provides design and engineering services to its clients in many fields of expertise including: computational fluid dynamics (CFD), radar Doppler multifunction (RDM), structural analysis, electrical design and certification.

Evada Aircraft, affiliated to the Swiss company, MCI, also wants to take its share of this niche market with its "cost-effective" aircraft models, the Evada A2, powered by a 130hp Rotax 915 engine, and the Evada A4, equipped with a sixcylinder Lycoming 0-540 engine.

Both models will be equipped with a full avionics and a retractable gear, enabling them to land on water or a hard runway. Retractable skis will be offered as an option.

Avionav and Evada Aircraft have entered into discussions over contract manufacturing and services with the view to launching the prototype of the amphibian aircraft.



BUSINESS AVIATION

C'est la ville ocre du Maroc qui a accueilli la seconde édition de la conférence/Air Show MEBAA le mois dernier. Malgré les difficultés, les opérateurs affichent un brin d'optimisme alors que les autorités souhaitent accélérer le développement de l'aviation d'affaires dans la région. Reportage Vincent Chappard / Photos lan Billinghurst.

MEBAA marquée par des annonces majeures

a conférence s'est tenue sous le haut patronage du roi Mohammed VI et avec le soutien de l'Office National Des Aéroports (ONDA). Elle a été particulièrement riche avec des présentations et des tables rondes. Notons deux annonces majeures : la création d'un aéroport dédié à l'aviation d'affaires au Maroc et le lancement de la « MEBAA Insurance ».

■ Projet d'aéroport connecté

Les prévisions de l'ONDA montrent en 2017 une croissance du trafic « passagers » estimé à 18% (en particulier à Laayoune et Agadir) et des mouvements d'avions de l'ordre de 7,55%. D'où, l'importance du projet d'un nouvel aéroport à Till Melil, proche des parcs industriels et de la Finance City et de Casablanca.

Cet aéroport est actuellement opérationnel pour l'aviation générale. Il le sera pour l'aviation d'affaires en 2025 dans un premier temps. La piste actuelle sera ensuite allongée pour obtenir les codes B et C afin d'opérer les avions d'affaires.

« L'objectif est d'en faire un aéroport d'aviation d'affaires de niveau international. Nous souhaitons associer un partenaire stratégique, des investisseurs et des opérateurs dans un partenariat public/privé », a déclaré Zouhair Mohamed EL Aoufir, le DG de l'ONDA, à African Aerospace.

La phase d'étude et de « business plan » a été réalisée par un cabinet international.

L'appel d'offre sera lancé dans les prochains mois.

■ Un nouveau package d'assurance

Développé par la MEBAA en partenariat avec RFIB, l'un des principaux courtiers de réassurance de Londres et Surety Global Limited. Ce package a été spécialement conçu pour répondre aux besoins immédiats de ses membres.

Elle s'engage à leur fournir « des solutions concurrentielles alternatives viables ». Cette offre sur mesure comprend à la fois la cybersécurité ainsi qu'une assurance pour aider les membres à comprendre les menaces cybernétiques et à protéger leur technologie.



Inauguration du salon MEBAA de Marrakech en présence de son excellence Mohamed Sajid, Ministre du Tourisme, du Transport Aérien, de l'Artisanat et de l'Economie Sociale du Maroc et d'Ali Alnagbi, président fondateur et exécutif de MEBAA.

Les cyberattaques inquiètent

Cette problématique interpelle les compagnies aériennes, les constructeurs aéronautiques et les autorités

Selon ZDNet, la violation des données coûtera deux trillions de dollars à l'économie mondiale d'ici à 2019. 85% des CEO des compagnies aériennes se disent inquiets. Face à ce « business lucratif » visant aussi à jeter le discrédit et à déstabiliser les cibles, il faut sans cesse améliorer les politiques et les programmes de cyber-sécurité pour une protection accrue et renforcer la coordination stratégique et les partages de renseignements.

■ Vers une reprise du marché en 2019

Selon Honeywell, 7 600 avions seront livrés d'ici à 2026 au niveau mondial. En 2016, les achats ont connu une hausse d'environ cinq points contre -27% l'année précédente.

La région Afrique/Moyen-Orient représentera 3 à 4% de la demande des avions neufs durant les cinq prochaines années. Elle compte actuellement 4% de la flotte mondiale. D'ici à 2021, la flotte connaîtra une croissance de 1-2% par rapport à 2-3% les cinq dernières années en

raison notamment des questions géopolitiques, de l'instabilité politique et l'émigration des avions de la région.

La prochaine conférence MEBAA aura lieu le 3 octobre 2017 à Djeddah.

■ Un Show prometteur

L'aéroport de Marrakech-Ménara a accueilli la seconde édition du MEBAA Air Show. Il a été inauguré par Mohamed Sajid, ministre du Tourisme, du Transport Aérien, de l'Artisanat et de l'Economie Sociale.

Il a rappelé la stratégie d'ouverture et de développement du transport aérien dans le royaume.

C'est le cas aujourd'hui pour l'aviation d'affaires. Ce secteur se développe progressivement en Afrique du Nord avec des pays leader comme l'Egypte et l'Algérie.

Les principaux avionneurs (Bombardier, Gulfstream, Cessna, Boeing BJ) étaient présents au salon pour soutenir leurs stratégies de ventes. David Sale, le nouveau directeur des Ventes de Bell Helicopter est venu promouvoir le dernier né, le Bell 505. Celui-ci vient d'obtenir sa certification FAA. Selon lui, le Maroc est une

MEBAA REVIEW



porte d'entrée sur le marché africain.

Il y a eu une forte présence des opérateurs FBO à savoir Swissport, Jetex, Xjet et SEA Prime. Deux concessions d'exploitation ont été accordées respectivement, à Jetex pour les aéroports de Casablanca, Marrakech, Rabat, Agadir et Dakhla et à Swissport Executive pour les aéroports de Casablanca, Marrakech, Rabat et Tanger. Selon Christophe de Figueiredo, le DG de Swissport, la société veut renforcer l'attractivité des marchés de la région MENA. Présente au Maroc et en Algérie, elle a réalisé de grandes ouvertures récemment à Oman et à Djeddah pour l'aviation commerciale, et va sûrement franchir le pas pour l'aviation privée.

Xjet est un club américain d'aviation privée conçu pour proposer « un confort et des services irréprochables à ses clients ». Son fondateur et DG, Josh Stewart, cherche à étendre ses activités en Arabie Saoudite et au Maroc où des discussions sont en cours.

Mohammed El Masaoudi, DG d'Air Océan Maroc, affiche pour sa part de l'optimisme face à la volonté des autorités marocaines. Il souhaite avoir des facilités au niveau de la législation, de la douane et de la fiscalité pour opérer dans l'aviation d'affaires. « Ce secteur nécessite davantage de flexibilité par rapport à l'aviation commerciale. » Cet appui des autorités est nécessaire par rapport aux nombreux concurrents basés à Malte qui bénéficient d'exonérations et d'incitations fiscales.

Le Rendez-vous est pris sur le même site pour le prochain salon MEBAA les 17 et 18 septembre 2019.

SUMMARY

MAJOR ANNOUNCEMENTS DOMINATE MEBAA

Two major announcements stood out when Morocco hosted the second Middle East Business Aviation Association (MEBAA) conference and air show last month. Vincent Chappard reports. Pictures: lan Billinghurst

The announcement of a new dedicated business aviation airport in Morocco and the launch of a new MEBAA insurance scheme were the highlights of the conference, held under the aegis of King Mohammed VI with the support of the Moroccan Airports Authority, ONDA.

The airport – Till Melil – will be operational in 2025 with a further 10-year growth plan.

"The goal is to make it an international business aviation airport. We want to involve a strategic partner, investors and operators in a public/private partnership," revealed ONDA CEO Zouhair Mohamed EL Aoufir, who added that the study and business plan phase had already been carried out by an international firm.

A tender would be launched in the coming months, he affirmed.

Meanwhile, MEBAA's new insurance package, developed in partnership with RFIB, one of London's leading reinsurance brokers, and Surety Global Limited, has been specifically designed to meet the immediate needs of members. The offer includes both cyber security and insurance to help members understand cyber threats and protect their technology — issues of major concern to airlines, aeronautical manufacturers and authorities.

Mohamed Sajid, Minister of Tourism, Air

Transport, Crafts and Social Economy, inaugurated the second edition of the show. He recalled the strategy of liberalising and developing air transport in the kingdom.

There was a strong presence of FBO operators, including Swissport, Jetex, XJet and SEA Prime.

00000

Two FBO licences have been granted respectively to Jetex for the Casablanca, Marrakech, Rabat, Agadir and Dakhla airports and to Swissport Executive for the Casablanca, Marrakech, Rabat and Tangier airports.

Mohammed El Masaoudi, CEO of Air Ocean Maroc, was optimistic about the moves by the Moroccan authorities. He is looking for legal, customs and tax facilities to operate in business aviation and believes that this sector requires more flexibility compared to commercial aviation.

According to Honeywell, 7,600 aircraft will be delivered by 2026 globally. The conference heard that, in 2016, purchases increased by about 5%, compared to a fall of 27% the year before.

The Africa/Middle East region will account for 3-4% of the demand for new aircraft over the next five years. It currently represents 4% of the world fleet.



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Unmanned air vehicles and their potential uses throughout Africa were put under the microscope at the Drones East Africa Conference in Nairobi. Githae Mwaniki reports.

Conference plots the future direction for drones

he authorities in East Africa should fast-track regulations to operationalize the drones sector. That was the overwhelming conclusion of a wide-ranging conference organised by IQPC.

Speakers called for collaboration in sharing drone technology, including maintenance and training, to unlock the opportunities that a vibrant remotely-piloted aircraft systems (RPAS) sector could deliver.

Gilbert Kibe, director general of the Kenya Civil Aviation Authority (KCAA), opened proceedings by saying that the drone revolution was a reality.

However, he pointed out, the long-term safe use of drones in non-segregated airspace required stakeholder input in the licensing of pilots, technologies for avoid and detect, and separation standards to all be incorporated in a robust regulatory framework.

He said KCAA started developing RPAS regulations in 2015 with wide stakeholder participation, guided by International Civil Aviation Organization (ICAO) recommendations. This had led to the draft regulations that were due to be enacted into law, which would ensure safe and expeditious coordination of RPAS operations so that they didn't compromise national security, or infringe on privacy of individuals and organizations.

He believed RPAS operations would bring a wide range of opportunities and indicated that KCAA would work with stakeholders to support research and standards development to address all operational concerns, including safety, physical and cyber security. He added that the effective and safe implementation of the regulations would create new opportunities and jobs.

Kibe concluded by saying that that KCAA had instituted a RPAS safety team tasked with the responsibility of promotion of safe operations, offering critical linkages with the public through provision of education on flight safety, and serving as a resource base for drone enthusiasts groups and aircraft hobby clubs.

Michael Dai demonstrates a drone conrolled by hand presentation.





Many speakers pointed out the number of different uses and the potential for good that drones would have throughout the region.

Steven Muchiri, CEO of the Eastern Africa Farmers Federation, said drones could be of critical use in agriculture, especially in mapping, inventory and crop scouting. He gave examples of how they were used in monitoring vineyards in South Africa and farm surveys in various parts of East Africa.

Joel Kaiser, regional director, WeRobotics, explained how drones had been used in Tanzania for mapping Zanzibar Island and other large-scale projects. He also said a firm in Rwanda was using drones to deliver medical supplies across the country.

Maria Stefanopoulos, production manager *ABC News*, outlined how drones were used in news gathering to open up unreachable areas like remote game parks and reserves. She gave examples of the technology used in Nepal and Tanzania, including drone use enriching live TV coverage.

Dieudonne Harahangazwe, senior scientist at International Potato Center, outlined how his organization has been using drones in evaluating drought tolerance, estimating yield and pest and disease control.

Bernard Muhwezi, who works for the Uganda Bureau of Statistics geo information services division, discussed drone use in his country, including in agriculture, media, public utility management – water and sewerage, health campaigns and in mapping to resolve land conflicts.

He called for closer collaboration to deal with the challenge of cost and security of drone operations but added that, prospectively, drones could be used in assisting to manage drought, landslides, public control and in the large-scale mapping in Uganda and East African region.

Grady Stone, the US Federal Aviation Administration (FAA) senior representative for Africa, talked about his organisation's basic approach to regulating RPAS. After discussing regulatory provisions, he reiterated how drones were not allowed to operate in national airports.

That was a point picked up by Gueye Sidy, IATA's regional director for airports, passengers, cargo and security, who highlighted industry concerns about unmanned air vehicle (UAV) access to the airspace, plus the safety and security, civil aviation spectrum, and regulatory challenges.

Finally, Brian Verport, international head of IToo Special Risks Ltd, outlined how UAVs are insured and discussed the growing use of the technology. He said that ever since July 2015, when the UAV regulations were enacted in South Africa, the number of qualified remote pilots had grown from 38 to 380, with an average of 50 more qualifying every month.

La start-up Will & Brothers veut inscrire le Cameroun sur la carte des fabricants de drones avec Drone Africa. Elle a levé 200,000 dollars pour réaliser ce rêve. Vincent Chappard nous présente William Elong et son projet.

Elong lance drones vers de nouveaux sommets

"Nous avons fait le pari fou, celui de transformer un fichier Powerpoint en une entreprise rentable..."

WILLIAM ELONG

23 ans, Forbes le classe 7ème parmi les 30 jeunes entrepreneurs africains les plus prometteurs. Ce plus jeune diplômé de l'École de guerre économique de Paris à l'âge de 20 ans, est rentré au pays, après un passage chez Thales et Oracle, avec un rêve. Celui de faire jaillir « la flamme entrepreneuriale » qui est « le point commun » des collaborateurs, des actionnaires et des partenaires que recherche son entreprise.

Il transforme ce rêve en réalité dans ses nouveaux locaux de la capitale économique du pays, avec 22 personnes représentant quatre nationalités, deux continents et parlant huit langues. Drone Africa a été conçu pour valoriser le Cameroun et l'Afrique.

« Drone Africa permet de réduire les coûts de cartographie et surtout d'amener les drones à la portée des organisations privées et publiques au Cameroun à des coûts abordables », a déclaré William Elong à African Aerospace.

Ce concept « révolutionnaire », selon son promoteur, sera utile pour la promotion du tourisme, la réalisation à coûts réduits des cartographies sur les projets miniers et de développement urbain, la couverture plus efficace des événements importants et la collecte d'images dans des zones sinistrées ou enclavées.

« Les pays africains sont dépendants de certains prestataires pour obtenir des images aériennes. Elles se vendent à des prix qui défient l'imagination. Par conséquent, nous pensons que les drones sont une solution plus simple pour combler ce besoin et bien d'autres, qu'il s'agisse de sécurité ou de tourisme », explique William Elong.

Il souligne que « ce projet vise à valoriser le savoir-faire

SUMMARY

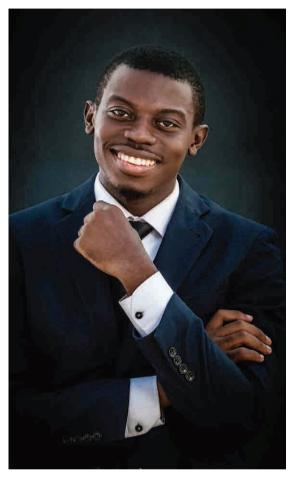
ELONG TAKES DRONES TO NEW HEIGHTS

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

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

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

Elong said his company is helping to reduce the cost of aerial mapping and imagery for both tourism and business users with the added benefit of enhancing the technical skills of young Africans.



technique des jeunes africains et à inspirer les autres ». D'où, cet appel lancé (« Osez! ») à ses compatriotes et aux Africains sur sa page Facebook. Et, aux investisseurs qui croient dans le potentiel de ce continent en pleine croissance alors que de nombreux pays développés font face à des problèmes économiques.

« Nous avons fait le pari fou, celui de transformer un fichier Powerpoint en une entreprise rentable... Il y a un an, j'étais seul face à mon ordinateur avec la conviction que tout est possible. Au fil du temps, des gens au Cameroun et d'ailleurs ont décidé d'y croire... Bilan, levée de fonds réussie et phase finale en cours. »

Et, la reconnaissance car en mai dernier, le projet du startupper a été acclamé au « village Androïd » aménagé à Yaoundé à l'occasion de la conférence économique internationale sur le thème « Investir au Cameroun, terre d'attractivités ».

L'application pourra être téléchargée prochainement. Grâce à elle, un drone équipé d'une caméra miniaturisée peut être piloté à distance pour capter des images inédites sur des rayons très étendus.

A l'heure où nous allions sous presse, l'équipe de William Elong préparait le lancement du projet en Afrique avant de le présenter au niveau international.



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Addis Ababa Bole
International Airport –
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handles more than 300
daily departures and close
to 10 million passengers per
annum. But soon that
won't be enough, which is
why the facility is getting a
\$345 million upgrade.

Kaleyesus Bekele reports on the reasons behind the move and the latest progress. s Ethiopia's aviation industry is growing steadily, Addis Ababa Bole International Airport is becoming more and more congested. The national carrier, Ethiopian Airlines, has grown fast in the last decade. It is acquiring new and more modern aircraft and is expanding its passenger and cargo destinations all over the world. According to IATA, Ethiopian became the largest carrier in Africa in 2014, overtaking South African Airways and EgyptAir. The airline grew fivefold in seven years. Today it operates 90 aircraft and serves 105 international destinations in five continents.

General aviation in Ethiopia is also growing. Charter flight operators and pilot training schools are being established and all of them are based in Addis Ababa.

The Addis Ababa airport was first built in its current location in the 1960s, when Ethiopian Airlines joined the jet age by introducing the B720 jetliner in Africa.

In 2003, the Ethiopian Airports Enterprise (EAE) inaugurated terminal II, which has a design capacity of handling six million passengers a year, and dedicated terminal I for domestic flights. At that time, the terminal was pronounced a white elephant project and critics commented that it was too big for a poor country. They claimed that there was not enough traffic to fill the terminal.

However, to the surprise of many, the terminal became full only 10 years after its inauguration.

EAE CEO, Tewodros Dawit, said the design capacity of the terminal was six million but it is now handling more than nine million passengers annually. "When it was built, we believed that the terminal would be adequate for 20 years," Dawit revealed.

Ethiopian Airlines transports more than eight million passengers yearly and 70% of the passenger traffic to Addis Ababa is in transit. The airline, which styles itself as the 'New Spirit of Africa', has 55 destinations in Africa.

A large number of passengers from all corners of Africa transit through Addis Ababa en route to Asia, the Middle East, Europe and America.

Dawit said the main contributing factor for the quick increase in passenger traffic was the unpredicted growth of Ethiopian Airlines in the past few years. "No one forecast that the national airline would grow at this pace. The Ethiopian economy, too, has been growing in double digits in the past 10 years. This is also one of the contributing factors for the surge in passenger traffic."

To mitigate the problem, the Ethiopian Airports Enterprise, which aspires to become the best airport service provider in Africa by 2025, launched a \$345 million terminal expansion project in 2015. EAE hired China Construction and Communication Company (CCCC) to undertake the project, which

AIRPORTS ETHIOPIA

CONTINUED FROM PAGE 77

comprises three main components – the expansion of terminal 2, terminal 1, and the construction of a new VIP terminal.

Priority was given to the expansion of terminal 2, which handles all the international flights.

Work on phase one of the terminal 2 expansion project began in January 2015. A Singapore airport design company, CPG, conducted the design of all the expansion work.

The Ethiopian Government secured the project finance from the EXIM Bank of China.

Supervision work is being carried out by a French consulting firm, ADPI and the project is slated for completion in January 2018.

Hailu Lemmu, chief site engineer for the project, said the passenger terminal expansion work includes the construction of a new building on both the left and right wing of the existing terminal II, with a floor area of 74,000sqm. The existing terminal floor area is 48,000sqm.

The new terminal will have a vast commercial area for duty free shops, restaurants and cafes. It will have two escalators and eight elevators, which can shuttle 218 passengers at a time.

The terminal will have a three-level access way, arrival and departure levels. It will be connected with the domestic terminal, allowing passengers coming from international flights to have smooth transfer to domestic flights.

Lemmu said that a state-of-the-art baggagehandling system, security control and fire control system had been purchased.

Elevators, escalators and other airportspecialised equipment are being manufactured and assembled in both China and Europe. The new terminal will have four new boarding bridges to add to the existing five.

The expansion project includes the construction of a 560m access bridge to the terminal, which will be 13m high. Vehicle scanning machines will be installed at the bridge gate. Lemmu said 80% of the work on the bridge is complete.

A vast parking area, which can accommodate more than 2,500 vehicles, will also be built.

A five-floor parking building will be constructed in the future in a separate development project.

According to the chief engineer, 52% of the expansion work is complete. However, the January 2018 completion could be pushed back by around eight months.

Ethiopian Airlines Group CEO, Tewolde GebreMariam, confirmed that the expansion project was delayed but, as of late, was progressing well. "Our Addis Ababa Airport hub is competing with Dubai, Doha, Abu Dhabi, Istanbul, Johannesburg, and other hubs in the region. Competition is not only in the air but it is also on the ground. We have to bring our airport facilities and services up to the global standards," he said.

According to Lemmu, the delay has been caused by the challenging work of relocating all the







electric, telephone, water pipe and sewerage lines. "We are undertaking the expansion work without interrupting the regular operation of the airport and that is very challenging," he commented. "Procurement of different equipment and machines with the international standards set by CPG was also time taking," he added.

EAE will soon embark on phase two of the expansion project, the construction of the VIP terminal and expansion of terminal one, which accommodates domestic and regional flights. The VIP terminal will serve senior government officials, diplomatic corps and heads of states.

Addis Ababa is often referred to as the political capital of Africa as it is the seat of the African Union, the United Nations Economic Commission and other major international and regional organisations. Since the city hosts major international conferences the Ethiopian Government believed that the airport needed to have a dedicated terminal for VIPs.

Due to budget constraints the Government decided first to build the regular passenger terminal. But, after securing additional funding from EXIM Bank of China, it decided to construct the VIP terminal.

EAE recently signed the agreement with the contractor, CCCC, for the construction of the VIP terminal on the left wing of the passenger terminal. Originally, the VIP terminal was planned to be on the right of terminal 2, next to the domestic terminal. However, since the domestic terminal will also expand, the plot of land would not be adequate for the VIP facility.

Lemmu said the final design of the VIP terminal is complete and EAE is handing over the site to the contractor.

He added that construction work on the VIP terminal was scheduled to begin as this edition of *African Aerospace* was going to press, and would be completed in two years.

The VIP terminal will have two levels. VIPs enter the terminal on the ground floor and then use elevators to access the second floor and board their aircraft. There will be three different access ways for diplomats, senior government officials and heads of states.

The terminal, among other things, will have various saloons, a press briefing room, conference room, restaurants, and a cocktail lounge. A separate parking area will also be developed for the new terminal.

The VIP facility, together with the expansion of the domestic terminal, will cost \$120 million.

"When the expansion project is complete, Addis Ababa Airport will be one of the best airport hubs in Africa," Lemmu said. According to him, the expansion project will mitigate the existing congestion problem and will enable the airport company to upgrade its services to global standards.

The Ethiopian Government is also planning to develop an airport city outside of Addis Ababa. EAE, in collaboration with ADPI, is undertaking a study on possible sites.



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AIRPORTS

New Copperbelt airport



CAA director Gabriel Lesa: "We will ensure that the Copperbelt international Airport is constructed to International standards."

Zambia Airports Corporation Limited (ZACL) has begun construction of the \$397 million Copperbelt International Airport.

Humphrey Nkonde reports.

ambia's new aerodrome is 13km west of Ndola, the headquarters of the Copperbelt Province, the country's major mining region.

It is close to the spot where the second United Nations Secretary General, Dag Hammarskjöld, died in a plane crash in September 1961 as he tried to bring peace to the Democratic Republic of Congo.

The \$397 million being used to construct the ultra-modern airport is a loan obtained from China's Export and Import (Exim) Bank.

Chinese company, AVIC International, was hired to design the airport and it has also been contracted to build the facility.

Over the years, the Copperbelt has attracted large-scale investments in various sectors, including the agro-based Global Industries, which has built a \$40 million plant, and the Chinese-led Chambishi multi-facility economic zone.

The economic zone is connected to Zambia's cobalt and copper mining and it is expected to boost

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set to shine

exports from the Copperbelt.

There are also some tourist attractions on the Copperbelt, including Chimfunshi Chimpanzee Orphanage in Chingola, the Dag Hammarskjöld crash site, and Nsobe Game Reserve in Ndola, which can contribute to the development of the aviation industry.

The new airport's design includes a 12,000sqm terminal building with a capacity of one million passengers, a 28m-high control tower, a fire station, aircraft hangar, 3.5km runway and a 50-room hotel.

The class E runway will be able to accommodate large aircraft such as Boeing 747/777, Airbus 350 and MD 11.

President Edgar Lungu officiated at the ground-breaking ceremony on June 25, during which time he unveiled the airport's foundation stone.

It is the first time in 50 years that Zambia will be developing a large airport – Kenneth Kaunda International Airport, formerly Lusaka International Airport, was built in 1967.

Copperbelt International Airport will replace Simon Mwansa Kapwepwe International Airport, formerly Ndola International Airport. This started as a military base for the British colonial government in 1938 and was converted to a civilian aerodrome in 1958

Over the years, residential houses have been developed around the site and, as a result, 2.5km parallel runways cannot be extended to accommodate the latest wide-body planes that require longer landing strips.

There is, equally, no space at the old airport where a modern terminal building and other structures can be constructed.

The Civil Aviation Authority (CAA) has approved construction of the new airport and said it would ensure that the facility meets international standards.

It will be the first time that the CAA, which was established in 2012 with financial and technical assistance from the European Union, will oversee construction of an airport.

CAA director general, Gabriel Lesa, said the new airport would enhance the institution's aviation oversight, adding that it would be constructed to international standards and would also contribute positively to the relevance of Lusaka's Zambia Air Services Training Institute (ZASTI) in the provision of manpower.

"ZASTI will be required to train pilots and other aviation professionals, who would be required to manage the new airport," Lesa explained.

ZACL showcased impressions of the new airport during the Zambia International Trade Fair in Ndola from June 29 to July 4 and they were also shown to President Lungu during the ground-breaking ceremony.

Unlike old airports developed as strictly landing facilities, the Copperbelt International Airport has incorporated into its design a 50-room hotel, from which it will generate income outside aeronautical services.

ZACL managing director, Robinson Misitala, said during the trade fair that his institution's vision was to increase nonaeronautical revenue from 10% to 30% from international airports.

Those in operation run by ZACL include Kenneth Kaunda in Lusaka, Simon Mwansa Kapwepwe in Ndola, Harry Mwaanga Nkumbula in Livingstone, and Mfuwe, near South Luangwa Game Park, in Mambwe.

Misitala said that while the hotel at the new air airport would be owned by ZACL, the intention was to have it leased to a competent operator in the hospitality industry.

The ZACL managing director said the airport









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AIRPORTS ZAMBIA

CONTINUED FROM PAGE 81

would a have a category 10 fire station, compared to category eight at Simon Mwansa Kapwepwe International Airport.

Thousands of show-goers had the opportunity to view the impressions of the Copperbelt International Airport from the ZACL stand.

ZACL won the best innovation prize among state enterprises during the trade fair and the trophy was presented by Commerce and Trade Minister, Margaret Mwanakatwe.

There is justification for Ndola to have a new airport going by the growing numbers of both local and international passengers being handled by Simon Mwansa Kapwepwe International Airport.

In 2004, both local and international passenger numbers at the old airport were below 50,000, although the aggregate was slightly above that figure, according to ZACL statistics.

The aggregate figure for both local and international passengers shot above 200,000 in 2013, representing an increase of 300% in slightly less than 10 years.

It was only in 2016 that the aggregate number of both local and international passengers fell slightly below 250,000.

As the new airport will have a capacity for one million passengers, its actual throughput is expected to be about 25%, if statistics for Simon Mwansa Kapwepwe International Airport are taken into consideration.

A novel aspect is that the Copperbelt International Airport would incorporate freight transport, an operation that is not part of Simon Mwansa Kapwepwe International Airport.

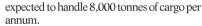
According to projected statistics released by ZACL, Copperbelt International Airport is



ZACL director of airport services Agness Chaila explains features of the Copperbelt International Airport from an impression that was exhibited during the Zambia International Trade Fair.

President Edgar Lungu in an excavator during the groundbreaking ceremony on June 25 for the construction of the Copperbelt International Airport.

PICTURES: HUMPHREY NKONDE



Cargo planes from Europe, Asia and other parts of the world will be capable of landing owing to the category E runaway.

From 2007 to date, Simon Mwansa Kapwepwe International Airport has been handling an average of between 8,000 and 10,000 domestic and international planes.

It has been estimated that the Copperbelt International Airport will have 20,000 take-offs per year.



There is no doubt that Zambia needs modern airports to stimulate the aviation industry, which collapsed after Zambia Airways was liquidated in 1994.

As a result of that liquidation, ZASTI could not train commercial pilots, something that the Government, through the CAA, intends to reverse

The Zambian Government has indicated that it would revive a national airline, especially after the European Union lifted the ban on aircraft originating from there from landing in the Eurozone.

However, ZACL has to work hard to attract more airlines to the Copperbelt International Airport so that it serves several local and foreign passengers.

This is the only way the 75% spare capacity of the one million passenger terminal building would fully be utilised.

It would also be the only way that ZACL would have a good return on investment so that it pays back the \$397 million loan it obtained from China to have the Copperbelt International Airport constructed.









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AIRPORTS FBOs

North Africa is an emerging market, especially for business aviation. **Vincent Chappard** talks to Zouhair Mohammed El Aoufir, CEO of the Office National Des Aéroports du Maroc (ONDA), about a new strategic step in the development of activities at Moroccan airports.

ONDA DRIVES THE BUSINESS FORWARD



Zouhair Mohammed El Aoufir: "These FBOs mark a new strategic step in the development of business aviation activities at Moroccan airports."

he MEBAA show in Marrakech in September was the first in a 10-year deal signed between the Middle East Business Aviation Association and ONDA demonstrating the growing demand for private aviation in the country.

ONDA CEO, Zouhair Mohammed El Aoufir, revealed the company has also signed two agreements to cater for ground-handling services for business aviation and to manage exhibitions at various sites throughout the country.

The deals are with Jetex for Mohammed V, Marrakech, Rabat, Agadir and Dakhla airports, and with Swissport for Mohammed V, Rabat, Marrakech and Tangier airports.

"These FBOs mark a new strategic step in the development of business aviation activities at Moroccan airports," said El Aoufir. "They will bring a significant improvement in reception and offer tailor-made services with the best international standards."

The FBOs will be able to accommodate an estimated annual traffic of 29,000 passengers, with at least 10 parking spaces for each facility. The total investment is more than 130 million Moroccan Dirhams (\$13.4 million).

"We have a strong desire to pursue the development of this sector to become a regional and continental business hub," added El Aoufir.

Morocco registered an air traffic record in 2016, with its airports welcoming 18.2 million passengers. All traffic components have shown positive figures: up 3.58% for passenger traffic, 1.16% for aircraft movements, 6.52% for freight and 11.1% for over-flight traffic.

ONDA also recorded double-digit growth for Rabat-Salé (up 23.69%), Laayoune (19.95%) and Dakhla (20.96%) airports.

Flights from Europe account for 68.87% of passenger traffic; domestic flights 10.52%; the Middle East and the Far East 7.60%; and Africa 7.08%.

The Mohamed V International Airport in Casablanca captures 47.25% of the traffic, followed by Marrakech with 21.35%, Agadir 7.32% and Fez Saïss 4.90%.

Morocco needs more modern airports to take advantage of its potential and solidify its position as a commercial and aviation bridge between North Africa, Europe and the Middle East. ONDA is engaged in a strategy to sustain the development of airport infrastructure through extension works, modernisation, and new construction projects, to support the increase in air traffic and the tourism strategy '2020 Vision'.

The new airport terminal, Menara Marrakech, inaugurated in December 2016, is a vivid example.

"Its expansion brings the overall capacity of this airport to nine million passengers per year. It will meet the growth and capacity requirements of the next decade," said El Aoufir.

Innovations include the commercial 'walkthrough', a concept that will be extended to other airports with high development potential, and free WiFi. Telescopic footbridges were also deployed for the first time last July to receive long-haul flights.

Discussions are on-going on the construction of a second airport in Marrakech to accompany the dynamism of the tourist sector of the region. According to ONDA: "In the medium term, this extension will not be able to accompany the evolution of the traffic expected by the Moroccan airport master plan."

The modernisation of Mohammed V remains one of ONDA's flagship projects. The economic capital of the kingdom was the first city in North Africa to host the A380 on March 26. Emirates operated the flight from Dubai.

The airport's Terminal 1 project was halted for more than four years with work resuming at the end of 2014. This situation has created severe constraints on airport operations and has limited its capacity. In its current configuration, the airport welcomed 8.6 million passengers in 2016, much more than its actual capacity of 7 million. This operation was possible due to the permanent optimisation of spaces and flows.

"The extension of the terminal will increase the overall capacity of the airport to $14\,\mathrm{million}$ passengers," said El Aoufir.

The new terminal will also feature state-of-the-art equipment, such as automated luggage-handling systems, interactive checkin terminals, boarding bridges and safety equipment.

Terminal 2 has also been extended, with the construction of a new control tower for commissioning by 2021. By then the airport plans to accommodate 21 million passengers.



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It's not rare to spot an MD-10 aircraft in African skies but there is one unique jet, owned by Orbis that is saving the sight of thousands and offering life-changing training in eye care.

Marcelle Nethersole reports.

FLIGHT FOR SORE EYES

rom the outside, there is nothing too unusual about this particular MD-10 aircraft other than the branding.

Inside however is a different story as it.

Inside, however, is a different story, as it contains a state-of-the-art operating theatre that has saved the sight of thousands of people in Africa and around the world.

The world's only flying eye hospital belongs to leading eye charity Orbis, and it is celebrating delivering 10 million treatments around the globe in a single year.

"This is no normal aircraft; it plays a vital role in the fight against avoidable blindness," explained Natasha Lee, senior communications officer. "There are 285 million people in the world who are blind or visually impaired and Orbis discovered that 80% of these people suffer unnecessarily from conditions that are preventable or treatable, including cataracts, glaucoma and age-related macular degeneration.

"Around 90% of the world's visually impaired people live in developing countries where eye care is scarce. Put simply, this aircraft changes lives."



Orbis is the result of an alliance forged between the medical and aviation industries. In the 1970s, leaders of these two industries came together to create the plan that led to the charity's foundation.

In June 2016, Orbis launched its third next-generation flying eye hospital. The converted MD-10 was donated by Fed-Ex and now houses an operating theatre equipped with audio-visual technology that transmits live 3D surgeries to students in classrooms at partner hospitals, a classroom for 46 people, a laser treatment room, a sterilisation room, and a pre and post-op recovery room.

Donations are relied upon for the charity to work and that includes for the aircraft. The company has received many donations from companies happy to help fit out and provide for the aircraft. These include Botany Weaving supplying the aircraft carpet, as well as medical companies providing all the essential surgical equipment needed in its



theatre and laser rooms, and training companies kitting out the classrooms.

The aircraft enables a team of the world's most highly regarded ophthalmic experts to train local medical professionals.

"We are also able to strengthen and improve eye health systems by partnering with local hospitals, public health agencies, NGOs and governments," added Lee.

What makes Orbis extra special is its staff, all of whom take the time out from their daily jobs.

"Orbis retains a dedicated global network of medical professionals, known as a volunteer faculty, who provide ophthalmic education and instruction to increase our partners' skills, services, and the quality of patient care," said Lee.

"Most Orbis medical volunteer opportunities are short-term, averaging one to two weeks. All volunteers are matched in accordance to requested subspecialty skill areas. Typical activities include hands-on training, surgical demonstration, diagnostic consultation and lectures."

The pilots also volunteer from Fed-Ex. Africa is a continent on which Orbis particularly focuses and, in 1999, it set up its first country office in Ethiopia – now its longestestablished programme.

"Team Orbis has worked hard in Ethiopia to

eliminate the painful blinding condition trachoma. We were the first charity in the country to implement the World Health Organisation 'SAFE' strategy, which tackles trachoma through surgery, antibiotics, face washing and environmental changes," explained Lee.

"Rural populations face numerous challenges when trying to access healthcare. As well as the majority of health services being located in urban areas, there are often very few qualified medical professionals on hand and it can be very difficult to secure transport."

Orbis tackles this by training local people – ranging from community health workers to teachers, and traditional healers – in how to screen for eye conditions, apply basic treatments and make referrals in serious cases.

An example comes from one woman called Tsehay, who was trained by Orbis to become an integrated eye care worker. She works at the Zada Health Centre in the rural area of Dita Woreda in the highlands of Ethiopia.

"One day I met a 15-year-old boy who was suffering from trichiasis as a result of repeated infection from trachoma," said Tsehay. "He was a weaver, but the pain from his eyelashes rubbing his eye was so bad it meant he was unable to work. I managed to persuade him to come to

EYE CARE



Zada, where I was able to perform surgery and correct it. I felt happy that I could help him."

In 2015, Orbis distributed more than 3.4 million doses of Zithromax – the antibiotic to treat blinding trachoma – and screened and examined more than 500,000 people living in rural areas.

"Training is paramount in the fight to save sight in developing countries," said Lee. "We conduct our training programmes on board our Flying Eye Hospital by collaborating with local hospitals and through Cybersight – our online telehealth portal. The specialist areas we cover include paediatric eye care, cataract, glaucoma, retina, oculoplastics, and diabetic retinopathy.

"In 2015, we supported 21,469 training sessions for doctors, nurses, community health workers and others."

Zambia is another country benefitting from the Orbis programme.

After developing a partnership with the Zambian Ministry of Health and Kitwe Central Hospital, the Flying Eye Hospital conducted a training programme in the country in 2012.

Dr Larry Benjamin is a consultant ophthalmic surgeon at Stoke Mandeville Hospital in the UK. He has been involved in Orbis since 2004, both as a medical volunteer and as a trustee.

He has regularly visited the Kitwe Eye Annexe – Zambia's first dedicated children's eye centre – in order to develop the skills of the country's first paediatric ophthalmologist, Dr Chileshe Mboni.

Benjamin said: "We'll operate on around 20 children with me doing some and Dr Mboni performing some. As a specialist in cataract surgery in the UK, I have done my fair share of cataract operations, and this helps me to impart the tricks of the trade. The aim is to initiate a cascade process. As Dr Mboni gets more confident, he passes on his skills to other local doctors."

Dr Mboni helped save the sight of one young girl called Racheal. Her mother, Verah, noticed there was something wrong with Racheal's eyes just after she was born.

"I would move my hands in front of her face but she wouldn't react," said Verah.

She cycled 60km with Racheal to get her checked out at an eye screening, where she was diagnosed with cataracts. They then travelled more than 500km by bus to Kitwe Eye Annexe for surgery, performed by Dr Mboni.

Following her operation it was clear Racheal could see again.

"She said hello to both me and Dr Mboni," said Verah.

All she needed from then, was a pair of glasses. Today, the centre is famous across Zambia and requires more than just one person at its helm. Orbis is now supporting the training of a second paediatric ophthalmologist, except this time it will be Dr Mboni delivering the training. Dr Lillian Musonda will qualify this year.

Orbis Flying Eye Hospital currently operates 40 long-term programmes in countries including, Ghana, India, Mongolia, Indonesia and Vietnam.

"The new Flying Eye Hospital recently completed its first programme in Shenyang, China, where 24 patients were treated providing 18 local doctors with hands-on surgical training," said Lee.

Since the first Flying Eye Hospital took to the skies in 1982, both the plane and Orbis' mission have evolved.

Lee said: The Flying Eye Hospital has often been the catalyst that has either enabled us to establish or expand our long-term country programmes. Our programmes in Africa are a great example of this."

In 2017, The Flying Eye Hospital will be continuing its good work in Cameroon, Vietnam, and Bangladesh.

SAA KEEPS A WEATHER EYE

South African Airlines (SAA) has been making good use of a system run by the World Meteorological Organisation (WMO) to better understand and predict weather in the region.

Steve Nichols reports.

AA says it has saved between two and three million US dollars in fuel over a one-year period by enabling better route planning using WMO aircraft meteorological data relay (AMDAR) data.

The AMDAR observing system started around 30 years ago and has grown to involve 40 airlines and more than 4,000 aircraft worldwide.

It uses aircraft on-board sensors, computers and communications systems to collect, process and transmit meteorological data to ground stations via satellite or radio links.

A special AMDAR software module is installed in the appropriate aircraft avionics that enables data acquisition and initial data quality checks. The measurements are compiled into a standard message format (AEEC, ARINC 620).

The weather data allow pilots to choose a flight level that avoids flying into heavy winds. Crew are also able to update their flight plans at the last minute using up-to-date weather information.

Gaborekwe Khambule, senior manager, South Africa Aeronautical Meteorological Service (SAWS), said: "We entered a pilot project with AMDAR in 2004 and this has matured into a full programme for upper air observation.

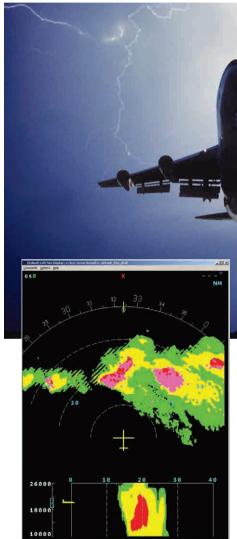
"The use of AMDAR is critical for the reduction of errors in our numerical weather prediction (NWP) forecast models. The more AMDAR observation data you feed into the prediction models, the better the output or performance in terms of accuracy.

"Research has shown that AMDAR observations generally improve forecasting skill and accuracy in NWP by contributing to 15-20% of the total error reduction attained from all observing systems.

"The South African Weather Service is pleased to see the Africa AMDAR regional implementation plan now taking shape following the first workshop that took place in Nairobi in June 2016."

Khambule added that having more airlines contributing in the region would be advantageous as SAA doesn't fly everywhere on the continent.

So what about future AMDAR expansion with SAA? Kobus Olivier, senior aeronautical officer, SAA, said: "We can only provide the AMDAR data for as long as it is utilising Airbus



aircraft. Expansion will only happen if the fleet increases, but under the current financial conditions it looks like some of the Airbus aircraft will leave SAA service."

The European E-AMDAR programme is also providing data from visiting E-AMDAR aircraft from Air France, British Airways and Lufthansa. This data is supplementing the SAA network over northern, central and eastern African regions, including the Indian Ocean.

Stewart Taylor, WMO senior operational meteorologist and WMO AMDAR development officer, said: "ACARS links have been the

AMDAR observations are helping South African Airlines avoid bad weather like this.

mainstay of the in-flight data gathering, but WMO is looking at what is possible with next-gen satcom/broadband technology.

"ACARS will be around for some time, but we are looking at what will be available with satcom/broadband technology, such as IP downlinks, electronic flight bag (EFB) and satcom-based ADS-B."

Once on the ground, the AMDAR data is relayed to National Meteorological and Hydrological Services, where it is processed, quality controlled and transmitted on the WMO global telecommunications system (GTS).

"While AMDAR has been around for more than a couple of decades, many airlines are still unaware of it or the benefits it can bring through improved weather information and, as a result, more efficient flight operations. This is where WMO outreach and promotion is assisting with the goals of the global expansion of AMDAR and data gathering in remote areas."

The WMO global AMDAR system currently produces more than 700,000 high-quality observations per day. These include air temperature, wind speed and direction, together with the required positional and temporal

OPEN TO SAVE MILLIONS

information and an increasing number of humidity and turbulence measurements.

The data collected is used for a range of meteorological applications, including public weather forecasting, climate monitoring and prediction, early warning systems for weather hazards and, importantly, weather monitoring and prediction in support of the aviation industry.

A recent report on its use concluded that the current AMDAR observations provided by the participating airlines benefits the air transport industry greatly.

Benefits in the flight-planning phase, from increased forecast accuracy, enables optimisation of the fuel load prior to take-off and triggers significant fuel-burn savings during the flight.

In the air, flight crews can optimise their flying parameters using updated forecasts and actual weather observations made available through AMDAR validation and correction. Major savings can come from disruption avoidance, made possible by more accurate weather forecasts.

These cost reductions will increase in the future because most of these disruptions are a consequence of snow, freezing rain, fog and thunderstorms, which can all be better forecast with the progressive inclusion of water vapour measurements from AMDAR.

This recent report says that, through the availability and use of AMDAR data, a potential, tangible fuel saving of \$10 million per annum is realisable for a typical large airline participating in the programme.

In addition to fuel savings, safety improvements, especially from the prediction of turbulence and other potentially dangerous weather phenomena, should also result from improved forecasting.

Earlier this year, the WMO held talks and entered into a new working arrangement with the International Air Transport Association (IATA) on the future operation of the global AMDAR system.

WMO secretary-general, Petteri Taalas, met IATA director general, Alexandre de Juniac, to discuss how IATA's 265 airlines in more than 117 countries can best contribute to AMDAR's data-gathering system.

IATA can help to expand and improve the operation of the AMDAR programme while WMO can help to ensure that data owned by airline partners is better secured.

WMO also signed an agreement with the International Civil Aviation Organization in April to work more closely together.

WMO is also encouraging the integration of a humidity sensor with any new airline implementing AMDAR, and the collaboration with IATA/WMO has identified this as a development item, along with turbulence reporting.

As a result of the success of the South Africa AMDAR programme, WMO is in discussion with Royal Air Maroc and Kenya Airways to look at further expansion of the AMDAR system within Africa.



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MRO SEATING

African airlines' small fleet sizes don't carry a lot of clout with seating manufacturers. Could a website that acts like eBay for used aircraft seats solve the problem and be a lot more cost-effective than new seats? **Victoria Moores** has been finding out.

Sitting pretty on refurbished seats

ooner or later, most airlines want to upgrade their aircraft interiors, but what happens to the old seats? "They end up as hidden capital in a warehouse," said Thomas Bulirsch, founder and CEO of aircraft interior remarketing site aviationgate.com.

"If an airline doesn't promote [advertise] the used seats, they can lose their potential value and, instead, become a burden and a cost factor. The longer you keep the seats, the more they cost and one day you could end up having to pay for them to be scrapped. Turning this cost into revenue has to be a good thing."

The aviationgate.com website was created two years ago as a portal for airlines to sell these seats and help set them up with a new home. The team manages the listings and helps arrange seat refurbishment and certifications to get them flying again. There is no fee for listing seats on the website; aviationgate.com only charges a fixed commission once the seat is sold.

"Nobody is really doing the same thing as us. We are in a niche; the concept is quite unique," Bulirsch said. "We want to make this invisible market a bit more visible."

Bulirsch believes the African market has huge potential. "We are just not very well known yet. We have 110 different seat models online, available in a few days in 'as removed' condition. The price is a lot lower than a new seat; it can sometimes be a lot less than half the cost," he said.

For smaller airlines, high costs and long lead times are not the only issue; it's capturing the attention of the seat manufacturers in the first place. "The big guys focus on larger requirements and economies of scale. A lot of customers in Africa are not a focus area for the big seat original equipment manufacturers (OEMs). They are not willing to deliver low quantities of seats; it's just not possible to go to an OEM for one or two shipsets. For us, scale is not a problem. We are happy to work with lower quantities."



AviationGate lists a range of seats.

Aviationgate.com lists seats for a wide range of aircraft types, including older models, which could be hard to find elsewhere. It can customize the seats and bring them up to standard by refurbishing them, renewing the covers and fixing or changing plastic parts.

The company is also able to fit in-flight entertainment (IFE) systems, as it removes these and refits them too, with space to overhaul three narrow-body shipsets at once and store seats if needed.

The supply chain is just the seller, the website and the buyer. "We deal with you directly from our office. We don't have middlemen in between making the products a lot more expensive. We have defined processes behind everything. This is not a grey market, or someone unknown selling seats from a warehouse. We have all the traceability documents and certification available to make the process of buying used seats a lot more secure."

Finally, there is that potential revenue stream too. "Lots of airlines use us not only to source seats, but also to sell them. We are constantly looking to buy surplus seats. I would even put that in the category of ancillary revenues," Bulirsch said.



Thomas Bulirsch: "We want to make this invisible market a bit more visible."





MRO EXPANSION

> Aerotechnic Industries (ATI), a major MRO provider located at the crossroads of Africa, Europe and the Middle East, is plotting sustainable and steady growth and expansion projects.

Vincent Chappard talked to CEO, Tommaso Auriemma.

ATI plots ways to maintain its progress

TI is a 50/50 joint venture between Air France KLM Engineering & Maintenance (AFI KLM .E&M) and Royal Air Maroc (RAM).

It provides A320 and 737NG overhaul services from A-checks to D-checks at Casablanca International Mohammed V Airport with top-quality EASA Part 145cerfified services.

It has logged a total of 507 checks for A320 family and B737 NG during the last year, including 12 D checks and more than 35 C checks.

More clients have been pulled on board since the fourth line opened in 2016.

"All this is the outcome of 30 years' unwavering partnership and the benefits gained from the extensive airline-MRO experience of the two mother airlines on medium-haul fleets," enthused ATI CEO Tommaso Auriemma.

Now the MRO provider has started working on an extension project for its facility and services.

"The growth of RAM, of the African market and of our clients, means that our present facilities will be saturated by 2019-2020," explained Auriemma. "The setting-up of a new hangar in Casablanca to increase capacity is being studied."

ATI clients come from Africa (mostly southern) and Europe (mostly east and south). They include: Air Arabia Morocco, Air Corsica, Aigle Azur, Air Côte d'Ivoire, TAG Angola, and a new client - Congo Airways.

ATI recently completed a Ccheck on A320s for Congo Airways, including a change in landing gear. The company hopes the airline will become a regular client as it has recently invested in two A320s, a Q400 and a B737-800.

The MRO provider will soon have its facility ready for the A320neo and Boeing 737 MAX – an obvious move as RAM has ordered these models.

Auriemma underlines that AFI KLM E&M was the first in Europe to welcome an A320neo in Toulouse.

ATI has a highly qualified and diversified team of 330

employees, which enables it to provide maintenance of engines, landing gear and aircraft seats. It also offers integrated solutions (cabin modification and painting) to further optimise the "base maintenance aircraft-onground (AOG) time" of its clients.

The company also has privileged access to the maintenance services offered by AFI KLM E&M and RAM, from engineering, logistics and AOG services, 24/7 on-wing support, non-destructive testing (NDT) inspections and cabin design, to customised components, engines or nacelles support.

ATI makes the most of its competitive local presence – Casablanca now being a full-blown hub connecting Africa to the rest of the world with 10 daily flights to Paris. It, thus, benefits from an unbroken supply chain, its proximity to RAM and its subsidiaries, especially

> Snecma Morocco Engine Services (MRO for CFM56 engines), and STTS (specialised in aircraft painting).

Furthermore, ATI is planning to provide a new 'line maintenance' service within 12 months throughout Morocco. "It will require lighter facilities and will be available first at Casablanca and will be extended to Rabat, Marrakech, Agadir and other stations in Morocco," explained the CEO.

Investment in training is also vital. ATI works closely with specialist training institutes the Institut Spécialisé des Métiers de

> Aéroportuaire (ISMALA) and the Groupement des industries marocaines aéronautiques et

spatiales (GIMAS). Unlike many MRO providers, ATI has all the necessary components to fully grow and strengthen its base and workforce; good

infrastructure, a critical mass, strong partners and a qualified local workforce. By 2030, the aviation market

will grow exponentially and forecasts show that African MRO spending will increase substantially by 2025. Tommaso Auriemma: "The growth of RAM.

of the African market and of our clients, means that our present facilities will be saturated by 2019-2020."



Nigerian aviation services provider, Springfountain Infrastructure, and US aircraft manufacturer, Boeing, have signed a joint venture agreement to set up Africa's first aircraft leasing company, which will also offer maintenance, repair and overhaul (MRO) services in West Africa. **Oscar Nkala** reports.

Alliance a Springboard for Nigerian expansion

he African Aircraft Leasing Company (AALC) was set up after Springfountain Infrastructure executive director, Tokunbo Fagbemi, and Boeing's head of sales, West and Central Africa, Larry Tolliver, signed an agreement in Abuja.

The new joint venture will offer logistics, spares, supplies and other aggregated service solutions.

Among its key plans, the partnership aims to provide at least 200 aircraft to support the expansion of the West African aviation sector over the next 20 years.

Fagbemi said supporting the aviation industry would spur new investments and create employment and aviation training opportunities.

"We want to work with government and the aviation industry to import brand new aircraft, reduce airline industry operating costs and bring down airfares in Africa," she said.

"Our proposed investment of more than \$20 billion (including foreign direct investment) in aircraft leasing, MRO, spares, logistics and supplies, as well as aggregated services solutions, will require the development of local skills including pilots, engineers, aviation economists and specialist lawyers, among others.

"Through this venture, we will help to ensure that Nigeria does not lose out as African aviation gathers momentum. African countries are re-positioning by developing their cultures, business and economies around

Boeing regional sales manager for West and Central Africa, Larry Tolliver, (second left) and Springfountain Infrastructure executive director, Tokunbo Fagbemi, (second from right) after the



aviation and increased intra-continental air connectivity.

"What we ask from the (Nigerian) government is commitment to increase primary demand for air travel. Government should take flying to the masses by making air travel affordable and convenient."

She said the aviation sector could absorb up to 100 new aircraft in the next few years if it took advantage of the Nigerian population's 'high propensity' for travel to raise the airline passenger departures rate from the current 19 million to 44 million per annum in the next decade.

However, she warned that airlines might not be able to boost passenger volumes unless they invested in new aircraft and improved the quantity and quality of the services they offered.

Fagbemi said the Nigerian Government could create an enabling environment for the expansion of the aviation sector by introducing policy reforms, waivers of laws deemed unfair to foreign investors and direct investment in aviation training, education and skills development.

The Government should also exempt airlines from paying some custom duties and create a one-stop-shop for processing and issuing new operator permits and licences.

Aviators also want a special regime for the importation of aircraft spares, a special visa regime and immigration procedures for aviation industry workers, and waivers on airport fees in order to facilitate new aircraft acquisitions and ease the entry of MRO-bound aircraft.

Tolliver said the new partnership would improve the accessibility of Boeing services to its regional clients.

Nigerian Minister of State for Aviation, Senator Hadi Sirika, hailed the Boeing-Springfountain joint venture as a strategic relationship that would bring innovative solutions to Nigerian aviation.

He said the Boeing commitment to Nigeria would improve the development of the aviation industry human resources base, create new jobs and ensure that most of the wealth generated by the sector was retained in-country.

According to estimates, the establishment of an aircraft MRO centre in Nigeria could save local airlines up to \$500 million annually in maintenance, service and conveyance costs arising from contracting out-of-Africa companies.

The private sector initiatives comes a few years after the Nigerian Government abandoned plans to establish West Africa's first MRO facility at the (Akwa) Ibom International Airport.

MANUFACTURING TUNISIA



A gauche : Mécanique et usinage de précision chez AD Industrie Tunisie.

A droite : Activité d'assemblage chez Zodiac Aerospace Tunisie.

LE RÔLE CLÉ DE L'AÉRONAUTIQUE DANS L'ÉCONOMIE TUNISIENNE

«Aerospace plays a key role in the Tunisian economy» – Page 97

La filière aéronautique en Tunisie a le vent en poupe aujourd'hui avec près de 80 entreprises employant 13 000 salariés dans le pays. Un reportage de Vincent Chappard sur la genèse, les développements et le savoir-faire de l'industrie aéronautique tunisienne.

a Tunisie a toujours été une terre d'aviation avec le décollage de la première montgolfière en 1784 à Tunis puis le premier vol historique de Louis Blériot dans la capitale tunisienne en 1910, les vols de Roland Garros et la création de la compagnie Tunisair le 1er avril 1949. Depuis, la Tunisie a procédé à des plans d'aménagement et de modernisation de son transport aérien.

L'industrie aéronautique connaît aujourd'hui une croissance à 2 chiffres, c'est également l'un des rares secteurs qui a créé des emplois depuis la révolution. Elle sera pourvoyeuse de 1000 emplois par an pendant les cinq prochaines années.

La filière aéronautique tunisienne dispose de nombreux atouts dans le cadre des politiques et stratégies d'outsourcing des grands groupes aéronautiques mondiaux.

Selon Zied Ladhari, ministre de l'industrie et du commerce, la stratégie de développement de ce secteur vise à placer le pays dans le club privilégié des fournisseurs des équipementiers aéronautiques européens et mondiaux. Pour cela, la Tunisie encourage les partenariats public/privé en facilitant les flux logistiques, en dématérialisant les procédures douanières et en favorisant le développement les ressources humaines et la formation.

Le pays a récemment mis en place un cadre incitatif et attractif pour les investisseurs étrangers. Une nouvelle loi de l'investissement est entrée en vigueur en avril dernier. Elle concerne bien sûr le secteur aéronautique mais également l'industrie automobile, la pharmaceutique, les TIC, le textile et l'agriculture.

« L'adoption de cette nouvelle loi constitue un pas en avant pour davantage de liberté en matière d'investissement aussi bien pour les Tunisiens que pour les étrangers », soutient Fadhel Abdelkefi, ministre du développement, de l'investissement et de la coopération internationale. « Notre ambition est d'enregistrer une croissance à un rythme plus soutenu que celui qu'on a connu durant les cinq dernières années de notre transition politique et de faire de la Tunisie un hub régional pour l'Afrique du Nord. »

Cette loi définit des règles claires sur l'investissement, clarifie les obligations et les garanties de l'investisseur et garantit le transfert de capitaux.

Au travers de sa transition démocratique, la Tunisie a mis en place des réformes pour passer d'une économie à faible coût à un



MANUFACTURING

SUITE DE LA PAGE 95

hub avec un tissu économique diversifié. La stratégie industrielle 2030 vise ainsi à valoriser les atouts du pays, rendre ses entreprises plus compétitives et innovantes, et les ressources humaines encore plus performantes.

La filière aéronautique fait ainsi l'objet d'une attention particulière des pouvoirs publics, qui œuvrent pour l'amélioration de la gouvernance de ce secteur à travers la création de clusters aéronautiques nationaux. La sécurité et la navigabilité sont également des préoccupations majeures.

« La Supply Chain aéronautique tunisienne se caractérise par le fait qu'elle soit complète et intégrée », assure Thierry Haure Mirande, président du Groupement des Industries Tunisiennes pour l'Aéronautique et le Spatial (GITAS). « Elle regroupe les différents métiers de l'aéronautique : ingénierie, mécanique, traitement de surface, composites, injection plastique, aérostructures, contrôle et essais, emballages, outillages spécifiques, MRO ».

Le GITAS a été créé en 2006 à l'initiative de Zodiac Aerospace et Sabena Technics. Elle intègre aujourd'hui 47 membres. Ses missions sont diverses: promouvoir et favoriser le développement d'une Supply Chain aéronautique tunisienne, représenter le secteur auprès des autorités tunisiennes, être le référent des investisseurs et favoriser l'émergence des fournisseurs nationaux.

Selon l'enquête CEPII/APII réalisée pour le GITAS, on dénombrait une dizaine d'entreprises aéronautique en 2004. Elles sont près de 80 en 2017. Plusieurs grands groupes se sont implantés en Tunisie à savoir Latécoère en 1998, Sabena Technics en 2002, Zodiac Aerospace en 2005 ou encore Stelia Aerospace en 2011.

Ce secteur emploie aujourd'hui environ 13000 personnes, c'était 10 fois moins en 2004. 86% des entreprises aéronautiques implantées dans le pays sont étrangères. La France reste le premier partenaire de la Tunisie avec environ deux tiers des entreprises. On observe également l'implantation d'autres acteurs du secteur provenant du Moyen-Orient (en particulier du Qatar), de l'Asie et des Etats-Unis. Il y a également une émergence des entreprises et



Thierry Haure Mirande: "La Supply Chain aéronautique tunisienne se caractérise par le fait qu'elle soit complète et intégrée."

Stelia Aerospace en Tunisie.



d'entrepreneurs locaux comme l'avionneur Avionav ou la nouvelle compagnie aérienne « Express Air Cargo » qui est passée à une étape supérieure en créant son propre centre de maintenance d'avions.

Pour intégrer la Supply Chain de l'industrie aéronautique mondiale, la Tunisie propose des services d'ingénierie, la production et la fabrication de pièces et de sous-ensembles aéronautiques et de maintenance. Elle dispose de capacités et de savoir-faire. L'industrie tunisienne s'est spécialisée dans le montage et l'assemblage d'aérostructures métalliques ou composites. C'est le cas des structures des Airbus A320 et A330 qui sont réalisées en Tunisie et envoyées en France pour l'assemblage final.

L'assemblage de ces structures complexes se réalise dans un centre autonome unique au monde dans le pôle aéronautique d'El Mghira. Il est situé dans la banlieue sud de Tunis et s'étend sur une superficie de plus de 200 hectares dont 20 dédiés au parc aéronautique. Stelia Aerospace a été le premier groupe à s'y installer et a entraîné ses partenaires et fournisseurs tels que Figeac Aéro, Mecahers Aerospace, Corse Composite.

Selon Ouassim Berraies, directeur général de Stelia Aerospace Tunisie, plusieurs critères ont poussé le groupe à s'installer dans la zone industrielle d'El Mghira: la qualification de la main d'œuvre, la proximité avec les sites en Europe en termes de délais logistiques et les coûts.

Pour accompagner le potentiel du parc aéronautique, les autorités tunisiennes ont inauguré en mai dernier le Centre d'Excellence dans les Métiers de l'Industrie Aéronautique (CEMIA) à El Mghira. Le développement d'une main d'œuvre qualifiée et compétente est un maillon essentiel de la Supply Chain tunisienne.

« La zone d'El Mghira va doubler en capacité dans les prochaines années et elle sera réservée en priorité aux acteurs du secteur aéronautique pour des projets d'extension ou pour attirer de nouveaux investisseurs », assure Karim Chafroud, vice-président du GITAS.

L'implantation de Stelia Aerospace a été le point de départ au renforcement de la formation et au développement des compétences en matière d'aérostructures.

Les investisseurs aéronautiques retrouvent ainsi le même écosystème qu'en Europe ou qu'aux Etats Unis. Le GITAS collabore avec certains organismes tels que les clusters aéronautiques de différentes régions françaises et l'agence française de développement. El Mghira se transforme progressivement en un cluster aéronautique. Autre facteur essentiel, le GITAS encourage et soutient les entreprises tunisiennes dans leurs certifications aux normes qualité EN9100 et ISO 14001.

Le potentiel du secteur aéronautique reste toutefois insuffisant par rapport aux opportunités et au potentiel de développement. Le GITAS est de ce fait dans une dynamique de contacts vers les donneurs d'ordre et des investisseurs. La Tunisie est ouverte à toute forme de collaboration visant à enrichir sa Supply Chain. Des rencontres et des visites sont organisées avec des acteurs en particulier dans de nouvelles régions du monde comme l'Amérique du Sud, les USA et le Canada. Selon plusieurs sources, Embraer a récemment visité les installations en Tunisie.

Le GITAS invite régulièrement ses partenaires sur le terrain pour mesurer les performances de l'industrie tunisienne et assure une représentation de la Tunisie dans les différents salons et conférences.

Pour soutenir sa croissance dans le secteur aéronautique, la Tunisie souhaite se diversifier vers d'autres activités. Face à la diminution des capacités de stockage des compagnies aériennes, le stockage d'avions est une réelle opportunité pour les aéroports tunisiens et en particulier à Tozeur. C'est une activité en croissance qui nécessite des parkings en zones sèches. La Tunisie souhaite également jouer un rôle dans le démantèlement d'avions. En effet, environ 15 000 avions devront être démantelés dans les 10 prochaines années. La fabrication de textile certifié aéronautique (en particulier pour les sièges) est également une opportunité pour le pays.

Le GITAS va prochainement lancer une commission et prend des inititives pour accompagner le développement du concept de l'usine 4.0 axé sur la réalité augmentée. Ces nouveaux procédés de conception et de fabrication devraient permettre à une usine en Tunisie de disposer d'ateliers de travail avec une conception 3D, des lunettes de réalité augmentée afin de pour travailler avec les grandes compagnies à travers le monde. Le GITAS s'investit pour aider les entreprises en Tunisie pour franchir le cap de l'usine 4.0.

L'industrie aéronautique tunisienne est devenue attractive comme au Maroc et en Algérie. Véritable pont avec le Moyen-Orient, l'Afrique du Nord s'industrialise et se trouve désormais en lumière voire en compétition pour attirer les grands acteurs du secteur.

Selon le GITAS, il n'y a pas de grandes rivalités mais davantage de complémentarité. Il existe en effet des échanges croisés entre le Maroc et la Tunisie au niveau de la formation et des mutualisations de ressources humaines sur des projets d'implantation. Des grands groupes aéronautiques comme Stelia Aerospace, Figeac Aerospace ou Latécoère sont à la fois présents au Maroc et en Tunisie. Une rencontre a été organisée au salon du Bourget entre le président du GITAS et du GIMAS (Maroc) pour renforcer les échanges.

L'Afrique du Nord est désormais une terre d'opportunités et d'expertise pour la supply chain aéronautique mondiale. Elle aura besoin de stabilité, d'investissements et d'entraides, et de complémentarité pour en assurer une croissance durable.

SUMMARY

The aeronautics sector in Tunisia is in full growth mode, with around 80 companies employing more than 13,000 people.

Vincent Chappard takes a look at the history, development and future plans for the aerospace industry in the North African country.

Aerospace's key role in Tunisian economy

Historically, Tunisia has always been a land steeped in aviation, from the country's first balloon flight in Tunis in 1784 to Louis Bleriot's flying demonstration, also in the Tunisian capital, in 1910.

The aerospace industry is now experiencing double-digit annual growth and it's also one of the few sectors to have created jobs in recent years. Indeed, it's scheduled to provide more than 1,000 new positions annually over the next five years.

According to Tunisia's Zied Ladhari, minister for industry and trade, the development strategy of the sector aims to secure the country in the privileged club of European and global aerospace manufacturing. To this end, Tunisia promotes public/private partnerships through assisting in the simplification of customs procedures and promoting the development of human resources and training. It has also created a fiscal incentive framework to encourage foreign investment.

"The adoption of this new law is a step forward for more freedom of investment for both Tunisians and foreigners," said Fadhel Abdelkefi, the country's minister for development, investment and international co-operation.

"Our ambition is to achieve growth at a more sustainable pace than we have seen in the last five years of our political transition – and also to make Tunisia a regional business hub for North Africa."

Following its democratic transition, Tunisia introduced reforms to move from a low-cost economy to a manufacturing hub with a diversified economic structure.

The aeronautics sector is a key part of this initiative and the government aims to enhance the governance of the sector through the creation of national aerospace clusters.

"Tunisia's supply chain is characterised by the fact that it is complete and integrated," explained Thierry Haure Mirande, president of the Tunisian Industries Group for Aeronautics and Space (GITAS). "It brings together the different aviation professions, particularly in engineering, mechanics, surface treatment, composites, plastic injection, aerostructures, control and testing, packaging, industry-specific tools and MRO.

GITAS was created in 2006 following an initiative

by Zodiac Aerospace and Sabena Technics. It now has 47 members and its remit is specific – to promote and support the development of a Tunisian aeronautical supply chain, to represent the sector with the Tunisian authorities, to be the point of contact for investors and to encourage the emergence of national suppliers.

According to a major survey carried out for GITAS, there were a dozen aeronautical companies in 2004 and this has now grown to around 80. Several major groups have established themselves in Tunisia: Latecoere in 1998, Sabena Technics in 2002, Zodiac Aerospace in 2005 and Stelia Aerospace in 2011.

More than 85% of aerospace companies located in the country are foreign-owned with France remaining Tunisia's largest partner, comprising around two-thirds of the total.

There are also other major international players in the sector, including those from the Middle East (especially Qatar), Asia and the United States.

Local companies are also emerging, such as the Avionav aircraft manufacturer and a new airline, Express Air Cargo, that has moved to a new level by setting up a maintenance centre.

Tunisia now offers a variety of aerospace engineering services, production facilities and manufacturing solutions, including the production of parts and subassemblies for Airbus' A320 and A330 families of airliners.

These are produced at the EI Mghira industrial centre in the southern suburbs of Tunis and extend over an area of more than 200 hectares, of which 20 are dedicated to the aeronautical park.

Stelia Aerospace was the first group to set up shop there and soon began to train its local partners and suppliers, such as Figeac Aéro, Mecahers Aerospace and Corsica Composites.

According to Quassim Berraies, managing director of Stelia Aerospace Tunisia, several criteria led the group to settle in the industrial zone of El Mghira — qualification of the workforce and the relatively close proximity to sites in Europe in terms of deadlines logistics and costs.

Aerospace plays an ever more important role the Tunisian economy and this appears set to continue over the coming months and years.

Proud to serve Africa with our new hub in Cotonou



EVENTS BEST PRACTICE

Many African airlines could be more profitable if they brought their commercial departments up to date with modern industry best practices. That was one of the messages from a workshop staged by Sabre and the African Airlines Association (AFRAA). Alan Dron reports.

SABRE PUTS OUT-OF-DATE PRACTICES TO THE SWORD

oo many of Africa's carriers are still using decades-old practices that are hindering them from achieving profitability, a gathering of 14 of the continent's airlines heard during a workshop at the AFRAA headquarters in Nairobi, Kenya.

The aim of the session was to look into the root causes of some of the problems faced by many African airlines and to provide the participants with industry-best practices on how they should be thinking about their commercial departments, said Gad Wavomba, principal consultant, Africa, Airline Solutions Consulting, who leads Sabre's consulting initiatives on the continent.

Sabre Airline Solutions offers a range of software, data solutions and consultancy that aims to help airlines market themselves, sell their products and operate more efficiently.

"Over two days, we taught them what are the best practices, what they should, as African carriers, be doing to maximise revenue," said Wavomba.

For decades now, the airline industry has been talking about Africa's potential, but that potential has proved frustratingly elusive when it comes to converting it into solid results.

"The potential is definitely still there, it's just a question of how African airlines capitalise on it. What are African airlines doing differently from carriers like Emirates, Qatar Airways and Turkish that ARE capitalising on Africa?

"The answer is that [the external carriers] have tools that speed to market leveraged partnerships and codeshares that can help them drive traffic. Investing in technology skills and consulting – that's what's going to be the route that allows airlines to capitalise on that potential."

According to Wavomba, it is sometimes the less-

AFRAA

To serve

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glamorous, behind-the-scenes actions that can improve the service an airline offers to its passengers and thus, the amount of profit that it makes: "Instead of initially purchasing large aircraft orders for hundreds of millions of dollars, you might want to invest in consulting services and innovations that support a return on investment on aircraft assets."

Problems on the continent include some countries that set up airlines merely as a matter of national pride, rather than as a viable economic unit, and others that think an airline can be run like any other type of company.

Just two African carriers – Ethiopian Airlines and Comair/Kulula of South Africa – are profitable out of more than 40 in the continent, said Wavomba. Even the very low fuel prices of 2014-16 had not been enough to move most African carriers' balance sheets from loss to profit. "Ethiopian has done a great job. It has invested with us over the past 10 years in both technology and implementation consulting."

"A lot of the carriers are still operating best practices from the 1990s," said Wavomba. This was even more surprising considering the scale of some of the airlines – reasonably sizeable companies operating more than 20 aircraft.

"Some of the carriers haven't invested in an airline network forecasting tool. That's mandatory, because technology out there allows you to look at scenarios of your routes and profitability.

"Instead of simply saying, 'We should fly from Lusaka to Cotonou', for example, there's technology to say whether it's likely to be profitable, where codeshare benefits might come from. etc."

Too many African airlines, said Wavomba, opened new routes on the grounds that 'We know another airline is making a profit on it', or simply because they felt 'It's just important to us', with no real analysis of the route.

Many of the problems facing African airlines can be fixed with quick hits, said Wavomba. For example, if an airline is not benchmarked or competitive on pricing compared to its competition, that problem can be resolved literally within minutes with the right software. Similarly, improving hubs to optimise network connections is a relatively simple matter of adjusting schedules. When factors such as those are in place, the benefits stretch far beyond an individual airline's balance sheet. A successful aviation sector drives a country's overall economic development.

Gad Wavomba (right) presents a certificate at the end of the workshop.

Two major air cargo conferences took place in Addis Ababa, the Ethiopian capital, in June. Kaleyesus Bekele reports.

How to make the African cargo industry shipshape

he Global Perishable Conference, organised by the Cool Chain Association and the STAT Trade Times, took place at the Sheraton Addis on June 26.

Sponsored by Ethiopian Cargo and Logistics Services, and Brussels Airport, stakeholders came from various global cargo industry and perishable producers to discuss ways of best avoiding the waste of goods.

Up to 40% of perishables produced in the developing world are spoiled before reaching the appropriate markets due to the absence of cool chain and proper cargo-handling facilities.

Billions of dollars are wasted as food is damaged due to mishandling. Better storage, transport systems, and education are now of paramount importance.

Fitsum Abadi, managing director of Ethiopian Cargo and Logistics Services, said there was a long way to go when it came to perishable cargo transport in Africa. In an effort to plug the gaps, he said Ethiopian Airlines was investing heavily in cargo infrastructure.

Ethiopian has inaugurated a \$150 million state-of-the-art cargo terminal. With eight dedicated cargo aircraft, Ethiopian Cargo is the largest cargo operator in Africa. It operates six B777 and two B757 freighters and it has placed firm orders for two more B777Fs.

"We are in close contact with flower, vegetable, fruit and herb growers, and exporters," he said. "We have also built a cold store for meat products. Our new cargo terminal has positioned us to handle all these products based on their temperature requirements."

According to Abadi, perishable products lose up to 50% of their quality during transport from the producer to the retailer and another 15% at



Dr Olumuyiwa Benard Aliu: investment in infrastructure will be crucial for Africa's growth in air cargo.

the retailer. "The consumer gets 70% less quality. Hence, the speed to market and the cold chain all the way from producer to retailer is crucial," he said. "We should all be prepared to serve the consumer with fresh products. That is why Ethiopian Airlines is investing heavily in its fleet and cargo terminal."

Sebastian Scholte, chairman of the Cool Chain Association, noted that there was a lot to do in infrastructure development in Africa. "What you do for horticulture and pharmaceuticals are almost the same – quite similar for perishables and pharmaceuticals.

"We need to have common standards but not enough attention is given to perishables," he added.

Tewodros Zewide, executive director at the Ethiopian Horticulture Producers and Exporters Association, remarked that the cost of doing business with traditional exporting countries, like the Netherlands and Ecuador, was going up. "Greenhouses in the Netherlands are shrinking because of the high cost of doing business. If you go to any parts of the world outside of Africa the costs are increasing. So this naturally calls for Africa to intervene in the market," he said.

The global perishable air cargo industry is estimated to be valued at nearly \$250 billion. The Cool Chain Association, in its capacity as an industry organisation, supports and takes initiatives to address the challenges in the movement of perishable cargo by air from farms to destinations around the world. Hurdles like poor cold chain infrastructure, transportation delays, and temperature excursions, result in wastage to the stakeholders.

It is estimated that an efficient cold chain facility and management could significantly reduce wastage.

The following day, the International Civil Aviation Organization (ICAO) held its second meeting on African air cargo development at the United Nations Economic Commission for Africa (UNECA) Conference Hall.

Dr Olumuyiwa Benard Aliu, president of the ICAO Council, said that technological innovation, regulatory reform and investment in infrastructure would be crucial for Africa's growth in the air cargo segment, adding that the full implementation of the Lomé Declaration [to enable the unobstructed flow and rapid release of goods through enhanced trade facilitation and custom clearance frameworks] would drive the air cargo segment growth.

CARGO



"In Africa today, aviation supports millions of jobs and \$72 billion in GDP. The importance of air freight as a key enabler of international trade, especially on high-value and time-sensitive goods, is reflected in the fact that it transports around 35% of world trade by value," he said.

He also added that growth in African freight traffic outpaced the global average last year and that cargo capacity offered by African carriers in the region surged by more than 20% in 2016.

Innovation is particularly crucial, as e-commerce trends will continue to be a significant driver of growth. "The air cargo share of items purchased online grew from 16% to 74% between 2010 and 2015 and is projected to reach 91% by 2025," said Aliu. "The number of parcels flown by air has increased from around 130 million in 2011 to around 400 million in 2015, at a staggering 30% average annual growth rate."

According to the council president, progress on the implementation of the Lomé Declaration requires enhanced investment in ground infrastructure, aircraft, and human resources.

The Lomé Declaration was issued at the first African air cargo development forum held in Togo in August 2014. It identified regulatory and operational programmes for the development of air cargo in Africa.

June's follow-up meeting in Addis Ababa adopted a new statement on the implementation of the Lomé Declaration, reaffirming commitment to the sustainable development of air cargo in Africa.

Director general of the Ethiopian Civil Aviation Authority, Colonel Wossenyeleh Hunegnaw, said air cargo was an extensive and highly complex industry, adding that operators should respect various international standards. "Airlines and cargo-handlers should work together to improve operational safety and efficiency," he said.

Global air cargo accounts for \$6 trillion worth of trade goods – around 35% of global trade. More than 68 million people earn their living from air cargo and 52 million tonnes is carried by air.

Ethiopian Airlines Group CEO, Tewolde Gebremariam, discussed how Ethiopian and Kenyan flowers were transported by air to Europe. "Hundred of thousands of Kenyan flowers are carried by air to Europe daily. More than 200,000 tonnes of fresh flowers is transported by air from Addis Ababa to Europe every year. Ironically, there are some African countries that import flowers from Europe," he noted.

He said that not enough attention was given to the air cargo industry in Africa and air transport in general.

"Air Cargo in Africa needs help. We need to take out paper from the process. IATA, ICAO and all of us working together successfully managed to take out paper from passenger travel and now it is time to work together with customs and governments to take out paper from cargo transport. It makes it efficient, fast and allows us to compete with the rest of the world. With the advent of e-commerce speed is very important."

Vladmir Zubkov, secretary general of The International Air Cargo Association (TIACA), said all stakeholders needed to improve the air cargo business supply chain. "We have to solve the problems quickly through e-air waybills (e-AWB) and E-freight. We want to contribute to

the growth of the global chain. We have to have single-window processing to facilitate cargo movement. We need to have coordinated border agency procedures."

Sergio Mujica, deputy secretary general of World Customs Organization, said e-commerce was all about speed and efficiency. "The challenge is to ensure safety and security," he added.

Sanjeev S Gadhia, founder and CEO of Astral Aviation, pointed out that the air cargo sector in Africa was not fully liberalised.

As vice chairman of the African Airlines Association cargo taskforce, he highlighted restrictions on traffic rights on the intra-African sector for African carriers due to outdated bilateral air services agreements, which were limiting growth potential.

He noted a lack of intra-African connectivity, lack of cargo infrastructure, the high cost of operation (caused by higher jet fuel price, cargo-handling fees, royalties, freight fees and taxes), lack of cooperation between African countries, dominance of foreign carriers, and the ageing freighter fleet were some of the major challenges facing the industry.

Foreign carriers control 85% of the air cargo traffic in Africa, he pointed out.

Gadhia also mentioned that the presence of rickety Soviet-era freighter aircraft was a threat to safe air cargo operations in the continent.

According to Boeing, Africa air trade with Europe, Asia and North America will grow 3.8, 6.5 and 5.3% respectively per year through to 2035.

Boeing forecasts that African airlines will acquire about 100 freighters up to 2035, mostly standard-body (up to 45 tonnes capacity), to tap fast-growing intra-regional markets.

















TRAINING IVORY COAST



De gauche à droite : Christel Barel (CAMAS), le nouveau CMA à Abidjan et Olivier Baric (EGIS).

Nouveau centre pour renforcer la sécurité dans les aéroports

Les groupes français EGIS et CAMAS ont associé leurs ressources pour créer un centre de formation spécialisé dans les métiers de l'aviation à Abidjan. Des détails avec Vincent Chappard. e CMA, qui a lancé ses activités en avril dernier, propose une offre de formation professionnelle continue en Afrique à destination des entreprises du secteur mais aussi à des particuliers. Cette offre sera « accessible, adaptée, de qualité et de standards internationaux » en s'appuyant sur les ressources africaines et le savoir-faire d'EGIS et de CAMAS.

L'offre couvre une panoplie de domaines liés au secteur aéroportuaire : piste et cargo, sécurité et sûreté, planification et exploitation, certification et audit, accueil et escale, logistique et gestion.

Les partenaires souhaitent ainsi contribuer à l'amélioration de la gestion de la sécurité et de la sûreté dans la sous-région, qui offre d'importantes perspectives de croissance dans les années à venir.

« Il y a un réel besoin de formation dédiés aux métiers

aéroportuaires en Afrique francophone. Le développent du trafic aérien en Afrique crée des besoins en personnel formé et qualifié. C'est une des plateformes qui semble des plus dynamiques de cette sous-région, avec des échanges et des connexions faciles », explique Christel Barel, directrice de CAMAS.

Le leader en formation aéroportuaire a trois centres en Afrique dont ceux de Casablanca et de Johannesburg. Le groupe est aussi présent à Maurice, Mayotte et La Réunion.

Son objectif est de former les nouvelles personnes travaillant sur les aéroports, les « primo arrivants » mais également les personnes qui sont en poste et qui ont besoin de recyclage et de perfectionnement de leurs compétences.

SUMMARY

NEW TRAINING CENTRE TO BOOST SECURITY AT WEST AFRICA AIRPORTS

French airport operator EGIS and training organisation CAMAS have combined to create a training centre for airport specialists in Abidjan, the commercial capital of the Ivory Coast. The partners are confident that it will contribute significantly towards enhanced airport safety and security in West Africa.

Launched in April, the Aviation Professions Centre offers continuing vocational training for existing and potential employees of companies in commercial aviation. It covers the entire airports sector, including cargo-handling, safety and security, planning and operations, certification and audit, reception, stop-over, logistics and management.

CAMAS director Christel Barel said: "There is a real need for specialised training for airport professionals in Africa thanks to the growth of the commercial aviation sector on

the continent. Abidjan is ideal for this as it is one of the most dynamic cities in this subregion and it has effective transportation links."

CAMAS is experienced in aviation training and the new venture will join its existing centres on the continent, including Casablanca and Johannesburg. The group also operates in Mauritius, Mayotte and Reunion.

EGIS is a natural partner for CAMAS as it already manages five airports in West Africa, while IATA-approved CAMAS brings training know-how of operations and certification.

EGIS' Olivier Baric, director of aviation Africa said: "When CAMAS offered to join us to set up a training centre we saw the potential for many synergies that will enable us to respond to the increasing need for training in the field of airport operations." Pour CAMAS, EGIS est un partenaire solide qui gère cinq aéroports en Afrique de l'Ouest. « On apporte notre savoirfaire et notre certification, étant une école IATA, avec des standards internationaux. »

Pour EGIS, la création du CMA est le prolongement naturel de son positionnement à côté de ses partenaires de long terme en Afrique pour accompagner encore plus largement leur développement.

« Lorsque CAMAS nous a proposé de nous associer pour créer un centre de formation en Afrique dans la continuité de leur développement international, nous avons rapidement perçu le potentiel de synergies dont nous disposions pour répondre de manière adaptée au besoin de formation dans le domaine de l'aviation sur le continent », affirme Olivier Baric, directeur Aviation Afrique d'EGIS.

Le nom du Centre des Métiers de l'Aviation traduit sa vocation qui au-delà de la formation, est de développer les compétences et « de promouvoir les bonnes pratiques professionnelles » dans les métiers de cette industrie en pleine expansion en Afrique. »

Le site d'Abidjan a été choisi pour son attractivité, indique Olivier Baric, dans un pays où « les perspectives de croissance du trafic aérien sont importantes ».

Danny Vranckx

Marcelle Nethersole speaks to the CEO of Aviaco GSE.

1

■ Can you tell me a little about what Aviaco does?

Aviaco offers a wide range of used and refurbished groundsupport equipment (GSE), specifically for the aviation sector, all over the world.

Spare parts and technical back-up are available and GSE can also be rented on a short as well as a long-term basis. Aviaco is also able to source new GSE for its clients, if required. In all, the company has 25 years of experience in this sector.

Our focus is to bring in a GSE solution that will suit customer need in terms of brand, type and budget.

Aviaco is a young and flexible company and will grow this business in the coming years with the focus on rental and refurbished GSF

3

■ Where in Africa is your equipment used?

I have visited more than 30 countries in Africa and we have been delivering GSE in most of them

One of the biggest projects we won in the last few years was Congo Airways.

We deliver at 14 airports in Congo for Congo Airways self-handing.

Also, we have been delivering on the islands around the coast, including sending equipment to Mauritius, La Reunion, Comore and Zanzibar.

Africa is, for sure, the future continent and one of Aviaco's main focuses for the next few years. We are planning to open three stations in Africa to give a permanent support to our customers.

5

■ What does a typical day for you as CEO involve?

GSE was my first job. I started as a mechanic in 1990 and have been working in different positions since then. For the last 10 years I have been in GSE sales.

As the CEO, I like to be involved in everything that goes on and it's important that I, in turn, listen to my staff and clients, and give advice where I can.

l use my experience to make Aviaco grow into a success story and ensure I can make our staff the best in this industry.



2

■ Who do your customers include?

We have a network of contacts and customers, who are supporting us doing a successful job.

Our customers include airlines, handling companies and airport authorities – generally, any potential buyer looking for good quality equipment for a lower budget then brand new.

We also deal with any brand and type on the market and are willing to buy customer machines that are no longer in use or which need to be replaced for any reason.

■ What sets Aviaco apart from other GSE companies?

Aviaco always tries to fill in the customers' needs with regards to their operations and the budget available.

We are flexible in dealing with any brand and type of GSE. That is what we believe puts us ahead of our competitors and other vendors in the market.

We are flexible in dealing with any brand and type of GSE. That is what we believe puts us ahead of our competitors and other vendors in the market.

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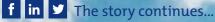
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