

THE MAGAZINE FOR AEROSPACE PROFESSIONALS IN AFRICA

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Kenya Airways the Pride of Africa

KENYA'S AFRICAN AMBITIONS

((Les ambitions de Kenya Airways en Afrique))

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Low-cost carrier takes the fast track PAGE 14



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VistaJet changing the view of Africa PAGE 50





Your Partner of Choice in Africa

Published by



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African aerospace set for a decade of growth

elcome to this first issue of African Aerospace. This is an exciting time for the industry on the African continent. There is recognition that Africa could be the fast growth area of the next decade – but at the same time there is significant concern that the benefits for riding this growth will go outside the continent.

There have been calls for partnerships, collaboration and even consolidation before. But now a realisation that more than 80% of the African market is going outside may lead to serious talking and perhaps even action.

We have launched this magazine to work with African companies and African aerospace organisations in sharing ideas and practices. We have done the same in the Middle East and become an essential part of that industry.

We are working with organisations like AFRAA and AfBAA in the air transport and business aviation

We have put together an impressive team of international journalists with close contacts within the global manufacturing and aerospace industries – and with major experience in Africa.

We will gradually be adding to the Frenchlanguage sections of our magazine through the efforts of our French-speaking team members in

Our goal is to bring you thought-leadership for the industry across the whole of Africa.

While the magazine is quarterly, our website is daily with news as it happens.

For this launch I urge you to keep in touch.

Tell us your plans, your successes ... and your

Working together we can show the world that African aerospace IS the market to watch.

Safe landings,



COVER: Kenya Airways CEO Titus Naikuni. Picture: Ian Billinghurst.

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African Aerospace magazine is published in partnership with AFRAA





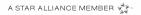
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Having become a Regional Training Partner and an Authorized Training Center of IATA last year, Turkish Airlines Aviation Academy's extraordinary performance has made it a **2012 Worldwide Top Regional Training Partner** in just one year.

This award symbolizes the Turkish Airlines Aviation Academy's outstanding achievement and its commitment to developing the human capital in the Aviation sector that conducted more than 17 IATA training courses within 2012 and trained more than 300 students.

As a subsidiary of Turkish Airlines, the Academy has many years of experience and offers a wide array of commercial and technical training as well as management and personal development courses to its national and international students. This success in IATA courses shows, once again, the Academy's excellence.

The Academy offers IATA courses in Istanbul located at the junction point of Europe, the Middle East and Asia cross paths. These courses are a significant contribution to the professional aviation training and to the development of qualified personnel in the sector, not only in Turkey but also in other countries in the region.

IATA represents 240 major airlines that account for 84% of the world's air traffic, and has many partners in six different regions: Africa, the Americas, Asia-Pacific, Europe, Middle East and South Asia. Having risen to the top among all these partners in 2012, the Academy raises the bar even higher for Turkish Airlines, which is already a global brand.

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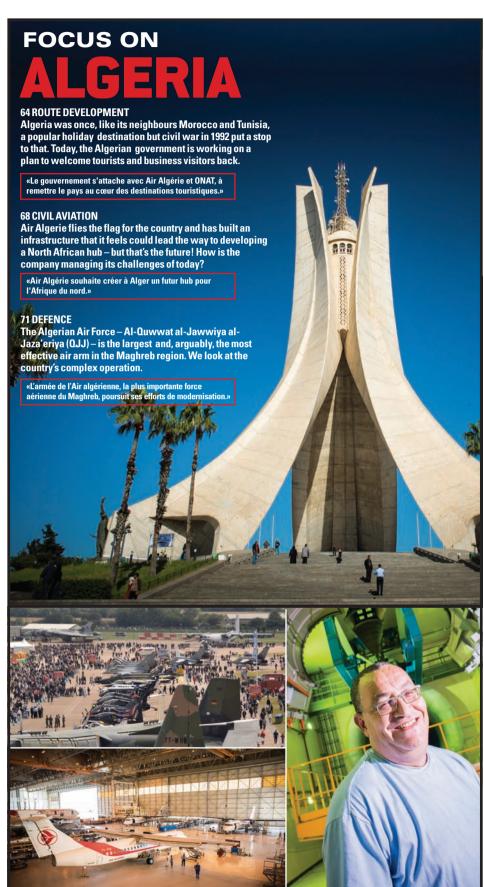
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business brief

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AgustaWestland wins SA contract

AgustaWestland has signed a comprehensive service support contract for the South African Air Force's fleet of AW109LUH helicopters. The annual contract includes the provision for it to be extended for up to five years.

Under the contract
AgustaWestland will be
responsible for the delivery
and provision of spares,
support equipment, D-Level
maintenance as well as
component repair and
overhaul services.
AgustaWestland will provide
an on-site support team.

Gambia Bird Airbus sports AJW livery

Gambia Bird Airlines has launched its first Airbus A319, which commenced its first commercial flight sporting a unique paint scheme from global aviation company A J Walter Aviation (AJW).

The A319-100 with the registration code D-ASTA is deployed on the entire Gambia Bird flight network, including routes between West Africa and Europe.

The special AJW livery is positioned over the wings, at the centre of the plane's fuselage.

SA Express's Bombardier coup

South African Express Airways has become the first authorised Bombardier service facility on the African continent. The authorisation was announced ahead of a welcome party at the African Airline Association (AFRAA) annual assembly in Johannesburg.

The South African regional carrier will carry out A, B and C checks, as well as on-wing engine repairs for CRJ100, CRJ200 and CRJ700 regional jets, as well as the turboprop Q400 and other Dash 8/Q-Series aircraft.

Speaking at the event, Bombardier's regional vice president, sales, Raphael Haddad, said the Canadian manufacturer has almost 100 of its aircraft in operation in Africa.

Ethiopian upgrades turboprop offer

Ethiopian Airines and its Togo affiliate ASKY Airlines have become the first in the world to operate a two-class cabin in their Bombardier Q400 turboprop aircraft.

Ethiopian is the first airline to take delivery of the newly configured aircraft, which now offers seven business class and 60 economy class seats. It has reclining seats in economy and a hot galley, as well as more luggage capacity, extra overhead bin space and leg room.

Ethiopian operates the Q400 on 17 domestic destinations and on regional routes including Djibouti, Mombasa, Nairobi, Kilimanjaro, Dar-es-Salam, Zanzibar, Entebbe, Kigali, Juba, Khartoum and Berbera. Five re-configured Q400s are on order.



Massoud honoured by African airlines

Former Egyptian civil aviation minister Hussein Massoud was honoured by the African Airline Association (AFRAA) at its annual assembly in Johannesburg.

Massoud was formerly the chairman and chief executive of the EgyptAir holding company before becoming the country's civil aviation minister – a post he held until the recent Egyptian elections.

During 2011, he stepped in as chairman of AFRAA and helped the association bring unity and develop a business plan that has enabled it to succeed, AFRAA said at the presentation.

He received a commemorative trophy from South African minister of public enterprises Malusi Gigaba.

LAM takes another B737-500

GE Capital Aviation Services Limited (GECAS), the commercial aircraft leasing and financing arm of GE, announced delivery of a leased Boeing 737-500 to the Mozambique flag carrier Lineas Aereas De Mocambique (LAM).

LAM, along with its subsidiary Mozambique Express (MEX), operates 10 aircraft to destinations in Africa from its base in Maputo, Mozambique.

Aero Contractor expands fleet

Aero Contractor – Nigeria's second largest domestic airline – has acquired two additional Boeing 737-400 aircraft, increasing its total fleet of aircraft to 12.

IATA and ICAO back Action Plan

The International Air
Transport Association
(IATA) and the
International Civil
Aviation Organisation
(ICAO) urged ministers
attending the African
Ministerial Meeting on
Aviation Safety in Abuja,
Nigeria to endorse and
adopt the Africa Strategic
Improvement Action Plan.

The plan will enhance safety by addressing deficiencies and strengthening regulatory oversight in the region progressively to 2015.



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Gebremariam wins CEO of the Year

Ethiopian Airlines CEO Tewolde Gebremariam has been awarded African CEO of the Year by the African CEO Forum 2012.

Jetlink relying on South Sudan funds

Kenyan airline Jetlink Express has cancelled all flights and effectively ceased trading saying it has insufficient cash for operations to continue due to inaccessible South Sudanese funds.

It claims that a shortage of foreign exchange in South Sudan has meant it is owed more than \$2 million from sales made to South Sudan passengers.

Ethiopian unveils business lounge

Ethiopian Airlines has opened the first phase of its new business class (Cloud Nine) lounge at its main hub, Addis Ababa Bole International Airport, with modern facilities and amenities for premium travellers.

When fully completed, the new Cloud Nine lounge will be three times bigger than the existing one. It has a quiet corner with sleeping cots and individual reading lamps; massage chairs, where passengers can relax and rest; an internet corner with fixed stations as well as free and fast Wi-Fi connection.

ASECNA signs with Thales consortium

The ICAO meeting in Montreal last year saw another major contract between the Agency for Aerial Navigation Safety in Africa and Madagascar (ASECNA) and European ATM specialist Thales.

The air navigation provider for most of the



Young engineers are Paramount

Paramount Group, one of Africa's leading defence and aerospace companies, is helping to educate and inspire Africa's next generation of engineers to consider a career in the defence and aerospace industry.

The South African defence company – headed by internationally renowned industrialist and philanthropist Ivor Ichikowitz – was one of the biggest sponsors of Africa Aerospace & Defence's (AAD) Youth Development Programme (YDP).

The sponsorship of R150,000 contributed to the attendance of 3,000 South African schoolchildren (aged four to 18) at the continent's major airshow to learn about career prospects in the defence and aerospace industry.

Ichikowitz said: "The defence and aerospace industry represents the pinnacle of technology and South Africa has an outstanding reputation for designing and manufacturing world-leading products. But it is critical that we invest in the next generation of African engineers to ensure that we

continue to innovate and compete globally."

The YDP aims to create awareness for career opportunities in the defence and aerospace industries in South Africa. The programme started in 2004, with a modest 500 learners, but now inspires over 3000 learners to consider a career in the industry.

As part of the Youth Development Programme sponsorship, hundreds of local schoolchildren visited Paramount Group's stand to learn more about career opportunities and technologies that African defence companies can offer, not just in Africa but globally.

In addition to its activity at AAD, each year the Youth Development Programme provides assistance to a number of schools for disabled children or those with learning difficulties and those from disadvantaged communities.

In 2012 the YDP supported schools by distributing Tutu Desks, which is a flexible writing surface that sits on a learner's lap and mimics a traditional desk. With 90 million children across Africa in need of desks, Tutu Desks are a mobile and affordable solution.

agreed that a pan-African organisation was needed in order to share their knowledge and experience across Africa, and in particular to empower women in the industry despite peer group negativity.

The inaugural conference

in Aviation (SAWIA), it was

The inaugural conference will be in July or August of 2013 in Botswana.

RwandAir selects Madrid for MRO

RwandAir is to send its pair of Bombardier CRJ900s to Madrid for planned maintenance.

The airline selected Iberia's maintenance division to support components for the two Bombardier CRJs.

The three-year contract includes access to Iberia's pool of spare parts and the sending of a main base kit to the airline's hub in Kigali.

Dates set for 2013 AFRAA assembly

Kenya Airways is to be the host of the 2013 African Airlines Association (AFRAA) annual general assembly (AGA). The 45th AGA will be held in a yet to be named venue in Kenya from November 24-26 2013.

Starlite launch for latest Super Puma

The South African-Irish group Starlite Aviation has signed a contract to become the launch customer of the latest version of the Eurocopter Super Puma medium weight helicopter.

Starlite signed for two of the AS332 C1e helicopters. The contract also includes an option for two additional aircraft.

First deliveries will take place before the end of 2013, following EASA and FAA certification.

Francophile African nations signed a \$35 million contract for the supply and installation of Monopulse Secondary Surveillance Radars (MSSR) with Mode S capability in addition to its Air Traffic Management (ATM) systems.

Signing the deal at ICAO's Montreal headquarters, ASECNA director general Amadou Guitteye said that the radars will cover terminal areas for some of the region's 25 international airports. Five terminal areas were already

covered. En-route surveillance is provided by automatic dependent surveillance - mode C, with air-ground communication by a combination of VHF radio and satellite-based controller/pilot datalink.

PAWA targets July for conference

Pan African Women in Aviation (PAWA pronounced 'power'), the organisation that aims to educate and mentor women in aviation in addition to educating young women and mentoring those entering the industry, is taking shape with NGO status in the pipeline and official accreditation having already been conferred by Frank Ramsden, the former Transport Minister for Botswana, and an ICAO Council member.

Following the strong attendance by women during 2011's Women in African Aviation (WAFRIC) conference in Ghana, and in addition to the work done by the Southern African Women



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Pimentel takes the helm at AFRAA

Dr Antonio Luis Pimentel Araujo, chairman and CEO of TAAG Angola Airlines, has been elected by the African Airlines Association (AFRAA) to become chairman of the association's executive committee.

Inati Ntshanga, CEO of South African Express, and Sergio Rosa, CEO of Air Burkina, were re-elected first and second vice chairmen respectively. The AFRAA executive committee has oversight responsibility for the association and crafts policy, as well as oversees implementation of projects and programmes by the secretariat.

EgyptAir signs MoU to support Ghana

Air transport in Ghana, West Africa, is to undergo significant development thanks to a new deal signed between EgyptAir and the Ghanian Network Aviation (CTK).

The two sides signed an MoU under which both sides will start materialising a project to promote air transportation expansion in West Africa.

EAN taking a bigger bite in Nigeria

Lagos-based Evergreen Apple Nigeria (EAN) has reported 100% growth in business aviation movements at its FBO.

The company said there has been a rapid increase in aircraft movements; a broadening of originating and outgoing destinations and a growth in demand for its FBO services.

Daily movements are now running at an average of 15.

Flights are arriving into the FBO predominantly from Europe with London,



Australian utility aircraft manufacturer GippsAero is winning widespread approval from African charter operators.

Owned by Indian conglomerate the Mahindra Group, GippsAero has delivered its fourth GA8 Airvan this year via distributor Airvan Africa, which is based in Port Alfred, South Africa.

The most recent delivery was a brand new aircraft to Safari Air, based in Maun, Botswana.

This was Safari Air's third GA8 and Maun is rapidly becoming the Airvan capital of the world, with 18 now operating into the nearby Okavango Delta wilderness area.

Operators say that passengers like the aircraft's eight-place seating, large windows and centre aisle. The large freight door has also earned approval from cargo operators. The only method of supplying game lodges in the region is by air or water, so piston-engined aircraft are still proving highly cost-effective despite fears of Avgas shortages, which have yet to materialise.

While the GA8 has won widespread acceptance as a revenue generator among commercial operators in Africa, the manufacturer would like to see more examples sold to conservationists, business users and as a private aircraft.

In 2012 Gipps Aero released details of its interior option packages, which included leather seats and thick carpeting intended to attract more interest from this market sector.

GippsAero is continuing to develop its turbine-powered 10seat GA10, which first flew in 2012. Deliveries may begin in early 2014.

Ireland, Germany, Spain, France and Austria all featuring as regular starting points as they bring business executives into Nigeria.

Driving the growth is the expansion of the oil and gas energy industries, which is seeing increased interest from European companies.

Likewise flight arrivals from the Middle East are also growing with Dubai, Saudi Arabia and Amman rating highest in terms of originating destinations.

Eurocopter's tourism Reunion

A pair of Eurocopter EC130s has begun operating on Reunion Island, declared a World Heritage Site by UNESCO in 2010. Delivered to the company Corail Hélicoptères, the aircraft will be used to perform tourism operations and aerial work.

Founded in 2004, when it began operating with an AS355N, Corail Hélicoptères specialises in tourism transport as well as aerial work, firefighting and air evacuation.

The company has grown since then and this latest delivery takes its fleet of helicopters to five, all of them from Eurocopter's Ecureuil family. Following these latest aircraft additions, the company is planning to add a new transportation link between Reunion Island and Mauritius to its range of missions.

Kenya reports first half losses

Kenya Airways recorded a net loss of KSh4.79 billion (\$55 million) in the first half of 2012, compared with a net profit of KSh2.03 billion in the same period in 2011.

Operating loss for the six months to September 30 totalled KSh5.53 billion, compared with an operating profit of KSh1.02 billion in 2011.

Revenue declined by 9.3% to KSh49.8 billion, while total expenses rose 2.7% to KSh55.4 billion.

Fuel costs remain the airline's largest expense at 38.7% of total operating costs, though this is down slightly from 39.3% in 2011.

Passenger revenue declined from KSh48.6

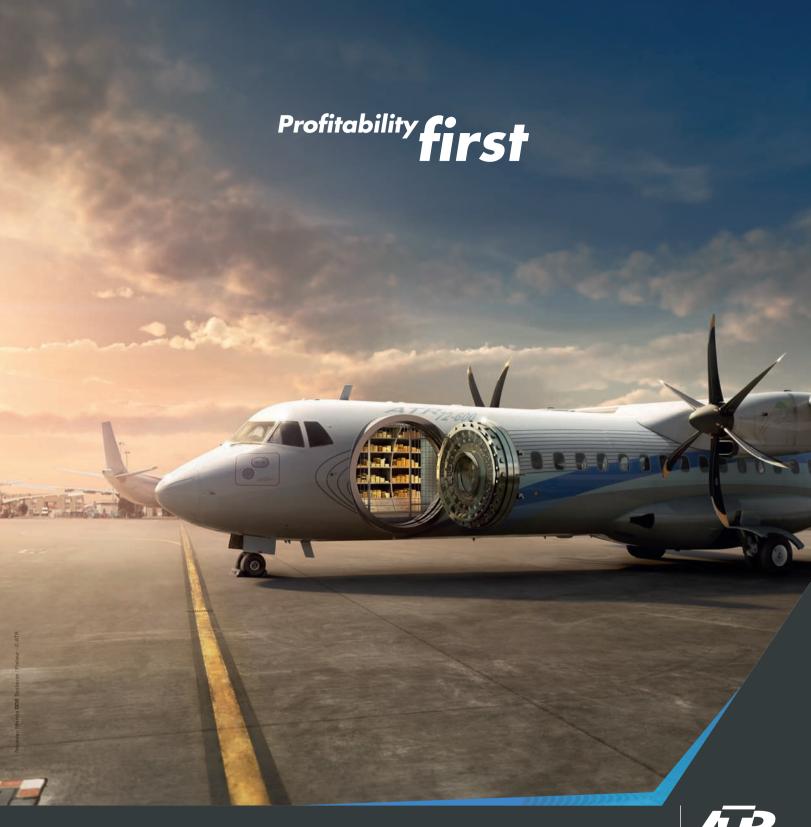
billion in 2011 to KSh43.6 billion last year, primarily due to decreased European passenger numbers, network-wide pressure on yields and the strong Kenyan Shilling.

Meanwhile the airline has signed a codeshare agreement with Vietnam Airlines as it works towards expanding its Southeast Asian footprint.

Under the agreement, Kenya Airways passengers will be able to travel to Hanoi and Ho Chi Minh City daily via Bangkok.

Vietnam Airlines will place its code on Kenya Airways' daily service between Bangkok and Nairobi.

This brings to 17 the number of Kenya Airways codeshare deals with international carriers.



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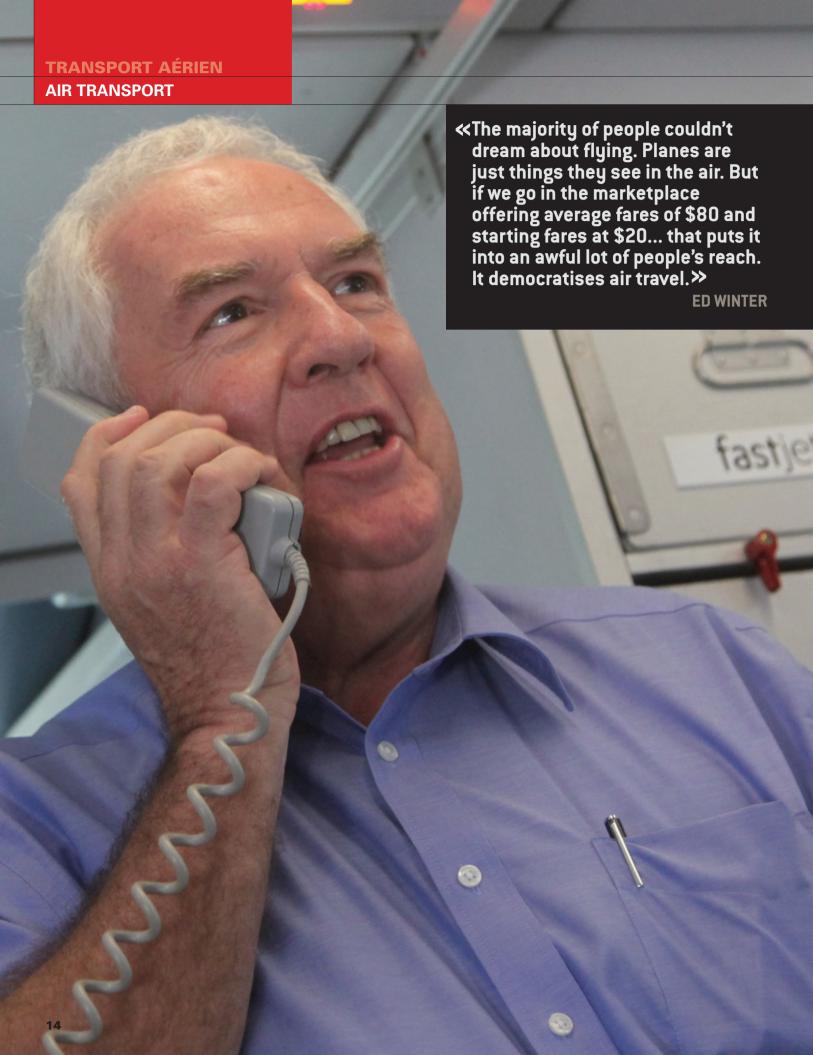
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With the low-cost carrier (LCC) market transforming how Europeans think about air travel in the space of just two decades, it is little wonder that Stelios Haji-Ioannou, the founder of EasyJet, has been keen to export his philosophy to other corners of the globe.

Martin Rivers looks at why the LCC phenomena has launched in Africa.



FASTJET ANSWERS THE LOW-COST CALL

⟨⟨FastJet applique le modèle low cost en Afrique⟩⟩ – Page 18

rawing inspiration from EasyJet's brand name – not to mention headhunting several of its former executives and even leasing one of its old aircraft – the Greek Cypriot tycoon Stelios Haji-Ioannou's vision became reality in November 2012, when the inaugural FastJet flight took off from the Tanzanian capital Dar es Salaam to the northern city of Mwanza.

Tanzania was selected as the springboard for FastJet because the country's government was among the most receptive to arguments against passenger taxation – a key obstacle to low-yielding LCC business models.

Nairobi will become the airline's second east African base in the first quarter of 2013, while in west Africa it also has air operator's certificates (AOCs) in Ghana and Angola. They stem from the reverse takeover of Lonrho Aviation, the parent company of Nairobi-based airline Fly540, which has allowed FastJet to hit the ground running in the rapidly expanding African LCC market.

"Lonrho have got 100-plus years of experience in Africa," chief executive Ed Winter explained. "That gives us access to governments and it gives us an understanding of how to do business in Africa. Without the Lonrho connection it would have taken me an awful long time to

get to know government officials in Ghana, for example."

Fly540 operates a predominantly turboprop fleet and although the two carriers will co-exist for a while, the precursor airline will gradually be wound down in favour of FastJet's expanding route network and fresh brand. "We're going to use its AOCs and its route licences," Winter noted. "From an administrative point of view that has given us a great head start."

At the time of going to press, FastJet's management team announced that they are negotiating a buyout of South Africa's grounded 1time Airline, giving them an earlier-than-expected foothold in the continent's most developed aviation market. If the deal is finalised, FastJet will resurrect 1time's fleet for an interim period before introducing its own aircraft to South Africa.

FastJet launched operations with three 156-seater Airbus A319s – the same type favoured by EasyJet – after concluding that the high unit costs of the smaller Embraer 190 would impede fare discounting, while the larger A320 was oversized for the market.

Its fleet will be ramped up to four or five aircraft "fairly quickly", Winter said, adding: "You need to get to that size to



AIR TRANSPORT

CONTINUED FROM PAGE 15

reach critical mass." The expansion will then continue apace, reaching 15 aircraft within the first 12 months and targeting 30-40 jets by the end of 2016, providing demand materialises as expected.

Its rapid growth plan embodies a heartfelt belief that Africa is primed for a major LCC boom, precipitated by factors such as growing political stability; greater wealth distribution among the emerging middle classes; and a new appetite for deregulation and liberalisation.

"You've got a continent here where air travel at the moment is reserved for the select few," Winter said. "The majority of people couldn't dream about flying. Planes are just things they see in the air. But if we go in the marketplace offering average fares of \$80 and starting fares at \$20... that puts it into an awful lot of people's reach. It democratises air travel."

Domestic services

FastJet began operations with just two domestic services to Kilimanjaro and Mwanza, but Winter is keen to steal a march on his fledgling competitors and has already applied for flying rights to Kenya, Uganda, Rwanda and South Sudan.

Though Africa's LCC market lags behind other regions, the airline will be closely watching Kenya Airways' upcoming LCC subsidiary, Jambo Jet, which received traffic rights for 22 domestic and regional routes in October. Further south, Comair and South African Airways operate LCC subsidiaries Kulula and Mango respectively.

Rapid route development will, therefore, be essential if Fastlet is to avoid losing market share and maximise utilisation of its fleet. To this end, Winter stressed that there is no shortage of routes to choose from, both within Fly540's network and beyond.

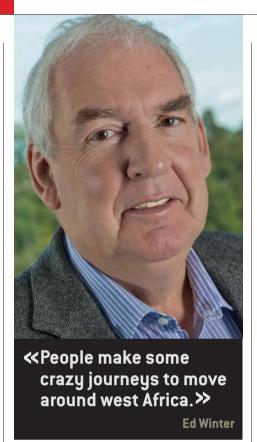
"Clearly, if one looks at Tanzania internally, there are some obvious destinations," he said, noting the construction of a new runway at Mbeya. "And, of course, all of the regional cities that you'd expect there's Nairobi, Kigali, Bujumbura, Entebbe, Lusaka, Johannesburg - the sort of places you'd expect that demand will be there."

Promising to introduce a diverse mix of leisure, business and visiting friends and relatives (VFR) routes, Winter added that several nearby east African nations emerging from troubled pasts could also benefit from the regional boom in affordable

He described Juba, the capital city of South Sudan, which was established as a sovereign state in 2011 after two civil wars, as "very interesting", adding: "There's a clear demand for connections between Juba and Dar es Salaam."

In the Democratic Republic of Congo, he noted that on-going conflicts are largely confined to the north-east of the country, which leaves the "thriving" city of Lubumbashi on his watch-list.

Turning to FastJet's upcoming west African bases in Accra, Ghana and Luanda, Angola - both due to launch in 2013 – the chief executive drew attention to the weak connectivity and inefficient routing endemic to the region.



"If you take Accra alone, it's only linked on a daily basis to four other capital cities in that region. This is a region that's supposed to be a free trade area, so there's a huge amount of opportunity there," he said. "If you look at how people move around, the fastest route from Accra to [Guinea's capital] Conakry is via Paris. People make some crazy journeys to move around west Africa."

Approach to air taxation

A wholesale overhaul of regional connectivity will not occur until west Africa's governments fundamentally re-think their approach to air taxation – which Winter likens to an opportunistic 'wealth tax' across the region. To this end FastJet continues to talk with the 15-member Economic Community of West African States (ECOWAS).

A subset of ECOWAS called UEMOA, the eightmember French-speaking West African Economic and Monetary Union, is of particular interest to the airline, he added.

Elsewhere, the launch of Gambia's new national carrier, Gambia Bird, underscores the rapid pace of development in west African aviation. Though the Germania-owned company is not branding itself as a low-cost carrier, there will likely be some overlap with FastJet if the former's route network develops according to plan.

While the precise path of FastJet's expansion trajectory will depend on political and fiscal developments in individual countries, the broader philosophy underpinning its creation is unlikely to

Describing 2012 as "absolutely perfect" timing

LOW-COST CARRIERS

for launching the carrier, Winter continually returns to the notion of "democratising" air travel for the under-privileged masses on the continent. He uses the term sincerely and does not mince his words when criticising Africa's chequered past for supposedly progressive overtures.

"In the past, mineral wealth and oil and gas wealth would have filtered into a very small number of pockets in Africa. It now is being spread very widely across the population. You just need to go to these countries and you actually see the consumerism - you can see that people have got money to spend."

Statistics backing up his viewpoint are not hard to come by, with Ghana enjoying the world's thirdhighest GDP growth rate in 2011, at 13.5%, and Angola averaging 11% growth per year over the past decade. But economic success only tells part of the story.

Political stability is key to distributing wealth among the middle classes, and other factors such as the rapid rise of Chinese investment and the eradication of third-world debt further strengthen the case for air transport growth. With Africa's road transport infrastructure suffering from chronic under-investment, and with high demand for traffic due to labour mobility, all the stars seem to align in favour of an LCC boom.

Bringing good value

"All of the economic and political factors at the moment are perfect for what we need to do," Winter said. "There's no magic in the model. We're simply bringing good value to people; the lowest costs; keeping out complexity; making it easier to use. We see ourselves as being the people's champion, democratising air travel."

Simplicity lies at the core of FastJet's ethos, so interline or codeshare agreements with any of the big four legacy carriers serving Africa – Air France, KLM, British Airways and Brussels Airlines would be anathema to the business plan.

"I think the maxim of 'simplicity drives low-cost, complexity drives high-costs' still holds very true," Winter stressed. But he added that FastJet has talked to "a few" international carriers, and informal cooperation should not be ruled out. "I think we will certainly pick up a lot of inbound traffic that wants to move around Africa," he noted.

Winter often talks about the "three pillars of success" underpinning FastJet's business plan - the local expertise of Lonrho; the airline start-up experience of shareholder EasyGroup; and the "Stelios halo" accompanying his most high-profile

Though FastJet's management team have gone to great lengths to ensure they do not infringe the rights of EasyJet - with whom founder Stelios now has an uneasy relationship, having angrily quit its board in 2010 - it is clear that the new venture will vicariously benefit from EasyJet's success story.

Alongside the tempestuous Stelios link, Winter was himself the former chief operating officer of EasyJet, while FastJet has also appointed EasyJet's former chief pilot





TAT GROUP



AIR TRANSPORT

CONTINUED FROM PAGE 16

and head of aircraft operations, Rob Bishton, to the role of operations director.

Ironically, even FastJet's fleet has its roots in EasyJet. Winter announced the signing of the first A319 operating lease in July and the BBAM aircraft (MSN 2176) came straight off a lease with the Luton-based carrier.

Given that EasyJet is the single largest operator of A319s in the world – flying 144 of the type – it is highly probable that more of the jets will make their way from Luton to Africa following a quick paint job.

Aside from the EasyJet ties, other prominent names on the board of FastJet include executive chairman David Lenigas, who has served as chairman of Lonrho since 2006; chief financial officer Richard Blakesley; executive director Geoffrey White; and non-executive director Robert Burnham.

Heighten demand

With the right management team in place and LCC pioneer Stelios backing the project, FastJet is confident it will not be tainted by Africa's poor safety record. Indeed, concerns about local operators should only heighten demand for an internationally-recognised airline brand, particularly given FastJet's deal with Brussels-based MRO provider Sabena technics.

The lingering concern for Winter, therefore, remains the issue of taxation. While the chief executive said east Africa's governments still impose "fairly high" taxes, he insisted they are "nowhere near as high as in west Africa".

"What's basically happened over the years is that air travel [in Africa] has been restricted – and still is – to high-net-worth individuals, both business traffic and tourists," he explained. "Governments have treated it somewhat as a wealth tax and clearly that, along with the fuel tax they charge, needs to change."

Tanzania was particularly receptive to arguments against higher taxation, Winter noted, and efforts continue across the continent to change governmental attitudes. "We've shown them [the Tanzanian authorities] that a reduction in the tax—and the stimulation of demand and the overall size of the market—will cause a rapid increase in the net revenues for government," he said. "But it needs a bit of a leap of faith for governments to actually reduce taxes."

Convincing sceptical finance ministries will take time and the pace of negotiations will be affected by domestic issues outside of FastJet's hands. In Ghana, for example, the death of president John Atta Mills in July proved a major test of the country's democratic institutions, in turn pushing talks about liberalising air transport well down the national agenda.

But as operations gather steam at the first two bases in east Africa, governments across the continent are certain to be keeping a close eye on FastJet's passenger numbers – mindful of the economic benefit and fiscal revenue that each farepaying traveller brings.



FastJet applique le modèle

n à peine deux décennies ,les compagnies à bas coûts ont changé la façon de voyager des Européens. Pas étonnant, donc, que Stelios Haji-loannou, le fondateur d'Easyjet, ait cherché à exporter le modèle vers d'autres régions du globe. Le phénomène « low-cost » arrive aujourd'hui en Afrique. Par Martin Rivers.

Fastjet a transporté ses premiers passagers en novembre 2012. La vision africaine de l'homme d'affaires britannique Stelios Haji-loannou, qui s'est inspiré de la marque Easyjet et en a même débauché d'anciens cadres, est ainsi devenue réalité. Le vol inaugural de la nouvelle compagnie reliait la capitale économique tanzanienne de Dar es Salam à Mwanza, située plus au nord. L'autre liaison depuis Dar es Salam aboutit à l'aéroport de Kilimandjaro.

Pourquoi la Tanzanie? C'est là que le gouvernement s'est montré le plus réceptif aux arguments contre les lourdes taxes qui pénalisent les passagers sur le continent. Or le modèle « low-cost » y est particulièrement sensible. Les dirigeants de FastJet voient maintenant le pays comme un tremplin.

Nairobi, au Kénya, deviendra en 2013 la deuxième base est-africaine de Fastjet. La compagnie est d'ores et déjà candidate à des droits de trafic vers l'Ouganda, le Rwanda et le Sud Soudan. En Afrique du Sud – le marché le plus mûr de l'Afrique – Fastjet est en train de reprendre le défunt transporteur 1 time.

En Afrique de l'ouest, la jeune entreprise compte sur ses certificats de transport aérien au Ghana et en Angola. Ils lui viennent de Fly540, une compagnie que Fastjet a racheté avec la société-mère, Lonrho Aviation.

Cette dernière a apporté une expérience précieuse. « Sans les relations de Lonrho, nous aurions mis longtemps à connaître les autorités ghanéennes par exemple », explique Ed Winter, le directeur général de Fastjet. Fly540 exploite principalement des avions turbopropulsés. Le nom disparaîtra au profit de la marque Fastjet.

Fastjet débute avec trois Airbus A319 de 156 sièges – similaires à ceux d'Easyjet. L'Embraer 190, un temps envisagé, revenait plus cher au kilomètre par passager. Quant à l'A320, il offrait une trop grande capacité.

Cette flotte devrait « assez vite » passer à



low cost en Afrique

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quatre ou cinq avions, indique Ed Winter. Il vise 15 avions au bout de douze mois. En 2016, la flotte de Fastjet devrait atteindre 30 à 40 avions si la demande est au rendez-vous.

Cet espoir d'une croissance rapide repose sur la conviction que l'Afrique est mûre pour l'arrivée massive des compagnies à bas tarif. Les facteurs : une plus grande stabilité politique, une meilleure répartition des richesses et une orientation générale vers la libéralisation des échanges.

« Sur ce continent, le transport aérien est encore réservé aux happy few. Mais si nous proposons des tarifs moyens de 80 \$ et même des places à 20 \$, cela change tout. Nous démocratisons le voyage en avion », déclare Ed Winter, qui compte sur l'émergence des classes moyennes.

Il assure que le consumérisme gagne l'Afrique. Les statistiques lui donnent raison. Le Ghana, en 2011, a enregistré une croissance de 13,5 % – la troisième meilleure performance mondiale. En Angola, le PIB a augmenté de 11 % par an en moyenne ces dix dernières années.

Parmi les autres facteurs qui favorisent



l'économie africaine, on peut citer les investissements chinois et l'effacement de la dette. En revanche, le sous-investissement est chronique dans le réseau routier alors que la demande de mobilité est importante. Les étoiles semblent donc alignées pour une forte croissance des compagnies à bas coûts.

Pour le développement de Fastjet en Afrique de l'ouest, Ed Winter compte sur la faiblesse du réseau existant. « La route la plus rapide entre Accra (Ghana) et Conakry (Guinée) passe par Paris!», s'exclame-t-il. Mais une amélioration passe, pour les gouvernements, par une révision complète de leurs politiques de taxes sur l'aérien. Les dirigeants de Fastjet discutent sur ce sujet avec la Communauté économique des Etats de l'Afrique de l'ouest, qui compte 15 membres. « Les taxes sont élevées en Afrique de l'est mais elles le sont encore plus dans l'ouest du continent », indique Ed Winter.

C'est pour lui un vrai sujet d'inquiétude. « Nous avons démontré aux autorités tanzaniennes qu'une réduction des taxes contribue à stimuler le marché et donc à augmenter le revenu total pour l'Etat», raconte Ed Winter. Mais ce sera « un acte de foi », pour les ministres de l'ouest, que de passer à l'acte.

D'autres compagnies à bas tarif se développent en Afrique. Kenya Airways a lancé sa propre filiale, Jambo Jet, qui dispose déjà de droits de trafic sur 22 liaisons. En Afrique du Sud, Kulula et Mango sont respectivement les marques « low-cost » de Comair et South African Airways.



AIR TRANSPORT

SOUTH AFRICA

Vuyisile Kona: "We do not know what the new business plan will look like but we need to progress to newgeneration aircraft, which are cheaper to operate."

A bout of turbulence at the top for SAA



Tom Pleasant looks at an airline beginning to fight back after a string of management departures. outh African Airways (SAA) is looking to overcome a recent string of management departures and is preparing to detail its new strategy in February 2013. "We are currently focused on preparing our business and turnaround plan," said SAA chairman and acting CEO Vuyisile Kona.

SAA urgently needs to tackle its management stability following the sudden resignation of CEO Siza Mzimela, eight of the airline's board members and two general managers in late 2012. The airline put the swathe of departures down to "turbulence of a temporary nature".

"It is important to have stable management because we are handling assets worth multiple billions," said Kona. He explained that SAA had set up a sub-committee tasked with finding a new CEO by the end of February. The board members have already been replaced.

At the time of going to press, SAA was also on the brink of selecting a consultancy firm to advise on its new strategy, which will see the airline renew its 58-aircraft fleet. "We do not know what the new business plan will look like but we need to progress to new-generation aircraft, which are cheaper to operate," said Kona. "We will be replacing the current fleet."

He explained that the business plan should be finalised by the end of January, when it would be submitted to its shareholders for approval. The details of the plan should be made public around February.

"We are very confident SAA will turn around," said Zemedeneh Negatu, Ernst & Young managing partner - Ethiopia. "It has all the elements for being a dominant carrier in southern Africa."

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Une zone de turbulence à la tête de South Africain Airways

SAA cherche à surmonter sa récente série de départs de sa direction générale et se prépare à dévoiler sa nouvelle stratégie en février 2013.

Suite la démission soudaine de son directeur général, Siza Mzimela, huit des membres du conseil et deux directeurs généraux de SAA ont également quitté la direction de SSA fin 2012. La compagnie aérienne se voit contraint à renouveler sa direction afin de préserver sa stabilité. Son président par intérim assure que cette vague de départs provoquera seulement des remous temporaires.

«Nous sommes maintenant concentrés sur la préparation de notre plan stratégique qui devrait être finalisé fin janvier 2013. Il sera ensuite soumis aux actionnaires et sera dévoilé en février », a déclaré Vuyisile Kona président par intérim de SAA.

SAA a mis en place un comité chargé de trouver un nouveau directeur général d'ici fin février prochain. Les membres du conseil ont déjà été remplacés.

«Nous devons également investir dans une nouvelle génération d'avions qui diminueront nos coûts d'exploitation», a déclaré Kona.

Au moment de mettre sous presse, SAA finalise la sélection d'un cabinet de consultants pour l'aider à élaborer sa nouvelle stratégie et le renouvellement de sa flotte de 58 avions.

«Nous sommes très confiants et SAA a toutes les capacités pour être le transporteur majeur dans le sud de l'Afrique», a déclaré Zemedeneh Negatu, responsable des consultants d' Ernst & Young pour l'Ethiopie.

Il prévoit toutefois qu'Ethiopian Airlines pourrait passé devant SAA d'ici 2025. Ethiopian Airways et Kenya Airways ont déjà exposé leurs stratégies respectives.

Tous les yeux sont maintenant tournés vers SAA. Il s'agit de voir comment la compagnie pourra proposer une solution viable et une vision à long terme pour consolider sa position en Afrique.

However, he predicted that by 2025 Ethiopian Airlines could be bigger than SAA because Ethiopia is the second most-populated African country after Nigeria. This would rank the big three in size order as Ethiopian, followed by SAA and then Kenya Airways. "No other country except Nigeria has that kind of volume." he observed.

Both Ethiopian and Kenya Airways have already laid out their strategy, so all eyes are now on SAA to see whether it can successfully plan and deliver a viable long-term vision. A new Cameroon airline is hoping to succeed where others have failed.

Victoria Moores reports.

CAMAIR-CO ON THE UP AND UP

ithin 21 months, Cameroon Airlines Corporation (Camair-Co) CEO Alex Van Elk has built up an airline with three aircraft and 12 destinations and, with a Boeing 787 order in the pipeline, he still has a lot to achieve.

Douala-based Camair-Co was founded by the State of Cameroon in September 2006 and launched operations in March 2011.

It was created to replace the former Cameroon Airlines, which was blighted with financial and reliability issues from its launch in November 1971 to when it finally shut down in March 2008.

"I was asked to jump-start the airline within one year," said Van Elk. "Now I am at the point where I am stabilising the company and removing the sharp edges."

This will involve adding more domestic and regional destinations within West Africa, plus a push to Middle and Far East destinations, such as Dubai and China.

Small and profitable

"We are not looking to be the biggest airline – we will not have a fleet of 20-30 aircraft. We are looking to be small and profitable. We are talking about going up to 10 aircraft, maximum, in the next couple of years."

Camair-Co currently operates a leased Boeing 737-700 and a purchased Boeing 767-300ER, but Van Elk is looking to add two to three turboprops next year. He says these will most

likely be MA60 turboprops, made by China's Xi'an Aircraft Industrial Corporation, which will be used to add three new domestic routes.

"The MA60s are being purchased by the State of Cameroon. They are just doing the negotiations on the final documentation. It will be finalised any moment," said Van Elk.

In the longer term, Camair-Co is also seeking three mid-range aircraft and two or three wide-bodies. "The mid-range could be the Embraer 190/195 or the CSeries," said Van Elk. "We are finalising the 787 purchase contract right now. We already have the production line reservation for 2019 delivery. It will be two aircraft and we may add another one to that."

The Boeing 737-700 lease is also up for

SOMMAIRE

Camair-Co cherche son équilibre

Alex Van Elk, PDG de Cameroun Airlines Corporation (Camair-Co), a bâti une compagnie aérienne avec trois avions et 12 destinations en seulement 21 mois. Retour sur cette aventure et surtout sur le long chemin qui lui reste à parcourir.

Basée à Douala, Camair-Co a été fondée par l'Etat du Cameroun pour remplacer Cameroun Airlines. Prise dans des problèmes financiers et de fiabilité, cette dernière avait du cesser toutes activités en 2008. Camair-Co a lancé ses opérations en mars 2011.

«On m'avait demandé de relancer la compagnie aérienne dans l'année», a déclaré M.Van Elk. «Maintenant, je suis dans une période de stabilisation et de redéfinition des activités.» Camair-Co exploite actuellement un Boeing 737-

700 en location et a acheté un Boeing 767-300ER.

Son PDG cherche d'abord à créer trois nouvelles lignes intérieures en exploitant de deux ou trois avions à hélices d'ici 2013. Fabriqués par le groupe chinois Xi'an Aircraft Industrial Corporation, les MA60 pourront être achetés par l'Etat du Cameroun. Les négociations sont à un stade avancé et portent désormais sur la documentation finale. «Un accord peut intervenir à tout moment», selon lui.

Camair-Co cherche à ajouter non seulement des destinations régionales en Afrique de l'Ouest mais également au Moyen et Extrême-Orient, comme Dubaï et la Chine. Pour y parvenir, Camair-Co finalise le contrat d'achat d'un Boeing 787 pour une livraison en 2019.

Camair-Co est également à la recherche de trois avions à moyen rayon d'action ainsi que deux à trois avions à grande capacité. Selon M.Van Elk, des avions comme l'Embraer 190/195 ou de la CSeries sont de bonnes options. Deux autres avions pourront également intégrer la flotte comme un Boeing 737-700 en location dont l'échéance prend fin en 2017 puis ensuite par le nouveau 737 MAX de Boeing.

«Nous ne cherchons pas à être la plus grande compagnie aérienne car nous ne disposons pas d'une flotte de 20 à 30 avions. Nous cherchons à être rentable et performant. Nous pouvons exploiter jusqu'à 10 avions au maximum, au cours des deux prochaines années », a-t-il précisé. Il reste cependant un défi de taille. Comme de nombreuses compagnies aériennes africaines, Camair-Co travaille intensément pour obtenir sa certification IOSA.

Il s'agit en effet de pouvoir certifier ses normes d'exploitation afin d'établir de nouveaux partenariats.

«Nous avons un grand nombre de partenaires potentiels en partage de code, mais l'aboutissement de ce type de projet dépend en grande partie de notre certification IOSA. Nous espérons signer certains accords début 2013 », a-t-il

poursuivi.

Nous cherchons à être rentable et performant

Camair-Co a généré un chiffre d'affaires d'environ 75 millions d'euros. La compagnie a pour objectif un retour à l'équilibre dès 2014. Le gouvernement du Cameroun est en effet très désireux de privatiser la compagnie aérienne. Alex Van Elk estime que cette opération prendra encore quelques années afin d'établir durablement la confiance auprès des investisseurs privés.

CAMEROON



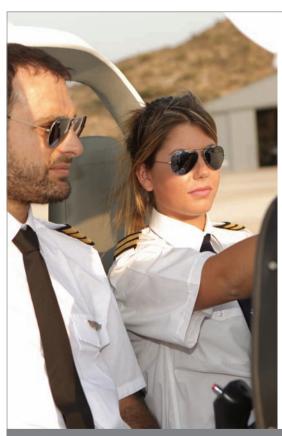
renewal in 2017 and this will "probably" be replaced by a Boeing 737MAX, also on lease.

Like many African carriers, Camair-Co is working to secure IOSA certification so it can prove its operating standards to form cooperations. "We are talking to a large number of potential codeshare partners but these largely

depend on our IOSA certification. In early 2013 we hope to commit to some partnerships," said Van Elk.

Camair-Co has a turnover of around €75 million and is aiming to turn a profit in 2014. The Cameroon government is also very keen to privatise Camair-Co, either fully or partly, but

Van Elk believes this will take time. "I have told them that we are talking at least a couple of years. When you start a new airline, you need to build confidence and then look at privatisation. We need to break even and then we need a couple of years before we can look at institutional investors or flotation." he concluded.



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AIR TRANSPORT RWANDA

RwandAir is a vital part of the government's push to grow tourism, attract foreign investment and encourage economic development.

Victoria Moores reports.

Small airline with a huge ambition

⟨⟨RwandAir, une compagnie aérienne qui monte⟩⟩ – Page 26

Billing itself as the fastest-growing airline on the African continent, RwandAir has huge ambitions to promote its home country and fuel local economic development.

"We are landlocked, so it is a big disadvantage if we don't have good connections," said RwandAir CEO John Mirenge.

He explained that Kigali-based RwandAir was launched as the new national carrier in late 2002, because the country's air links were becoming "increasingly unreliable and far apart".

The airline, then operating under the name RwandAir Express, was rebranded as RwandAir in March 2009 and is now a vital part of the government's push to grow tourism, attract foreign direct investment and encourage economic development. "There is no way their objectives can be achieved without connections," said Mirenge.

Continued on Page 26

It is clear that the government is



AIR TRANSPORT RWANDA

CONTINUED FROM PAGE 25

taking the airline's development very seriously, demonstrated by the appointment of African aviation veteran and former Ethiopian Airlines CEO Girma Wake as RwandAir chairman.

Wake, who was planning to retire after 15 years as Ethiopian CEO, has decades of industry experience and is highly respected by his peers, having successfully doubled the size of Ethiopian within five years to become one of Africa's leading airlines.

RwandAir currently serves 14 destinations but it is aiming to rapidly grow its network over the next three years. This development will be focussed on "the sub-Saharan region and southern Africa," said Mirenge. "We are already in negotiations to add other destinations on the continent."

This push will include two or three destinations in west Africa and two more in southern Africa.

Mirenge said Abijan in Cote d'Ivoire and Douala in Cameroon were both potentials for the west African additions, which may begin in the first half of 2013. RwandAir has already received government permission to serve Douala and it is currently researching market potential for the route.

In southern Africa, RwandAir is evaluating Lusaka in Zambia and Harare in Zimbabwe. It will also launch services to Juba in southern Sudan "very soon".

Strong trader market

Looking further afield, Rwanda has a strong trader market, which means RwandAir is able to support flights to Dubai. Mirenge may further build on the trader links by offering flights to Guangzhou in China, via Mumbai, although this is not in the airline's immediate plans.

At the moment RwandAir has no long-haul capability. It operates seven aircraft: two purchased Boeing 737-800s, which it introduced last summer; two leased 737-500s; two purchased Bombardier CRJ900s, which arrived in October; and a leased Bombardier Dash 8-200, which serves its two domestic routes.

"We are looking at growing to around 12 aircraft. We have been talking to the likes of Boeing about moving into longer-range aircraft like the 787. Around 2015, we would like to start getting into markets like China. We also definitely want to go to Europe. It will probably be London combined with one other city, like Paris," said Mirenge.

He added that RwandAir had already paid Boeing a non-refundable deposit for the 787s and the deal would soon be finalised. "We are looking to lease about two 787s and two Boeing 737s," he explained. The pair of 737-700s are likely to come from leasing specialist International Lease Finance Corporation (ILFC) to renew its two 737-500s in April and June 2013.

Turning to regional capacity, RwandAir has options on another two purchased CRJ900s, which Mirenge is hoping to introduce around 2015. In the shorter term, the airline is in

RwandAir, une sommaire compagnie aérienne qui monte

RwandAir a été désignée comme la compagnie aérienne qui connait la plus forte croissance sur le continent africain. Elle affiche désormais de grandes ambitions.

Créée en 2002, RwandAir est maintenant un maillon indispensable du dispositif du gouvernement visant à développer le tourisme, attirer les investissements étrangers et stimuler le développement économique.

«De tels objectifs ne peuvent être atteints sans un réseau aérien», a déclaré John Mirenge, PDG de RwandAir.

Basée à Kigali, RwandAir dessert actuellement 14 destinations et exploite sept avions: deux Boeing 737-800s, deux Boeing 737-500 en location, deux Bombardier CRJ900 et des Bombardier Dash 8 pour ses deux lignes intérieures.

« Nous cherchons à augmenter notre flotte pour atteindre environ 12 avions», explique son PDG.

Rwandair discute avec Boeing pour l'achat d'un Boeing 787 ou encore des sociétés de leasing comme IFLC pour louer deux Boeing 737 et deux 737-700s ou le renouvèlement de ses deux B737-500. Pour le marché régional, RwandAir possède deux options sur des CRJ900 à l'horizon 2015. La compagnie est également en négociation avec Bombardier pour un Q400.

Selon son PDG, RwandAir va rapidement développer son réseau, en particulier sur la région sub-saharienne et en Afrique australe. Il intègrera deux ou trois destinations en Afrique de l'Ouest et deux autres dans le sud de l'Afrique. RwandAir a d'ailleurs reçu l'autorisation du gouvernement pour desservir Douala. Elle jauge encore la pertinence de desservir Lusaka en Zambie et Harare au Zimbabwe.

Elle lancera prochainement ses services à Juba au Sud-Soudan.

Seul bémol, RwandAir n'a pas la capacité aujourd'hui pour des vols long-courriers. Elle devrait desservir des marchés comme la Chine ou l'Europe vers 2015. Le renouvellement de sa flotte devrait faciliter l'obtention de la certification IOSA d'ici 2013, précieux sésame pour nouer des partenariats avec d'autres compagnies aériennes. C'est aussi un élément crucial pour le PDG de Rwandair.

«IOSA certification is a very important project for us. We hope that we will pass the audit before the second half of 2013. That will bring us closer to airlines that we would like to partner and codeshare with. This is something we are actively working on.»

John Mirenge

negotiations with Bombardier for a Q400, which will be brought in on a sale and lease-back to replace the Dash 8-200 in August 2013. "We are still talking with the guys from Bombardier and hope to finalise the slot soon," said Mirenge.

The fleet renewal should help RwandAir secure IOSA certification, which is essential for the airline to develop partnerships with other airlines. "IOSA certification is a very important project for us," said Mirenge. "We hope that we will pass the audit before the second half of 2013. That will bring us closer to airlines that we would like to partner and codeshare with. This is something we are actively working on."

RwandAir, which is fully government-owned, funded the Boeing 737-800s with ExIm Credit financing and managed to secure Export Development Canada (EDC) financing for the CRIs.

However, Mirenge is realistic about the airline's prospects of securing any private investment or equity partnerships in the short-term. "If anyone was attracted to come in, we would be prepared to open doors, but any investor is likely to look at our viability. We are probably looking at break-even in about four years. That is where we have set our sights. It is not easy and we have not had any approaches at this time."



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Victoria Moores talks to
Ethiopian Airline boss
Tewolde Gebremariam
who has an ambitious
plan for the next few years...

DOUBLE VISION

⟨Ethiopian Airlines dévoile sa vision pour 2025 >> − Page 30

sk Ethiopian Airlines about its strategic plan and the answer is quite simple: double it.

Back in 1995, Ethiopian Airlines announced plans to double its fleet, network, passenger numbers, cargo tonnage and revenues within five years under an ambitious scheme called Vision 2010. It did it.

Now it is doing it again – but this time around the plan is called Vision 2025 and the aim is to more than double everything.

"It is difficult to plan for the next quarter, let alone the next 15 years," joked Ethiopian Airlines CEO Tewolde Gebremariam, speaking on the sidelines of the African Airlines Association (AFRAA) annual general assembly in Johannesburg.

Yet, despite the challenging market conditions, Gebremariam and his team have a clear plan stretching beyond the next decade.

Seven years ago, when Vision 2010 was launched, Ethiopian operated 14 aircraft. Smiling proudly, Gebremariam says the airline now has 55 aircraft but this will grow to 120 under Vision 2025. Likewise, passenger numbers are set to soar

from 4.8 million today to 18 million by 2025. Ethiopian's international network will ramp up from 70 to 90 destinations, its staff headcount will grow from 7,000 to 17,000 and its cargo tonnage is set to increase from 181,000 to 820,000 metric tonnes.

Gebremariam admits the last few years have been "very challenging", but he is "still on course" for this ambitious plan and sees no reason to change his targets.

Four pillars are critical

In his eyes, success rests on Ethiopian getting four things right: fleet; infrastructure; human resources and systems – including processes, procedures, policies; and ICT. "These four pillars are critical, they are vital for growth. If we don't have one of these, our growth will be jeopardised."

Ethiopian has 41 aircraft on order, including 12 Airbus A350-900s, five Boeing 777-200Fs, two 777-300Fs, 10 787s, seven 737-800s and four Bombardier Q400s. To boost is fleet up to 120 aircraft, more orders must be in the pipeline.

One area for development will be Ethiopian's regional fleet. At the moment, the airline operates

13 Q400s, but Gebremariam said this would expand to 27 by 2015. "We will have to order more. Depending on our growth, it could be next year or a year later." Ethiopian has just become the launch customer for a new two-class Q400 and it plans to retrofit the new cabin design on to some of its existing aircraft.

Addis Ababa's Bole International Airport has already added 24 new parking stands in a bid to keep pace with Ethiopian's growth. "It has been overwhelmed by the number of aircraft we have phased in," said Gebremariam. He explained the next stage would see further ramp expansion, with the addition of another 14 stands. Finally, the airport will expand the passenger terminal.

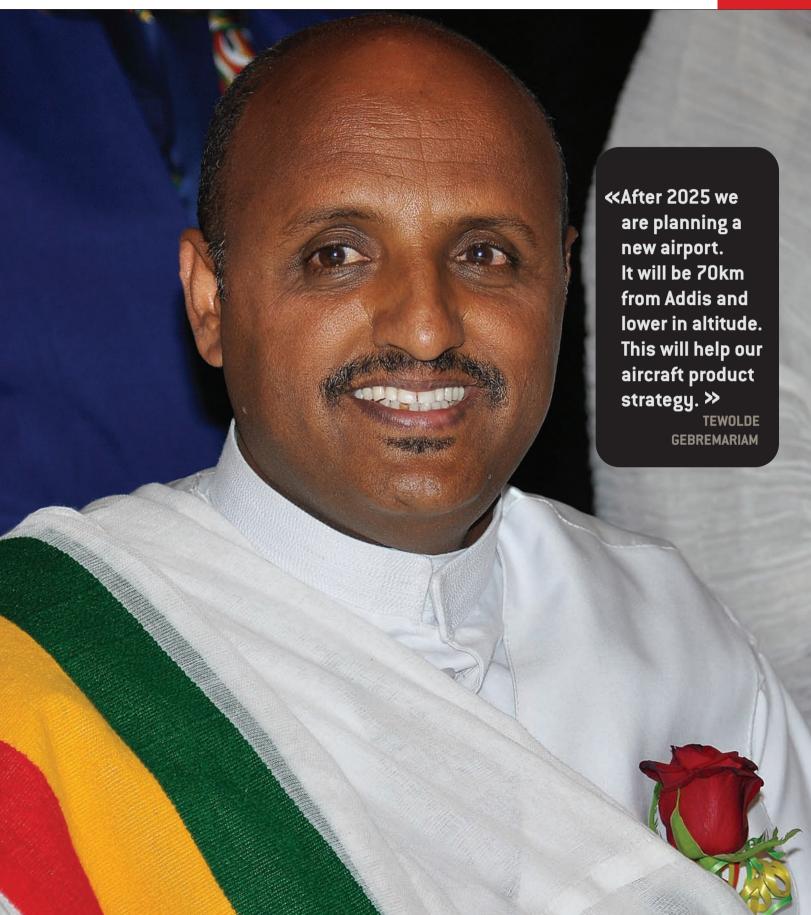
"After 2025 we are planning a new airport," said the Ethiopian CEO. "It will be 70km from Addis and lower in altitude. This will help our aircraft product strategy." Ethiopian's choice of aircraft is currently limited because of the altitude of Bole Airport – one of the highest in the world, its thin air is highly demanding on aircraft engines to maintain lift.

Continued

on Page 30

>

Ethiopian's rapid growth has also put a strain on its own resources. One



CONTINUED FROM PAGE 28

of the ideas of Vision 2012 was to turn Ethiopian into an aviation group, expanding its training and maintenance businesses into third-party work.

The aviation group remains a central element of Vision 2025. "Since the airline is growing very fast, most of our services are geared to support the airline. Over the last three or four years our aviation academy and MRO business have scaled down on third-party work to focus on our own requirements," said Gebremariam.

He explained that Ethiopian will be "fully transformed into an aviation group" under Vision 2025. The company will be divided into seven business units, which will act as profit centres for the group. These comprise international passenger services, domestic and regional passenger services, Ethiopian cargo, Ethiopian MRO services, Ethiopian Aviation Academy, Ethiopian ground services and in-flight catering services.

\$10 billion turnover

"We will have a \$10 billion annual turnover by 2025," said Gebremariam. "Now we are at about \$2.2 billion."

Last year Ethiopian delivered a 683 million Birr (\$37.5 million) net profit and a 1 billion Birr operating profit. Growth under Vision 2025 will be partly funded from Ethiopian's own operation and partly from credit lines. "As long as we are credit-worthy and do the right job, banks and institutions will be willing to lend us money," said Gebremariam.

Ethiopian's cargo business is fundamental to its expansion plans. Gebremariam claimed that his carrier already has one of the largest cargo networks in Africa, handling 180,000 tonnes a year and operating six dedicated freighters.

As part of the Vision 2025 plan, the airline is building a new cargo terminal, which Gebremariam said would be among the largest in the world, able to handle around 1.5 million tonnes per year. The project will be done in two phases, with the first adding around 600,000 tonnes of capacity, including 360,000 tonnes of cold storage

for fresh flowers and other perishables.

"Phase one is already starting," said Gebremariam. "ICM, a German company, won the bid for the project. We are working on financing and building work will start any time now. It is due for completion about two years from when work starts."

Ethiopian is driving to boost the scale of its own operations and that of its Addis hub so it can offer a "global standard product at the lowest possible cost" and secure the competitive advantage it

Ethiopian Airlines **SOMMAIRE** dévoile sa vision pour 2025

Tewolde Gebremariam, PDG d'Ethiopian Airlines, s'est s'exprimé lors de l'assemblée générale annuelle de l'association des compagnies aériennes africaines (AFRAA), à Johannesburg. Victoria Moores a recueilli ses propos.

Doubler ses activités, tel est le plan stratégique d'Ethiopian Airlines pour les prochaines années. En 1995, la compagnie avait déjà annoncé son intention de doubler sa flotte, son réseau, le nombre de passagers et le volume de fret lors du projet Vision 2010. Malgré les conditions difficiles du marché, c'est aujourd'hui mission accompli.

Le PDG d'Ethiopian Airlines a donc dévoilé son plan ambitieux appelé Vision 2025. Son objectif est de devenir un grand groupe aéronautique qui sera organisé en sept branches. Elles engloberont les services aux passagers, le fret, la MRO, une académie, des services au sol et des services de restauration à bord. Elles agiront comme des centres d'affaires.

La flotte de la compagnie passera de 55 à 120 avions, le nombre de passagers de 4,8 millions à 18 millions, le réseau à l'international de 70 à 90 destinations et les effectifs de 7 000 à 17 000. Le fret devrait augmenter de 181 000 à 820 000 tonnes.

Le succès de ce plan reposera sur quatre piliers indispensables selon son PDG : la flotte d'avions, les infrastructures, les ressources humaines et son management. Le chiffre d'affaires annueldevrait s'élever à 10 milliards de dollars.

Ethiopian Airlines compte 41 avions en commande dont 12 A350-900, cinq B777-200F, deux B777-300Fs, 10 B787, sept B737-800 ainsi que quatre Q400 de Bombardier pour étoffer son réseau régional. La compagnie exploite déjà 13 Q400 et souhaite en disposer 27 en 2015.

Ce plan nécessite des transformations et une expansion de l'aéroport d'Addis-Abeba pour répondre à ce rythme de croissance. 24 nouvelles aires de stationnement ont déjà été aménagées. La prochaine étape verra la construction d'autres zones puis d'un nouvel aéroport après 2025.

L'activité cargo reste fondamentale pour Ethiopian Airlines. Gebremariam a déclaré que son groupe possède déjà l'un des plus grands réseaux de fret en Afrique avec la manipulation de 180 000 tonnes par an. La compagnie souhaite la construction d'une nouvelle aérogare qui sera la plus importante au monde selon son PDG. Elle pourra gérer environ 1,5 millions de tonnes annuellement.

Les partenariats jouent enfin un rôle essentiel. Ethiopian Airlines va se développer en Afrique australe comme en Zambie, pays avec lequel les discussions ont été très fructueuses. Le Malawi et la Tanzanie sont également des destinations prometteuses.



needs

Partnerships will play a key role in this growth. Ethiopian already has a 40% equity stake in Togolese carrier ASKY, giving Ethiopian a West African hub in Lome. Gebremariam said he is now looking to replicate this strategy in southern Africa.

"Our second hub will be southern Africa. We are looking at the most viable hubs. We think Zambia has a lot of potential. We have had discussions with the Zambian government, which

has been very encouraging and welcoming," said Gebremariam. If Zambia goes ahead, Ethiopian would form a joint venture partnership with the government.

Malawi, through Air Malawi, and Tanzania are also candidates. "Our hub will definitely be one of those [Zambia, Malawi or Tanzania], but we can work with all of them because we want to cooperate with them. We want African airlines to work with us and grow with us. We don't want to grow alone."



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AIR TRANSPORT



TAAG faces a taxing

An African aviation veteran is still battling on after 72 years. **Victoria Moores** reports on the great survivor.

fter riding out 27 years of civil war and emerging from the controversial European Union blacklist, TAAG Angola Airlines is now focussed on rebuilding its network and pushing ahead with its fleet renewal.

TAAG is an African aviation veteran with 72 years of service under its belt. However, like its country, it has a turbulent past.

It survived through the 1975-2002 Angolan Civil War after Angola became independent from Portugal.

Then, in June 2007, the EU blacklisted TAAG over safety concerns. The ban was lifted in 2010, although some of its aircraft are still banned from European operations.

"The civil war ended in 2002 and since then the increase in traffic has been huge, in line with growth in our economy," said TAAG Angola Airlines international relations and commercial agreements director Jacinto Junior.

Since the end of the war, the government has ploughed "huge investment" into TAAG, said Junior. It has bought aircraft, ground equipment and put money into training. "We are not profitable but we could be. We need time to get a return on investment. We hope to be able to break even in three years," he said.

TAAG has already slashed its headcount but further work still needs to be done. Between the mid-1980s and early 1990s, the airline employed

6,000 staff. Now it has around 3,500 employees but this needs to be cut to 2,600-2,800.

"As the company grows and we bring in more aircraft, we may end up with around 3,000 because of the extra pilots and technicians," said Junior.

Today TAAG operates a fleet of 13 aircraft, comprising five 737-700s, three 737-200s, three 777-200ERs and two 777-300ERs. It has a further three 777-300ERs on order, plus options on three more.

Calmer conditions

Now blessed with calmer conditions, TAAG is seizing the opportunity to strengthen its network. "We are not looking at new routes but we will grow and increase frequencies to some of our existing destinations," explained Junior. Specifically, he is looking to add extra flights to Dubai, Lisbon and Oporto in Portugal, Sao Paulo and Rio de Janeiro in Brazil, and boost frequencies to Havana in Cuba, which it currently flies fortnightly.

TAAG is also considering operations to Houston in the USA. At the moment, World Airways operates thrice-weekly Luanda-Houston flights for SonAir, which is the travel division of Angolan petroleum company Sonangol. This flight operates as a charter service specifically for oil-related traffic.

"We would take over from them," said Junior.

"TAAG temporarily transferred these flights to SonAir to operate on our behalf. When we have means, we will take over from them because this is our right. It is a temporary agreement." The flights would then also be opened to scheduled traffic.

Another destination on TAAG's wish list is Paris. "We used to operate to Paris but stopped in 2007 when we were blacklisted. We might resume flights, with at least two frequencies a week."

The new routes would be added when the three 777s arrive in 2015.

"It is not certain when the aircraft will come but if we can find a way to resume Paris earlier, we might consider it. No decision has been made yet," said Junior.

In a further effort to build and develop its network, TAAG is seeking out new partnerships, although airlines have very little choice but to partner with government-owned TAAG if they want to fly to Angola. "It can be any kind of commercial agreement," said Junior.

The Angolan carrier already has codeshare agreements with Air France, Air Namibia, Brussels Airlines, Iberia, Kenya Airways, KLM, LAM Mozambique and Lufthansa. "We are in discussions with other partners, such as Precision Air on Dar es Salaam-Luanda, Arik on Lagos-Luanda and ASKY on Lome-Luanda."

Junior said TAAG is also getting "more and more involved" in projects through the African Airlines Association (AFRAA) to further its cooperation with other airlines in the region. For example, it is among nine airlines that have shown an interest in the association's network



time...

coordination project, in partnership with Sabre Airline Solutions. This initiative is aimed at creating virtual alliances, optimising flight schedules and cutting duplication to push up revenues and load factors.

Some African countries have extremely high taxation and fuel charges, well above the world average.

Fuel prices at Luanda were among the highest in Africa, so AFRAA and IATA lobbied the Angolan government and have now slashed fuel prices at TAAG's Luanda home base by 20%, saving \$60 million for airlines operating to the airport.

Very expensive

"Angola is one of the most expensive countries. The fuel achievement helps but it is still very expensive.

"Handling charges and air navigation fees are also very expensive compared with the average. We are not doing well financially. It is very hard for us to cope, so we always struggle to survive. The high operating costs don't help."

So, it is ironic that after its battle for survival throughout the civil war and blacklisting, TAAG's most immediate problem is high taxes and charges imposed by its government owner, which is so keen for TAAG to succeed and prosper. While some ideas on transitioning TAAG to private ownership have been floated, it is "not really being seriously considered", said Junior. The airline will continue to lobby for reduced charges to speed its path to break-even.

TAAG souhaite renforcer son réseau et nouer de nouveaux partenariats

L'ANGOLA

EST L'UN

DES PAYS LES

PLUS CHERS

TAAG Angola Airlines reconstruit son réseau après une longue guerre civile qu'a subie le pays. Elle vise maintenant à renouveler sa flotte d'avions.

TAAG a traversé de multiples turbulences ces dernières décennies : guerre civile angolaise puis la liste noire de l'Union européenne. Bien que l'interdiction ait été levée en 2010, certains de ses avions restent toujours interdits d'opérations. Depuis la fin de la guerre, TAAG bénéficie du soutien du gouvernement.

«Le trafic a fortement augmenté avec la croissance de l'économie du pays depuis 2002», a déclaré Jacinto Junior, directeur commercial de TAAG Angola Airlines.

TAAG opère aujourd'hui une flotte de 13 avions, incluant cinq B737-700, trois B737-200, trois B777-200ER et deux B777-300ER. Elle possède trois B777-300ER en commande incluant trois options.

Bénéficiant de conditions plus calmes,
TAAG souhaite renforcer son réseau et nouer de
nouveaux partenariats. Le transporteur angolais
possède déjà des accords avec Air France, Air
Namibia, Brussels Airlines, Iberia, Kenya Airways,
KLM, Lufthansa et LAM Mozambique. TAAG est en
pourparlers avec d'autres partenaires, tels que
Precision, Arik et ASKY.

«Nous ne cherchons pas de nouvelles routes, mais à augmenter les fréquences de plusieurs de nos destinations», explique Junior.

TAAG cherche ainsi des vols supplémentaires sur Dubaï, Lisbonne et Porto (Portugal), Sao Paulo et Rio de Janeiro (Brésil) et davantage de fréquences à La Havane (Cuba). TAAG envisage des opérations à Houston aux Etats-Unis. World Airways exploite trois fois par semaine des vols pour SonAir, qui est l'agence de voyage de la compagnie pétrolière Sonangol. TAAG souhaite aussi reprendre les vols sur Paris arrêtés en 2007, avec au moins deux fréquences par semaine. Ces nouvelles lignes pourront être effectives dès la livraison des trois Boeing 777 en 2015

Jacinto Junior concède cependant que TAAG n'est pas encore rentable. Elle pourrait parvenir à l'équilibre financier d'ici à trois ans. TAAG a déjà réduit ses effectifs de 40% depuis 1990 et devrait encore en diminuer pour atteindre entre 2,600

> à 2,800 personnes. Selon M. Junior, TAAG pourrait bénéficier de 3000 pilotes et techniciens supplémentaires à ce rythme de croissance.

TAAG est confrontée à d'autres difficultés en particulier à une fiscalité très lourde que l'on trouve dans plusieurs pays africains. Des taxes élevées sont en effet imposées par le gouvernement angolais qui de surcroît est l'actionnaire majoritaire de

TAAG.

Le prix du carburant à Luanda était parmi les plus élevés en Afrique. Face à la pression de L'AFRAA et de l'IATA, le gouvernement angolais a réduit le prix du carburant de 20%, permettant aux compagnies aériennes opérant à l'aéroport d'économiser 60 millions de dollars.

L'Angola est l'un des pays les plus chers et les coûts d'exploitation restent donc très élevés ce qui pèse sur les finances et la survie de la compagnie. Selon Jacinto Junior, il est difficile d'y faire face.

Certaines voix s'élèvent pour une privatisation de TAAG afin d'assurer sa réussite. Ce n'est pas envisagé selon M. Junior.

Mais TAAG continuera à faire pression pour une réduction des charges. Un des moyens de parvenir à l'équilibre.

Partners needed for two LAM joints...

LAM serves 10 domestic and five regional routes.



Victoria Moores

looks at an ambitious Mozambique operator about to spread its wings into new operations.

AM Mozambique is seeking partners for two new joint ventures, which would see it return to long-haul services and branch out into cargo operations.

Since 2006, Maputo-based LAM has repositioned itself as a regional and domestic carrier, shifting to high-frequency, lower capacity operations.

Today it serves 10 domestic and five regional routes using a fleet of two Embraer 120s, three Bombardier Q400s, three Embraer 190s and a Boeing 737-500. These will be joined by two ERJ-145s and a fourth E-190 in 2013, replacing the Embraer 120s, which are due to leave the fleet.

Mozambique's political situation is stable and GDP growth is expected to continue at 7% over the coming years, stimulated in part by the growth in mining. "We are currently preparing a new five-year business plan, taking into account the country's economic growth," said LAM CEO Marlene Manave. "By 2015, or maybe earlier, we may need bigger aircraft than the Embraer 190s because the market is growing quicker than expected."

As part of this planning project, due for completion in January 2013, LAM is considering a return to intercontinental operations. "In a few years, we believe we will be able to build the feed we need for intercontinental routes."

An initial study into the long-haul re-launch suggests this could be achieved in two ways. The first would be through a codeshare with a carrier that operates long-haul services, such as Kenya Airways over Nairobi. "The other way we are envisioning, which we are most likely to go for, is to find a partner and create a separate entity that could be called LAM International," explained Manave.

The new entity would draw on LAM's technical and distribution resources. A financial investor could help secure aircraft, or an airline partner could provide aircraft. "This way,

the airline could carry the Mozambique flag. This is what the government wants, but to do this we need to have a partner and the demand first. If we launched operations today, it would lose money."

In the shorter term, LAM is also considering a return to cargo operations by the end of 2013. "When we took the decision to move to smaller aircraft, we were aware we would lose cargo capacity. Cargo made up 5% of our revenues, so we focused on the other 95%. We also knew that the roads were becoming more developed, so that would have been another mode to compete with," said Manave. "That was before the boom. Now, with current developments, we are convinced there is a need for cargo."

She explained that, similar to the long-haul project, LAM is aiming to set up a cargo joint venture. LAM is actively seeking a partner and the project should be finalised in the first quarter of 2013, for launch towards the end of the year. "One other option is to transfer one Embraer 120 to make it a full cargo aircraft. If we had to start by ourselves, we could do that," she added.

Secondary cities

Finally, LAM is planning to take a pair of ERJ-145s in 2013. These aircraft, which will replace its Embraer 120s, will be used to operate flights direct from Mozambique's secondary cities to regional destinations within Africa.

"We want passengers to stay within our own network," said Manave. "There are now direct services to the provinces, whereas they used to be via Maputo. We are trying to recover the market that used to be ours, and to negotiate codeshares with the airlines serving these routes. We need to right-size our operations. Our current service is losing money because we have too much capacity on the route."

The ERJ-145s, operated by fully-owned subsidiary Mozambique Express (MEX), will take over LAM's service from Beira and Tete to Johannesburg. They will also be used to launch services between Tete and a destination in Malawi, most likely Blantyre or Lilongwe. The final new routes will be Nampula to Dar es Salaam and Lilongwe.

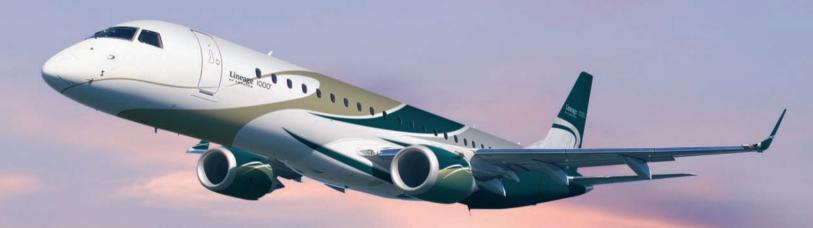
LÂM is also aiming to grow its network into other African intercontinental hubs, feeding airlines such as Ethiopian and Air Seychelles. It will move the Q400s to serve tourist destinations, where the short paved runways are too harsh for jet operations.

In 2011 LAM carried 600,000 passengers, generating a \$142 million turnover. It has been profitable since 2008, except in 2010 when fuel prices and currency fluctuations pushed it back into the red. "In 2011 we made a profit and we will make a profit in 2012," said Manave.



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Art of Victory

DEFENCE AIR ARMS



After decades in which its air arms have lagged those in Europe and the Middle East, Africa has suddenly started to see a number of its leading air forces equipping with the latest generation superfighters – with a number of nations acting as eager customers for the latest Russian military hardware, taking up some of the slack left by reduced spending by the Russian military, or buying up unwanted fighters inherited by some former Soviet states.

Jon Lake reports.

Por many years, it was a standing joke that many of the more advanced fighter aircraft in service with African air forces had been procured more to 'impress the neighbours' than to fulfil real military requirements.

Instead of buying genuinely useful and supportable subsonic fighter-bombers, a number of states acquired less suitable, more sophisticated supersonic interceptors, which would be used for a national day flypast or two before being grounded by spares shortages or inadequate support.

Nigeria's SEPECAT Jaguars, pushed into storage hangars to rot with not much more than 'delivery mileage' on the clock, became emblematic of the fate of many advanced fast jet combat aircraft in much of Africa.

Things were different in Apartheid-era South Africa, which operated a succession of advanced combat aircraft with notable success, even developing its own Cheetah derivative of the IAI Kfir.

Angola, on the frontline in the long struggle with white South Africa, raised its game, and flew meaningful operational missions with its MiG-21 and MiG-23 fighters, and with Sukhoi 'Fitter' fighter bombers, sometimes with Cuban,

East German and other 'advisors' at the controls.

Some North African countries also operated more advanced fighters without major problems, especially in Egypt, on the frontline of the struggle against Israel, and also in Libya, Algeria and Morocco.

Elsewhere, and especially in sub-Saharan Africa, though the stereotype of immature air forces incapable of operating more advanced aircraft became progressively more outdated, there was little requirement for advanced air-to-air fighter capabilities, and aircraft like the F-5E Tiger II (used by the Sudan, Kenya and Ethiopia, and later by Botswana) and the MiG-21 and its Chinese copy, the Chengdu F-7 (used by Angola, Burkina Faso, Chad, Congo, Eritrea, Ethiopia, Guinea, Guinea Bissau, Mozambique, Namibia, Nigeria, Somalia, Tanzania, Zaire and Zambia) were more than adequate to meet requirements.

In Angola, Ethiopia, the Sudan and Zambia the MiG-23 saw some service, while Sukhoi's swingwing 'Fitter' was used by Angola.

Despite this widespread service, few of the F-5s and MiGs saw much action, except in Angola and in Ethiopia.



DEFENCE



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FIGHTER OPERATIONS IN AFRICAN SKIES

In Angola, there was much use of fast jets during the civil war (which raged from 1975 until 2002), where both the Força Aérea Popular de Angola and the Cuban Defensa Anti-Aérea Y Fuerza Aérea Revolucionaria flew MiG-21s against rebel forces, using 57mm and 240mm unguided rockets, 250kg and 500kg bombs, cluster bombs, as well as bombs containing napalm and fuel air explosive (FAE).

The Cubans also flew combat air patrols armed with four R-3S air-to-air missiles. Their aim was to prevent operations by the South African Air Force, but in this they were largely unsuccessful.

On November 6 1981, a Mirage F.1CZ flown by Major Johann Rankin, shot down a MiG-21MF flown by Cuban pilot, Lieutenant Danacio Valdez.

Another MiG was claimed as shot down by Rankin on October 5 1982, who also crippled a second on the same day, though it limped back to base.

A further Angolan MiG-21 was downed by a SAAF Mirage F.1AZ on December 5 1985. The Cubans scored a success on September 27 1987 when a MiG-23ML, flown by Alberto Rivas Law, damaged the Mirage F1 flown by Captain Arthur Piercy. They also made further disputed claims.

MiG met MiG during the Ogaden War of 1977-78, between Ethiopia and Somalia. Cuban pilots were again heavily involved, with a squadron of Cuban MiG-17Fs, a squadron of MiG-21bis, two MiG-21R reconnaissance fighters and a number of Mi-8 helicopters deployed to support the Cuban tank brigade that was sent to try to repulse the Somali invasion of the Ogaden province.

At least three Cuban pilots were lost in action during ground attack sorties, but air-to-air action had ended before the Cubans arrived – the Ethiopian air force's own MiG-21MFs and US-supplied F-5As and F-5Es having already won air superiority.

In one incident, two F-5As (reportedly piloted by Israelis) shot down two Somali MiG-21MFs while the remaining pair collided. Overall, the Ethiopian F-5s claimed 10 Somali MiG-21MFs; while the Somalis claimed three Ethiopian F-5s

four MiG-21MFs, one Canberra bomber and three Douglas DC-3 transports.

In mid-August 1998, the Air Force of Zimbabwe deployed five or six Chengdu F-7 Skybolts and later five BAE Hawks (as well as transports and helicopters), to Lubumbashi IAP and Mbuji-Mayi in the Congo, from where they flew ground attack sorties and combat air patrols during the First and Second Congo Wars.

The Zimbabwean fighters failed to intercept any of the transport aircraft being used to bring troops, arms and supplies from Rwanda and Burundi, but from October 1998 did undertake air strikes against airfields in Gbadolite, Dongo and Gmena, and then, in late November, against rebel and Rwandan positions in the Kisangani area.

On November 22 six Hawks, armed with Mk.82 bombs and Matra 155 rocket launchers, attacked ferries being used to transport troops and supplies from Burundi across Lake Tanganyika into the war in the Congo. Six ferries were sunk, killing 600 Burundi and Rwandan troops.

NEW GENERATION FIGHTERS

Signing the Camp David accords opened the door for Egypt to re-equip a large portion of its air force with modern western fighters.

Since 1980 the Egyptian Air Force has ordered 240 F-16s under seven separate 'Peace Vector' contracts. This marked the first time that an African nation had ordered such advanced fighters, and confirmed Egypt's regional superpower status.

Deliveries are on-going, but about 200 of these are in service with nine squadrons – 138 of them to Block 40 standards, and with 20 Block 52s on order.

This makes the Egyptian Air Force the world's fourth largest F-16 operator and gives Egypt Africa's foremost fighter fleet.

Perhaps predictably, it was another North African nation that became the next 'superfighter operator' when Algeria acquired the F-16's nearest Soviet-bloc counterpart – Mikoyan's MiG-29 Fulcrum.

The Algerian air force eventually received 74

MiG-29s, including 12 two-seaters, between 1997 and 2007, from Russia, Belarus and the Ukraine.

About 36 MiG-29s were estimated as being in service as of December 2011. As part of the same deal, Algeria also acquired 28 Su-30MKAs, and is due to receive 16 more.

More surprisingly, it was the Horn of Africa that saw the next induction of advanced, new generation fighters. There is some confusion as to whether Ethiopia, or its newly independent neighbour and former province of Eritrea, 'kicked off' this superfighter armed race, since both air forces received the first of their new fighters during December 1998.

Ethiopia agreed a \$150 million deal with Moscow for the supply of eight surplus Su-27s (including two two-seat Su-27UBs), the first of which departed for Ethiopia aboard an Antonov An-22 on December 15. One of the Su-27UBs was lost in a training accident January 6 1999 but was immediately replaced, and No5 Fighter Squadron at Debre Zeit was operational by February 1999, with a mix of Ethiopian and Russian pilots.

Meanwhile, Eritrea took delivery of eight refurbished MiG-29s and two MiG-29UBs, and this equipped No5 Squadron at Asmara, from where the first of the new Eritrean MiG-29s was seen flying on December 14 1998, probably in the hands of a Ukrainian 'advisor'.

The new fighters clashed on February 25 1999 when four MiG-29s were sent to intercept two Su-27s that were on patrol near Badme. The Sukhois escaped the volley of R27 (AA-10 'Alamo') missiles fired by the MiGs, and the Ethiopian flight lead, Major Workneh, shot down one of the attackers with an R73 (AA-11 'Archer') short range missile. The downed Eritrean aircraft was subsequently claimed to have been piloted by the commander of the Eritrean Air Force, Brigadier General Habte Zion Hadgu.

The next day another Sukhoi, this time flown by a female pilot, Captain Aster Tolossa, shot down another Eritrean MiG-29 – this one a MiG-29UB flown by her former instructor – becoming the first female fighter pilot to shoot down an enemy jet fighter.

AIR ARMS



On May 15 2000 an Eritrean MiG-29 shot down an Ethiopian Su-25 fighter-bomber, while the next day, a MiG-29 was damaged by an Su-27 during a fighter-bomber mission, crash-landing at Asmara. On May 18, an Eritrean MiG-29 shot down two Ethiopian MiG-21s, only to be engaged and shot down by an Su-27, whose wingman was damaged after colliding with an African Buzzard!

Ethiopia and Eritrea agreed a ceasefire on June 18 2000, under pressure from the international community, and though clashes continued, there was no more action for the Su-27s and MiG-29s.

The Ethiopian Su-27s suffered no losses and shot down four Eritrean MiG-29s, damaging another, while the Eritrean MiG-29s shot down two Ethiopian MiG-21s, three MiG-23s, and an Su-25.

Both sides rebuilt their air forces after the war, and today the Ethiopian Air Force operates 11 Su-27SKs, three Su-27Ps and four Su-27UBs, though serviceability is reportedly poor, and the unit can often muster just four airworthy aircraft, though the Su-27s have been used, reportedly to great effect, during the war in Somalia (since 2006), bombing Islamist positions and flying combat air patrols.

Eritrea reportedly bought six more MiG-29s from Moldova in 2000 and certainly bought four new MiG-29s from Russia in 2001. Today No5 Squadron routinely fields seven or eight MiG-29s from its base at Asmara IAP, with the aircraft being flown and maintained by a disparate group of Eritrean, Russian and Ukrainian pilots and technicians.

In 2003 Eritrea acquired the first eight Su-27s, using these to equip No6 Squadron at Asmara. More (between 10 and 20) were supplied to Eritrea from 2009, reportedly funded by Qatar.

Angola purchased eight Su-27s, including at least one two-seat Su-27UB, in 1999. The air force also revamped its radar defences, deploying new radar systems in seven key locations – Catumbela, Cuito, Huambo, Luena, Malange, Menongue and Saurimo – to give nationwide coverage.

The Su-27 entered service with the Força Aérea Popular de Angola/Defensa Aérea e Antiaérea in

mid-2000, equipping a squadron based at Catumbela, the main airbase in the central region. Some reports suggest that another seven 'Flankers' are on order. Some sources suggest that the aircraft came from Belarus, others that they were purchased from Russia. Angolan pilots were reportedly trained in Belarus, and technical support for the aircraft came from the Ukraine.

One of the newly delivered Su-27s was lost on November 19 2000, with its Ukrainian pilot, Igor Valenchenko. Opposition group UNITA claimed to have shot the aircraft down using an SA-14 MANPADs, while the air force blamed a technical failure.

The Força Aérea Nacional Angolana (as the FAPA/DAA had been renamed in 2007) had seven Su-27s on charge as of December 2011.

War-torn Sudan was the next customer for new generation fighters, taking delivery of 10 MiG-29SEhs and two two-seat MiG-29UBs in July 2004 to equip No2 Fighter-Intercept Squadron.

One was reportedly shot down by anti-aircraft fire over Darfur in May 2008 with the loss of its Russian pilot, though the Sudanese government denied this claim. Another was claimed to have been shot down by South Sudan during the 2012 border conflict. There have been persistent reports that a second batch of 12 MiG-29s has been ordered.

GET A GRIPEN

The post-apartheid South African National Defence Force (SANDF) was created in 1994, integrating some personnel drawn from the former guerrilla forces of some of the political parties involved in creating the new South Africa, but retaining the old SADF's structure and much of its equipment.

The South African Air Force (SAAF) was affected by major budgetary cuts and a loss of personnel but remains arguably the most effective and most professional air force in sub-Saharan Africa. It is undergoing a major re-equipment programme, rationalising a smaller air force around a reduced number of more modern aircraft types.

Selection of the Gripen to meet the SAAF's advanced light fighter aircraft (ALFA) requirement was announced in November 1998, with deliveries scheduled for the 2008-2012 timeframe. This made South Africa the first export customer for the Gripen, which was customised to meet specific South African requirements.

The Gripen is ideally suited to the African environment and to the SAAF requirements. The aircraft is designed for a service life of at least 30 years and is based on the Swedish doctrine of deployed operations from road bases, which give short take-off and landing distances and which allow deployed operations from austere airfields.

The communications and identification systems have been designed according to the SANDF's combat net interoperability standards, allowing the aircraft to be fully integrated with the existing SANDF command and control systems through the data link system.

The aircraft is compatible with the full range of indigenous South African weapons, many of which will be cleared for use on the SAAF's Gripens, including the Denel A-Darter, a fifth generation short-range infrared homing air-to-air missile, which will complement the IRIS-T missile now in use.

On June 7 2010 a Gripen successfully launched six A-Darters over the Overberg range complex, leading to an announcement that integration with the Gripen was 'complete'. In January 2012 a series of further testing firings were completed.

The original South African order was for nine dual- and 19 single-seat aircraft, but this was reduced to nine two-seaters and 17 single-seat aircraft in 2005, reflecting the number of two-seat Cheetah Ds and single-seat Cheetah Cs then in service.

South Africa's first Gripen, the fully test instrumented SA01, was rolled out at Saab's Linkoping plant in October 2005 and made its maiden flight on November 11.

SA01 arrived in South Africa on July 17 2006 and was delivered to the test flight and development centre at AFB Overberg in the Southern Cape. It



DEFENCE AIR ARMS

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was initially used for a development test and evaluation (DT&E) flight test phase under Saab auspices, concentrating on the integration of specific South African avionics, weapons and systems.

The aircraft took a break from this vital trials work to make its public debut in South Africa on September 19 2006, on the eve of the African Aerospace & Defence exhibition (AAD 2006) at Air Force Base Ysterplaat in Cape Town.

This aircraft was subsequently handed over to the SAAF during the first quarter of 2008. Flying training began in Sweden, and then transferred to South Africa, where No2 Squadron at AFB Makhado in Limpopo province converted to the new aircraft.

KNAAPO SU-30MKKS

The failure of the Uganda People's Defence Air Force (UPDAF) to halt attacks by Sudanese aircraft against rebel positions near Uganda's border in the mid-1990s highlighted a real capability gap.

This was underlined by the relative impotence of the air force's ageing MiG-21s during operations against the guerrillas of the Lord's Resistance Army in 2008, which demonstrated their lack of air-to-ground, range and all-weather capability.

With a continuing threat from insurgent groups, a need to protect Lake Victoria to deter any Egyptian threat (there is some tension over water extraction from the Nile's upper reaches), and to protect newly discovered oil reserves along the border with the Democratic Republic of Congo, a long-range, all-weather, multi-role fighter was clearly required, and early negotiations for the supply of six MiG-29s were abandoned.

President Yoweri Museveni led a delegation to Russia in August 2009 and was shown the Su-30MKK at the Komsomolsk Na Amur Aircraft Production Organisation (KNAAPO) plant.

In April 2010, as the Su-30 deal was being signed, and even after a partial payment of \$446 million had been made (of a total contract value reported at \$744 million), an official Ugandan spokesman still denied press reports that it had signed a deal for the purchase of six fighters from the Russian company, and insisted that six MiG-21s were being upgraded instead.

This was shown to be incorrect on July 4 2011, when an Antonov An-124 arrived at Entebbe and disgorged the first pair of Ugandan Su-30s. These were Su-30MK2s, as developed for the Chinese People's Liberation Army Air Force, and built by KNAAPO.

As such, they differ in detail from the Irkutsk Aircraft Production Organisation (IAPO)-built Su-30MKAs ordered by Algeria, most obviously in featuring square-topped tailfins and in lacking canard foreplanes. They also retain a primarily Russian avionics suite, including a conventional, mechanically scanned N-001VE radar, and are compatible 'out of the box' with Russian weapons, sensors and systems.

One of the Su-30MK2s suffered a bird strike on September 8 2011 while taking off from Entebbe. One engine was damaged but the pilot landed safely, and the aircraft was repaired within three weeks as part of Rosoboronexport's three-year warranty.

There have been suggestions that the aircraft will be paid for in part using oil revenue, and it has been reported that the Russian LUKoil company will be involved in the complex deal, participating in the exploration, exploitation and development of Uganda's new oil fields.

Britain's Financial Times newspaper reported that Uganda's Central Bank governor, Emmanuel Mutebile, had claimed that president Museveni had forced him to raid the country's foreign exchange reserves to pay for the Sukhois and other military hardware.

In March 2011, the first eight UPDAF pilots and 40 technicians were sent to Russia for training and there are plans to train 8-16 more pilots and 40-80 further technicians. Eventually an Su-30MK2 simulator will be installed at Entebbe to allow more training in-country.

The third and fourth Su-30MK2s were delivered to Uganda in October, and on May 30 2012 Russia's Interfax news agency reported that a 'military diplomatic source' had announced that the final two Su-30MK2s had been delivered. Some sources have suggested that Uganda received eight aircraft, and not six, but this is believed to be incorrect.

By the time the final aircraft arrived, however, two of the eight newly trained Su-30 pilots had already resigned over pay and conditions and the remaining six had written a strongly worded letter of complaint to president Museveni – whose directive to have pilots' allowances increased had not been implemented – threatening to follow their colleagues into the airlines, where local pilots earn \$8-10,000, and first officers \$5-7,000 per month. Ugandan 'Flanker' pilots reportedly earn \$500 per month.

SUPER SIXTEENS

In July 2011, the same month that Uganda received the first of its Su-30MK2s, the Royal Moroccan Air Force (RMAF) accepted its first F-16 at Lockheed's Fort Worth facility. The first four aircraft left on their delivery flight to Morocco on August 1.

Moroccan interest in the F-16 had begun in the early 1990s, as it became more and more urgent to replace the RMAF's ageing F-5E/F fleet and to supplant the fleet of Mirage F-1CH/EH fighters.

Algeria's acquisition of MiG-25s, then of Su-24 fighter bombers, and finally of MiG-29s, made the acquisition of a new fighter an urgent priority.

A contract with the US government for 20 ex-USAF F-16A/Bs (funded by Saudi Arabia) was signed in November 1991, but the deal fell through.

A further round of fighter modernisation in Algeria led to a new impetus and, in 2007, the

Moroccan government started another round of negotiations to purchase a new fighter, this time turning its attention to the French Dassault Rafale. Dassault offered 18 Rafales at a cost of \$3.3 billion, leading to a US offer of 36 second-hand F-16s at a cost of only \$1.4 billion.

A Dassault counter-offer of 24 Rafales for \$2.85 billion failed to win Morocco over and, on December 19 2007, the US Defense Security Cooperation Agency (DSCA) announced Morocco's formal request for 24 F-16C/D Block 50/52 aircraft and associated equipment (including targeting pods, recce pods, IFF and EW equipment) and services at an estimated cost of \$2.4 billion, excluding weapons.

By June the following year, the choice of the F100-PW-229 engine had been confirmed, and the F-16 sale was officially announced on June 6 2008. The following month a \$155 million weapons package was announced, including AIM-120C-5 AMRAAM missiles. AIM-9X Sidewinders were ordered subsequently.

The first Moroccan F-16C block 52 was rolled out at Fort Worth on September 21 2010, and four former Royal Moroccan Air Force F-5 pilots underwent F-16 conversion training with the Arizona Air National Guard's 162nd Fighter Wing, the USAF's international F-16 training unit, at Tucson International Airport. The four Moroccans qualified as flight leads and as instructor pilots, graduating in time to deliver the first four of Morocco's 24 F-16s in July 2011.

Six more Moroccan pilots underwent the basic F-16 course in Tucson, graduating in September 2011, joining the first four pilots to form the cadre of the new F-16 unit in Morocco – Escadron de Chasse 'Viper' at Ben Guerir AB.

The first 22 aircraft were ferried to Morocco between July 2011 and December 2012, allowing the formation of Escadrons de Chasse 'Falcon' and 'Spark'.

The two remaining aircraft are being used for integration flight tests at Edwards Air Force Base in California and at Fort Worth, Texas, and will be ferried to Morocco in 2013. The final aircraft was handed over in a ceremony on April 3 2012, since it was the 4,500th F-16 Fighting Falcon delivery.

With regional rivalries and tensions continuing in many areas of the African continent, local arms races will inevitably continue, and there is every prospect of more African nations joining the ranks of the superfighter operators.

Many will undoubtedly opt for the cost-effective capability offered by Russian equipment, while others will take the bargain basement option of buying second-hand fighters from former Soviet republics.

But in some cases, the lure of US equipment, and the attendant favoured nation status its acquisition may confer, may prove compelling, while the US and other Western suppliers may court some of those nations that may be seen as being the most potentially valuable allies in the on-going war against terror, or those countries whose natural resources make them most attractive.





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BUSINESS AVIATION

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with entrepreneurs, business leaders and governments, plus their respective civil aviation authorities, to facilitate growth in the sector. It will also push for operational safety and security through training programmes that teach "professionalism and excellence".

Ragheb would also like to see more new aircraft installed in Africa. The current business aircraft fleet stands at around 1,300, only 400 of which are jets under eight years old. He explained: "Traditionally Africa has been a dumping ground for old aircraft, such as DC-3s. We need to see newer types, such as Gulfstream G450s and G550s here."

All the founding members have made a strong financial commitment to developing the private aviation sector in the continent, and are expected to support African nations in understanding and leveraging the value that it can provide to future economic prosperity.

With initial membership commitment until 2015, the founders will adhere to the association's guiding principles, which focus on advocacy, safety, security, integrity, service and training. Launch members will also have a strong voice within the association, and take an active role in shaping the future of business aviation in Africa.

All founding members either operate in, or have

interests in, Africa. They are: Afrijet Business Service, Air BP, BestFly Flight Support, Crystal Ventures, Dalia Air Private Jets, Embraer Executive Jets, Evergreen Apple Nigeria, ExecuJet Aviation Africa, Gainjet Aviation, Gulfstream Aerospace Corporation, Hawker Beechcraft Corporation, Nexus Flight Operations Services, Paramount Group, Piero Scarpellini, Satcom Direct, Skyjet Aviation Services, Tarek Ragheb, Universal Weather and Aviation and Z-Aviation Services.

The group has elected 18 board members to implement the association's policies and strategy.

Extra support

Ragheb heads up the board and is joined by Ivor Ichikowitz of Paramount Group, who is vice chairman and treasurer. There are also four subcommittees, each with its own remit and elected chair, to add extra support.

Executive director Rady Fahmy oversees the whole group's activities, while Jack Olcott, formerly president of the NBAA, and a well-known business aviation advocate, has been retained in his advisory role supporting the association's development.

This October AfBAA launched four new membership categories in order to attract recruits from the rest of the world. The association is committed to building bridges with the international aviation community and also joined the US National Business Aviation Association (NBAA) to further that goal.

Additionally, it is forging links with other influential regional business aviation groups, such as the Middle East Business Aviation Association, and has applied for International Business Aviation Council membership.

Demonstrating its commitment to education, a delegation from Africa paid a visit to NBAA's headquarters this summer, while travelling around North America studying the business aviation industry there.

NBAA's senior manager, finance & tax policy Scott O'Brien explained: "Their big challenge is learning how to deal with business flight operations. One goal of this reverse-trade mission was to help them become educated about our industry and what it needs to operate in Africa."

He added that outsiders planning a trip to Africa would be well advised to start a few months ahead of time ideally, and to investigate health issues, such as necessary vaccinations. He pointed to potential security issues for both personnel and aircraft, and the fact that fuel and service availability are major considerations.

He said: "There may not be maintenance

SOMMAIRE

L'AfBAA assure la promotion de

Dans le microcosme de l'aviation d'affaires, une nouvelle association prend son essor sur la scène internationale. Liz Moscrop nous explique le rôle déterminant qu'elle pourrait avoir sur le continent africain.

L'Afrique sub-saharienne attire de plus en plus d'entreprises et de talents du monde entier. Selon un article paru dans The Economist, les investisseurs se sont massés ces dernières années à Lagos et à Nairobi comme Francfort et Tokyo autrefois. Les investissements étrangers ont augmenté d'environ 50% depuis 2005. La célèbre banque d'affaires JP Morgan, vient d'ajouter le Nigeria comme un indice obligataire des marchés émergents.

Ces signes de prospérité montrent que le monde de l'aviation d'affaires s'intéresse sérieusement au continent africain. C'est ainsi que s'est créée l'African Business Aviation Association (AfBAA).

Lancée à la dernière convention EBACE, elle est entièrement financée par ses 18 membres fondateurs. Ce sont des entreprises internationales et africaines qui mènent des activités ou ont des intérêts en Afrique. Elle représente les intérêts des propriétaires d'avions d'affaires, des opérateurs et des fournisseurs du continent.

Son fondateur, Tarek Ragheb, dirige le

conseil d'administration et Ivor Ichikowitz du groupe Paramount est désormais président adjoint et trésorier. L'association est organisée en quatre groupes avec leurs propres compétences et leur président élu, ce qui renforce son fonctionnement. Rady Fahmy, directeur exécutif, supervise les activités de l'ensemble du groupe. Jack Olcott, ancien président de l'association NBAA et fervent défenseur de l'aviation d'affaires, a été maintenu dans son rôle de conseiller et de soutien au développement.

Les 18 membres font partis du conseil d'administration et mettent en œuvre la politique et la stratégie de l'association. Sa mission est simple : promouvoir l'aviation privée en Afrique.

L'AfBAA va promouvoir les bienfaits de l'aviation d'affaires comme un important contributeur au développement et à la prospérité économique du continent. Elle a pour objectif de travailler avec les entrepreneurs, les chefs d'entreprises et les gouvernements, ainsi que les autorités de l'aviation civile respectives afin de faciliter la croissance du secteur. Elle militera également pour de meilleurs processus opérationnels et une sécurité optimale grâce à des programmes de formation d'excellence.

Les membres fondateurs auront également

une voix forte au sein de l'association et tous joueront un rôle actif dans la promotion de l'aviation d'affaires en Afrique.

Tarek Ragheb assure que l'AfBAA possède le professionnalisme et les capacités nécessaires pour soutenir le développement de l'aviation d'affaires en Afrique. C'est un continent diversifié doté d'infrastructures montrant beaucoup de disparité au niveau de l'aviation.

L'ensemble des membres fondateurs sont prêts à soutenir les pays africains et à démontrer toute la valeur ajoutée que peut apporter l'aviation privée à leur réussite économique.

«La flotte d'avions d'affaires s'élève actuellement à environ 1300 dont 400 seulement sont des jets de moins de huit ans», a expliqué Tarek Ragheb souhaitant voir aussi plus de nouveaux appareils comme le Gulfstream G450 ou G550 sur le continent.

L'AfBAA a également lancé quatre nouvelles catégories de membres afin d'attirer de nouveaux adhérents dans le monde

L'association s'est engagée à créer des liens avec la communauté aéronautique internationale. Elle a rejoint l'association NBAA et d'autres groupes influents de l'aviation d'affaires, comme la «Moyen-Orient services in some areas. Ramp equipment could be a factor and even the purity of the fuel is a consideration."

AfBAA is determined to combat such obstacles and is now working through a selection process to finalise its last two founding members, as well as soliciting applications from international businesses to join as launch members.

Ragheb said: "We noted that a number of companies we would have welcomed as founding members were unable to apply originally for a variety of reasons. As we value their input and the potential support they can offer, AfBAA will now encourage them to apply."

In addition, interested parties will be able to apply for the newly formed normal and affiliate membership types.

Although AfBAA is developing quickly, Ragheb said there is "no race" to create a local airshow. His main goal is to establish a robust organisation during his two years in charge in order to help create a culture of safety in the region, modelled on that of South Africa.

He concluded: "There have been some horrendous accidents in Africa. Other continents are able to operate a level of legislation thanks to their regulatory environments. We are focused on understanding and addressing safety here."

Evergreen sharing the tree of knowledge

Founding member Evergreen Apple Nigeria (EAN) is already making waves on the international scene since its first appearance at EBACE this year.

The company operates the only hangar, fixed base operation (FBO) and maintenance business in Nigeria, which it opened at Murtala Mohammed International Airport in Lagos in July 2011.

The centre has a full suite of facilities and is an EASA-approved maintenance, repair and overhaul organisation. In October EAN announced a partnership with Florida's Banyan Air Service, which will see the US FBO "sharing knowledge, resources and contacts" with the Nigerian team.

Evergreen chief Segun Demuren is looking to the 33-year-old Floridian entity for tips on customer service in particular. He said: "Our focus is on premium customer service and safety and the Banyan business model is a fine example of how we would like our business to develop."

He added: "We are a fledgling business and the first in the market to respond to the needs of a growing business aviation fraternity in our country. We are delighted to start sharing best practice, knowledge and resources with Banvan as we evolve and fine tune our operation."

Demuren anticipates that the partnership will help EAN improve its systems and processes, which in turn will beef up its service offering. Evergreen's ambition is to create a chain of FBOs across Africa.

Banyan CEO Don Campion and James Torrey, lead project manager, visited Nigeria in early October to undertake a complete audit of EAN's systems. This resulted in a detailed schedule for changes and improvements, plus advice on how to implement them.

Campion is bullish about the potential of the alliance and said: "We congratulate Segun and his team for establishing such a professional and attractive FBO."

■ See Evergreen's Simple Roots - Page 46

l'aviation d'affaires en Afrique

Business Aviation Association». Elle a également demandé son adhésion à l'International Business Aviation Council.

Une délégation africaine a effectué cet été une visite au siège de la NBAA pour une immersion dans l'industrie de l'aviation d'affaires Scott O'Brien directeur financier de la NBAA a déclaré: «Leur grand défi est d'apprendre à mener des opérations de vol d'affaires. Un des objectifs de cette mission était d'apporter une aide pour comprendre notre industrie et d'évaluer les besoins pour que cela fonctionne en Afrique.»

APPLE EVERGREEN NIGERIA MONTE EN PUISSANCE

Le membre fondateur d'Apple Evergreen Nigeria (EAN) fait déjà parlé de lui sur la scène internationale depuis sa première apparition à la dernière convention EBACE.

Depuis l'ouverture de l'aéroport international Murtala Mohammed de Lagos en juillet 2011, EAN opère dans l'unique hangar en tant qu'exploitant de services aéronautiques et de maintenance (FBO) au Nigeria. Elle bénéficie d'une gamme complète d'équipements et d'une organisation de MRO certifiée par l'EASA.

EAN a surtout noué un partenariat en octobre 2012 avec Banyan Air en Floride qui possède plus de 33 ans d'expériences en tant que FBO. Banyan Air partagera ses connaissances et ses ressources avec les équipes nigérianes.

Segun Demuren, directeur d'EAN a déclaré: «Notre objectif est d'assurer à nos clients des services de très bonne qualité et une sécurité optimale. Le savoir-faire de Banyan Air est un modèle dont nous souhaitons nous inspirer pour développer notre entreprise. Nous sommes la première entreprise sur le marché pour répondre aux besoins de l'aviation d'affaires en croissance dans notre pays. Nous sommes ravis de commencer à partager les meilleures pratiques avec Banyan Air pour faire développer et améliorer nos opérations."

Ce partenariat permettra de renforcer son offre de services, l'ambition d'EAN étant de créer un réseau de services à travers l'Afrique.

Don Campion, PDG de Banyan Air et son chef de projet, James Torrey, se sont rendus au Nigeria en octobre 2012 pour procéder à un audit d'EAN. Banyan Air leur a remis un rapport avec des modifications et des améliorations à effectuer ainsi que des conseils pour la mise en œuvre.

Don Campion s'est dit très confiant concernant cette alliance et a déclaré: «Nous félicitons Segun Demuren et son équipe pour avoir établi une gamme de services de qualité».

Scott O'Brien a indiqué qu'avant de planifier des voyages en Afrique, il est conseillé de s'y prendre quelques mois en avance afin d'évaluer les éventuels problèmes de santé et les vaccinations nécessaires. Il a aussi pointé du doigt les problèmes de sécurité tant pour le personnel que pour les avions. La qualité du kérosène et la disponibilité des services au sol, le matériel de piste sont des facteurs qu'il faut aussi prendre en considération.

L'AfBAA est déterminé à aller de l'avant. Elle travaille aussi sur un processus de sélection plus simple de ses membres.

Tarek Ragheb a déclaré: «Nous avons constaté que plusieurs entreprises souhaitaient être accueillies comme membres fondateurs mais ne pouvaient pas pour de multiples raisons. L'AfBAA va maintenant les encourager à adhérer tout en évaluant leurs candidatures».

Il a également souligné qu'il ne fallait pas se presser pour organiser un salon en Afrique. Son objectif principal est de mettre en place une organisation solide pour les deux prochaines années pour contribuer à créer une culture de la sécurité dans la région car les autres continents ont été en mesure de mettre en place une législation et des règlements strictes dans ce domaine. **BUSINESS AVIATION**

FBO



EVERGREEN'S SIMPLE ROOTS

Evergreen Apple, Nigeria's first fixed base operation, is enjoying the fruits of its first 18 months of training. Liz Moscrop reports.

vergreen Apple Nigeria (EAN) opened the first full fixed base operation (FBO) in Nigeria in July 2011 and is going from strength-to-strength as business aviation takes hold in the country.

The company's website urges clients to: "Forget the days of flying into Nigeria and not knowing what to expect." It cites examples such as searching for aircraft parking at 2.00am, exiting the plane on the taxiway in the dark, being rushed through the main terminal and ushered through public customs.

EAN has built a 14,900sqm luxury facility next to Murtala Muhammed International Airport in Lagos; the first in the country. The FBO offers services found at top private terminals elsewhere in the world, such as being met on arrival 24/7 and ushered into an air-conditioned VIP lounge complete with refreshments and wireless internet.

There are also VVIP meeting rooms, plus a dispatch office, crew lounge and showers and concierge services.

The company also teams with other entities to offer EASA-approved maintenance, ground handling, and helicopter charters.

EAN chief executive Segun Demuren explained that the company understands that flying into a foreign country can be a stressful experience. He said: "We try to make it simple."

Maintenance comes in conjunction with Maintenance Centre Malta (MCM), while the hanger jet centre provides a home for most executive jets and can offer troubleshooting and daily inspections, as well as line maintenance and repairs.

There is also secured apron parking, a restaurant, contracted security, fuelling, and customs and immigration arrival assistance.

EAN recently received its first training visit from partner Floridian FBO operator Banyan Air Service. The tie-up has Banyan "transferring its extensive experience and skills to EAN by sharing knowledge, resources and contacts with the aim of supporting and developing EAN's customer-focused service strategy", said Banyan.

Demuren explained that 33-year-old Banyan represents a "fine example of how we would like our business to develop", adding: "We are a fledgling business and the first in the market to respond to the needs of a growing business aviation fraternity in our country."

EAN also collaborates with local helicopter companies to provide flight services to its platinum jet club members. These range from chartered trips to medevac rescue services.

It is worth taking a couple of steps back to examine why EAN is enjoying



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CONTINUED FROM PAGE 46

such a great success.

Back in September 2012, Tunji Abioye reported in Nigeria's leading newspaper, Punch, that over the last five years some of Nigeria's wealthiest people had spent about \$6.5 billion acquiring new private jets, making it Africa's biggest market for private planes. His findings indicated that the number of privately-owned aircraft in the country had risen by 650% between 2007 and 2012. In 2007, there were a total of 20 private jets in the country; today there are more than 150.

Abioye collated information from aviation agencies and wrote that the trend came from "the need for privacy, fear of insecurity and the urgency required by modern business".

The owners of private jets in Nigeria typically range from high-flying politicians to oil magnates, business moguls and a few clergymen, the Punch article reported.

The article said there were several more private jets on the way, meaning that Nigeria is rivalling China as one of the two fastest-growing markets for private jets in the world.

This has not been lost on the OEMs. At the end of 2012 Bombardier Aerospace held a 16-African city marketing tour, starting with a four-day showcase of its latest offering, the \$60 million Global 6000, in Nigeria – its most promising

African market.

The number of acquisitions of private planes in Nigeria over the last decade has been unprecedented. Between March 2010 and March 2011, Nigerians spent \$225 million on private jets.

Demuren backs this up. He said EAN has noted increasing aircraft movements, a broadening of originating and outgoing destinations and a growth in demand for its FBO services, adding that business aviation movements had increased "by over 100% year-on-year and movements are running at an average of 15 daily".

Regular starting points

Flights are arriving into the FBO predominantly from Europe with London, Ireland, Germany, Spain, France and Austria all featuring as regular starting points for business executives travelling into Nigeria. Driving the growth is the expansion of the oil and gas energy industries, which is seeing increased interest from European companies.

Likewise, flight arrivals from the Middle East are also growing with Dubai, Saudi Arabia and Oman rating highest in terms of originating destinations.

Evergreen attended the recent Middle East Business Aviation show in Dubai because, Demuren said, Dubai is one of three key world cities for Nigerian high-net-worth investors – the other two are London and Johannesburg.

He said: "The Middle East accounts for 20% of our traffic and it is very important for us to be here."

Within Africa, most movements are to and from the most active destinations. National flights within Nigeria and from further afield, including Gambia, Cameroon, Ghana and Equatorial Guinea, all reflect the increase in African business aviation activity driven by the continent's continued expansion of energy, mineral, agricultural and telecom sectors.

Owing to the sheer size of the continent, the mid to heavy jets are proving most popular at the EAN Hangar Jet Centre. Gulfstream 400/450 models, the Bombardier Global Express family and the full range of the Bombardier Challenger types from 601s to 850s are regularly parking up at the hangar.

Demuren added: "The range of these aircraft enables business executives and government officials travelling around Africa and further afield to the Middle East and Europe to travel in the most convenient and efficient way. Longer-range fleets are working much harder than the shorter-range aircraft and we note that our handlers are mainly taking care of the mid to heavy jets on a regular basis."



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Dynamic duo on a mission to change the vista of Africa

istaJet and Bombardier are on a mission to visit underdeveloped countries around the world and this month 17 countries in Africa can look forward to a visit from the dynamic duo.

Thomas Flohr, founder and chairman, VistaJet, said the visit is to change the preconceptions about the continent and the industry there.

"Seven years ago I believed there were underserved markets in the world, especially in Africa, the Middle East and Asia. We want to visit remote and underdeveloped countries around the world and Africa is one of these continents." said Flohr.

"Business aviation is already on the radar in Africa and is particularly strong in many of its countries, such as Nigeria, South Africa, and Angola, but some people do have preconceptions about the region. What I love about my job is eliminating these thoughts. There are extremely educated people in Africa who want to improve their countries. Together with Bombardier we can change that mind-set."

The countries VistaJet will be visiting include: South Africa, Nigeria, Uganda, DR Congo, Angola, Ethiopia, Rwanda and Mozambique.

In November last year, the Swiss company signed the largest single transaction in the history of business aviation with a firm order for 56 new Bombardier Global business jets and options on a further 86, making a total order value of \$7.8 billion.

The order comprises 25 Global 5000, 25 Global 6000 and six Global 8000 jets. Deliveries of these aircraft will begin in 2014. The agreement also includes options for 40 Global 5000, 40 Global 6000 and six Global 8000 jets.

"By any standard, this is an historic order for Bombardier. It goes without saying that we are thrilled VistaJet has again chosen to grow their fleet with the industry-leading Global family," said Steve Ridolfi, president, Bombardier Business Aircraft at the announcement in London. "We welcome VistaJet's on-going commitment to global coverage within existing and developing new markets. Our Global aircraft are perfect for VistaJet's business strategy to deliver the ultimate business jet family to all corners of the world," he added.

For VistaJet – which has an operation in Lagos – the order signifies a key part of its expansion plans and ambitions to make business aviation more accessible to the emerging markets.

Flohr explained: "This order is the most significant milestone for VistaJet and is a testimony to our successful strategy that focuses on global coverage. Our customers need to fly point-to-point across the globe, and in many instances at short notice. Whether it's a direct flight from Los Angeles to Shanghai, from London to Luanda or from Kinshasa to Ulan Bator, we are seamlessly connecting our customers to every corner of the world in unrivalled levels of style and safety."

Flohr added: "Our customer success allows us to place this historic order and will enable us to base



NEW MARKETS

VistaJet's Thomas Flohr (left) with Bombardier's Bob Horner.

even more brand new aircraft in these dynamic growth markets. I am excited to serve these markets with an unparalleled product, both locally and globally. The Bombardier Global aircraft are ideally suited to meet the demanding needs of both jet owner and customer alike."

The aircraft will serve other growth regions such as Russia, Kazakhstan, China, USA, and the Middle Fast.

Another important factor the company wants to highlight is that no aircraft is older than two years. For the African market, this could well be a breakthrough given it is known to hold older aircraft.

"We want to market new aircraft in Africa," said Flohr. "Africa needs to be served in this way. It has huge resources and wealth and we want to connect to this continent. We will do this by flying to 136 airports in the region – we really want to cover it. Africa has tremendous expansion and will become like China. It's a really exciting continent for us to be with."





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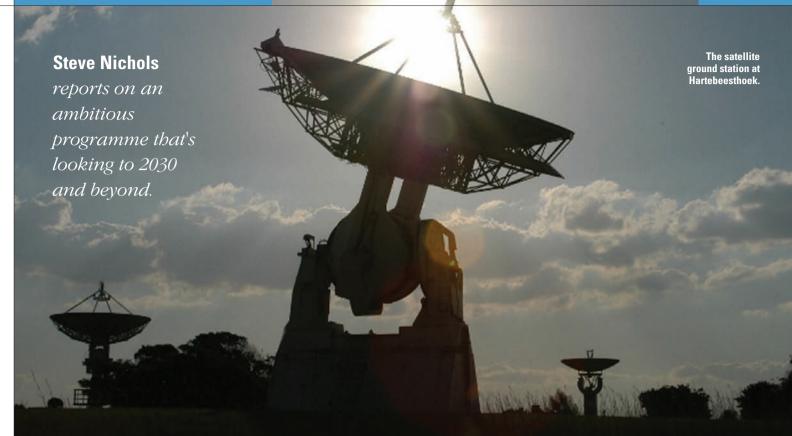
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SPACE SANSA



Space gives extra scope to South Africa development

hink of the space industry and South Africa isn't the first nation that springs to mind. But you might be surprised.

South Africa is placing a lot of emphasis on space – it now forms part of its Department of Science and Technology's 10-year innovation plan and the country also has a national space strategy.

The reason is simple. As a technologically advancing country, South Africa is increasingly reliant on space-based services and applications, particularly in terms of satellite earth observations, telecommunications, navigational positioning and timing.

The country has also made major strides in astronomy, including the Southern African Large Telescope (SALT) and the Square Kilometre Array (SKA) projects.

It thinks that creating a robust and effective space capability will increase South Africa's economic prosperity, plus the sharing of spacerelated scientific and engineering knowledge is critical to developing human capital for a stronger technological base.

SANSA – the South African National Space Agency – is a bridge between its government, academia, schools, science councils, industry and the international space industry.

It operates in a number of fields, including Earth observation (satellites), space operations (ground facilities and tracking), space science, space engineering, education and public engagement and human capital development.

Major focus

The major focus area for SANSA for the next year is the establishment of a National Space Programme with its Space Vision 2030.

More than 50 leading experts participated in an initial workshop held in November last year. They are now working on defining the priority programmes, and involving industry and important stakeholders in the process.

Participants are already active on the shared

working website contributing and debating the future National Space Programme and there are 40 individuals contracted to participate in four working groups

So what has South Africa been doing in the

The country's involvement in modern astronomy can be dated back to 1685 and in 1820 a permanent observatory was established outside Cape Town. Astronomy has enjoyed an uninterrupted history spanning more than 180 years, culminating with the construction of the Southern African Large Telescope in Sutherland 1995.

On the space front, from the 1950s to the 1970s South Africa tracked satellites to determine the effects of the upper atmosphere on their orbits. Lunar and interplanetary missions were also supported from a tracking station at Hartebeesthoek.

This station received images of the planet Mars taken by the

SPACE



CONTINUED FROM PAGE 53

Mariner IV spacecraft – the first images of Mars and of another planet to be received on Earth.

In the late 1980s South Africa commenced a military programme to develop a launcher and a reconnaissance satellite, but this was discontinued in 1994.

In 1999, the first South African satellite, Sunsat, was launched into space as a NASA-sponsored secondary payload on the rocket that delivered the much larger Argos satellite into orbit. The 64-kg Sunsat micro-satellite was built by staff and students at the University of Stellenbosch. The team that built Sunsat then built a second, more capable, South African satellite.

SANSA's Space Operations directorate, formerly the CSIR Satellite Applications Centre (SAC), also maintains an archive of images taken by a variety of satellites dating back to 1972.

The facility is a key component in the implementation of South Africa's National Space Strategy, located at Hartebeesthoek in South Africa's Magaliesberg mountain range.

SANSA provides tracking, telemetry and command (TT&C) services for geosynchronous and polar-orbiting spacecraft to the manufacturers, operators and users of satellites and launch vehicles, as well as for satellite data acquisition.

It was also involved in satellite navigation through ESESA, a European Union Framework Programme Seven project. The project was completed in 2011 after investigating extending the European European Geostationary Navigation Overlay Service (EGNOS) system to Southern Africa, primarily for use in the aviation sector. EGNOS is an augmentation system that allows for more precise satellite-location services with GPS, GLONASS and Galileo.

SANSA is helping to develop the technical requirements for an EGNOS extension to South Africa. A joint task force led by the European GNSS Agency (EGSA) met for the first time in early October.

Once a report is produced, the European Union and Republic of South Africa will then decide to engage in a longer EGSA service definition phase. This could last up to 15 months and would involve the development of more detailed specifications.

The vast range of satellite navigation applications, such as in mining and agriculture, environmental and disaster management, surveys mapping, Earth sciences and transportation and education, will be explored specifically for the benefit of the Southern African Development Community (SADC).

In 2005, South Africa embarked on a threeyear integrated capacity building and satellite development project, managed by Stellenbosch University.

Major focus

Services were contracted from SunSpace and Information Systems (SunSpace) to build the satellite, and the Council for Industrial and Scientific Research's (CSIR) Satellite Application Centre (SAC) for satellite tracking and monitoring operations.

The micro Earth observation satellite, named SumbandilaSat, was launched in September 2009 aboard a Soyuz-2 launch vehicle from the Baikonur Cosmodrome. The first part of the name, Sumbandila, is from the Venda language and means "lead the way".

This was positioned in a low earth orbit (LEO) to enable it to take high resolution images, which were used for agricultural and environmental management application. Technical difficulties were encountered in March 2010, but it provided images of the tsunami-affected port of Soma, north eastern Japan.

The satellite itself, which cost around onetenth of the price of satellites with similar performance levels from traditional suppliers, carries a main multi-spectral imager with a ground resolution of 6.5metres and is supported by on-board storage of six gigabytes, with a redundant 18 gigabyte spare.

But earlier this year SunSpace announced that the satellite had malfunctioned and was unlikely to be brought back online. Ron Olivier, head of business development at SunSpace, said that the chances of repairing the satellite were virtually zero.

SumbandilaSat was damaged during a solar storm in June last year. The power supply to its on-board computer stopped working and the satellite stopped sending back images.

This was not the first time that the satellite had been damaged by solar radiation. Shortly after its launch in September 2009, radiation caused a power distribution failure.

SunSpace said that SumbandilaSat had delivered around 1,200 images over the course of its lifetime and was also used extensively by amateur radio enthusiasts as it carried a radio transponder and digitalker.

South Africa, Kenya, Nigeria and Algeria have signed a joint venture to contribute to a constellation of satellites that will enable the sharing of Earth observation data across the continent. In addition, South Africa has embryonic plans to build a space weather satellite with Brazil and India to monitor radiation over the southern Antarctic.

SANSA Space Operations' ground station facilities also provide services to local and international space industry and governments, including launch support and early-orbit support (LEOP), in-orbit testing (IOT), satellite life-cycle support and mission control.

Customers include Astrium, Boeing Satellite Services, CNES, Eutelsat, Intelsat, and Telesat.

It is also host to the only space weather regional warning centre in Africa, which operates as part of the International Space Environment Service (ISES). The space weather products and services are required primarily for the communication and navigation systems in the defence, aerospace, navigation and communication sectors.



South Africa is also the only African country with a scientific base in Antarctica. SANSA Space Science is a key player in the South African National Antarctic Programme (SANAP) and has several ongoing space science- and space weather-related projects in Antarctica, on Marion Island and on Gough Island.

It is particularly interested in polar research since the inward-curving magnetic lines at the south pole provide the perfect opportunity to conduct space particle research. SANSA research includes the monitoring of space weather to provide data related to the effects of space weather on communication satellites.

So there is more to the South African space industry than meets the eye.

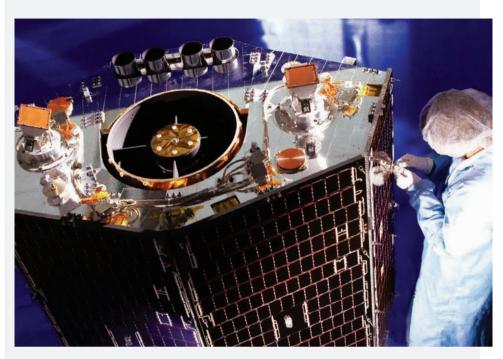
Skills and expertise

Tiaan Strydom, International Business Manager at SANSA Space Operations, said: "SANSA's skills and expertise in space operations have been built up over 50 years and are on par with the best in the world. We have supported over 350 launches and spacecraft operations since 1984 with a 100% success rate."

In its latest annual report SANSA chief executive Sandile Malinga said: "SANSA has achieved numerous successes and South African firsts in its pursuit of scientific excellence.

"Through the dedication and hard work of its employees and stakeholders, the agency has taken steps towards satisfying targets set out in the National Space Strategy and the grand challenge of space science and technology within the Department of Science and Technology's 10-year innovation plan.

"Watch this space as SANSA ensures South Africa's space activities are integrated and optimised for the maximum benefit of our citizens through the fostering of research in space science, the advancement of scientific engineering, and the support of an environment conducive to industrial development."



NigeriaSat-1

provided valuable

info on Africa's

resources and

environment

NIGERIASAT-1 IS RETIRED AFTER NINE YEARS IN ORBIT

UK-based SSTL reports that Nigeria's first satellite, NigeriaSat-1, has reached the end of its life after nine years in orbit, outliving its design life by four years.

The satellite was retired after its replacement, NigeriaSat-2, was launched last year. Although still fully functional, NigeriaSat-1 has had its orbit lowered and its propellant used up to reduce its remaining time in space.

The orbit will eventually decay, meaning a fiery end for the satellite in an effort to prevent it becoming space debris.

In its blog, SSTL says that NigeriaSat-1 was the country's first satellite, marking the beginning of its space programme. SSTL built NigeriaSat-1 for the Nigerian Space Agency (NASRDA) to provide large coverage medium-resolution (32-metre) imagery in three bands (green, red and near infrared).

This multispectral imagery was ideal for environmental monitoring such as examining vegetation growth and the damage caused by fires and floods. Its 600km swath width allowed NigeriaSat-1 to image large areas, returning to image a given spot on Earth with a revisit time of two-five days.

NigeriaSat-1 provided valuable information on Africa's resources and environment, from feeding predictive models of desertification, mapping the Niger Delta, detecting environmental change, and spotting locust threats in Algeria and Syria.

NigeriaSat-1 also benefited the international community. It was launched alongside the UK-DMC (which retired earlier this year) and BILSAT-1.
Together with the Algerian AlSat-1 they formed the first generation of the Disaster Monitoring

Constellation (DMC). As part of the DMC, NigeriaSat-1 acquired imagery to aid responders to the Asian Tsunami (2004), Hurricane Katrina (2005) as well as floods, volcanic eruptions, and other disasters.

SSTL says that NigeriaSat-1 was a catalyst for Nigeria's space programme. Following its success, two more Earth observation satellites have been launched by NASRDA.

NigeriaSat-X, which launched last year, was jointly built in Guildford by a team of engineers from SSTL and Nigeria. Applying

knowledge from their comprehensive training and development programme at SSTL, Nigerian engineers were able to learn satellite expertise "on the job" and commissioned the satellite in orbit from their ground station in Abuja.

NigeriaSat-2, launched with

NigeriaSat-X, is one of the most advanced satellites ever built. It is highly agile and equally suited to monitoring the explosive growth of Nigeria's cities as it is to assisting disaster

relief as part of the Disaster Monitoring
Constellation (DMC).

It provides continuity of the original NigeriaSat-1 data, but also provides images in very high 2.5m resolution.

The SSTL NigeriaSat-2 Team recently won "Best Space Activity (Industry/Project)" in the 2012 Arthur Clarke awards (known affectionately as "The Arthurs").

The winners of the Sir Arthur Clarke awards are individuals, teams or organisations that have originated in, or have strong links to, the United Kingdom, or have contributed to or benefited the national space sector in some capacity.

REGIONAL AVIATION



Kelly Green was there as Embraer delivered its 900th E-Jet to Kenya Airways, which is following a bold strategy to fly to the main city of every African country. enya Airways has added another Embraer E-Jet – an Embraer 190 – to its rapidly growing fleet as it expands its destinations in Africa and increases frequencies on existing routes.

The aircraft was delivered to Kenya Airways' Nairobi hub and joins the airline's existing fleet of 14 Embraer aircraft, with seven more E190s on order to be delivered by February 2013.

The occasion was celebrated with a special ceremony that took place at the airline's headquarters in the Kenyan capital. It was particularly momentous as it also marked an important milestone in Embraer's history – the delivery of the 900th E-Jet.

"The 900th E-Jet is a great achievement for Embraer and we are very pleased to deliver this aircraft to Kenya Airways, one of Africa's leading airlines, only eight years after the first E-Jets entered revenue service in 2004," said Paulo Cesar Silva, Embraer president, commercial aviation.

He continued: "E-Jets were the first aircraft to change traditional thinking about 70 to 120-seat aircraft and revolutionised regional transportation by bringing more connectivity or frequencies to passengers, providing more flexibility to their traveling plans while improving the airlines' operational efficiency."

The E-Jet family, which consists of four commercial jets with 70 to 122 seats, featuring advanced engineering design, efficient performance, outstanding operating economics, low emissions levels and a spacious cabin without middle seats (2x2), has seen global success since it entered service in 2004.

Today, E-Jets are in service with more than 60 airlines from 40 countries. In Africa alone there are 30 E-jets in operation, with the Kenyan flagship carrier being the single largest Embraer customer in Africa.

The airline's E190 aircraft are configured in a dualclass layout with 96 seats: 12 in business class and 84 in economy. They feature individual screens for every

seat, with in-flight entertainment on demand.

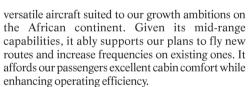
"It is a real honour for Kenya Airways to be part of this highlight in Embraer's history by receiving the 900th E-Jet," said Dr Titus Naikuni, CEO of Kenya Airways. "The E190 is a

CAPIAL CAPIAL The airline's E190 class layout with 96 in economy. They feel to the conomy. The

《Moment historique pour Embraer à Nairobi》 - Page 58

KENYA AIRWAYS





"This new acquisition brings the airline closer to our vision of flying to every capital in Africa in the next few years."

The delivery of the new aircraft comes after a difficult few months for Kenya Airways. The airline reported Sh4.7 billion net losses in the first half of the year ending September 30 2012, driven by a decline in passenger revenues. However, it is continuing with its ambitious plans for the continent and Embraer, too, sees a lot of potential in the African market.

"Our reputation is growing and this is very much thanks to companies like Kenya Airways," said Silva. "The 900th E-Jet is incredibly symbolic of the aircraft's success.

"Around the world airlines are continually discovering the potential of the E-Jet family to bring the greater efficiency and profitability to their operations. But it's Africa that has captured our hearts now.

"Kenya Airways is following a bold strategy, to fly to the capitals of every African country, and some of those flights will be with our E-Jets. Those new markets will need frequency and, of course, the right size of planes to let the airline fly even more efficiently."

Addressing the Kenya Airways' CEO directly at the event, Silva added: "Your commercial strategy, your expansion,



REGIONAL AVIATION

CONTINUED FROM PAGE 57

your new routes and your E-Jets are all helping to bring affordable air travel to more Africans."

For Kenya Airways, the aircraft is fitting in well with its expansion strategy. "If you look at the routes we are starting, these are new routes, young routes, we don't have enough passengers for larger aircraft so you need smaller aircraft," said Naikuni.

"The E190 jet is giving us an opportunity to expand our network and increase our frequencies beyond the current offering, while cementing our mandate of connecting Africa to the world and the world to Africa through our hub at Jomo Kenyatta International Airport."

Silva believes that other airlines, too, will realise the advantages of having smaller aircraft in their fleet, and Embraer forecasts a bright future in the continent. "There is a bright future here. Bigger isn't always better, small can be also beautiful," he said.

"We see a huge potential in the Africa market; it's a market that is very much suited to aircraft of around 70-100 seats."

Silva pointed out that around 70% of all flights intra-Africa are more suitable for 100-seat aircraft. "Load factors are well below the average in the world here, so it means that there is huge potential for rightsizing routes in the continent."

Greater need

With the big Middle Eastern carriers, such as Etihad, Emirates and Qatar Airways, bringing large numbers of people into Africa daily, Silva believes there will be an even greater need for intra-Africa air transportation in the future.

And, as this requirement grows, E-Jet operators will be prepared to match capacity to demand.

"There will be immense opportunities for air travel here," he said.

"Of course there are challenges," he continued. "Africa is a big continent with a billion people but 54 countries, so there must be a little bit of liberalisation and more deregulation among the countries, or integration. But it is definitely a huge market.

"Right now there are approximately 210 jets in the category between 60 and 120 seats, but for the next 20 years we see another 250 aircraft in this category," Silva predicted.

He added that there has been a huge improvement in the African air traffic and air transportation market.

"We believe that we have the right product for this market," he said of the E-Jet. "We are investing a lot of money in the next five years to continue to be very competitive in this segment and we believe that we have all the necessary attributes to maintain our position and grow our market share in Africa.

"We have a strategy that has been already implemented and will continue to be implemented to grow our presence in Africa. We are sure that we will keep the E-Jet family very competitive.

SOMMAIRE

Moment historique pour Embraer à Nairobi

Embraer a livré son 900ème E-Jet à Kenya Airways lors d'une cérémonie qui s'est déroulée au siège de la compagnie situé dans la capitale kenyane. Retour sur cet événement avec notre envoyé spécial, Kelly Green.

Kenya Airways a ajouté un autre Embraer 190 (E190) à son portfolio. Cet avion rejoint la flotte de la compagnie en pleine expansion qui compte recevoir sept autres E190 fin février 2013.

«L'E190 est un avion polyvalent adapté à nos ambitions de croissance sur le continent africain. Compte tenu de ses capacités, il nous permet d'opérer de nouvelles routes et d'augmenter les fréquences sur notre réseau. Il offre également un haut niveau de confort à nos passagers tout en améliorant notre efficacité opérationnelle», a déclaré Dr Titus Naikuni, directeur général de Kenya Airways.

Pour Kenya Airways, l'E190 est en parfaite adéquation avec sa stratégie. Selon son PDG, la livraison de ce 900ème E-Jet permet à la compagnie aérienne de consolider sa vision c'est-à-dire pouvoir desservir toutes les capitales de l'Afrique durant les prochaines années. En ouvrant de nouvelles destinations, vous courez le risque de ne pas avoir assez de passagers. Vous avez besoin par conséquent d'avions plus petits, avec moins de capacités.

«L'E190 nous donne ainsi l'occasion d'étendre notre réseau et d'augmenter nos fréquences au-delà de l'offre actuelle, tout en répondant à nos impératifs de relier l'Afrique au monde et le monde à l'Afrique par le biais de notre hub de l'aéroport international Jomo Kenyatta », a-t-il ajouté.

La livraison de ce 900ème E-Jet est également une grande réussite pour Embraer. Paulo Cesar Silva, directeur de la branche commerciale de l'avionneur, s'est dit très heureux de livrer cet avion à Kenya Airways, l'une des principales compagnies aériennes en Afrique, huit ans seulement après le premier E-Jet entré en service commercial en 2004.

«L'E190 est le premier avion de 70 à 120 places qui a révolutionné le transport régional. Il apporte plus de connexions ou de fréquences pour les passagers, plus de souplesse tout en améliorant l'efficacité opérationnelle des compagnies aériennes», at-il déclaré.

La gamme d'E-Jet se compose de quatre avions commerciaux allant 70 à 122 places. L'E190 offre une capacité accrue. Il est également plus économe en carburant que les avions de la génération précédente tout en offrant des performances supérieures en rayon d'action, de vitesse et de confort. L'E-Jet a connu un succès mondial depuis son entrée en service en 2004 avec plus de 60 compagnies aériennes clientes dans 40 pays dans le monde. En Afrique, plus 30 E-Jet sont en service, Kenya Airlines étant le plus important client. L'E190 de Kenya Airways est dans une configuration en classe double avec 96 sièges: 12 en classe affaires et 84 en économie.

M. Silva a enfin salué la stratégie audacieuse de Kenya Airways: «Votre stratégie commerciale, l'expansion de votre réseau et vos nouveaux E-Jet contribueront à apporter au continent un transport aérien abordable à davantage d'Africains».

Au delà de cette cérémonie, c'est la réputation d'Embraer qui s'étend. M. Silva estime que d'autres compagnies en Afrique pourront se rendre compte des avantages des avions E-Jet.

Embraer voit un énorme potentiel dans le marché africain qui est très bien adapté pour les avions de 70 à 100 places. L'avionneur continue à développer sa stratégie pour accroître sa présence en Afrique.

Selon M. Silva, Embraer continuera à investir durant les cinq prochaines années pour continuer à être très compétitif, maintenir sa position et accroître sa part de marché en Afrique.

«Il y a actuellement 210 avions régionaux dans la catégorie 60 et 120 passagers. Nous estimons le nombre à 250 nouveaux avions pour les 20 prochaines années», prédit Silva. « Nous croyons que nous avons le bon produit pour ce marché ».

Les grandes compagnies du Moyen-Orient, comme Etihad, Emirates et Qatar Airways transportent chaque jour un grand nombre de voyageurs en Afrique. Il y aura par conséquent plus de trafic pour les routes intra-africaines à l'avenir. Les opérateurs d'E-Jet seront alors prêts à adapter la capacité face à cette demande.

La livraison du 900ème E-Jet d'Embraer intervient après des mois difficiles pour Kenya Airways. La compagnie aérienne a affiché une perte nette de 4,7 milliards Sh (shilling kenyan) au premier semestre de l'exercice clos le 30 Septembre 2012. C'est essentiellement en raison d' une baisse de revenu par passager. Cependant, la compagnie poursuit son plan ambitieux en Afrique. Embraer souhaite quant à lui développer tout son potentiel sur le marché africain et y asseoir sa notoriété.









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Precision plan for ten-year growth

Tom Pleasant

meets the CEO who demonstrates a model way to grow from small beginnings.

ou can have a lot of aircraft but without a good business model you will die very fast – that's the view of Alphonse Kioko, CEO of Precision Air:

Kioko should know. He turned Precision Air – it started out as a crop sprayer in 1991 – into Tanzania's first and only airline to pass IATA's operational safety audit, moving more than half-amillion passengers a year.

"By June 2013 we will be rolling out our fleet plan for the next 10 years and I think we will come up with some very interesting numbers," Kioko revealed.

For now the airline has five ATR 72-500s, four ATR 42s and three Boeing 737-300s. Some of those are being replaced by ATR 42-600s, part of a five-aircraft order that saw the first delivered in November and the second in December. Two more will arrive in 2013, to be joined by the final one on 2014.

"The aircraft we have are financed by ECS, Citi Bank and Finnfund," explained Kioko. "These new ATR-600s are being financed by EDC in Canada, but we also have other investors interested in coming in and those we will review as time moves on."

Currently the airline mostly operates domestically but it also flies to Nairobi, Mombasa (both Kenya), Lubumbashi (DRC) and Lusaka (Zambia). Next year Kioko hopes to expand to Lilongwe (Malawi) and Harare (Zimbabwe), but it will be at least another two years before flights resume to South Africa, although he promises new equipment and increased frequencies.

For the time being the airline's focus is on East and Central Africa. "We are also looking at Angola next year," he added, "and

to start operations to West Africa in the next two years. After that will be the Middle East and Asia, followed by Europe."

Kioko: the future is very bright.

That will be accomplished largely with help from Kenya Airways, which is Precision's major partner (owning 41.2%), but Kioko doesn't rule out cooperation with other airlines, although on softer terms, such as codeshares and training. "As time goes on we will try to renew our cooperation and see what new areas we can team up with," he explained.

Maintenance facility

As well as fleet and network, Kioko said he wanted to develop the airline's maintenance facility, ground handling and cargo businesses so that it was not entirely reliant on passenger traffic.

Concerning the issue of the African talent drain to the Middle East, Kioko said: "People obviously want money but it isn't all about that. It is also not just forcing staff to stay by bonding them after their training. It is about providing them with the environment to do the job you have trained them to do. You also have to be receptive to their ideas and encourage them, giving them career growth."

He admitted there were potential challenges that could limit Precision's plans. "There are obviously external problems, such as regulatory issues. We may want to expand to a certain area but the traffic rights do not permit us to do so.

"By and large, though, I can see us setting out to do what we want to do," he predicted. "When you look at our growth it's been double digit. In 10 years time I imagine Precision Air will be a much bigger carrier, one of the major airlines in the region. The future is very bright for us."

South African Express Airways (SA Express) is a small regional carrier taking its first steps into becoming, if not a big carrier, then at least a resilient one.

Tom Pleasant looks at the issues.

Can SA Express provide Africa's missing links?

ealism is absolutely key for SA Express boss Inati Ntshanga. "We're a small airline; we cannot try and operate as if we were a big one," said the Harvard-educated company CEO.

SA Express started operations in 1994 as the regional subsidiary of South African Airways (SAA). While it still shares a strategic alliance with Airlink and SAA, it is operationally independent from both.

It currently flies one Boeing 737-300, 10 Bombardier CRJ200ERs, five CRJ700s (leased from Horizon Air) and nine Dash 8-Q400s.

Ntshanga has been SA Express CEO since 2010. He joined the airline from SAA in 2005. He has been leading the airline's recent growth and talked happily about the company's plans, particularly its expansion out of southern Africa.

"If people are trying to move between east or west Africa and Johannesburg they have to fly to Europe or the Emirates first, which is crazy," he said. "There may be airlines that fly directly between the African regions but they are expensive."

Vacuum left behind

There is certainly an opportunity following the collapse of Air Afrique, the pan-African airline that flew extensively throughout Africa and internationally but collapsed in 2002. Since then various airlines have tried to move into the vacuum left behind but with mixed results. Ntshanga is convinced SA Express has a business model that will ultimately prove more successful.

So far, SA Express has built up a respectable hub and spoke network across southern Africa. From Cape Town, Durban and Johannesburg it flies to eight other points in South Africa and internationally to Botswana, Democratic Republic of the Congo (DRC), Mozambique, Namibia, Zambia and Zimbabwe.

Now, Ntshanga wants to build a three-hub

network that encompasses east and west Africa.

"We've done the research; we know where we want to go. For the west, we're certain we want to launch a hub in Accra in Ghana. In the east, where Kenya Airways is strong, we're looking at Entebbe in Uganda, but with Air Tanzania struggling it could be Dar es Salaam instead," he said.

"We're after natural, sustainable growth. There's no urgency. The good thing is we don't use narrow-bodies. We started with two aircraft we already owned and grew from there. We use 50-and 70-seaters, so it's easy to stimulate a market. We don't have to put a huge aircraft on a route where we could start making huge losses. We carry 30 people and we're happy."

If developing the right network expansion model were the only thing that stopped other airlines from picking up the Air Afrique crown, then it would have been done before now. One problem, so far, has been little exploitation of non-passenger revenue opportunities, vital for an industry that operates on such a slim profit margin.

SA Express has, therefore, become the first commercial aircraft authorised service facility in Africa for Bombardier (see story on page 9).

"We've always looked at ancillary revenue as being critical," explained Ntshanga. "Technical is a very expensive area where you cannot compromise. You have to spend indiscriminately to maintain your aircraft but when you only have a few aircraft you start losing money because of economies of scale. By opening up our technical division to other airlines, it no longer means we're buying for ourselves but for a bigger pool and that turns the division into a good profit centre that will grow."

SA Express has already become approved by the civil aviation authorities in Angola, DRC, Malawi, Mozambique, Nigeria, South Sudan and Tanzania. Without those approvals Ntshanga said the airline would have had to work harder to gain the trust of

the aviation companies and the countries' governments. Eventually he wants the airline to gain European Aviation Safety Agency (EASA) certification, but that will have to wait for the time being.

The other area that has caused problems for African airlines has been the skills drain as trained staff are poached to go and work in Europe and, in particular, the Middle East. Ntshanga does not see this as a particular problem for the airline though.

"Without people, nothing would work. When we think about innovation many people think of IT and systems, but it has to be people – their skills and their passion, about the land and the industry. For me, the priority has to be people development.

Attrition is very low

"That's why our attrition is actually very low. It's only 1%, mainly from the technicians. They go, but then they come back when they want to settle down, when they're tired of feeling like a foreigner wherever they go.

"We also pay decent salaries but the good thing is, because we're a regional airline, pilots and cabin crew can sleep at home almost every day. Here we make you feel like part of the family. So even if they leave us we have a lifestyle that means they can always come back and fit in.

"Even watching staff being taken away by other companies is OK, because I know they are top people."

The airline has been busy "churning" out black African pilots, of which there is a shortage on the continent. The company, which has about 200 pilots, currently trains 20 cadets every year. So successful is its training programme that it has now started training other airlines' pilots as an additional revenue stream.

It has also introduced a management development programme and bought in-house IATA training for all of its senior managers.

"We don't have to

put a huge aircraft

on a route where

we could start

making huge losses. We carry

30 people and

we're happy."

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Even with this corporate development, the African aviation environment as a whole is difficult to operate within. Most African airlines are still state run and that gives their governments cause to become highly protectionist, both by withholding route rights and by issuing crippling taxes. Liberalisation of the African skies is something that has long been talked about at African Airlines Association annual general assemblies but rarely has anything come of it.

"Everybody knows what needs to be done," explained Ntshanga. "It's not rocket science. The problem is you can have all these good ideas but sometimes it's just the implementation of what's really happening on the ground that stops you. As long as you are able to hit the ball hard, far and straight you will have a good golf game. The same with running an airline – you have to mitigate cost, be efficient and be innovative."

Especially important

Ntshanga said this is especially important when considering the usual response many airlines have had to the global recessions – namely cuts.

"The industry has completely changed from what it was seven years ago. We have to constantly change ourselves to meet the needs of our customers. We need to find new ways to increase our revenues. You can't continue to cut to the bone. You have to balance cost cutting with revenue enhancements.

"It's still very expensive to operate in this industry," he added. "In Africa it seems like everyone is making money except for airlines. The yields continue to decline. The size of the pie is not changing. Instead, each airline's slice of the pie is getting very, very thin. That's not sustainable."

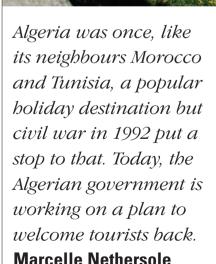
One area that could help is alliances, which he believes can also help to increase safety levels. "I don't know why we still don't have an African alliance; there are real benefits," he said. "As

airlines want to become part of an alliance they have to clean up to world-class levels, but it takes time. "Also, when SA Express started 18 years ago, we had synergies with SAA that helped us deploy the right aircraft in the right markets. SAA might have been flying large aircraft twice a day but now we're flying the same route eight times a day, but with smaller aircraft. For us that's a model that works. "Those synergies are what are needed for the entire continent, but that requires cooperation. Everyone knows it, but the problem is execution. We've been talking about it for years. We need to stop talking and do it. The people in leadership need to come together to make the change so that big and small airlines can work together to grow the size of the pie."



THE LAND THAT TOURISM FORGOT

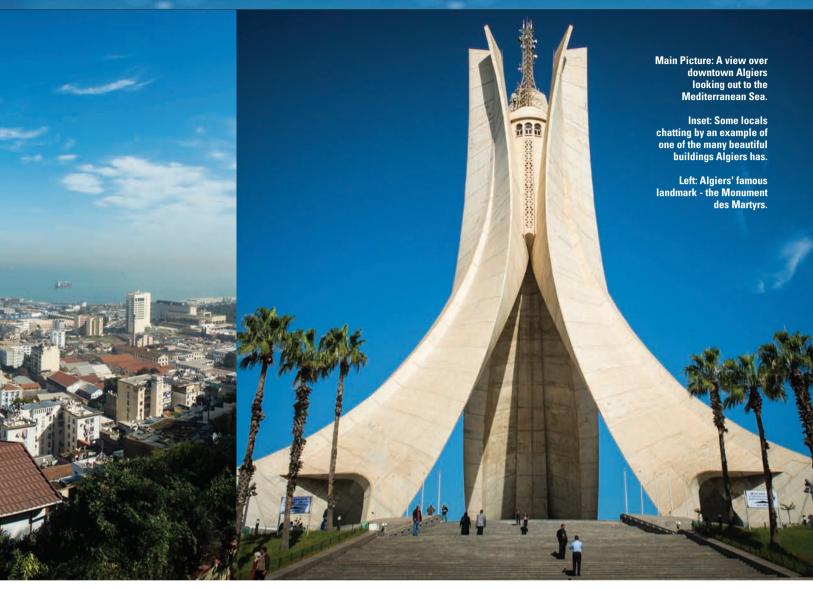
«Un pays qui a perdu ses touristes**»** – Page 67



visited the diverse

country.

TOURISM



tanding high and proud above Algiers, the capital of Algeria, is Monument des Martyrs, a landmark created to commemorate the Algerian War for Independence, which ended 50 years ago.

Over the next half century Algeria has been making progress with its infrastructure. And, while it continued with its struggles – particularly when bitter civil war broke out in 1992 – the government is now on a mission, along with the national airline, Air Algérie, and the main tourism company, ONAT, to construct a tourism plan.

While the tourism sector of Algeria is a contributing factor in the country's economy, the figures are still quite low, with 220,000 tourists visiting in 2011. Of those, many are from the 'ethnic' community, which means Algerians living abroad coming back to visit.

"We have \$\overline{3}\$6 airports in Algeria and the air traffic is more than six million passengers a year, which is made up of business, ethnic and tourism," said Nabil Doumi, head of cooperation and international affairs at Air Algérie.

"We have large communities living in Europe that come home to Algeria to visit family and friends but we are also starting to see a small number of tourists coming in to Algeria who particularly enjoy the south of the country.

"Air Algérie is working with the government to try and set up packages to have more tourists visit from around the world, and not just business travellers and nationals working abroad. Together, we want to show the world what Algeria offers."

It's fair to say that Algeria makes it hard for a tourist, or business traveller from certain countries, to visit with all the visa restrictions and letters of invitation needed to enter the country.

Hopefully the tourism plan will take this into account, so visitors can visit this very diverse country that really in a gem in North Africa.

Algeria is huge, spanning 2,300,000sqkm, making it the second largest country in Africa after Sudan.

It has 120km of coastline and 6,000km of borders with Tunisia, Libya, Niger, Mali, Mauritania, Western Sahara and Morocco.

It has beaches, deserts, mountains, and forests – making its climate suitable to everyone all year round.

There is a rich culture that is underdeveloped with seven Unesco World Heritage sites and ancient civilizations. To this day the different civilisations, which have enriched the country for years, have left many traces that can still be seen – from rock paintings and carvings in the south to many of the historic cities, such as the valley of the M'Zab, which has a collection of castles and fortified villages, and the former Roman cities of Hippo and Djamila.

Most visitors fly in to Algiers. It is here that a lot of business is conducted away from the gas and oil industries in the south. It is the largest city in Northwest Africa and is also home to the largest port in the region.

Algiers is known as the white city. Sitting on the Mediterranean, the capital is stacked with white dusty buildings. When the sun is shining, it's very easy to see the charm the city once held.

CONTINUED FROM PAGE 65

While it's a little tired around the edges now it still has stunning French and Ottoman architecture, and wonderful winding streets and alleys going up in to the hills.

There are beautiful mosques and churches to visit, including the Notre Dame d'Afrique Cathedral that sits atop a hill overlooking the Mediterranean, as well as museums, including the Museum of Modern & Contemporary Art and the Beaux-Arts Museum.

Discover the old city of the Casbah, which is listed as a Unesco World Heritage site, where you can walk the steep narrow alleys with its low houses. It is believed up to 70,000 people still live in this poor area. It's best to go in the day to appreciate it, and also for safety reasons.

Algiers is a lively city with a great selection of bars and restaurants and, due to its location, it is particularly noted for its seafood restaurants.

The only major downfall of Algiers is its traffic. If you're in a hurry to get across town you'll need a good hour-and-a-half in the traffic. However, the new underground system became active in 2012 so, hopefully, the traffic will be cut dramatically.

Algiers has a good selection of hotels; one of the best is the El Aurassi, where the 45th Arab Air Carriers' Organization AGM took place.

Algeria is considered a safe country. This makes international brands particularly interested in investing in its future growth. Some key players like the InterContinental, Marriott, Hilton, Sofitel and Accor are investing there for the long term.

The government is currently working on its strategy to boost the quality of hotels as well as hit



The Tuareg tribe (also known as the Blue Men of the Sahara) in Tassili N'Ajjer. Right: The old city of Casbah.

SOMMAIRE

Un pays qui a perdu ses touristes

Jusqu'à la guerre civile, en 1992, l'Algérie était une destination prisée des

touristes. Le gouvernement veut à nouveau les attirer. Par Marcelle Nethersole.

Comment remettre l'Algérie sur la carte des destinations touristiques? Le gouvernement s'attelle à la tâche. Il s'est allié avec la compagnie nationale Air Algérie et la principale agence de voyage du pays, ONAT, afin de préparer un plan de développement.

Certes, le tourisme contribue déjà à l'économie du pays – mais à un faible niveau. Seuls 220 000 visiteurs ont été enregistrés en 2011. Et encore, beaucoup sont des Algériens qui vivent à l'étranger et reviennent voir leur famille.

« Nous avons 36 aéroports en Algérie et plus de six millions de passagers par an – ils voyagent pour affaires, visites de famille et tourisme », explique Nabil Doumi, directeur de la coopération et des affaires internationales à Air Algérie. La compagnie a constaté que les quelques « vrais » touristes qui viennent en Algérie visent surtout le sud du pays. Elle travaille maintenant avec le gouvernement à créer des formules tout-compris.

Redévelopper le tourisme en Algérie ne sera pas facile. Certaines difficultés sont connues. Ainsi, aujourd'hui, les visiteurs de certains pays doivent

d'abord réunir visa – une procédure parfois très contraignante – et lettre d'invitation. Le plan de développement touristique en cours d'élaboration devra aplanir ces obstacles.

Mais l'Algérie ne manque pas d'atouts. C'est un pays très varié que l'on peut qualifier de joyau de l'Afrique du Nord. Avec 230 000 km2, elle possède la deuxième superficie d'Afrique après le Soudan. Ses 120 km de côte offrent une profusion de plages. Si l'on ajoute déserts, montagnes et forêts, chacun pourra trouver un climat qui lui convient, tout au long de l'année.

L'Unesco a classé sept sites au patrimoine mondial de l'humanité. Plusieurs civilisations se sont succédées au fil des siècles. Elles ont laissé des traces – des peintures rupestres aux châteaux, en passant par les anciennes villes romaines de Hippone et Djemila.

La plupart des touristes arrivent par avion à Alger. C'est là que se font les affaires. Alger, plus grande ville d'Afrique du Nord, en est aussi le plus grand port.

La Méditerranée borde « la Blanche », l'un des surnoms de la capitale. Ses immeubles d'un blanc... poussiéreux ne masquent pourtant pas son charme. Bien qu'un peu fatigués, certains bâtiments laissent encore apparaître de superbes architectures française et ottomane. Rues et ruelles sinueuses grimpent dans les collines.

De belles mosquées et églises attendent le visiteur. Les musées ne sont pas en reste, comme le musée d'art moderne et contemporain. La vieille ville, la Casbah, est l'un des sites classés par l'Unesco. Quelque 70 000 personnes vivent dans ce quartier pauvre. Mieux vaut y aller de jour pour l'apprécier en sécurité.

Dans cette cité animée, le visiteur peut compter sur une belle sélection de bars et restaurants, notamment grâce aux produits de la mer. Du côté des bons hôtels algérois, on peut mentionner le El Aurassi. C'est là que s'est tenue la 45ème assemblée générale de l'association des compagnies aériennes arabes.

Finalement, le seul gros point faible d'Alger, c'est sa circulation automobile. Il faut compter une bonne heure et demie pour traverser la ville. Un nouveau métro, en 2012, devait en partie résoudre le problème.

Oran et Constantine sont deux autres grandes villes dignes d'intérêt. Port important, Oran est réputée pour

all visitor interests; including aiming at the health and wellness visitor to the country – Algeria boasts 270 hot springs that can be developed as hotel spas and resorts.

Two other popular towns to visit in the north are Oran and Constantine – the second and third largest cities in Algeria.

Oran is a major port city. It is popular with young locals for its lively nightlife and for families as it offers a beautiful coastline and beaches. The cornice is located a few kilometres west of the city and has a multitude of beaches, one of the best being Madagh beach.

Constantine is truly stunning. It sits atop a plateau surrounded by a deep ravine and rises from the surrounding land to a height of 2100ft above sea level. It is often referred to as the 'City of Bridges' because of the four bridges that connect it with the mountains.

The 125 metre Mellah Slimane Bridge joins the train station with the centre of the old town. It is some 100 metres above the water and makes a breath-taking walk.

Other highlights in this historic city are the Casbah, which houses ancient buildings and various styles of architecture; the stunning Palace of Ahmed Bey, which is one of the finest Ottomanera buildings in the country; and the Grand Mosque, which was built in the 13th century. A visit to the Cirta Museum offers a great insight to the city's spectacular past.

As Algeria is such a big country, some trips will require visitors to fly to certain destinations to save time.

"Our airports are all very well equipped, which enables travel quickly between remote areas," said Doumi. "This includes the road network, trans-Sahara road in the south and eastern highway. So visitors can experience road travel in good conditions."

Trips to the south of the country require a flight. It is the south that boasts the mammoth Sahara desert and a stunning mountainous backdrop.

It has only been possible in the last couple of years to visit this region of the country – and it's truly a must. But, you should note that for safety reasons it is not wise to travel in the south independently.

Popular trips include a visit to Tassili N'Ajjer National Park and the Hoggar.

Tassili N'Ajjer National Park is just outside the whitewashed oasis town of Djanet, close to the Libyan border.

It is known as the 'Plateau of Chasms', which conceal unrivalled Saharan rock art. There are more than 15,000 drawings and engravings, which record the climatic changes, the animal migrations and the evolution of human life on the edge of the Sahara – which covers more than four-fifths of the land – from 6,000 BC to the first centuries of the present era.

The desert in itself is stunning, with huge rocks in the middle of waves of golden sand.

Beauty of the mountains

The Hoggar is one of the biggest mountain ranges in the Sahara. Trips usually start from the city of Tamanrasset.

Here you can discover the beauty of the mountains, as well as desert landscape, its rocks and carvings.

While trips are mainly undertaken in 4x4 vehicles, there are also trekking trips. Treks include the chance to hike to the top of Algeria's highest summit, Jabal Tahat, which stands at 2,908 metres.

Camel treks can also be made in Dag Iharadj.

Depending on which trip you choose, you might be staying in a hotel in one of the towns, or camping out in local shelters or huts, or if you're in Tassili you can sleep in traditional tents.

Berbers originally inhabited Algeria, until the Arabs conquered North Africa in the 7th century. Based mainly in the mountainous region of the south, the Berbers resisted the spread of Arab influence, managing to preserve much of their language and culture.

Part of this tribal culture is still very much alive in the Tassili N'Ajjer and Hoggar regions. There are around 1,000 nomadic Tuareg tribes still settled in the area that are reputedly of Berber decent.

The Tuareg tribe is also known as the 'Blue Men of the Sahara' because of the striking indigo veils, worn by the men (but not the women), which help them cope with the desert weather.

Today, much of the tribe relies on tourism to survive and many of them will accompany you on your trips, so expect a friendly nomadic welcome.

In fact, once you have got past the initial visa drama of getting into Algeria, the country, and its people, will offer you a very warm welcome and a trip you will remember for life.

There are definitely opportunities to market the destination a lot more aggressively.



sa vie nocturne. Les familles apprécieront les plages – celle de Madagh est à recommander.

La situation géographique de Constantine, très différente, est à couper le souffle. Perchée sur un plateau à 600 m d'altitude, elle est entourée de ravins spectaculaires. Quatre ponts la relient aux montagnes environnantes. A visiter: le superbe palais d'Ahmed Bey, l'une des plus belles constructions de l'ère ottomane en Algérie.

Pour le touriste qui veut profiter de plusieurs facettes du pays, les distances peuvent être longues. « Nos aéroports sont très bien équipés, ce qui permet d'aller rapidement d'un point à un autre », assure Nabil Doumi. Quant au réseau routier, dont la route transsaharienne au sud et l'autoroute de l'est, il est de bonne qualité, ajoute notre interlocuteur.

Le sud du pays ne se visite que depuis un an ou deux. Cette région à elle seule vaut le voyage. Mais attention, pour des raisons de sécurité, n'y voyagez pas sans être accompagné.

Le parc national du Tassili est une mine d'art saharien. Plus de 15 000 dessins et peintures rupestres y racontent les changements climatiques, les migrations animales et l'évolution de la vie humaine au bord du Sahara de 6 000 ans avant J.C. jusqu'aux premiers siècles de notre ère. Les paysages de désert sont somptueux.

La plupart des visiteurs se déplacent en 4x4. Les randonneurs à pied pourront gravir le mont Tahat, le plus haut sommet d'Algérie – 2 908 m. Pour ceux que tenterait une méharée, des chameaux sont disponibles à Dag lharadi.

Dans le Tassili et le Hoggar, la culture berbère reste vivace. Elle a résisté à l'influence arabe. Environ 1 000 Touaregs nomades, héritiers de cette culture, se trouvent dans la région. Une grande partie de la tribu vit du tourisme : attendez-vous à un accueil chaleureux.

L'Algérie, pays d'avenir pour le tourisme? En tous cas, des acteurs majeurs de l'hôtellerie comme Intercontinental, Marriott, Hilton, Sofitel et Accor y investissent. Les 270 sources chaudes pourraient servir de base au développement du tourisme de balnéothérapie.

lan Sheppard was a visitor when Algeria hosted the Arab Air Carriers Association (AACO) meeting in November. Here he reports on his time getting to know both Air Algérie and the background to the country's aviation woes.

AN AIR OF OPTIMISM

⟨⟨Un air d'optimisme⟩⟩ – Page 70

or many in the developed world, North Africa is an almost forgotten place between West Africa and Europe, or perhaps the Middle Fast.

For Algeria, a vast former French-occupied territory in the Maghreb, there is not even much tourism putting it on the map—unlike its neighbours Morocco and Tunisia.

The so-called Arab Spring of 2011 was a seminal moment for Algeria, if less so than for Egypt.

As with the rest of the region, Algeria still reverberates with the memories and implications of that time, and the suggestion from the West that all such nations should democratise.

This perhaps explains why it is a place that feels untrusting of outside visitors. It is perhaps weary of revolutions and didn't quite want to grasp the latest one, having succeeded in a long struggle against the French in 1952 and then seen a push for democracy in 1988 (resulting in a civil war in the 1990s after the then president was assassinated), and then more recently having been on the doorstep of Libya as regime change was enforced with the help of Western powers.

With radical Islam always bubbling beneath the surface (having been suppressed in the late 1990s) the immediate needs of security and stability seem to take precedence over a headlong rush for economic expansion.

The president is Abdelaziz Bouteflika, who gained 90% of the vote in the April 2009 presidential election. He has been president since 1999, so is in his third five-year term (there is no limit on number of terms).

With the official national languages being Arabic and French, both widely spoken with few having more than a few words of English, there is a sense of direction that points to the Middle East and away from France, despite so many Algerians living in France.

Algerians are still seeking their independent identity; stuck in an identity crisis with an attitude to France reminiscent of Zimbabwe's towards Britain, which resulted in such an economic disaster. France can help Algeria still but it will be an uneasy relationship for a long time to come.

Algeria has an economy which, due to reliance on oil and gas, has not tended to develop manufacturing. This is certainly the case for aerospace.

Its airline industry has been established predominantly on the back of French ties and the requirements of the oil and gas sector, needing to transport personnel into the vast swathes of desert inland.

Main market

The main examples are respectively Aigle Azur, the Paris-Orly based airline (and operator of 12 A320-family aircraft), whose main market is Algerians living in France, and Tassili Airlines, the domestic carrier owned by Algeria's national oil company, Sonatrach (the airline has been operating since 1999).

Sonatrach is Algeria's largest company and probably the biggest in Africa. It generates around 30% of the country's gross national product.

It is Air Algérie and its Algiers base, however, that represents the core of the aviation sector and for now the national carrier holds sway.

Although it relinquished its 49% stake in Tassili to Sonatrach in 2005, it is relatively friendly competition compared to low-cost carriers.

The EasyJets, Ryanairs and FastJets of the world

have not yet arrived but are a threat, which has been partly responsible for Air Algérie deciding to put together a new five-year plan to renew its ageing fleet.

Various international carriers, such as British Airways and Qatar Airways, also operate to Houari Boumediene International Airport.

Air Algérie president and CEO Mohamed Salah Boultif, said the country's ambition was for Algiers to become an important international hub. The airline's, five-year plan, running from 2013-2018, has 10 key points, including replacing its long-haul fleet of Boeing 767s, and its Boeing 737 fleet (three 737-300s, five -600s and 14 -800s) with more modern aircraft.

"I agree with IATA's Tony Tyler about the potential for a hub in North Africa," he said. "As far as Air Algérie is concerned, it is one of our objectives; we are trying to make a partnership with the airport and authorities. We are trying to identify all the connecting flights in order to build a very integrated schedule. Then we will try to define a fair policy regarding the sixth freedom traffic."

The state-controlled carrier currently operates three 767-300s and five Airbus A330-200s, all powered by GE CF6 engines. It also has a regional fleet of 12 68-seat ATR 72 turboprops from Toulouse, France-based manufacturer ATR, and would like to modernise this fleet too.

Boultif also said that the plan is to restructure the airline to create more distinct divisions covering catering, ground handling and maintenance.

The airline also wants to expand its route network, especially in Africa, to fit in with its hub plan alongside the encouragement of transit passengers at Algiers.

In August it announced intentions to start

AIR TRANSPORT



Yennek Mohamed - MRO capabilities for Al Algérie.

Air Algérie key facts

- Founded in 1947 as Societé Algeriénne de Construction Aéronautique (SACA).
- Now the 3rd largest airline in Africa.
- Fleet of 43 aircraft from ATRs to A330s.
- Nine scheduled international destinations in 28
- Thirty-two domestic destinations.
- Air France relinquished last 17% shareholding in 1974, and Air Algérie became a 100%-owned flag carrier.
- Has EASA Part 145 MRO with vast hangars and numerous workshops.
- Line stations at 29 national airports plus Paris, Lyon and Marseille in France.

operating to Nigeria and South Africa. The carrier has also increased traffic to African destinations, which is mainly West Africa – for example flights to Dakar increasing from two to five a week.

The airline is also looking at Chinese destinations, such as Shanghai, despite the recent suspension of its Beijing flights. Going to the United States is also on the cards, and it is waiting for the signing of an 'open skies' accord between the two nations. New York is top of the list – the airline already flies to Toronto in Canada, has many destinations in Europe and several in North Africa and the Middle East – around 39 international cities in total plus 32 domestic destinations.

Air Algérie has a well-equipped MRO operation with large hangars built in 2004 for the then Air Algérie Technics by Canadian company SNC Lavalin following the signing of a cooperation agreement with EADS Sogerma in 2003.

The airline is now working hard to make the operation more efficient and extend its capabilities, according to Yennek Mohamed, manager of the facility, who added that 30% of the MRO's work is for third parties.

In the main hangars were a Hercules undergoing a C-check, three ATR 72s having B and C checks, and two 737-600s in for C checks. "Another 737 and an A330 are coming in this afternoon," said Mohamed, who added: "We do more than 50 [heavy checks] a year."

The airline's restructuring includes a drive to be more commercially aware. For example, it plans to build a bigger avionics shop, probably through a joint venture, "so we can do more third-party work too", said Mohamed.

Another hangar is planned as well, also big enough to house an A330 and

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a new training school. Construction "will start next year". He added: "We are ambitious to do a lot of things but to do this we need joint ventures."

Mohamed said the ATRs are maintained in a designated part of the hangars that create a single space due to the sidewalls being left out. The turboprops were acquired in the 1990s, he

said, "and we got more from Khalifa when they went bankrupt, so now we have 12 all together".

Another part of the hangar is dedicated to 737NG maintenance; there is a C130 area (the airline operates one and there are many in the region) and then another part for maintaining the larger aircraft, 767s and A330s.

The hangar, which is described as "huge" (25,000sqm) could actually accommodate four 747s, or 12 737s, simultaneously, according to the

He noted that Air Algérie does not maintain Tassili's aircraft (it operates 737s and Dash 8s) and that the airline is now "going international, with Rome first... and they're going to buy new aircraft. So we will be competing.

Air Algérie purchased its aircraft with the help of the national bank and does not lease any, said Mohamed.

Fully-equipped

The airline has a fully-equipped, 8,800sqm engine shop, which can test engines up 65,000lb thrust the airline has CFM56-3/-7 and CF6-80E3/C2 engines - plus a separate rig to test the Allison (Rolls-Royce) T56 turboprops that power Lockheed C130 Hercules.

A current project will soon mean it can test the ATR's Pratt & Whitney Canada PW127 engines, said test cell manager Abdel Khalifi. The project involved SANCO, dynamometer specialist Frood Consine and P&WC, while the jet cell was developed in association with General Electric. It will soon be able to test the CF6-80E1 that powers the airline's A330s as well.

Air Algérie is involved in the MRO task force of the African Airlines Association (AFRAA), which is looking into the feasibility of joint pooling of inventory, collective purchases and optimal use of MRO facilities. Those involved in the initiative include Air Algérie Technics, EgyptAir, Ethiopian Airlines, Libyan Aircraft Engineering and Maintenance, Royal Air Maroc, SAA Technical, Snecma Engine Services, Tunisair Technics, TAAG

Air Algérie hosted MRO Africa in 2010, in conjunction with AFRAA, and hopes to do so again; it will be holding an event in 2013 at its facilities, while the main MRO Africa will next take place in Addis Ababa, Ethiopia, from February 25-27 2013.



Un air d'optimisme

Le transport aérien en Algérie s'est principalement développé autour des liens avec la France, d'une part, et des besoins de la production de pétrole et de gaz, d'autre part. Dans le second cas, . cela signifie amener le personnel dans les vastes étendues désertiques de l'intérieur du pays.

Ainsi, la compagnie française Aigle Azur exploite 12 Airbus de la famille A320 et s'adresse surtout aux

Algériens vivant en France. Quant à Tassili Airlines, c'est un transporteur algérien détenu par Sonatrach, la société pétrolière nationale. Mais c'est bien Air Algérie qui, depuis sa base à Alger, représente le noyau dur du transport aérien dans le pays. La concurrence avec Tassili Airlines n'y est pas vraiment féroce.

Une menace se fait jour : les Easyjet, Ryanair, Fastjet et autres compagnies à bas tarif. Elles ne sont pas encore établies en Algérie. Pourtant, cette possibilité a contribué à décider Air Algérie à . renouveler sa flotte.

Le plan 2013-2018 d'Air Algérie vise notamment à remplacer certains longs-courriers – les trois Boeing 767. Chez les moyens-courriers, ce sont 22 Boeing 737 qui cherchent des successeurs.

Air Algérie aimerait aussi moderniser sa flotte d'avions régionaux turbopropulsés, 12 ATR 72. Les cinq Airbus A330 ne sont pas candidats au départ. « Nous avons acheté nos avions avec l'appui de la banque nationale ; nous n'en louons aucun », explique Mohamed Boultif.

Le pdg, Mohamed Salah Boultif, voit en Alger une future plate-forme internationale de correspondances. « Je suis d'accord avec Tony Tyler, le directeur général de l'association IATA des transporteurs aériens : le potentiel est réel pour un hub en Afrique du Nord », affirmet-il. C'est même l'un des objectifs de sa compagnie: « Nous nous efforçons de nouer des relations de partenariat avec l'aéroport et les autorités. Nous partenariat avec essayons d'identifier tous les vols en l'aéroport et les correspondance afin de bâtir un horaire intégré. Ensuite, nous essaierons de

SOMMAIRE

L'association des compagnies aériennes arabes s'est réunie en novembre en Algérie. Le transport aérien veut s'y développer à partir de bases modestes mais solides.

Par lan Sheppard.

»Nous

nous efforçons

de nouer des

relations de

autorités.»

liberté ». Plusieurs compagnies étrangères, comme British Airways et Qatar Airways, desservent aussi l'aéroport Houari Boumediene.

L'expansion en cours du réseau de destinations en Afrique doit nourrir ce hub. En août, Air Algérie a annoncé son intention de proposer des vols vers le Nigéria et l'Afrique du Sud. De plus, certaines relations bénéficient de fréquences

accrues. Celle vers Dakar passe ainsi de deux à cinq vols hehdomadaires

Sur les autres continents, Air Algérie pense à la Chine. La compagnie envisage des vols vers Shanghaï, malgré la récente suspension des vols vers Pékin. Une desserte des Etats-Unis est aussi en projet – Mohamed Boultif attend la signature d'un accord de ciel ouvert entre les deux pays. La priorité : New York.

Le réseau actuel compte à ce jour 32 destinations algériennes et 39 à l'international – dont Toronto au Canada. Mais la troisième compagnie africaine compte sur d'autres forces que son seul réseau. Ainsi, les activités de maintenance sont destinées à devenir une division à part entière.

La future entité travaille déjà, à hauteur de 30 % de sa charge de travail, pour des compagnies tierces - mais pas pour Tassili Airlines. Mohamed Boultif envisage la création d'une coentreprise afin d'agrandir l'atelier d'avionique. Un autre hangar doit être construit, assez grand pour abriter un A330 et un centre de formation. Le début des travaux est prévu en 2013.

L'atelier des moteurs dispose de 8 800 m2. On peut y tester des turboréacteurs, jusqu'à 65 000 livres (290 kN) de poussée. A court terme, le banc d'essai pourra

accueillir des turbopropulseurs Pratt & Whitney Canada PW127 (ceux qui équipent les ATR) et des réacteurs CF6-80E1 (ceux des A330).

Air Algérie fait partie du groupe de travail « maintenance » de l'association des compagnies aériennes africaines. Il s'agirait de mutualiser des stocks de pièces de rechange, de faire des achats groupés et « d'optimiser l'utilisation des installations d'entretien. » Les travaux réunissent une dizaine de compagnies.

Angola, Air Mauritius and Kenya Airways. définir une politique équitable de sixième



HUGE FORCE FACING MANY ROLES AND CHALLENGES

«Une véritable force et de nombreux défis à relever» - Page 74

The Algerian Air Force – Al-Quwwat al-Jawwiya al-Jaza'eriya (QJJ) – is the largest and, arguably, the most effective air arm in the Maghreb region.

Jon Lake *looks at the complex operation.*

JJ is larger than the Royal Moroccan Air Force and better equipped than the Libyan Arab Air Force of old. This is, perhaps, unsurprising, as Algeria is the largest country in Africa and the tenth largest in the world, and it has a population exceeding 37 million.

High oil and natural gas prices mean a buoyant economy, well able to afford the necessary hardware to meet Algeria's complex security needs and to support what is the second largest army in Africa and in the Arab world, after Egypt.

Algeria has not traditionally enjoyed entirely smooth relations with Morocco to its West, thanks to Moroccan claims in western Algeria and Algerian support for the Polisario Front.

Air power has long been seen as the best means of patrolling and monitoring Algeria's borders and of deterring aggression or incursion.

Algeria also has some internal tensions, with Islamic and Berber protest movements forcing an end to one-party rule in 1988, and then leading the country into a 10-year civil war from 1992 (triggered when the Algerian military stopped free elections that seemed likely to bring an Islamist party to power), in which air power was again of critical importance in the campaign against Islamist insurgent groups.

Algerian air power, therefore, has to be capable of deterring and, if necessary, defeating aggression by a formed state adversary, but also of fighting a lower intensity asymmetric anti-insurgency campaign, which poses different demands, and which requires a greater emphasis on counterinsurgency (COIN) and air mobility.

The air force also bears the brunt of maintaining the security of

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Algeria's air space and of its long and, in many places, remote national frontiers. It is also equipped to carry out long-range search and rescue operations in the Sahara and for the provision of an emergency airlift capability for the country's desert tribes.

Algeria, therefore, maintains a large and modern air force, with 13 major air bases accommodating about 36 squadrons (known as Escadrons) and 10 wings (Escadres). Some 241 combat aircraft (of 271 on charge) serve with about 20 fast jet squadrons, while the air force also operates 46 transports (of 52 delivered) and 183 helicopters.

The air force also controls Algeria's air defence artillery and major surface-to-air missile systems, which are integrated with the fighters and air defence radar units.

In recent years the air force has diversified the sources of its equipment, though the frontline elements remain largely Russian looking, at least superficially.

The roots of the Algerian Air Force were put down even before the nation gained its independence in 1962. In 1954, the National Liberation Front (Front de Libération Nationale or FLN) launched the Algerian War of Independence. In 1956 it decided that an air force would be necessary and started sending potential pilots to Syria and to Egypt for training. A flight of helicopters was acquired and used even during the revolution.

New air force

After independence was declared on July 5 1962, these pilots returned to Algeria and formed a cadre, around which the new air force was formed. Egypt donated ten Heliopolis Gonhouria basic trainers (licence-built Bucker Bestmanns) and five MiG-15UTIs, and provided a nucleus of instructors.

The new air force set up a National Technical and Aeronautical School at Blida and an Air Force Higher Academy at Tafraoui, and prepared for rapid expansion.

Russia supplied 20 MiG-15bis fighters in 1964 and more than 60 MiG-17Fs from 1965. Another 30 MiG-21F-13s and six MiG-21FLs followed, allowing the establishment of five fighter squadrons at Laghouat, Bou Sfer, Béchar and Tindouf, while 14 Ilyushin Il-28s led to the formation of 27 Escadron at Mecheria.

In June 1967, Algeria sent about 20 MiG-17s, 20 MiG-21s and 12 Il-28s to Egypt during the Six Day War, though it did not participate directly.

The air force underwent a major re-equipment and expansion programme in the early 1970s, so that by 1973 it could field four air defence squadrons, equipped with MiG-21FLs and MiG-21MFs, five fighter-bomber squadrons – two with Su-7s, the remainder with MiG-17s – a MiG-21-equipped fighter squadron, and a transport arm with two squadrons of An-12s and a number of helicopter units, equipped with Mil Mi-8 'Hips' and later also with Mil Mi-24 'Hinds'.



During the October 1973 Yom Kippur War, Algeria dispatched 13 MiG-21s, 12 Su-7s and 23 MiG-17s to Egypt, this time with their pilots, and additional Algerian pilots joined Egyptian MiG-17 squadrons.

The Algerian elements undertook air defence missions around Cairo, and flew ground attack sorties. Two Su-7s, a MiG-21 and a handful of MiG-17s were shot down, but no pilots were lost. Subsequently, in the face of a Soviet refusal to supply more combat aircraft to Egypt, Algeria acquired 32 Su-20s and passed these on to the Egyptian air force.

Interceptor squadrons

Further expansion and re-equipment saw the Algerian air force able to field four MiG-21bis interceptor squadrons, a single squadron equipped with the MiG-23MF (14 Escadron), five fighter-bomber squadrons equipped with the MiG-23BN, and a training school equipped with Czech Aero L-39 Albatros trainers.

In 1978, Algeria deployed a fighter squadron and a reconnaissance squadron equipped with the MiG-25 'Foxbat'.

After Algerian acted as an intermediary in the effort to resolve the US Embassy hostage crisis in Iran, new, friendlier relations were forged with the USA, and Algeria received six (eventually 12) Beech T-34C Turbo-Mentor basic trainers six (eventually 18) C-130H Hercules transports and three Beech King Airs in 1981, with further aircraft following.

The dissolution of the Soviet bloc had little effect on Algeria which, unlike many of the USSR's clients in the developing world, was able to continue purchasing equipment on commercial terms.

There was a further round of expansion and modernisation in the 1990s, starting with the acquisition of some 39 Sukhoi Su-24s, comprising 35 Su-24MK 'Fencer-D' strike aircraft and four (not 19 as sometimes reported) Su-24MR 'Fencer-E' reconnaissance aircraft.

These replaced Algeria's MiG-23BNs and gave a much-improved long-range and all-weather capability, using a wider range of more effective weapons, including precision-guided munitions for the first time.

Tactical fighter-bombers had given way to aircraft with a potentially semi-strategic reach and effect, though in service, Algeria's Su-24s retained a primarily tactical role. The aircraft has undergone some upgrades in recent years, mainly at the hands of the Novisibirsk Aircraft Production Organisation in Siberia.

The next element of the air force to be upgraded was the air defence force, whose four squadrons of about 80 MiG-21bis fighters and one squadron of about 20 MiG-23s gave way to four squadrons with about 70 MiG-29s.

Between 1997 and 2007 Algeria gained 30 single-seaters and six two-seaters from Belarus, with about 17 single-seaters and two twin-stickers coming from the Ukraine, and 15 more coming from Russia. Some reports suggest that Algeria



The Algerian Air Force has developed a diverse collection of aircraft but with a strong leaning towards Russian and other Eastern European types.

eventually received 74 MiG-29s, including 12 two-seaters. The single-seaters consisted of a mix of 9-12 'Fulcrum-A' and big-spined 9-13 'Fulcrum-C' sub-variants.

Though primarily tasked with air defence, and operated by a unit with 'Defence Aérienne' in its title, the Algerian MiG-29s are multi-role fighters, and have demonstrated an air-to-ground role dropping free-fall bombs. Many of the aircraft have subsequently been modernised and upgraded in Belarus.

The MiG-25 fighters remained operational and, indeed, the 29 or so MiG-25P/U/RB that had been delivered in 1979 were augmented by nine MiG-25PDS interceptors and three MiG-25RBSh reconnaissance aircraft bought from the Ukraine in 1997, along with a massive spares package that has allowed a dwindling fleet to remain operational to this day.

By 2010, 11 were operational, including five MiG-25Ps, three MiG-25PDs, and three MiG-25RB/RBSh models, though the fighters rarely fly. More are in storage or undergoing maintenance with the MiGremont, Zaporozhye State Aviation Repair Factory in the Ukraine.

Algeria's fleets of Soviet-supplied support and attack helicopters were upgraded and expanded at much the same time, so that the air force now has a support helicopter force that includes more than 120 Mi-8 and MI-8MT and Mi-171Sh 'Hips', many of them upgraded to conduct night/all-weather operations.

At one time, it was expected that half-a-dozen or so 'Hips' would be modified for the combat search and rescue (CSAR) role, but that now seems more likely to be assigned to Agusta Westland AW101 Merlins, likely to be purchased alongside the armed 'surveillance and intervention' versions being purchased for the Gendarmerie Nationale.

The attack helicopter force was reduced, with only about 40 of the more recently acquired Mi-24 and Mi-25 'Hind-E's being retained, and the remainder retired. But the retained helicopters were upgraded and modernised to Super Hind Mark III standards by the South African company Advanced Technologies and Engineering (ATE).

Flying a prototype

ATE began work on Mi-24 upgrade configurations in the late 1990s, flying a prototype from February 1999, basing these on the proposed Denel/Kentron upgrade for Poland's PZL W-3WB Huzar fleet. The upgrade retains the airframe and engines of the donor 'Hind' and, therefore, has the same excellent performance and rugged survivability.

The aircraft has a new glass cockpit with new displays and controls, including a digital head-up display and a night-vision-compatible helmet-mounted display system. It features a new mission computer, a Doppler and GPS-based navigation system and NATO-standard identification, friend or foe (IFF).

The Super Hind features an extended nose with an under-nose Kentron IR/EO sight and an underslung Vektor (now Denel) GI2 (F2) 20mm chain gun. It carries 840 rounds in cheek bins, with a cheek fairing to port for the ammunition feed system. The gun features a dual-feed system that allows the gunner to select either armour-piercing or blast-fragmentation anti-personnel ammunition at will. It is augmented by provision for eight South African Kentron ZT35 Ingwe or ZT6 Mokopa laser-guided antitank missiles.

Some of the Algerian 'Hinds' may by now have been further upgraded to Super Hind Mk.4 standards with the Pall Vortex Engine Air Particle Separator System.

Algeria's next round of air force modernisation was announced in March 2006, when a new multibillion dollar arms deal was revealed during a visit by Russian president Vladimir Putin to Algeria.

The \$7.5 billion arms package was to have included the purchase of 28 Su-30MKAs, 28 single-seat MiG-29SMTs and six two-seat MiG-29UBTs and 16 Yakovlev Yak-130 advanced trainers, as well as eight batteries of S-300PMU-2 air-defence missile systems and 24 Almaz-Antei 2S6M Tunguska 30mm/SA-19 self-propelled air-defence systems.

The complex deal included the buy-back of surviving MiG-23s and 36 of the surviving first-generation MiG-29s.

Refused further deliveries

Algeria received the first two of the new MiGs in December 2006 and by April 2007 15 MiG-29SMT/UBT had been delivered. All was not well, however, and the Algerian military refused further deliveries in May, and then stopped making payments on the contract in October 2007, alleging that the aircraft were of inferior quality – and that they were old airframes, built some years before, rather than the new-build airframes that Algeria had expected.

In the end Rosoboronexport and the MiG Corporation agreed to take back the 15 fighters that had been delivered and offered to replace the MiG-29SMT contract with another agreement. Russia offered Algeria the more advanced MiG-35, with AESA radar and a new airframe, but this offer was refused.

The 15 MiG-29SMT/UBT were returned to Russia in early February 2008 and all 34 subsequently entered service with the Russian Air Forces' own 'Kursk' regiment at Lipetsk.

Instead, Algeria agreed to take a further batch of 16 Su-30MKA aircraft in place of the MiGs, taking the number of 'Flankers' on order to 44, and effectively exercising 16 of the 28 options it held. A contract was finally signed with Rosoboronexport for these 16 aircraft in April 2010.

The first of the Su-30MKAs was delivered during December 2007 and four had been delivered by March 2008, when the decision to add 16 extra Continued on Page 74

aircraft was taken.

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The Su-30MKA is a derivative of the Su-30M, which is, in turn, a two-seat multi-role derivative of the Su-27 'Flanker'.

The Su-30 was originally conceived as a dedicated long-range/high-endurance interceptor for the Soviet national air defence (IA-PVO) but only a handful were built before the type was extensively redesigned, gaining a multi-role capability to meet the demands of the export market.

There are several competing versions of the Sukhoi Su-30 offered by rival factories. The Su-30MKA selected by Algeria, however, was built and supplied by the Irkut Corporation's Irkutsk Aircraft Production Organisation (IAPO), part of Russia's United Aircraft Corporation (UAC) It was equipped with an N011M BARS pulse Doppler passive electronically scanned array (PESA) radar, canard foreplanes and Saturn AL-31FP engines with thrust-vectoring nozzles, and using a high proportion of Western avionics systems, including Thales Damocles targeting pods.

A dozen aircraft had been delivered to Algeria by November 2008 and test and evaluation trials were undertaken from Oum El-Bouaki airfield. All 28 of the first batch of Su-30MKAs were delivered by the end of 2009, allowing the formation of a new Escadre de Chasse (with two escadrons) at the newly-built air base at Ain Beida, officially opened in 2004.

About four of the aircraft are reportedly specially modified for reconnaissance duties, with a mission system and sensors designed and integrated by Thales, under the designation of Su-30MKR or Su-30MRK.

The deal for extra Su-30s was almost derailed when Algeria reportedly discovered that the aircraft's main mission computer relied on Israeli technology, while the HUD and EW systems (an Elbit Systems SU967 HUD and an Elta EL/M-8222 EW system) were of Israeli origin.

Demanded an explanation

Algeria reportedly demanded an explanation and there were fears that it could withdraw the Su-30 and abandon all further dealings with IAPO, as it did after two VIP-configured Eurocopter EC225s were found to have some Elbit avionics.

Somehow, Algerian concerns were allayed, and the final element in the big Russian deal went ahead, this seeing the delivery of the first of 16 Yakovlev Yak-130 advanced trainers ordered in March 2006.

Originally to have been delivered from 2009, the Yak-130s were repeatedly delayed and Algerian pilots finally performed their first solo flights on the aircraft at the Irkutsk Aviation Plant airfield on September 1 2011, following a three-month conversion training course.

Deliveries are now under way and two Yak-130s were seen on final approach to Boufarik on June 26 2012. Though the aircraft can be armed to provide a light attack capability, Algeria is expected to use the type for training only, perhaps including some weapons training, and not as a frontline type.

The acquisition of 16 Yak-130s – a number sufficient to provide lead-in fighter training for the Su-30MKA – highlights a real requirement to recapitalise the training fleet, which relies on a mixed fleet of Zlin 142s and 143s and Safir 43s (licence built Zlin 43s) for screening and primary training, and a force of Aero L-39s for basic and advanced flying training.

There is an obvious requirement for a modern turboprop trainer for basic/advanced training, or for a mix of turboprops and an enlarged fleet of Yak-130s.

Algeria is also recapitalising its tactical transport fleet, having acquired six CASA C-295Ms to augment the ageing Hercules fleet. Further procurement of transport aircraft is considered likely in the near term.

The procurement of further attack helicopters seems to be an even higher priority for Algeria. In June 2011 Russia's Rostvertol announced that it was in talks with Algeria for the supply of a number of Mil Mi-28NE attack helicopters for delivery from 2012-2017.

Attack helicopter

The Mi-28NE is a dedicated two-seat attack helicopter, equipped with a mast-mounted millimetre-wave fire control radar and armed with the Ataka anti-armour missile system, and would complement the Super Hind in Algerian service.

In July 2012 Rostvertol demonstrated its upgraded Mi-26T2 heavy transport helicopter in Algeria. By comparison with the baseline Mi-26, the Mi-26T2 has a new NVG-compatible glass cockpit, and a BREO-26 airborne electronic system, allowing day/night all-weather operations. Algeria previously operated the Mi-26's forerunner, the heavy-lift Mil Mi-6 'Hook'.

Although still largely equipped with systems of Russian or Soviet origin and though still acquiring Russian equipment, Algeria is increasingly looking towards the USA, Europe, and wider afield to meet future requirements.

Despite a hiccough caused by Algerian support for the Gaddafi regime in Libya during 2011, relations with the USA and NATO have improved progressively, and Algeria is increasingly seen as a bulwark against jihadist activity in the Sahel region, and in particular against Al-Qaeda in the Islamic Maghreb.

Algeria has embarked on a new relationship with Western nations including, for example, participating in the US 'Flintlock 2005' exercise, which saw US special forces troops training soldiers from Algeria, Chad, Mali, Mauritania, and Senegal.

Algeria is reportedly exploring the possibility of gaining an airborne early warning and control capability, and the Boeing 737 AEW&C and Saab Erieye have been examined as potential solutions to this developing requirement.

There may also be an emerging requirement for an air-to-ground surveillance capability, like that offered by the US JSTARS or British ASTOR. La QJJ est plus importante en nombre que sa voisine marocaine. Et elle est mieux équipée que pouvait l'être son alter ego libyenne jusqu'en 2011. Mais est-ce véritablement une surprise, l'Algérie étant le pays le plus vaste d'Afrique, avec plus de 37 millions d'habitants ? D'autant que les prix élevés du gaz naturel et du pétrole irriguent son économie, lui permettant de financer l'équipement et l'entretien de la deuxième armée en Afrique et du monde arabe, après l'Egypte.

En raison des revendications marocaines sur les territoires occidentaux de l'Algérie et du soutien d'Alger au Front Polisario, les relations entre l'Algérie et son voisin de l'ouest n'ont pas toujours été un long fleuve tranquille.

Dans ce contexte, la puissance aérienne est percue depuis longtemps comme le meilleur moyen de surveiller les immenses frontières du pays et de contrer toute tentative d'agression. L'Algérie a connu également des tensions internes qui débouchèrent sur une guerre civile de 1992 à 2002. Ce conflit plaça au premier plan la puissance aérienne dans la lutte contre les groupes insurgés et lui donna un certain savoir faire en matière d'opérations anti-guerilla. Pour toutes ces raisons, Alger dispose aujourd'hui d'une force aérienne aussi importante que moderne, avec 13 bases aériennes principales abritant 10 escadres et 36 escadrons. Soit environ 241 avions de combat, 45 appareils de transport et 183 hélicoptères, auxquels s'ajoute l'artillerie de défense aérienne et les principaux systèmes de missiles sol-air.

■ Equipements soviétiques
Les années récentes ont vu une certaine
diversification des sources
d'approvisionnement, bien que les
équipements de première ligne restent
majoritairement d'origne russe ou...
apparentée. Une tradition qui remonte à la
création même de la force aérienne algérienne.

Peu de temps après le début de l'insurrection qui devait conduire à l'indépendance en 1962, des élèves pilotes algériens furent envoyés en Egypte et en Syrie pour y être formés. Après l'indépendance, les pilotes formés à l'étranger revinrent en Algérie où ils formèrent un embryon de force aérienne avec l'aide de l'Egypte qui fournit des avions d'entrainement et les premiers chasseurs à réaction, des MiG 15 UTI.

L'Union Soviétique prit ensuite le relais, fournissant plusieurs douzaines d'avions de combat tout au long des années 60 : MiG-15bis en 1964, MiG 17F l'année suivante, bientôt suivis par des MiG 21F et des II-28. Au début des années 70, un important programme de rééquipement et d'expansion permit à l'Algérie de disposer de cinq escadrons de défense aérienne (équipés de MiG 21FL et MF), cinq escadrons de chasseur-bombardiers (deux sur

Une véritable force et de nombreux défis à relever

L'armée de l'Air algérienne – Al-Quwwat al-Jawwiya al-Jaza'eriya (QJJ) – est la plus importante force aérienne du Maghreb. Elle se caractérise aussi par un effort de modernisation constant.



Dassault Falcon VIP transport.

Sukhoi Su-7 et trois sur MiG 17) et deux escadrons de transport équipés d'Antonov An-12. A cela s'ajoutaient plusieurs unités d'hélicoptères équipées de Mi-8, rejoints par la suite par des hélicoptères de combat Mi-24.

Une vague suivante de rééquipement permis à la force aérienne de mettre sur pied quatre escadrons de MiG 21bis, un escadron de MiG 23MF et cinq escadrons de MiG 23BN. En 1978, l'Algérie reçu ses premiers MiG 25 Foxbat utilisés pour les missions d'interception et de reconnaissance. La trentaine de MiG 25P/U/RB alors livrée sera rejointe en 1997 par neuf MiG 25PDS d'interception et trois MiG 25RBSh de reconnaissance acquis, en même temps qu'un stock conséquent de pièces détachées, auprès de l'Ukraine. Cet achat aura permis de maintenir en vol jusqu'à aujourd'hui une poignée de ces appareils exceptionnels.

Une nouvelle étape dans la politique d'expansion et de modernisation prit place dans les années 90, avec l'acquisition de 39 Su-24. Au contraire de nombreux autres pays, la dissolution du bloc communiste eut finalement peu d'effets directs sur l'Algérie qui poursuivit sa politique d'achat auprès des héritiers de l'ancien empire communiste.

Venant remplacer les MiG 23 BN, ces Sukhoi donnèrent à l'Algérie de bien meilleures capacités de pénétration à longue distance, avec à la clef une plus large panoplie d'armements offensifs, dont pour la première fois des armements de précision. La phase suivante de modernisation se traduisit par la mise en service d'environ 70 MiG 29, dont une douzaine de biplaces.

La flotte d'hélicoptères de transport et de combat a elle aussi connu une belle progression au fil des ans. Elle rassemble aujourd'hui plus de 120 Mi-8, Mi-8T et Mi-17Sh "Hip". La flotte des hélicoptères d'attaque se résume quant à elle à une quarantaine de Mi-24 et Mi-25 "Hind E" modernisés par la firme sud africaine ATE et portés au standard "Super Hind Mk III".

■ Ouverture vers l'ouest

Un nouveau round de modernisation a été auprès annoncé en mars 2006 à l'occasion d'une l'ac visite à Alger du président russe
Vladimir Poutine.
Pour un montant global de » l'Algérie n'en

Pour un montant global de 7,5 milliards de dollars, le contrat signé incluerait l'achat de 28 Su-30MKAs, 28 MiG-29SMT monoplaces, 6 MiG-29UBT biplaces, 16 Yakovlev Yak-130 d'entrainement avancé ainsi que des matériels de défense aérienne. Ce contrat complexe

incluait également le rachat des derniers MiG 23 et de 36 des MiG 29 de première génération.

Alger a reçu les deux premiers de ses nouveaux MiG en décembre 2006 et quatre mois plus tard, 15 MiG-29SMT/UBT avaient été livrés. Tout n'était pas parfait pourtant, puisque les militaires algériens refusèrent les livraisons suivantes et interrompirent même leurs paiements en octobre 2007, expliquant que les appareils livrés ne répondaient pas à tous les critères de qualité.

Il s'agissait même de cellules anciennes et non pas d'appareils totalement neufs comme ils l'avaient imaginé.

Les avions furent finalement renvoyés à l'envoyeur et, à la place des MiG, l'Algérie accepta finalement de recevoir un lot supplémentaire de 16 Su-30MKA fabriqués par Irkutsk Aircraft Production Organisation (IAPO), avec une avionique contenant une haute proportion d'équipements occidentaux.

Le nombre total de Flanker en commande atteignait alors 44. Les 28 avions du premier lot furent tous livrés fin 2009, permettant l'équipement d'une nouvelle escadre de chasse installée sur la base moderne de Ain Beida inaugurée cinq ans plus tôt. Quatre avions auraient été spécifiquement modifiés pour les missions de reconnaissance, avec l'aide de Thales.

La vente de Su-30 supplémentaires fut à son tour menacée quand, dit-on, l'Algérie découvrit que le calculateur de mission principal, le viseur tête haute et le système de contre-mesures électroniques étaient d'origine israélienne. D'une façon ou d'une autre, les craintes algériennes furent surmontées et le contrat avec la Russie put aller à son terme.

Mais bien qu'elle soit déjà très largement équipée de matériels soviétiques ou russes, et bien qu'elle continue à se fournir à Moscou (on évoque aujourd'hui la fourniture d'hélicoptères de combat Mi-28NE), l'Algérie n'en regarde pas moins du côté des Etats-Unis ou de l'Europe pour satisfaire ses besoins futurs.

En témoigne par exemple l'achat de Casa 295 auprès d'Airbus Militairy ou celui d'hélicoptères auprès d'AgustaWestland. A moyen terme,

l'achat d'appareils de guet aérien et de surveillance air-sol est également

regarde pas moins

du côté des Etats-Unis

ou de l'Europe pour

satisfaire ses

besoins futurs.»

évoqué... Car malgré le léger coup de froid causé par le soutien algérien au régime du colonel Kadhafi en 2011, les relations entre Alger et les Etats-Unis ou l'Otan sont en voie d'amélioration, l'Algérie étant vue comme un rempart contre la progression de l'islamisme au Sahel et l'activisme d'Al Quaida au Maghreb Islamique (AQMI).



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Calgary firm's stampede towards safety and efficiency

A Canadian company is at the forefront of enhancing safety and operational efficiency for commercial aviation in Africa, including sub-Saharan countries like Nigeria, where there have been well-documented issues in recent years.

Geoff Thomas reports.

LYHT Aerospace Solutions, based in Calgary, has been working for the past 14 years to perfect an automated data collection and delivery system for commercial aviation and it has now become one of the world's leading providers of real-time data communications for the airline industry.

The company's main product and service offering is the automated flight information reporting system (AFIRS). The integrated system operates on multiple aircraft types and provides functions such as voice and text messaging, data collection and transmission, and on-demand streaming of black box data.

AFIRS sends that information to its companion, UpTime, the ground service product, which stores and transfers the data to the customer, again in real time. Aircraft operators can use this information to increase safety, improve services and enhance profitability through fuel savings, maintenance reduction, and fewer AOG problems.

Data monitoring

In addition to its data monitoring functions, AFIRS provides voice and text messaging capabilities that give pilots the ability to communicate with ground support. FLYHT, through its relationship with Iridium Communications, offers global satellite coverage that provides service to whoever needs it, when they need it, anywhere on the planet.

It's this reliable satellite facility that is so appealing to both African nations and their airlines in a continent where radiobased ground control centres (GCCs) are few and far

Matt Bradley: "All we do is to provide aircraft operators with the means to improve overall efficiency."



between and the radio communications infrastructure is embryonic at best.

This technology is remarkable because for the first time in aerospace history, FLYHT has demonstrated that live flight data can be streamed from an aircraft in real time. If an airliner encounters an emergency, FLYHT's proven technology can be automatically triggered to stream vital data that is normally secured in the black box, and provide position information to designated sites on the ground in real time. This technology opens new doors for increased safety and data analysis capabilities in the aerospace industry.

Matt Bradley, FLYHT VP business development, said: "Clients are using our products on every continent. We proudly serve more than 35 aircraft operators globally and we have also developed an extensive list of more than 30 certifications (supplemental type certificates – STCs) for many types of aircraft including Boeing, Airbus, ATR, Bombardier, Hawker Beechcraft, Fokker, Embraer and others. The latest to be added is the Boeing 777, which is a hugely popular airliner and freighter worldwide.

"Essentially, our products give airlines real time visibility about what's happening with their fleet in terms of location, fuel efficiency, engine maintenance and general operational effectiveness. But it's not a 'big brother' product. All we do is to provide aircraft operators with the means to improve overall efficiency, using their own training schemes to provide the start point.

Time-on-wing

"For instance, as a direct result of using our AFIRS real-time, automated engine trending system, an airline was able to increase the time-on-wing of its Pratt & Whitney PW123 turbo-props on a DHC-8 from 3,500 hours to 8,000 hours, while the fuel initiative reporting system tracker (FIRST) enabled another airline to save between 2% and 3% of its annual fuel bill."

Bradley is no boffin or backroom man. He has more than two decades of experience in military and civilian aviation, having flown Canadair CF-5s and McDonnell Douglas CF-18 Hornets for the Canadian military and Airbus A330s and A320s for Skyservice Airlines for the past decade as a captain and check pilot.

With Skyservice, he worked extensively in the area of fuel management, implementing a satellite communication and fuel efficiency initiative that saved the airline more than 3% of its annual fuel budget.

Bradley concluded: "FLYHT is looking forward to working with Nigeria and other African countries and also to attending the AFRAA-organised Aviation Symposium and Stakeholder Convention that's being held in Nairobi, Kenya, from June 16-18 2013.

"We're confident that by then we will have more clients in sub-Saharan Africa and that FLYHT's certificated products and services will be saving airlines much-needed cash and providing a far safer and more efficient operational environment."



Ten of the 11 independent airlines created in South Africa since deregulation in 1991 have collapsed.

Martin Rivers looks at the causes.

Ten times too many

⟨⟨ Dix fois trop...⟩⟩ – Page 80

he collapse of South Africa's 1time Airline in November 2012 was first and foremost a tragedy for the 1,000 employees it left jobless, few of whom can expect to be reinstated permanently if newcomer FastJet completes its proposed takeover of the defunct carrier. In an emotive statement announcing the failure of the business rescue plan, chief executive Blacky Komani spoke of the "end of a dream and an era for all of us".

But, looking beyond the human toll of the low-cost carrier's (LCC) failure, the South African media has been quick to ask why 10 of the 11 independent airlines created since deregulation in 1991 have collapsed.

In a country historically regarded as a trailblazer for African civil aviation, the spotlight inevitably falls on what 1 time's bankruptcy means for its two main LCC rivals – South African Airways (SAA) subsidiary Mango, and Comair subsidiary Kulula – and more crucially whether the battered domestic market can keep pace with regional growth by emerging pan-African players.

While full liberalisation across the continent remains a distant prospect, the high-profile launch of FastJet in the very same month that 1 time collapsed underscores how events outside South Africa's borders could ultimately shape the evolution of its domestic sector.

Indeed, the rapid pace of change is illustrated by

reports – breaking as this article went to press – that FastJet is negotiating a posthumous takeover of 1 time. The pan-African carrier says its intention is to temporarily resurrect the grounded airline before transitioning services over to its own brand.

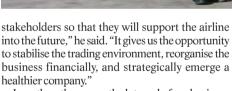
One need only look to Europe's loss-making flag carriers to appreciate the competitive threat that low-yielding, point-to-point models pose to inefficient domestic players. While Ryanair and EasyJet enjoy economies of scale that are the stuff of dreams for FastJet, there is, nonetheless, an acceptance that South Africa's litany of airline failures bodes poorly for its future stake in the fast-evolving regional LCC market.

Economic reasons

With that in mind, the chief executives of Mango and Kulula have wasted little time firstly in dissecting the economic reasons for 1 time's failure, and secondly in waging a war of words over where the blame lies.

In August 2012, when 1 time announced that it was filing for business rescue protection under Chapter 6 of the Companies Act – a process broadly analogous to Chapter 11 bankruptcy protection in the USA – Komani was initially optimistic about the airline's prospects.

"What business rescue does is to give us the protection we need for a few months while we agree a business rescue plan with creditors and other



Less than three months later – before business rescue practitioner Gerhard Holtzhauzen even had a chance to submit his recovery plan – Komani admitted that the airline was unable to service its short-term debt of 320 million rand (\$37 million) and now had "no reasonable prospects of survival".

The blame game got under way immediately, with the 1time boss complaining that his main creditor, the Airports Company South Africa (ACSA), had an "overall negative attitude" about the business rescue.

But Comair and Kulula chief executive Erik Venter raised the stakes higher, issuing a statement that accused rival Mango of pricing 1 time out of the market through state subsidies. The CEO had previously criticised the five billion rand government guarantee afforded to Mango's parent, insisting that the money will be used "to protect SAA's market share at the expense of its competitors and the taxpayer".

Weighing in on the collapse of 1time, Venter admitted that the airline's fleet of gas-guzzling Boeing MD-80s was ultimately behind the failure, calling the closure "inevitable" in lieu of a fleet renewal programme.

SOUTH AFRICA



But he went on to blame Mango for hindering a turnaround at 1 time by undercutting average fares with the assistance of government funding. "We are certain that in the absence of state-subsidised Mango, 1 time would have made adequate profits to upgrade its fleet and be sustainable over the long term," Venter argued, before claiming that Mango has lost 500 million rand since its launch in 2006.

Speaking on the day of 1time's liquidation, Mango chief executive Nico Bezuidenhout vigorously rejected suggestions that the airline either relies on state support or operates at a loss.

"Mango categorically does not require a bailout; has never required a bailout; and does not in any way, shape or form benefit from any recapitalisation, or capitalisation discussions, or guarantee issue to SAA as a shareholder," he asserted. Capital raising would only be necessary if Mango pursues "massive fleet expansion", the chief executive said, adding that this is "not necessarily on the radar at this point".

Turning to Mango's financial reports, Bezuidenhout insisted that the airline has enjoyed operational profitability in all five of its fiscal years to date, as well as bottom-line profitability in three out of five years. "The company has been cash positive since inception and we remain cash positive," he said.

The claim is impossible to verify as Mango's results are incorporated into SAA's filings – another

source of annoyance for Venter, even though Comair does the same thing for Kulula – so the war of words between South Africa's two dominant LCCs shows no sign of abating.

Irrespective of whether a different competitive landscape might have allowed 1 time leeway to turn around its business, most agree that the airline's former management shoulders much of the blame.

When 1 time launched operations in February 2004, its fleet of MD-80 aircraft may have initially seemed well suited to the macroeconomic climate. The aircraft benefited from lower lease rates due to their age – the oldest was built in 1982 – and with Brent Crude oil prices below \$40 per barrel, fuel efficiency was of little concern.

Cost structures

By 2008, however, Brent had peaked at \$147. In this environment, 1time was simply unable to compete with the cost structures at Mango and Kulula – both of which deploy modern, fuel-efficient Boeing 737-800s.

A potential stay of execution had been afforded to the airline in 2009, when its cashflow situation improved amid the collapse in commodity prices caused by the global financial crisis. But management passed up the opportunity to rejuvenate the fleet and instead focussed on expanding operations ahead of the 2010 FIFA World Cup in South Africa.

1 time's demise came in the same year that another South African LCC, Velvet Sky, filed for liquidation after barely 12 months of operations. In total, 10 of the 11 private airlines created since 1991 have collapsed.

Analysts point out that Velvet Sky's bankruptcy involved a markedly different set of circumstances, with both of its lessors – Aergo Group and Global Aviation – publicly complaining about non-payment of leases. Velvet Sky resisted litigation to the bitter end, only admitting defeat when fuel supplier BP Southern Africa convinced the courts that enforcement action was the last remaining option

Elsewhere in South Africa's aviation history, though, there is a long list of failures under deregulation. Lanseria-based Nationwide was one high-profile casualty, ceasing operations in 2008 officially due to high fuel prices, but with questions lingering about its chequered safety record. The airline had been grounded the previous year when an engine fell off one of its 737-200s seconds after take-off.

Other noteworthy failures include FliteStar, the first carrier to challenge SAA's monopoly in 1991; Aerolift, which suffered two fatal accidents within a month of each other in 2009; and SunAir, which was liquidated twice in 1999 and 2004.

Indeed, there can be little doubt that the list of defunct airlines would



CONTINUED FROM PAGE 79

include flag carrier SAA were it not for continuous government support, which-though in part justified by public service obligation (PSO) routes - has fuelled so much discontent within the private sector.

SAA's woes were highlighted in dramatic fashion in October 2012, shortly before 1time's collapse, when chief executive Siza Mzimela quit her post just days after chairwoman Cheryl Carolus and six other board members also resigned

South Africa's minister of public enterprise. Malusi Gigaba, responded by announcing the formation of a task team to develop a "roadmap for a turnaround" that would make SAA "financially viable and independent of government support in the medium to long-term". The task team was due to publish its recommendations shortly after this article went to press.

Amid on-going turmoil in the domestic sector, it is inevitable that those private carriers that survive will steadily build market share. Comair's shares spiked 10% on the first working day after 1time's collapse, while Mango's chief executive said he would expedite plans - already in place due to FastJet's launch - that envisaged the arrival of two new 737-800s and the introduction of its first nondomestic flights.

Insisting that FastJet's entry to the pan-African market places a "competitive necessity" on Mango to "more aggressively pursue regional expansion", Bezuidenhout said flying rights have already been secured for Mauritius and were late last year being finalised for Zanzibar, Tanzania.

Leisure-orientated

"You'll see Mango in African skies very likely within a 12-month period," he confirmed. "Mango is still to this day 60% leisure-orientated, 40% business. To that extent our likely expansion path lends itself more towards the east coast, up the eastern seaboard of Africa."

Alongside Zanzibar, 1time had formerly operated regional services to Mombasa, Kenya and Livingstone, Zambia. Both of those routes will now likely come under the scrutiny of route network planners at Mango and Kulula.

Although both LCCs are solely domestic operators at present, they use their sister carriers to offer onwards connections across the region. Mango operates interlines and codeshares with SAA, while Kulula does the same with the British Airways franchise operated by Comair.

Bezuidenhout said that operating low-cost and full-service brands side-by-side allows management at Mango and SAA to respond to changing market trends and demand. "You get flexibility in deploying a dual-brand model," he explained. "You can scale one operation up and one down, or vice versa, depending on actual market demand."

There is "no explicit statement of intent" by SAA to diminish its domestic and regional presence in favour of higher-yielding long-haul services, Bezuidenhout stressed. But he acknowledged that Mango is "specifically geared towards defending and gaining share within the price-sensitive segment of the short-haul market.'

SOMMAIRE

Dix fois trop...

Dix des onze compagnies indépendantes créées depuis la libéralisation de 1991 ont disparu. La filiale à bas coûts de South African Aiways. veut se développer dans un paysage changeant. Par Martin Rivers.

a annoncé la

formation d'un groupe

de travail afin de rendre

fonds publics à

moyen ou

long terme.»

La cessation d'activité, en novembre 2012, de la compagnie sud-africaine à bas tarifs 1time était d'abord une catastrophe pour les 1 000 employés restés sur le carreau. Mais, si on regarde au-delà du drame humain, on peut se demander pourquoi 10 des 11 compagnies indépendantes créées depuis la dérégulation de 1991 ont disparu. L'Afrique du Sud est pourtant considérée comme un pays pionnier du transport aérien sur le continent.

Il reste deux compagnies sur le marché sudafricain du « low-cost » : Mango, filiale de South African Airways (SAA), et Kulula, filiale de Comair. Mais leur homologue tanzanien, FastJet, négocie une reprise de 1time. Le transporteur, qui se veut « panafricain », affirme vouloir temporairement ressusciter 1time avant de reprendre ses activités sous sa propre

C'est une lueur d'espoir pour les 1 000 employés de 1time – même si tous ne seraient sans doute pas réembauchés. Pour l'instant, le secteur aérien sudafricain s'interroge sur les causes du dernier échec en date.

Jusqu'en août 2012, Blacky Komani, le pdg de 1time, est optimiste... malgré le dépôt de bilan. « La procédure en cours nous protège pour quelques mois – c'est ce dont nous avons besoin pour trouver un accord avec nos créanciers et partenaires afin qu'ils continuent à nous soutenir ; c'est l'occasion de nous réorganiser financièrement et de sortir plus forts de cette situation », affirme-t-il alors.

Moins de trois mois plus tard, Blacky Komani admet son incapacité à rembourser une dette à court terme de 320 millions de rand (37 M\$). Il reconnaît que sa compagnie, lancée en 2004, n'a plus « aucun espoir raisonnable de survie ». Peu après, il se plaint de « l'attitude négative » de son principal créancier, la société aéroportuaire Airports Company South Africa.

Erik Venter, le pdg de Comair et Kulula, va plus loin. Selon lui, le choix d'avions gourmands en carburant, des MD-80, est un facteur important dans la chute de 1time. Mais surtout, il accuse Mango d'avoir gagné une guerre des prix lancée contre 1time grâce à des subventions publiques. Et d'enfoncer le clou : Mango a perdu 500 million de rand (58 M\$) depuis son lancement en 2006, prétend Malusi Gigaba

Le pdg de Mango, Nico Bezuidenhout, rejette ces accusations en bloc. « La compagnie a été profitable depuis le début », assure-t-il. Et n'aurait nul besoin de recapitalisation. Des affirmations impossibles à vérifier, puisque les résultats financiers de Mango sont fondus dans ceux de SAA. D'ailleurs, Comair fait de même avec Kulula.

Erik Venter.

La liste est longue des banqueroutes dans

l'aviation civile sud-africain. En 2012 aussi, une autre « low-cost », Velvet Sky, a été liquidée après à peine 12 mois d'exploitation. Les deux loueurs d'avions auxquels elle faisait appel, Aergo Group et Global Aviation, se plaignaient de retards de paiement.

Nationwide, une compagnie basée à Lanseria, a cessé son activité en 2008. Officiellement, les prix élevés du carburant l'ont achevée.

Mais la sécurité des vols était aussi montrée du doigt. Nationwide avait vu ses avions cloués au sol en 2007 après qu'un moteur, sur l'un de ses Boeing 737-200, était tombé au sol quelques secondes après le

On peut encore citer FliteStar, la première à défier SAA en 1991. Aerolift, elle, avait subi deux accidents mortels en un mois en 2009. Sun Air a été liquidée deux

Même la compagnie nationale est loin d'une santé resplendissante. SAA est soutenue financièrement par le gouvernement, ce qui est en partie justifié par des obligations de service public. En octobre, le directeur général Siza Mzimela a démissionné, peu après la présidente et six administrateurs. Le ministre des entreprises publiques, Malusi Gigaba, a annoncé la formation d'un groupe de travail afin de rendre SAA « indépendante des fonds publics à moyen ou long terme.»

Pour autant, Mango continue son développement. Deux Boeing 737-800 doivent arriver sous peu. Le pdg envisage de premiers vols internationaux. Nico Bezuidenhout dit avoir déjà acquis des droits de trafic vers l'île Maurice et Zanzibar, en Tanzanie, La concurrence annoncée de FastJet motive cette expansion vers l'est de l'Afrique.

Et la compétition pourrait s'intensifier. Jambo Jet, une filiale à bas tarifs de Kenya Airways, possède désormais des droits de trafic vers 22 destinations intérieures et internationales. On en sait peu, en revanche, sur la flotte.

Face à ce paysage changeant, Nico Bezuidenhout compte continuer à appliquer à la lettre les principes « low-cost ». « L'utilisation journalière de nos avions est au moins 25 % au-dessus des autres acteurs

du marché intérieur », affirme-t-il. Quant à la productivité des employés de Mango,

elle est « près de deux fois supérieure à celle des autres transporteurs sudafricains». Les salaires des pilotes sont toutefois à l'origine de conflits sociaux.

Des efforts particuliers portent SAA «indépendante des sur la vente des billets. Sur le continent africain, le taux de pénétration des cartes bancaires est en-dessous de 10 %. Du coup, Mango a scellé des partenariats avec les épiceries Shoprite et Checkers et les magasins de vêtements Edgars.



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ntertainment is big business in Hollywood

– the Californian city where streets are
paved with stars and sprawling film and
television studios churn out the latest blockbuster
hits.

Located just an hour's drive south of sunny Los Angeles is Irvine, home to the in-flight entertainment headquarters facility of the French avionics and IFEC products manufacturer Thales

Here, in more than 220,000sqft of office, lab and manufacturing space, work is being carried out on the latest innovations in IFEC, from 'directional sound' that would do away with headphones, to 'gesture control' technology, whereby users simply wave their hands to navigate through screens.

It's an exciting time for the OEM. Thales' next generation android-based TopSeries Avant system will be making its way on to its first flights towards the end of this year with Qatar Airways, and competition among airlines is driving investment in IFE systems and connectivity.

Thales believes airlines are now recognising the value of IFEC. "In-flight entertainment systems can have a direct and lasting impact on passenger perceptions of an airline's service excellence," said Alan Pellegrini, Thales in-flight entertainment business CEO.

Enhancing the passengers' in-flight experience is high on the agenda for most airlines, many of which offer a substantial choice of content on board the aircraft. "It's not unusual when you fly with a modern in-flight entertainment system for there to be, maybe, several hundred movies on board, thousands of audio titles and CDs, hundreds of games," said Pellegrini. "The systems today can store up to two terabytes of content, which is an enormous amount of material."

However, there is still a huge range in the standards of IFEC offered, depending on which airline you choose. "The range in the airline industry is very great," said William Huot-Marchand, Thales vice president international business. "We have airlines like Qatar Airways, Emirates and Cathay Pacific that have hundreds of movies from all around the world to appeal to their entire demographic, down to airlines that have a more modest budget and offer a smaller set of the top 10 Hollywood blockbusters, and everything in between."

Key driver

In the African market, Huot-Marchand said that a good value system is the key driver. "Airlines in Africa are bringing in a lot of tourism so they a want a system that matches the tourists' demographic," he said.

Unsurprisingly, premium airlines in particular are willing to invest a lot of money in the customisation of the IFE system on board the aircraft. "For them the IFE is the centre of the experience that you are having there. So they are willing to invest a lot," explained Huot-Marchand.

For airlines with a smaller budget looking for ways to compete in today's crowded marketplace, Thales has a number of options. "It's important in our business to be able to address multiple segments of the airline community," said Pellegrini. "One of the best features of Avant is that it scales very well to cover that entire range. We've recently introduced a version of our product called Avant lite."

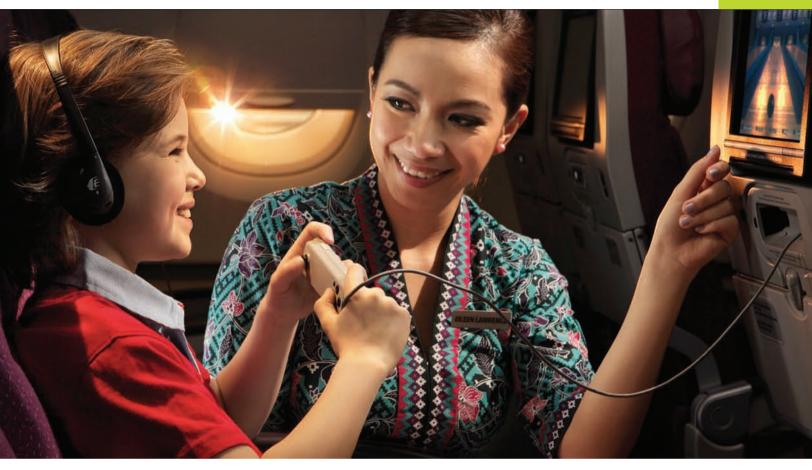
Avant lite allows airlines to offer pretty much all of the same features as the full system, but without as much investment – relying exclusively on the storage at the display, scaling back on the amount of equipment on board the aircraft and effectively getting rid of the servers.

Thales' TopConnect suite can also bring a lot of value to airlines looking for new systems. "Connectivity is one of the most significant growth areas for our business," said Stuart Dunleavy, Thales vice president & general manager, media & connectivity business. "For many years the desire in our industry has been to offer airline passengers the same degree of connectivity and communication that we enjoy on the ground at home or in our office.

"The problem is that trying to deliver that functionality at 36,000ft, 600mph, everywhere around the world is very difficult and it's an area of the market that has been extremely challenging from a technology and a commercial perspective."

Being connected is increasingly important for passengers travelling by air. "The in-flight

CONNECTIVITY



environment is a very unusual one, we surrender our liberty and our freedom when we step on board an aircraft," said Dunleavy. "We don't often chose the seat that we're sitting in, we don't chose who we sit next to, we don't chose when and how we're allowed to sit down, or what we eat. We don't choose the time it's going to take for us to arrive at our destination. So being connected, having some degree of understanding of where we are and when we're going to arrive is very, very important.

Connectivity services

"A big area of opportunity for us is in airline offered connectivity services and working with our airline customers to design and take applications with a specific for the in-flight environment," he said.

"We have 60 customers around the world, all of whom require this connectivity solution. It's a growing market for us."

Another option for airlines looking for new systems is the newly-introduced TopSeries Ava, which allows passengers and crews to use their own wirelessly-enabled portable electronic devices to access rich content and applications resident on the Thales TopSeries head-end server via wireless access points in the cabin.

"Ava is a new breed of IFE that Thales is bringing to the marketplace," explained project manager Julie Lichty. "What we're doing is allowing passengers to come on board with their own personal entertainment devices and connect to our server and receive streamed content. It is not something they will download to their devices and walk away with; it will be consumed during the flight.

"Ava is bridging the gap that has been there for a while, where passengers were bringing on their own devices and airlines were losing a branding opportunity. So now we're giving them a facilitation tool to present to the passengers a branded solution that will be able to be consumed on their personal devices."

The benefit of Ava for passengers is that coming on board the aircraft there is not the same learning curve to deal with as there is with a seatback screen.

"We're all very comfortable using our own devices and how you navigate that device," said Lichty.

"It can be a stand-alone solution," she added. "So for the single-aisle aircraft that perhaps don't have IFE on them, this is a solution that can be brought on board, installed on the aircraft very quickly and the passengers can begin consuming that content once they take off."

For aircraft that already have IFE on board, Thales is also seeing customer demand for a multi-screen experience.

"Passengers still want to have that beautiful big screen experience but they also like their personal devices.

"So we're allowing those passengers to stream

content to those devices while still engaging in a better IFE system."

However, there are still limitations regarding early window content. Mark Horton, VP non-theatrical sales, Paramount Pictures, explained that from the point of view of the studios, protecting content is vital and there are still some doubts over wireless streaming to customer devices.

"We have to protect content – we have huge battles with piracy every day of the year," he said.

"The airlines are very secure; it's very hard to steal from a plane, but when you're distributing files to a customer device we have no way of knowing what pirate software they have on that device, or in a year's time may be developed that could steal.

Passenger device

"So for personal devices that the passengers bring on to the plane we're being very conservative in what we offer. You certainly won't get our brand new movie being circulated to a passenger device, purely for security reasons. Typically, it's going to be an older movie," said Horton.

While Thales finds a way to demonstrate to the studios that it can overcome these piracy concerns, work continues in California on the next innovations in IFEC. "The pace of change is dramatic in our business," said Pellegrini. "Therefore innovation has to be the foundation of a successful business for us."

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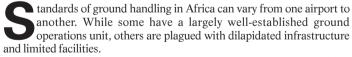
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Growth ready for take off...

《Des services aéroportuaires
en mutation》 – Page 86

As international carriers turn their attention to Africa, ground handling and line maintenance operators are faced with the task of creating sufficient ramp capacity, deploying new technologies and, in some locations, ensuring adequate oversight by the responsible authorities.

Keith Mwanalushi reports.



According to the Airports Council International, the African region has 57 members operating 200 airports in 47 countries. In 2011, these airports handled 153 million passengers, 1,795 tonnes of cargo and more than 2.5 million aircraft movements.

The International Monetary Fund predicts that over the next five years, seven of the world's 10 fastest growing economies will be in Africa. Aviation analysts indicate that airlines in Africa reported 116 billion available seat miles (ASMs) in 2011. ASMs are expected to grow to 152 billion by 2015 and to 186 billion by 2021.

Although the expected growth rates are remarkable, they are based on a small baseline. Even by 2021, capacity in Africa will be 10 times smaller than the expected capacity for North America. However, the long-term prospects for traffic in Africa are encouraging.

Three out of the top 10 busiest airports in Africa are in South Africa. International ground handler Menzies looks



GROUND HANDLING

CONTINUED FROM PAGE 85

after aircraft up to the A380 in Johannesburg and 747 and 747F in Cape Town and Durban. In Port Elizabeth there is narrow-body capability, with regional jet capability at other locations in the country. At Dakar, Accra, Cotonou and Malabo, Menzies has capabilities for up to 747 and 747F aircraft.

"Our South African operation had its best year ever in 2011 but the world recession made life a bit more difficult in 2012," said Forsyth Black, Menzies senior vice president for Africa. "We've encountered stiff competition as much as we've given it, and we're happy to say we're healthy and ready for whatever the future holds for us."

Menzies' OR Tambo operation in Johannesburg became the first South African ground handling operation to be awarded the prestigious ISAGO award by IATA. Cape Town was awarded the same just weeks later.

Menzies recently added Congo DR-based Korongo Airlines (co-owned by Brussels Airlines) to its portfolio at Johannesburg OR Tambo. "We value working with regional airlines as much as the big glamorous names in the industry," said Black. "Korongo is going from strength to strength and we're doing the full range



of services from passenger services, to ramp, to cargo, aircraft cleaning and lounges. We're in a great position to offer an end-to-end service."

In terms of investment, Black indicated that Menzies constantly looks at new ground support equipment (GSE) options and technologies and invests in them where possible. "Over the last couple of years our fleet of electric tow tractors has increased, but recently our largest investment has been in airport busses," he said. "In terms of expansion in the region, together with our partners, we have been awarded a licence to operate in Dar es Salaam, and we're pursuing a number of other opportunities right across the continent."

In December 2011 dnata made its debut foray into the South African ground handling market with a 50% acquisition of catering services provider Wings In-flight Services (the remaining 50% is held by Mentor Africa Limited and management).

The Wings business is spread across two airports – Johannesburg and Cape Town – providing catering services to a number of airline customers including British Airways, Singapore Airlines, Emirates and Thai Airways. "It was our

SOMMAIRE

Des services aéroportuaires en mutation

Les services de manutention au sol et de maintenance en ligne sont en plein essor en Afrique mais connaissent des disparités d'un aéroport à un autre.

Keith Mwanalushi nous fait un tour d'horizon.

Alors que les grandes compagnies aériennes étendent leurs réseaux vers l'Afrique, les opérateurs de manutention au sol et de maintenance en ligne doivent déployer davantage de nouveaux services et de capacités pour les aires de stationnement des avions. Certains aéroports bénéficient de services bien établis tandis que d'autres ont des moyens limités ou des infrastructures défaillantes voire une surveillance inadéquate par les autorités.

Selon le FMI durant les cinq prochaines années, sept pays sur dix avec les meilleures croissance au monde seront en Afrique. Le continent compte 57 opérateurs de services pour 200 aéroports situés dans 47 pays. En 2011, ces aéroports ont accueilli 153 millions de passagers, 1795 tonnes de fret et plus de 2,5 millions de mouvements d'avions.

Trois des 10 premiers aéroports africains les plus fréquentés sont en Afrique du Sud. L'opérateur Menzies y est fortement implanté et gère tout type d'avions: A380, Boeing 747 et B747F ou encore des biréacteurs régionaux. Il est également opérationnel à Dakar, Accra, Cotonou et Malabo.

«2011 a été une année historique pour nos opérations en Afrique du Sud. Malgré la récession mondiale et la concurrence en 2012, nous sommes en bonne santé et prêts à affronter l'avenir », a indiqué Forsyth Black, directeur général adjoint de Menzies pour l'Afrique.

Menzies est également devenu le premier opérateur sud-africain à recevoir la récompense ISAGO par l'IATA. Menzies assure maintenant une gamme complète de services pour Korongo Airlines (RDC) qui a reçu une licence d'exploitation à Dar es Salaam. Elle investit dans de nouveaux équipements au sol.

Fin 2011, l'opérateur Dnata a pris 50% de l'opérateur de restauration Wings in Flight Services qui opère principalement à Johannesburg et Cape Town. La société fournit ses services à des compagnies aériennes comme British Airways, Singapore Airlines, Emirates Airlines et Thai Airways.

«C'était notre premier investissement en

Afrique et nous souhaitons nous développer dans ce nouveau marché », a déclaré Stewart Angus, directeur des divisions du groupe Dnata.

Le groupe y voit de réelles opportunités. Il a depuis décroché un contrat avec British Airways sur les villes de Johannesburg et du Cap.

Le transport aérien au Ghana connait également une forte croissance. Les perspectives économiques du pays sont solides avec une prévision de croissance du PIB de 8,3% en 2012 et de 7,7% en 2013. L'aéroport d'Accra Kotoka gère en effet un million de passagers annuellement.

«Nous fonctionnons principalement durant la nuit pour les vols vers les Etats-Unis, l'Europe et l'Afrique du Sud», a déclaré Paul Craig, directeur général d'Aviance Ghana, principal opérateur à Accra Kotoka.

Les installations sont utilisées à plein régime pendant les heures de pointe et par conséquent tout trafic supplémentaire doit être régulé.

Un plan de modernisation est à l'étude pour arriver à traiter une capacité de cinq millions de passagers. Il existe actuellement deux opérateurs offrant une gamme complète de services selon les normes internationales, selon Paul Craig.

L'augmentation du trafic a un impact sur la qualité des opérations au sol. Aviance Ghana



Aircraft movments at Accra's airport have increased with the introduction of a new breed of carriers.

a donc mis en place un plan d'investissement pour répondre à la demande et aux nouveaux entrants. Ce plan a déjà permis l'achat d'autobus pour les passagers, de véhicules pour tracter des avions, de chariots élévateurs, ou encore des remorques à bagages.

Cependant, les réalités de fonctionnement en Afrique sont difficiles et il y a encore de nombreux défis à relever : qualité des alimentations électriques et des pistes et de la disponibilité d'un personnel qualifié pour la maintenance des équipements.

«Les industriels sont aussi peu présents en Afrique et les pièces pour la maintenance de nos équipements doivent être achetés au niveau international ou sur le marché local dans l'urgence », déplore M. Craig.

Les pièces sont certes de moindre qualité sur le marché local mais elles restent une nécessité opérationnelle. L'absence de passerelles télescopiques et de postes d'alimentation électrique rendent également les opérations plus coûteuses.

L'aéroport de Lusaka en Zambie connait une augmentation de son trafic aérien. Le pays s'ouvre aux grandes compagnies

«C'était
notre premier
investissement en Afrique
et nous souhaitons nous
développer dans ce
nouveau marché»

Stewart Angus

internationales, n'ayant pas de grand transporteur local.

En 2012, Emirates
dessert cinq fois par
semaine Lusaka depuis
Dubaï et KLM aura bientôt
trois vols par semaine
depuis Amsterdam, les deux
compagnies opérant des
Airbus A330.

L'aéroport accueille déjà British Airways, Kenya Airways et South African Airways.

Les opérations au sol ne se font pas sans mal. Roger Meels, directeur technique d'un opérateur hollandais, a relevé de nombreux défis pour assurer pleinement des services au sol dans la capitale zambienne.

Il nous a indiqué que sa société a dû apporter l'ensemble des outillages et des équipements nécessaires conformément aux normes Part-145 puis les auditer et certifier sur place.

Nous devons opérer aussi avec une équipe mixte, le personnel zambien ne possédant pas toutes les approbations pour opérer un A330.

Selon Roger Meels, de nombreuses opportunités existent à l'aéroport de Lusaka et il souhaite offrir le meilleur rapport qualitéprix à sa clientèle.

Ces activités peuvent créer davantage d'emplois pour les zambiens.

first investment since the acquisition of Alpha Flight Group at the beginning of 2011 and signalled our intention to develop and grow in the in-flight catering market, a relatively new market for dnata," stated Stewart Angus, divisional senior vice president for dnata's Associated Companies.

"It was also our first move into Africa, which we see as an area of exciting opportunity in the next few years. We were attracted to Wings by the very high service levels and quality reputation that it enjoyed in the South African market. Since then, Wings has been awarded a major contract to supply British Airways with catering in Johannesburg and Cape Town," Angus added.

Considerable increase

Another market seeing considerable increase in airline capacity is Ghana. The Ghanaian economic outlook in 2012 and 2013 remains positive with projected GDP growth of 8.3% and 7.7% in 2012 and 2013 respectively, according to data from the African Economic Outlook (AEO).

Accra's Kotoka International Airport handles in the region of one million departing passengers a year and is used by many global flag and regional carriers. "The main wave operates at night and focuses on the USA, Europe and South Africa," said Paul Craig, managing director at Aviance Ghana, the ground handler at Accra Kotoka. "During peak times facilities are used at optimum capacity and additional traffic has to be regulated, which impacts on free organic growth."

Craig said there is a plan to upgrade the airport to a capability of handling five million departing passengers and taking the airport infrastructure to a 15-year plan.

There are currently two ground

Continued on Page 88

GROUND HANDLING

OVERVIEW

CONTINUED FROM PAGE 87

handling providers offering a full spectrum of services to international standard, according to Craig.

The current influx of airline capacity into Accra has an impact on the how ground operations are managed at the airport and, as a result, Aviance Ghana has an annually reviewed capital investment plan mapped out into five-year periods.

"In the last 12 months passenger buses (Cobus), aircraft push back (Goldhofer Towbarless), ambulift (Mallaghan), forklift trucks and additional cargo and baggage trailers have been added to our fleet of GSE," said Craig.

He added that investment plans were implemented to ensure capability exceeds demand, thereby protecting service standards and delivery. "As Aviance already meets peak demand it is now for the authorities to ensure new entrants operate in periods when appropriate facilities (check-in desks/stands) are available. This assists best use of resource and equipment."

Despite the rise in airline capacity and impressive growth figures, the realities of operating in Africa are clearly evident. In terms of ramp services, there are still numerous challenges to tackle. Craig cites issues such as uncertain power supply, road surfaces, availability of qualified staff and maintenance of GSE.

"None of the GSE manufacturers have incountry sales or representation and, therefore, parts have to be sourced internationally or in emergencies from the local market," Craig explained. "Local market solutions will, in many instances, be of a lower grade than manufacturer parts but become an operational stop gap necessity.

More buses

"Costs associated to airfreight, shipping and duties also make the operation more expensive than Europe. With no passenger airbridges, or fixed electrical power supply, we have to maintain more buses and GPU/Airstart GSE than airports in Europe and the Americas," he added.

Opening up a new remote line station also comes with challenges. When Dutch-based line maintenance provider Direct Maintenance set up a line station at Kenneth Kaunda International Airport in Lusaka in 2012, Roger Meels, technical director and accountable manager recalls facing some unique challenges, as it prepared to cater for Emirates' new service to the Zambian capital.

"When we came to Lusaka the first time, there was no suitable office space available for our line station, as well as no space available which could be turned into a storage space for holding spare parts, in line with aviation regulations," said Meels.

Having worked closely with the Zambian airport authorities, Direct Maintenance was allocated a piece of land airside where the company was allowed to construct a storage space from scratch, as well as renovating a room which now functions as a line station office, only a few steps away from the apron.



«It is now for the authorities to ensure new entrants operate in periods when appropriate facilities (check-in desks/stands) are available.»

PAUL CRAIG

Photo - Aviance Ghana

Lusaka has also seen increases in airline capacity, to some extent caused by not having a local flagship airline, and fuelled by a growing middle class.

In 2012 Emirates introduced five-times weekly services from Dubai (which is expected to go daily) and KLM soon followed with thrice-weekly operations from Amsterdam, both carriers utilising A330-200s. This is in addition to considerable capacity already offered by British Airways, Kenya Airways and South African Airways.

"At first our staff perform a ramp foreign object damage (FOD) inspection prior to landing, next we plug in the headset to communicate with the incoming crew of the Emirates A330 aircraft." said Meels.

Line inspection

"Once the engines are shut down, we perform a line inspection of the aircraft focused on safety of the aircraft, while we liaise with the crew for any abnormalities observed and overview the refuelling operations. Defects that have to be rectified before the next flight will be completed. We also pay particular attention to any passenger convenience items, such as seats or IFE, in case any issues are reported. Prior to departure we certify the aircraft."

Meels said the company had to bring in all the required tooling and equipment in line with the EASA Part-145 regulations, some of which are calibrated at set intervals.

"In addition we have had to audit and certify the station to satisfy our CAA/NL, as well as the UAE GCAA. Further we did not manage to source Zambian nationals who hold A330 approvals, so for the time being we are having a mixed team on site, with non-Zambian licensed staff and local mechanics."

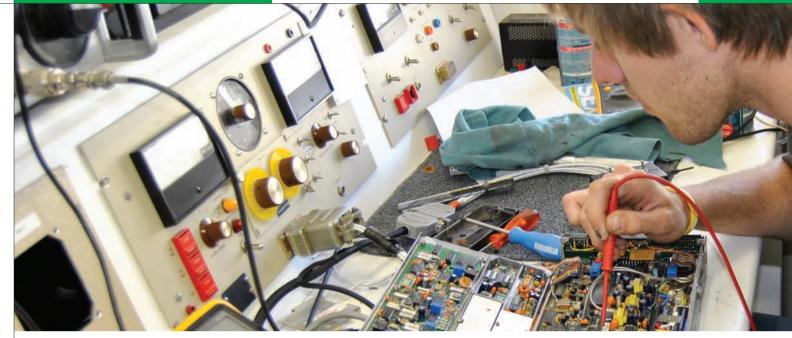
In terms of servicing other carriers at the Lusaka airport, Meels says that as business opportunities arise, the company is keen to consider supporting additional airlines, "some of whom already approached us even prior to our Lusaka station being operational. We will consider such carefully, not to jeopardise the operations of our launch customer Emirates, and to ensure we offer value for money to the potential new airline customers and I hope it may create more employment opportunities for Zambian staff."

Professional support

Direct Maintenance is also actively operational in East Africa. A few years ago the company approached several of the world's airlines to find out where they required support in terms of line maintenance. "By surprise, quite a few were in need of professional support in East-Africa," said Meels.

The company started out in Mombasa, Kenya, in 2006, just handling a few flights a week at the time. Over the years Meels explained there has been continued investment in creating local jobs as well as offering aircraft type training to expand capabilities, allowing the company to gradually take on more work.

"In addition we also commenced in Zanzibar, early 2007, where we are the only provider to date. Next came Addis Ababa in Ethiopia in 2009. We are now expanding into three more East-African locations, all due to demand from our customer base. For instance, our latest expansion drive will see us going into Nairobi Jomo Kenyatta Airport," Meels concluded.



Interjet maintains a healthy outlook

Marcelle Nethersole

reports on a
South Africanbased company
that believes it
is in just the
right position
to grow its
business.

nterjet Maintenance specialises in aircraft maintenance on mid-size business jets and heavy turbo-props including Cessna Caravans, King Air and Embraer turbo-props, Learjets, Citations, Challengers and Gulfstream private jets.

Based at Lanseria International Airport, the company also specialises in avionics and training.

"We deal with the installations of avionics but we also have workshops where we maintain older avionics. With the newer systems, we send to OEMs oversees for repair, as it's cheaper," said Bruce Boyson, managing director.

The company, which was set-up 28 years ago, also has a training division.

"We provide maintenance training for aircraft mechanics. We do everything from local regulations to the regulation training for Angola and surrounding countries," said Boyson. "We also offer basic maintenance training in engines and aircraft types."

Boyson said the company's market is 'big', working as far afield as Nigeria and Ghana. "We do a lot of aircraft from Angola, Kenya and Botswana too; it's a very varied market for us," he added.

The company's biggest competitor is ExecuJet, which has recently opened a facility in Nigeria. But this doesn't bother Boyson, as he feels that South Africa is the right location.

"There is no doubting that Nigeria has a lot of big business and, in turn, a lot of business jets. But ExecuJet does tend to fly all its repairs to the US or Europe," said Boyson. "We have Nigerian clients – one has been with us 10 years. They find there aren't really any maintenance companies in Nigeria so they bring their maintenance here to South Africa.

"While there is a drive to try and move maintenance to Nigeria the problem is there aren't many skilled technical people there and we can't afford to pay the huge salaries people want in order to live there. It makes more sense if they come to South Africa. My avionics guys here probably earn \$5-7,000 a month – to go to Nigeria they will want to command at least \$15,000, so it's not worth it."

While saying that, Interjet Maintenance is looking to expand both within South Africa and out of it.

Boyson said: "At the moment we have two hangars and two buildings. We're looking to expand but it has to be viable. African business is very cross-sensitive.

"We do a lot of work for aircraft in Mauritius and out of Madagascar – so looking at the Indian Ocean is good for us. We also do quite a lot of US and European registered planes that are working for Africa too. We're too small to look at moving into the US though."

Modification programme

Speaking about the US, Boyson added that the company has a partnership with Texas Turbines from Texas. "It's a modification programme on a Cessna Caravan where we take the PD6 engine out and replace it with a Honeywell engine. It's a TP331 – the 331-12JR motor – which increases the power of the aircraft dramatically and takes the time from the overhauls of the engine from 3,600 hours to 7,000 hours – so it halves the operating costs," explained Boyson.

So far, Texas Turbines has modified 36 aeroplanes and has sold 40 kits around the world.

"We're now the sole agent for it in Africa," said Boyson. "There are 1,830 Cessna Caravans of about 2100 being built that are eligible for this modification around the world and, of that, around 700 of those are in Africa – so there is a huge market and we have put a lot of money in to it.

Generally, we are geared to making flying pleasurable for both customers and the aviation enthusiasts."

MAINTENANCE MRO



SAA Technical area TAAG OR Tambo Apt JHB 0130.

SAA Technical is looking out of Africa

outh African Airways (SAA) has been running for more than 70 years with its aircraft maintained and repaired by SAAT.

"Our primary customer is SAA and we maintain its entire fleet," said Moosa Desai, senior manager for technical sales and marketing.

'Since the acquisition by SAA of a new Airbus fleet, it also means we have added full maintenance capabilities on Airbus to our existing capabilities on the Boeing fleet.

"We also have additional capability on Boeing 777s to attract more third-party customers. We are in a position to provide any services and also heavy maintenance checks and maintenance flight hours services operating in and out of our main base in Johannesburg."

While the company's main operation is at extensive premises at OR Tambo International Airport, it has expanded to serve customers in Cape Town, Durban and Lanseria. It is also Airlines are now looking at growing out of South Africa.

"Our primary market is Africa but we are planning to look at growing our thirdparty revenue at non South African business going forward, as well as out of Africa," said Desai.

'We have already worked quite a lot for the kingdom of Saudi Arabia, with some of it for the king's private aircraft, and we have also done work for Lufthansa and Air France."

But, while the company wants to look beyond the continent, within it, it is facing some obstacles.

"South Africa is definitely one of the leading players in Africa but the north of the country has quite significant growth.

"For us, we are more concerned about sub-Saharan growth and what we can do long-term with our customers. But our main problem is that, geographically, we are at the bottom of the continent, so we are finding that prevents people placing aircraft with us," explained Desai.

The company has already expanded its African footprint in Lusaka, Mauritius, Dakar, Luanda, and Kigali.

The African market is really growing now. It was once thought that the African market operated old aircraft and Africa was the dumping ground of Europe and

America, but that is now changing," said Desai.

"African Airlines are now buying brand new aircraft off the line and we are looking to capitalise on that.

"It's a growing market with growing activity in the region.

"We are seeing smaller African airlines beginning to blossom and we would like to partner with them from the word go from initial start-up, capability, capacity and then when they grow, we grow with them.

"That's the idea."

"African

buying brand new

aircraft off the line and

we are looking to

capitalise on that."

Moosa Desai

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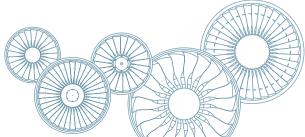




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Africa continues to see an influx from bigger foreign carriers but, as the secretary general of the African Airlines Association told Keith Mwanalushi, in order to counter the onslaught, local carriers and governments must put on a joint front.

HOW TO TAKE ON THE BIG BOYS

key topic at the African Airlines Association (AFRAA) annual general assembly in November was how the continent's airlines could compete against bigger foreign operators within their own airspace.

What strategies could be implemented in response to the larger and more dominant overseas carriers?

Industry figures show that intercontinental capacity to and from Africa by African airlines stands at around 20% – the remainder with airlines mainly from Europe, the Middle East and lately North America. As a result of this intense competition on the intercontinental routes, the best opportunities for growth and expansion for African airlines lie in the under-served regional and domestic markets.

"In my view there are two aspects to this," said Dr Elijah Chingosho, secretary general of AFRAA. "Firstly, what can the African airlines do for themselves and, secondly, what can the African governments do to facilitate the growth and development of African airlines?

"Let's start with governments. In Africa the charges, taxes and levies on passengers and on fuel are very high – much higher than the world average rates."

In terms of passenger charges, particularly in central and western Africa, he said some places were charging between \$60 and \$80 per passenger. "So you can see that it puts African aviation at a



disadvantage because, for the larger airlines to grow, we need those feeder airlines coming from domestic and regional operators that also face these high charges. We need to grow the intra-African market," said Chingosho.

He emphasised that governments need to reduce such excessive charges. Considering the high cost of fuel around the world, Chingosho indicated that worldwide fuel constitutes about 36% of operational costs for airlines globally.

"In Africa, on average, its 45 to 55% because of these various charges, taxes and levies on fuel," he added.

The second point he raised was that of the Yamoussoukro Declaration, designed to accelerate the implementation and liberalisation of the air transport industry in Africa; an issue that has dragged its feet over time.

Chingosho said it was critical to fully liberalise Africa for African operators, thus making it possible to get entrepreneurs from one country to invest in another.

"So, basically, what we are saying is we need the full implementation of the Yamoussoukro Declaration because what you often find is that African governments give preferential treatment to some foreign carriers, say from the Gulf or Europe.

"For example, they allow more frequency of services by literally giving fifth-freedom traffic to foreign carriers, yet the same is denied to African carriers. If our governments are able to create a



Left: Kenya Airways CEO Titus Naikuni said KQ, ET and SAA should come together to form a large African airline able to take the fight back to foreign carriers. Right: Qatar Airways continues its foray into Africa opening several routes in the past two years.

level playing field then I believe that our airlines should be able to compete effectively," he explained.

One of the main challenges facing airlines on the continent is that they are very small. "We need to consolidate, we need to form partnerships and we need to forge joint ventures. We encourage such arrangements," he stressed.

He noted the example of Kenya Airways and its partnership with Tanzanian carrier Precision Air and that between Ethiopian Airlines and ASKY in Togo – basically, larger airlines buying equity in smaller partners. "This way, both are able to grow," he said. "It's the only way we will be able to form bigger operating entities to compete against the foreign carriers."

According to a report by the Centre for Asia Pacific Aviation (CAPA) Precision CEO Alphonse Kioke said Kenya Airways' involvement in the company has allowed the carrier to access financing from banks to grow the airline in a way that was not previously available. It has also benefited from staff exchanges with Kenya Airways – allowing employees to gain experience in a bigger organisation. Also, an association with Kenya Airways' maintenance has made it easier for Precision to lease aircraft.

ASKY gives Ethiopian a hub in the huge and fast growing West African market, rich in oil and mineral exports, not easily accessed from its home base at Addis Ababa.

Establishing the hub in Togo, a small market with little traffic of its own, was challenging and restrictions on night services meant aircraft utilisation was not optimal, increasing costs. Nevertheless, ASKY has performed well, establishing good traffic volumes and load factors.

The inability to benefit from scale is a major drawback; Africa is littered with several small carriers that are crippled by their size.

Chingosho continued to stress on the fact that they must attract interest of the larger carriers.

Equity participation

He said: "I'm aware that Air Malawi, which a very small airline, is in discussions with airlines to try and get them to buy equity participation in the company. I think that is the way to go, otherwise the smaller carriers, because of the lack of economies of scale, will go out of the market one after the other."

Outside of South Africa, (and possibly Namibia), airlines in the sub-Saharan region are relatively small operations with no significant operational credibility, many of them featuring on the European Union list of banned airlines.

However, Chingosho warned that consolidation among these small carriers might not be the answer. "If we ask why the small carriers don't consolidate, the thing is that they don't have much to gain from each other because they suffer from the same basic problems."

He listed problems such as undercapitalisation, lack of management depth, and the lack of capacity to basically achieve industry best practice in quality, efficiency and in terms of economies. "That's why, in my view, you need that investment especially from the bigger airlines. Apart from benefiting from feeder traffic, the larger carriers might also benefit from the traffic rights which may be granted more easily under such forms of participation."

He noted that ASKY is now viewed as a regional airline rather than a Togolese airline, which as a result has much more fifth-freedom traffic rights than most other airlines on the continent – much to the benefit of Ethiopian Airlines.

"I think it's the way to go. Remove the national flag from the tail. For the countries in the Southern African Development Community (SADC), there could be an entity in Zambia, for instance, where you have people from Namibia, Zimbabwe, Malawi, Tanzania and so on. They can all get equity into that airline, get the shareholding traded at the various stock exchanges and this way you can mobilise much more capital from the region," he said

The SADC states are still heavily dependent on foreign airlines from the Middle East and Europe. This situation makes travel to the Southern African region expensive, due to frequent stopovers and delays caused through connections outside Africa.

EVENTS



Emirates has increased African destinations to 22 including recent additions Lusaka and Harare.

CONTINUED FROM PAGE 93

Of concern to some domestic and regional carriers on the continent, however, is the fear that greater liberalisation of intra-African skies will benefit the four largest players – Kenya Airways, Ethiopian, SAA and EgyptAir – which, given their comparatively vast resources, can quickly take the lion's share of a freed-up market to the detriment of smaller airlines. As a result they perceive the big carriers as a threat to their futures rather than as protectors with a common interest of collectively building Africa's aviation system.

Raise concerns

What, then, is AFRAA doing to raise concerns over high charges?

"We have collected the statistics and published them because we realised that some of the governments and airport authorities were not aware that their charges are much higher than elsewhere," said Chingosho. "They can now try and work on it."

An example of this is in Angola where, according to Chingosho, AFRAA was able to get the fuel company to reduce the price by 20%. He said, as a whole, the African airline industry could save up to \$60 million per year just by reducing some of the charges, taxes and levies on fuel.

"Also, we are lobbying against monopoly service providers such as fuel, ground handling and catering companies, so that by stimulating competition this should eliminate monopoly pricing," he added.

Despite the slow progress implementing the Yamoussoukro Declaration, Chingosho believes it's important to highlight that there are parts of the continent seeing growing implementation. "You will find that more and more countries in central and western Africa. Some in East Africa, too, are willing to open up their markets fully, and even to provide fifth-freedom traffic rights to those who intend to fly in their areas – so there is some progress."

He noted that the missing link with the Yamoussoukro Declaration had been the lack of an executing agency. This is now in place.

"The African Civil Aviation Commission has been mandated as the executing agency, so I believe it will now be easier to accelerate the full implementation," he said.

The Middle East leads the expansion into Africa. In October 2012, Mozambique became the latest foray on the African continent for Qatar Airways. The Doha-based carrier inaugurated three weekly

services to the country's capital, Maputo. With the discovery of large reserves of natural gas, Mozambique is today emerging to be one of the fastest growing economies in the region.

Qatar Airways operates to some 19 cities in Africa. Within just two years the airline opened up a number of routes across the continent, including Entebbe, Benghazi, Kigali, Maputo and Kilimanjaro in Tanzania. Similarly, Emirates serves 22 destinations, including the most recent services to Lusaka and Harare in February 2012.

"What we see is that worldwide, the perception of Africa is changing," observed Chingosho. "People are seeing Africa as the future growth market, the economies of Africa are rising well above world average rates and the middle class on the continent is rapidly growing – a number that's estimated to be around 300 million people.

"Even the poverty level within the continent is decreasing. This is creating quite a big market and that is why many parts of the world, such as the Middle East, Europe, America and Canada, are seeing opportunities here. I can see more of them getting into the market in Africa," he said.

However, he noted the situation with Asia as different. Currently, African airlines operate more services to and from Asia than Asian carriers to Africa. Trade between Africa and Asia continues to grow; China is already the largest trading partner with Africa, surpassing trade with the US by significant margins.

Our concern

Chingosho urged African carriers to increase their presence in Asia. "Our concern is that the Asian carriers will ultimately move into the African market and, unless we start going into Asia in a big way, when they come into Africa we might not be able to beat the competition from that part of the world."

At the 44th AFRAA annual general assembly in Johannesburg, Kenya Airways' CEO Titus Naikuni suggested that a potential offensive could be a tie up between the top three largest carriers in Sub-Sahara Africa – Kenya Airways, Ethiopian Airlines and SAA – to create a pan-African mega carrier.

Such consolidation in the airline industry is now common practice. Europe has consolidated to three major airline groups – Lufthansa, Air France-KLM and British Airways/Iberia parent IAG – in a region of 27 countries. In the US, United and Continental have come together along with Delta and Northwest. In Latin America there have been mega mergers in recent years with LAN and TAM and with Avianca and TACA.

Quelles stratégies pour les compagnies aériennes africaines pour concurrencer les grands opérateurs étrangers? Tel a été le thème central de l'assemblée générale annuelle de l'AFRAA en novembre dernier.

Les chiffres son évocateurs. Les compagnies aériennes africaines assurent 20% de la capacité du trafic aérien vers et hors l'Afrique par rapport aux compagnies provenant principalement d'Europe, du Moyen-Orient et plus récemment d'Amérique du Nord. En raison de cette concurrence intense, les meilleures opportunités de croissance se trouvent sur les marchés régionaux et nationaux.

Pour le Docteur Elie Chingosho, secrétaire général de l'AFRAA, il y a 2 problématiques : quelle est la politique des gouvernements africains pour faciliter le développement des compagnies aériennes africaines et que font ces compagnies pour se soutenir?

Les charges, impôts et taxes sur les passagers et le carburant sont très élevés en Afrique, nettement plus que les taux moyens mondiaux. Certains pays en Afrique centrale et occidentale imposent une redevance allant de 60 à 80 dollars par passager. Les gouvernements doivent bien sûr réduire ces taxes excessives compte tenu déjà du coût élevé des carburants dans le monde. Rappelons que le poste de dépense carburant représente environ 36% des coûts d'exploitation d'une compagnie aérienne. En Afrique, cela représente 45 à 55% en raison des diverses taxes. L'aviation africaine se met automatiquement dans une position désavantageuse.

La seconde problématique est la libéralisation de l'industrie du transport aérien et de l'entraide entre les compagnies africaines. Selon Elie Chingosho, il est essentiel d'y parvenir, ce qui permettra aux entrepreneurs d'investir d'un pays à l'autre. Les gouvernements africains accordent en effet des traitements préférentiels aux compagnies étrangères au détriment des compagnies africaines.

Cette libéralisation préoccupe de nombreux acteurs du continent africain, craignant qu'elle ne sera bénéfique que pour les grands opérateurs comme Kenya Airways, Ethiopian Airlines, SAA et EgyptAir. Elles disposent d'une taille critique et peuvent rapidement s'imposer sur un marché au détriment des petits opérateurs. Elle Chingosho estime au contraire que cette libéralisation ne doit pas être perçue comme une menace mais plutôt comme une opportunité pour bâtir collectivement le transport aérien en Afrique.

Elie Chingosho explique que si les gouvernements établissent de réelles règles

SOMMAIRE

Comment remettre en cause les grandes entreprises

Les grandes compagnies aériennes mondiales prennent de plus en plus d'importance en Afrique bénéficiant d'un fort développement du trafic aérien sur le continent. Les compagnies locales et les gouvernements doivent s'organiser pour assurer leur avenir.

Keith Mwanalushi a rencontré le secrétaire général de l'association des compagnies aériennes africaines (AFRAA).



La perception de l'Afrique change, elle est perçue aujourd'hui comme un marché en expansion avec des croissances économiques soutenues.

de jeu alors nos compagnies seront en mesure de rivaliser avec les transporteurs étrangers. Les petites entreprises disposent de peu de capital et manquent de capacité pour atteindre les meilleures pratiques de l'industrie. Ainsi l'AFRAA les encourage à se consolider et à développer des partenariats comme ceux entre Kenya Airways et Precision Air de Tanzanie ou entre Ethiopian Airlines et ASKY au Togo. Les banques acceptent plus facilement de prêter aux grandes compagnies. C'est ainsi que Kenya Airways a pu assurer son développement, ce qui n'était pas le cas auparavant.

La compagnie ASKY a permis à l'Ethiopie de devenir un véritable hub et a également obtenu de bons résultats au Togo. Considérée comme une compagnie aérienne régionale, ASKY dispose par conséquent de plus de fréquences et mobilise plus de capitaux au grand bénéfice de la compagnie Ethiopian Airlines.

Les compagnies aériennes de la région subsaharienne ont des opérations modestes. Elles manquent de crédibilité, beaucoup d'entre elles figurant sur la liste noire de l'Union Européenne. Les pays de la SADC sont encore fortement tributaires des compagnies aériennes étrangères, ce qui rend les voyages dans la région de l'Afrique australe coûteux, en raison de fréquentes escales et des retards causés par des connexions en dehors de l'Afrique.

Quelles ont été les actions de l'AFRAA pour la baisse des taxes sur le transport aérien? «L'AFRAA a publié ses statistiques. Plusieurs gouvernements et autorités aéroportuaires n'étaient pas au courant que leurs taxes étaient plus élevées qu'ailleurs », a déclaré Elie Chingosho. «C'est une bonne base de travail». Grâce aux efforts de l'AFRAA, l'Angola a décidé de réduire ses taxes de 20% sur le carburant. L'AFRAA a aussi fait pression sur des opérateurs de services en situation de quasi monopole afin de stimuler la concurrence et d'agir sur les prix.

L'idée d'ouverture du marché de l'aviation en Afrique fait également son chemin sur les bases de la déclaration de Yamoussoukro. Il manquait cependant une agence africaine capable de mener ce projet. Elle est désormais en place. La commission de l'aviation civile africaine a été mandatée en tant qu'agence exécutive pour faciliter le processus.

Le Moyen-Orient fait partie intégrante de la croissance en Afrique. En octobre 2012, le Mozambique est devenu la dernière destination de Qatar Airways sur le continent avec trois vols hebdomadaires vers Maputo. Avec la découverte de grandes réserves de gaz naturel, le Mozambique est aujourd'hui l'une des économies les plus dynamiques de la région. Qatar Airways exploite près de 19 villes en Afrique. Emirates dessert 22 destinations avec des services récents à Lusaka et Harare.

«La perception de l'Afrique change, elle est perçue aujourd'hui comme un marché en expansion avec des croissances économiques soutenues. Elle connait aussi une forte augmentation des classes moyennes représentant environ 300 millions de personnes », a observé Elie Chingosho. «Le niveau de pauvreté baisse sur le continent et il existe un marché assez grand pour attirer des investisseurs du monde entier ».

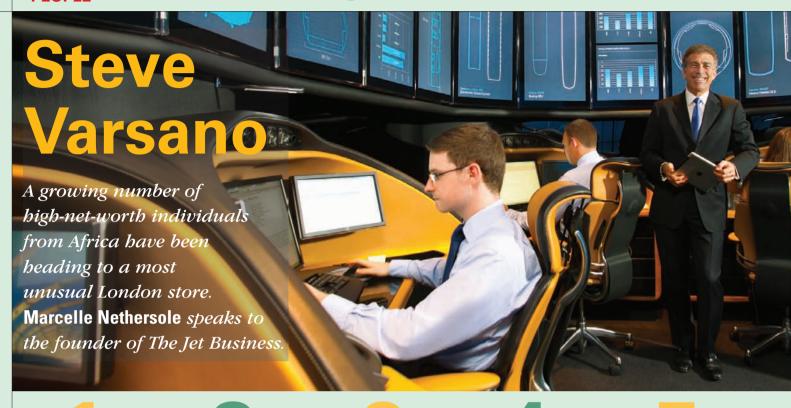
Toutefois, Elie Chingosho a exhorté les compagnies africaines à accroître leur présence en Asie car elles ont davantage d'opérations sur l'Asie que les compagnies asiatiques vers l'Afrique. Les échanges commerciaux entre l'Afrique et l'Asie ne cessent de croître, la Chine étant déjà le premier partenaire commercial de l'Afrique, dépassant le commerce avec les États-Unis.

«Les transporteurs asiatiques vont entrer de façon plus active sur le marché et nous devons consolider notre présence en Asie afin d'être en mesure de les concurrencer ».

Titus Naikuni, PDG de Kenya Airways a suggéré lors de l'assemblée annuelle de l'AFRAA, de créer un lien solide entre les trois premières plus grandes compagnies d'Afrique sub-saharienne - Kenya Airways, Ethiopian Airlines et SAA - pour créer un grand groupe de transport aérien.

Cette consolidation est déjà une pratique courante en Europe, aux Etats -Unis et en Amérique latine.

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. The showroom includes a full-size mock-up of an Airbus ACJ319 cabin, which attracts a lot of passers-by.

■ How did you get the idea?

I've worked in the jet selling market for 30 years and I couldn't understand how there wasn't an aviation could come and sit down and chat about their specific requirements. It was not so long ago that 95% of business was conducted over the telephone and you never really saw the customer. This was bizarre to me even then. I wanted to put on a smart suit and speak face-to-face with a customer.

l thought how do l build something where I can get the client to come and visit me? So, six years ago, I started drawing and sketching ideas. It took four years of putting the business plan together. I then needed to find the right location.

The showroom is very state-of-the-art, so the interior design took a good 10 months to build. The Jet **Business finally opened** January 2012.

■ Why did you choose London as its home?

It is best for me as nearly everyone who can afford a plane or to charter one and is based in Africa, the Middle East, or the CIS countries or Europe, comes through London. I can really capture the eyes of the people being based here. And there is no missing our glass showroom in a prime position near Hyde Park

■ How has the market started in the industry?

I got my first job selling jets almost 30 years ago. During that time I did leave the industry briefly to work in investment banking and private equity. When I returned to the aviation industry it had completely changed. Before I left, 80% of clients were in America, with the rest scattered between Europe and South America. But, when I returned. I discovered buyers were from Mongolia, Nigeria, Angola, Russia and China – far distant lands at

■ What does a typical day hold for you?

I'm up at 5:30am every morning. I come into the office for half-an-hour and check all my e-mails then I work out in the gym for an hour. I'll be back at my desk by 8am and will be in the office until 10pm every day.

There are three meetings a day here. We have meetings with potential clients, or pilots or private wealth clients. I make lots of calls a day to clients and potential ones.

Then I need to run the business generally, from marketing and negotiating contracts, to design and HR issues.

I used to travel 80% of my time but now it's more like 25%. I need to be in the office as much as possible as you never know who is going to walk in.

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