

WORLD AIR NEWS

AFRICA'S OLDEST AVIATION MAGAZINE

THE AVBUYER

African Business
Aviation Outlook



BURKINA FASO

Airport Concession
Agreement Suspended

ZIM AIRWAYS

Joins ICAO Corsia
Scheme

 Crafted in Switzerland

PC-12 NGX



 **PILATUS**

A CLEAR EXAMPLE OF EXPERIENCE PAYING OFF. LITERALLY.

Passing the milestone of eight million flight hours has firmly established the Pilatus PC-12 as the world's greatest single. Refunding on this experience, the new PC-12 NGX now offers 600-hour scheduled maintenance intervals, reducing operating costs and providing owners with more up-time. This proves the theory that time really is money.

pilatus-aircraft.com

Contact Pilatus PC-12 Centre Southern Africa, your nearest Authorised Pilatus PC-12 NGX Sales Centre for further information on
Tel: +27 11 383 0800, Cell +27 82 511 7312 or
Email: aircraftsales@pilatuscentre.co.za



This month's checklist photo features the FAI Aviation Group that operates Germany's largest fleet of Bombardier business jets. The fleet includes five Global Express, one Challenger 850, six Challenger 604s and seven Learjet 60s. Now the FAI GmbH Air Ambulance rent a jet division has received European Aeromedical Institute (EURAMI) accreditation for the fifth time. This for both long-range, intercontinental fixed wing and regional fixed wing air ambulance services. It seemed appropriate to feature this photo in our edition focussing on business aviation. Photo supplied: Emerald Media. Now read more inside.

CONTACTS

PUBLISHER TCE PUBLICATIONS

PO Box 35082, Northway
4065 South Africa
Tel.: +27 31 564 1319

MANAGING DIRECTOR

Joan Chalmers
joan@airnews.co.za

EDITOR

Heidi Gibson
heidi@airnews.co.za

BUSINESS DEVELOPMENT

Hes von Wielligh
hes@airnews.co.za
Tel.: 083 472 8834

Carla Hamman
carla@airnews.co.za
Tel.: 084 894 6172

AFRICAN CREW

ETHIOPIA - ADDIS ABABA
Kaleyesus Bekele
kaleyesusb@gmail.com
Tel.: +25 1911 461804

KENYA - NAIROBI

Githae Mwaniki
githae.mwaniki@gmail.com

MALAWI- BLANTYRE

Frank Jomo
fjomo@yahoo.com
Tel.: +265 922 0911

NIGERIA - LAGOS

Albinus Chiedu
output.publications@yahoo.com
Tel.: 234 803 81 17704

TANZANIA - DAR ES SALAAM

Al Mohamed
alm@ctas-net.com
Tel.: +255 784 474840

UGANDA - KAMPALA

Russel Barnes
barnesy@imul.com
Tel.: +256 722 712557

ZAMBIA - LUSAKA

Humphrey Nkonde
zpeopleandplace@gmail.com
Tel.: +26 0969 179805

ZIMBABAWE - HARARE

Wallace Mawire
wmawidri@gmail.com

INTERNATIONAL EDITORIAL CREW: BRITAIN / EUROPE / EUROPE BSP

MEDIA DIRECTOR

Sally Passey
sally@bspmedia.com
Tel.: +44 (0) 1491 628000

ITALY / PALERMO

Fabio Gigante
fabgiga@liberto.it
Tel.: 0939 329 360 3665

MALTA - ST JULIANS

Chris Cauchi
ckcauchi@melita.com
Tel.: 00356 9928 2208

AUSTRALIA / ASIA

Barrie Collins
collinsphotographic@bigpond.com
Tel.: +61 41 711 1729

USA, CANADA, SOUTH AMERICAN CREW

MEDIA DIRECTOR

Sally Passey
sally@bspmedia.com
Tel.: +44 (0) 1491 628000

RUSSIA - MOSCOW

Yuri Laskin
ylaski@mail.ru or
Tel.: 7 495 9121346

WORLD AIRNEWS

- 04 Flarepath
- 05 African Business Aviation Overview
- 07 BCA SAF Initiative
- 10 Ashanti Airlines Partners
- 11 Fly High Fred
- 14 Zimbabwe Carbon Offsetting Scheme
- 15 Air Charter Scotland
- 16 Burkina Faso Airport Suspends Concession
- 19 EAI B Boeing Max Final Report Complete
- 21 Textron Delivers 3000th Cessna
- 22 Helicopters Navy orders
- 25 IDEX & NAVDEX 2023
- 26 Fastjet Starts
- 28 AASA's Take on 2023
- 32 Rolls Royce's Largest Engine
- 34 Advanced Air Mobility Awaits
- 38 Aviation Recovery Hinges on Partnership



08



18



26



34

DISCLAIMER:— Opinions expressed in signed articles or in advertisements appearing in World Airnews, are those of the author or advertiser and do not necessarily reflect those of this journal or of its publisher. The mention of specific companies or products in articles or advertisements does not imply that they are endorsed or recommended by this journal or its publisher in preference to others of a similar nature which are not mentioned or advertised. World Copyright Reserved.

OFFICIAL JOURNAL OF:— Commercial Aviation Association of Southern Africa, The Airlines Association of South Africa, The Association of South African Aircraft Traders, Association of Training Organisations of South Africa, Aerodromes & Airports Association of South Africa, Association of Aviation Maintenance Organisations, South African Society of Aerospace & Environmental Medicine, Helicopter Association of Southern Africa, Aircraft Owners & Pilots' Associations of Southern Africa, Air side Operators, Association of South Africa, South African Aerial Applicators Association, East African Commercial Aviation Association, African Airline Association (AFRAA) Media Partner.

airbus.com   

HCARE
IS A
MISSION
LIKE NO
OTHER



Helping to keep the world a beautiful place, Airbus HCare portfolio offers the best combination of support and services for every customer. Starting the moment an Airbus helicopter is delivered, we'll make sure your operations are carried out efficiently, safely and cost-effectively. Because when your focus is on the mission, our focus is on you.

AIRBUS

BUSTING THE MYTHS – BUSINESS AVIATION

By Heidi Gibson

There is a perception out there that business aviation is only for the wealthy and that this sector of the industry contributes the most to carbon emissions and climate change. All of this was fuelled by the recent World Economic Forum meeting in Davos, Switzerland where there must have been hundreds of hundreds of flights of single-engine and turboprop aircraft, luxury jets and helicopters. All are used to transport the heads of state, businesses and big corporate personnel to and from this very important meeting.

If they didn't use these types of aircraft what are the alternatives? An ordinary commercial flight – well that would have taken another level of co-ordination. The protest against business aviation saw Greenpeace Lorelei Limousin calling on the EU to ban private jets and 'needless short flights' – as a signal that it is starting to tackle the climate crisis equitably. The group promoted the hashtag #banprivatejets.

Added to this US theme park heiress Abigail Disney threw in her bit on Twitter and claimed - private jets are a cancer.

Quite frankly the opposite is true - private aviation is responsible for just 2% of aviation's total carbon output, and of the overall human-induced carbon emissions - aviation forms 2.1% of this. More than this in 2021 the industry pledged to achieve net-zero CO₂ emissions by 2050. The original pledge to reduce CO₂ emissions by 50% was made back in 2009.

To counter this bad PR, Jet Aviation's Zurich location offered participants a Book and Claim programme involving Sustainable Aviation Fuel that allowed buyers to buy the product in locations where it is not available to drive demand. It is accepted that Sustainable

Aviation Fuel, or SAF, reduces aviation CO₂ emissions by up to 80%.

And then the last point on this issue. If business aviation is just for the wealthy think about all the general aviation aircraft used to connect remote locations in a humanitarian role. I can go on.

Changing topics - how refreshing to hear African Civil Aviation Commission (AFCAC) secretary general Adefunke Adeyemi on the recent African Airlines Association (AFRAA) SkyConnect leadership dialogue with Raphael Kuuchi – AFRAA director of government and industry affairs. Yes under the spotlight - SAATM, intra-African connectivity, strategy, and gender diversity.

The more we talk about it the more it will become a reality. As both parties agreed SAATM is so much more. It's about opening up markets and the facilitation of travel and transportation of goods. It's much more than just Fifth Freedom rights – people are still required to get a visa.

The African Union needs to get involved and it needs to do away with visas in Africa. Travel to another African country should not require a visa – that is just a barrier and adds costs. What I don't spend on the visa I will spend in a restaurant benefitting the local economy not the government.

Adeyemi agreed. She told those on the webinar there is a unit in the African Union – specifically set up for this purpose – it just needs to be activated. Come on AFCAC and the AU – activate it (whatever that means!)

Then the issue of the sovereignty of states and the power of AFCAC to force an African state to join or participate. Well, the answer to that is easy. No state can be forced to participate or join. But what AFCAC can do and is doing, is encouraging, educating and working with states to show them the benefits of SAATM. I gather that there are some hidden penalties but the devil will always be in the detail.

I am crossing my fingers that Adeyemi will get the ball rolling. We have our way of doing things.



AVBUYER AFRICAN BUSINESS AVIATION OVERVIEW

Industry leaders from five different companies shared their projections and visions for the African Business Aviation market in 2023. AvBuyer writer Felipe Reisch presents their outlook for aircraft sales on the continent

While some lingering effects of Covid are still being felt by the Business Aviation industry in Africa, the consensus of the leading companies is that 2022 was a positive year, financially, and that private aviation's recovery was faster than initially projected.

A trend noted during recent years is that African emerging economies such as Angola, Uganda, Ghana, and the Democratic Republic of the Congo are all becoming vital players in the industry.

While South Africa, Kenya and Nigeria continue to lead the way in terms of aircraft sales and charter demand, more operations with increased capacity to supply services is a good sign for the end-user. So, what are the overall projections for Africa in 2023, and can these economies continue their momentum after a solid 2022?

PRIVATE AIRCRAFT SALES OUTLOOK

According to JP Fourie, aircraft division executive director at National Airways Corporation (NAC), a recent trend emerging is the number of aircraft leaving the African market versus those entering it.

"Far more aircraft are being exported than new (or used) planes entering the continent. European and US buying strength, markets, and currency exchange rates are the primary drivers behind this."

"Although private aircraft sales have been buoyant off a low base, they're concerning because the import-export ratio is heavily skewed," he said.

For Justin Reeves, CEO of Comair Flight Services, things are trending upwards.

"Business Aviation aircraft sales are at an all-time high, and we've signed several new clients to manage their new and pre-owned aircraft," he said.

"[Only recently] we took delivery of a Dassault Falcon 2000LXS that is now based in Cape Town, and in the next year we're adding two brand new Pilatus PC-24s and a PC-12 NGX to the fleet."

FIRST-TIME USERS/OWNERS

According to Robyn Clark, deputy director of aircraft sales at Absolute Aviation, for the time being "Private jet activity throughout the region remains thin with an older fleet of Citations, Learjets and Hawkers dominating the activity.

"Maintenance for these aircraft types remains challenging, with either poor or non-existent maintenance support being available outside of South Africa or Kenya, the only two centres of capability."

But there might be a new pool of consumers in the making within the region, noted Jetcraft.

The firm's Five Year Pre-Owned Business Jet Market Forecast, which was released in September 2022, showed that buyers under the age of 45 account for 38.5% of Jetcraft transactions in the Middle East and Africa.

"Our forecast also explored the average purchase price in US dollars in each region across the globe," said Danie Joubert, vice president of sales in Africa for Jetcraft.

"In the Middle East and Africa, the average forecasted price from 2021-2026 is (US) \$20.8m - the second-highest figure in comparison to alternative regions.

"This is indicative of buyers investing more money in their private jet purchases, particularly in larger jets which are required to travel over longer distances across the African continent."

The global trend of new first-time private jet charter users, and also first-time aircraft owners has been seen in the African market too, according to Sizwe Buthelezi, sales director of helicopters at Absolute Aviation.

"During 2022 we noticed a shift in purchasing, from pre-owned aircraft to new," he said.

"OEMs are experiencing high demand and some supply chain issues (which have been solved at an impressive rate). Enquiries for new aircraft have been constant - nevertheless, buyers are becoming increasingly hesitant to commit, due to the long delivery times for new aircraft."

PRIVATE JET DEMAND PROJECTIONS

In a continent where turboprops (and in a smaller measure Light Jets) are king, the trend toward larger aircraft purchases is mainly due to the continent's large size and commercial aviation's continued inefficiencies.

Nevertheless, some overlying regulations (in terms of aircraft registration) might hamper the projected growth in some economies.

"We've seen a continued demand for long-range and larger cabin jets across the continent," Joubert said.

"As Africa has such a large landmass, larger jets are required to enable travel across the region and to other continents. The entirety of West Africa and regions of East Africa have also seen a distinct increase in enquiries."

Economic strength plays a key role in aircraft purchases, and for JP Fourie some specific economies will be favoured under these conditions.

"It would be fair to guess that Nigeria, Angola, Ethiopia, Kenya, Egypt, and South Africa will most likely be lead contenders for new jets, or any other BizAv and General Aviation demand projection for the next few years," he said.

"This ties up with their regional relevance, underlying economic strength, tourism, and actual aviation requirement to service business needs such as exploration, infrastructural development, servicing outlying stations, attending meetings on viable schedules, and the like."

Buthelezi also links aircraft sales with economic development. "With major commodity (mining) infrastructure companies broadening their business activity outside of their borders, the need for business jet travel is bringing some positive attention.

"With end users preferring aircraft younger than 20 years, we expect to see an uptick in newer pre-owned and factory-new aircraft sales," Buthelezi said.

However, Reeves is worried how local regulations might hinder market growth.

"We continue to see strong demand in East and West Africa where there are many opportunities, but these markets continue to be hamstrung by regulations that require local registration of aircraft if you want to base them there, as well as costly and difficult trading conditions."

Article courtesy: <https://www.avbuyer.com/>



BUSINESS AVIATION COALITION SAF INITIATIVES

A global coalition focused on business aviation sustainability aligned with the work of the World Economic Forum's Clean Skies for Tomorrow initiative offered a market-based solution to help reduce carbon emissions during the Davos meeting held earlier last month.

In Basel, a Switzerland-based, Jet Aviation AG company encouraged those utilising business aviation to use a Book-and-Claim transaction that enabled the purchase of sustainable aviation fuel (SAF), even if SAF is not available from their departing airport.

The Book-and-Claim system, which has been used for many years in the energy sector, reduces carbon emissions and increases demand for SAF, thus incentivizing more production.

SAF can reduce aviation lifecycle greenhouse gas emissions by 80% over legacy fuels.

"Davos participants are encouraged to purchase sustainable aviation fuel," said the World Economic Forum's Clean Skies for Tomorrow's Policy Lead, Adrienne Gibbs.

"We are excited about the progress made on SAF in recent years, and about the purchase options that exist for both business aviation customers and those traveling on commercial airlines. Our hope is that in the future, flying on SAF becomes the norm."

Jet Aviation President David Paddock said, "Book-and-Claim buyers do not consume the sustainable fuel; instead, the SAF is inserted by Jet Aviation into the supply chain in an independent transaction while the buyer, or operator, gets a credit for their SAF purchase and the emissions reduction. This initiative is just one of business aviation's comprehensive set of actions to decarbonise the sector and achieve net-zero carbon emissions by 2050.

"In addition to SAF, the industry is cutting emissions by increasing efficiency on the ground and in the air, developing new propulsion systems and zero-emissions advanced air mobility, and using other initiatives that invest in projects that reduce greenhouse gas emissions.

"Business aviation is deeply committed to climate action, and we are proud that we have reduced our carbon emissions 40% over the past 40 years," said International Business Aviation Council director general and SAF coalition steering committee co-chair Kurt Edwards.

"We have been striving to become more sustainable for many years, and the impact of our efforts is now becoming clear. Our industry will continue to innovate and increase aviation's climate action to achieve our carbon reduction goals," said Edwards.

A fact sheet with additional information about Book & Claim is available here and more information about Clean Skies for Tomorrow is available here.

BUSINESS AVIATION COALITION FOR SUSTAINABLE AVIATION FUEL

The Business Aviation Coalition for Sustainable Aviation Fuel is a coalition of leading international aviation groups. Members include the Commercial Aviation Alternative Fuels Initiative (CAAIFI), Canadian Business Aviation Association (CBAA), European Business Aviation Association (EBAA), the General Aviation Manufacturers Association (GAMA), Helicopter Association International (HAI), International Business Aviation Council (IBAC), the National Air Transportation Association (NATA) and the National Business Aviation Association (NBAA). The SAF Coalition's work is supported by a Steering Committee that includes dozens of aviation businesses that represent all points along the SAF supply chain.



GULFSTREAM RECOGNISED

Gulfstream Aerospace Corporation has earned four National Business Aviation Association (NBAA) Sustainable Flight Department Accreditations.

The newly established programme recognises Gulfstream for sustainability leadership across locations.

"We appreciate the partnership with NBAA to recognize our sustainability efforts," said Mark Burns, president, Gulfstream.

"These accreditations encompass our holistic commitment to leading our industry toward its goals for carbon neutrality, and we are proud to be the first original equipment manufacturer to be identified for these efforts across all four categories - flight, ground support, operations and infrastructure."

This programme was launched in 2022 by the NBAA to recognise "business aviation entities meeting exceptional environmental sustainability standards".

Gulfstream's long-term culture of innovation drives sustainable products and practices through cutting-edge aircraft technology, responsible operations and investments in sustainable aviation fuel (SAF).

Last month, Gulfstream was the industry's first business aircraft original equipment manufacturer to fly on 100% SAF.

In addition, Gulfstream facilities include more than 2.2 million square feet of green buildings both in the US and the UK.

Due to Gulfstream's increased focus on sustainable operations, the company has reduced its greenhouse gas emissions by 18% since 2014 while expanding facilities by 30%.



This Boeing 767-304ER(WL) still in partial TUI colours and registered N291CR to the Bank of Utah flew into Malta International Airport on the 14th of January 2023. The aircraft was supposed to arrive at LMML a couple of times earlier but the flight would be cancelled prior to departure. The aircraft was previously registered G-OBYG and it is now destined to be converted into a cargo hauler by Bedek in Tel Aviv. The aircraft flew in from St. Athan in Wales and should be destined for Chinese operator SF Cargo. PHOTO CREDIT: Mario Caruana / MAViO News.

AIRVAN AFRICA



PATRICK: +27 (0)82 565 8864
 BRENDAN: +27 (0)72 244 4958
 PHIL: +27 (0)83 284 3898

1971 Beechcraft Baron E55
 Stripping for Spares
 Call for Parts Price and Availability



***1977 Mooney M20J**
 4560 Hours Airframe TT, 690 Hours Engine SNEW IO-390 (210HP) Engine and Scimitar Prop Upgrade, MPI by SA Mooney in September 2022
Price: US\$ 85 000



***2003 GA8 Airvan**
 7800 Hours TT Airframe
 Almost Timex.
 Ex Botswana - No corrosion
Price: US\$ 245 000



***1964 Mooney M20C**
 3350 Hours TT Airframe, 1500 Hours SMOH
 Recent interior, good paint.
 The perfect budget A to B machine.
Price: R675 000



***2011 GA8 Airvan**
 7350 Hours Airframe TT, 1160 Hours Engine SMOH, 3-Blade Prop Upgrade, Cargo Pod, Melvill and Moon Seat Covers, Recently refurbished paint.
Price: R7 420 000



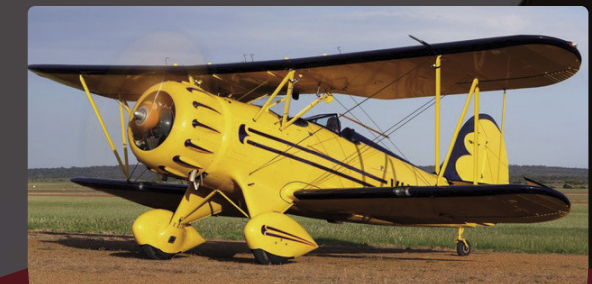
Lancair Evolution Turbine S/N 037
 1250 Hours TT All Components
 Extended range fuel tank
Price: US\$ 930 000



1962 Cessna 182E
 6900 Hours TT Airframe
 1100 Hours SMOH Engine
Price: Call For Price



***Classic 1948 Cessna 170**
 Immaculate example with all records from new A genuine collector's item
Price: R900 000



1942 Waco YMF
 650 Hours TT Airframe | Only 15 Hours SMOH on Jacobs R-755B2M Radial Engine | Based in Australia
Price: US\$ 275 000

SAFER AIRCRAFT FOR SALE

2008 Whisper Motor Glider

** Maintained by the only Mooney Factory approved Maintenance and Repair Facility in Africa. Unless otherwise stated all prices are exclusive of VAT*





ASHANTI AIRLINES PARTNERS

By Romuald Ngueyap, World Airnews correspondent

Ghana Airlines' business plan is taking shape. The future Ghanaian parastatal flagship operation is expected to begin later this year with Ashanti Airlines as technical partner and British investment fund Zotus Group as financial partner.

In a statement published earlier last month, Zotus Group, co-founded by former English footballer Emile Heskey (with Davison Simango) said that Ghana Airlines will first serve national and regional destinations, before launching international routes including New York and London Heathrow.

"We are working hard to prepare for the start-up of the company's operations and are currently working on the purchase of aircraft," said Emile Heskey, future board chairman of Ghana Airlines.

Other board members include Hitesh Patel, former CEO of Veling Aviation, a leasing company based in Mauritius and Alex Rayner, a public relations specialist.

The carrier in its infancy could start its operations with a combined fleet of Boeing 787 Dreamliners and De Havilland Canada Dash 8-400 aircraft.

The Ghanaian government actually has a signed memorandum of understanding for the acquisition of three Boeing 787-9 and six Dash 8-400 dated in November 2019. This was complete on the sidelines of the Dubai Air Show.

So what do we know about Ashanti Airlines?

Ashanti Airlines has an operator's licence. In September last year, it was selected as a technical partner by the Ghanaian government for the launch of a future carrier.

The announcement was made to the detriment of another Ghanaian company JNH Group, but more especially for two African aeronautical giants - Ethiopian Airlines and EgyptAir.

Both had signed memoranda of understanding with the Ghanaian government in December 2018 and October 2020 respectively.

Ashanti Airlines is owned by business tycoon Osei Kwame and his partner Dr. Ernest Ofori Sarpong.

They own the largest media group in Ghana and several companies in the field of agri-business and beverage production, among others.

"Now is the time to put Ghana back on the aviation map," said Ghana Minister of Transport Kwaku Ofori Asiamah.

"Learning from past experiences, and in line with aviation industry best practices, it is best to collaborate with the private sector," said Asiamah.

At present Ghana no longer has a national airline after Ghana Airways (1958-2004) and Ghana International Airlines (2005-2010) went bankrupt.

Since 2010, the domestic market has been dominated by Africa World Airlines (AWA) and Passion Air. Outside the country, AWA also serves Nigeria (Abuja and Lagos). The West African country (more than 32 million inhabitants) is connected to the rest of the world by several African and international air operators.

FLY HIGH FRED

By Alan Lentle



At Fred Bebington's memorial service, his long-time friend and fellow aviator Alan Lentle gave a short tribute to him. Here is a shortened version.

Frederick Rowson Bebington was born in Port Elizabeth and went to Grey's junior and high school where he played prop forward for his school. Later on, he joined Crusaders Rugby Club in PE. He joined the South African Defence force and rose to the rank of Captain where he became a tank commander.

Fred and his wife Anne have two children. Stuart is a senior air traffic controller in Johannesburg while Beverley Anne lives in Southend, in the United Kingdom with two children. He worked for the Ford motor company in PE, before he moved to Kloof, Durban, KwaZulu-Natal. He was involved in the display of new and imported mustangs, galaxies and other luxury vehicles at branches throughout the country. He also worked for Old Mutual.

"He was a great storyteller and could keep you awake all night," said Alan. Fred started gliding in Uitenhage in 1966 and went on to become an instructor a few years later. "I met Fred in 1981 when he belonged to the Howick Gliding Club while on a flyaway I was asked to check him out, only to discover he had a lot more experience than I did. The flight was full of laughs. He later joined us at the Estcourt Gliding Club. He loved teaching spinning while I taught cross country. He served four years as an instructor at our club and during this time we became friends and shared an interest in safety.

Fred became the safety officer for the club and later represented all the clubs in KZN. He joined the Soaring Society as a Safety Officer for South Africa and was part of the exco committee. His motto was "If you are going to do it – do it right". After completing various safety courses, he joined the air show circuit where he was responsible for safety.

He was also a member of the historic society and received an award from the Aero society in November last year.

Alan recalled an occasion when he joined him at an air show and flew into Welkom in a 90-degree gusting crosswind. "I touched down only to see another aircraft flipped on its back. Fred said look at that guy - he landed just before me.

"I refused to fly in the show until Scully Levin requested I did. So I ended up opening the event as Scully's team were not ready. I did it in the gusting crosswind with Fred's help.

Alan said Fred also joined Mayday-SA – an organisation that was instrumental in helping his own son after his accident.

In 2017 Alan moved to the UK but he and Fred keep in regular contact. "As I still fly in the UK safety issues were often discussed, His monthly safety bulletins went out to various clubs around the UK and my daughter Julie's club in Australia. We were looking forward to his visit later this year. We were meant to go to Duxford and other historic aviation sites.

"Fred was a gentleman and would help anyone – it was a pleasure to be your best friend," said Alan.



AVEX PILOT STUDY NOTES

AVEX Information Products has accompanied pilots through their aviation careers for over fifty years. Our Comprehensive and complete **Pilot Study Notes** for Private Pilot and Commercial Pilot Licence students are available in both Aeroplane and Helicopter student kits.

www.avexair.com



AVEX INFORMATION PRODUCTS

An Avex Group Company

+27 (0)11 974 4855

Email: info@avexair.com

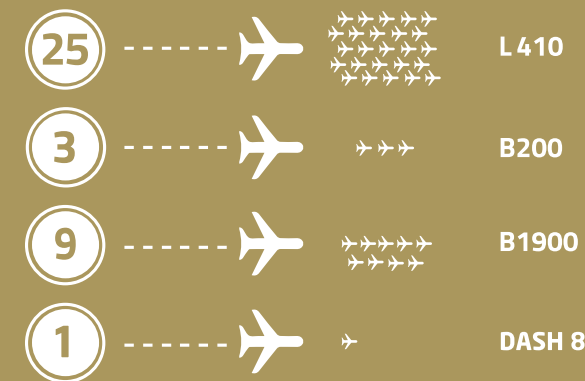


4106 PAPERPLANE. AN AVEX GROUP COMPANY

Your need is our passion

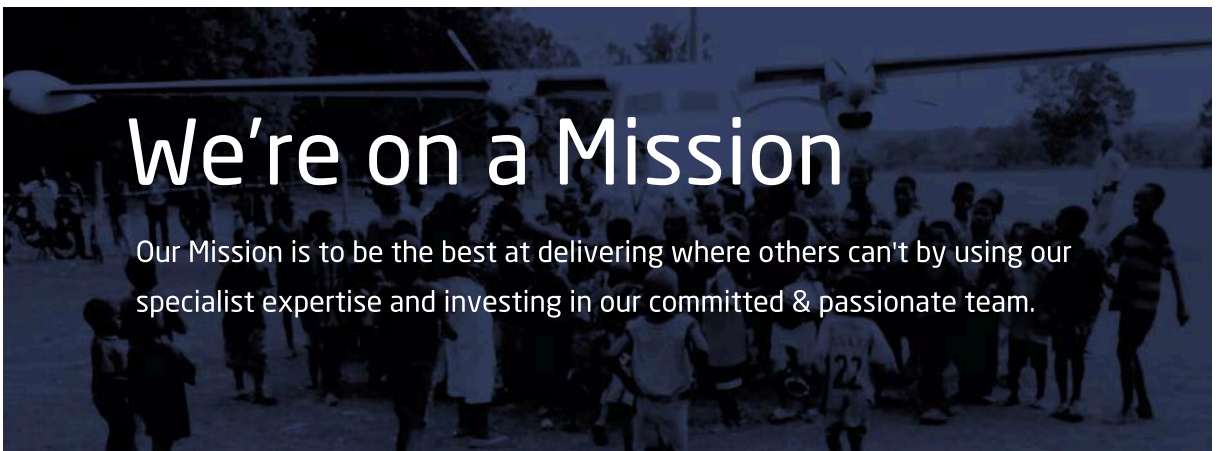
We provide a safe and reliable Air Service using the following aircraft:

- L410 & L420
- B200
- B1900
- DASH 8



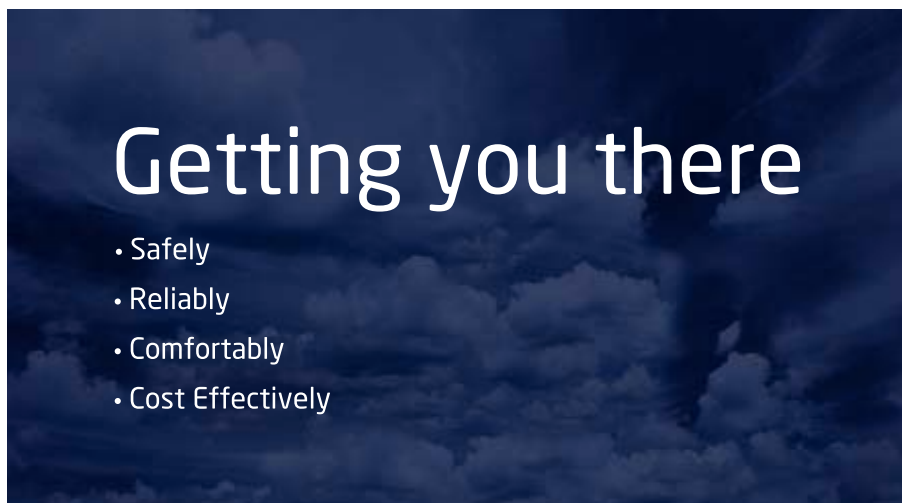
We're on a Mission

Our Mission is to be the best at delivering where others can't by using our specialist expertise and investing in our committed & passionate team.



Getting you there

- Safely
- Reliably
- Comfortably
- Cost Effectively



Our Core Business

- Aircraft Leasing ACMI
- Aircraft Sales
- Aircraft Maintenance, Factory Service Centres
- Pilot & Engineer Training



Training

AIR-TEC has the only approved L410 - FNPT 2 Simulator in the Southern Hemisphere. Our Flight Training Team is able to customize and structure every course to our customer's specific requirements.

We also offer soft skills training.





ZIMBABWE JOINS CARBON OFFSETTING SCHEME

By Wallace Mawire

Zimbabwe has taken a decision to voluntarily participate in the carbon offsetting and reduction scheme for international aviation with effect from January this year, according to Felix Mhona, minister of transport and infrastructural development.

Mhona made the remarks at the 41st International Civil Aviation Organisation (ICAO) Assembly in Montreal, Canada in October last year.

He said that climate change is a global challenge requiring an urgent response.

'To that end, as a state, we are committed to reducing the aviation carbon footprint and this is evidenced through the submission of our State Action Plan (SAP) for carbon emission reduction earlier last year,' Mhona said.

He said that in line with the country's efforts to reduce carbon emissions, the country is exploring possibilities of producing Sustainable Aviation Fuels (SAFs) banking on its experience and research in green fuels.

Zimbabwe is also participating in the ICAO Assistance Capacity Building and Training for Sustainable Aviation Fuels Programme (ICAO ACT-SAF) which aims at the attainment of global targets and goals on environmental protection and tackling climate change.

The minister also revealed that in the country's continued support of ICAO programmes Zimbabwe recently became the 84th member to join and participate in the ICAO Public Key Directory (PKD) which ensures reliable exchange of information in a timely manner on an open-ended and indefinite basis.

He also said that the country is aware that the PKD is fast becoming a useful resource for the authentication of e-passports and health proofs in line with ICAO Council's Aviation Recovery Task Force (CART) and World Health Organisation (WHO) recommendations.

The CART initiative recommendations have helped member states' aviation sectors including Zimbabwe with valuable guidance for restart and recovery processes following the impact of the Covid-19 pandemic.

Mhona said that Zimbabwe became a contracting state of ICAO on 13 March 1981 following its ratification of the Convention on International Civil Aviation - just a year after gaining its independence on 18 April 1980.

A PRODUCT DESIGN AWARD

The Dassault Falcon 10X – a ultra-long range, large-cabin business jet - was awarded the Chicago Athenaeum award for Good Design.

"These and other awards received by our rapidly expanding fleet are eloquent testimony to the unparalleled design and engineering prowess possessed by our company," said chairman and CEO Eric Trappier.

"No other business jet OEM is capable of blending leading-edge aircraft technologies, particularly in the realm of flight aerodynamics and digital flight control, with the most innovative and creative features of interior design."

The award, by the Chicago-based Museum of Architecture and Design in co-operation with the European Centre for Architecture Art Design and Urban Studies, is the second in the past year to be received for the 10X's innovative interior design.



The aircraft earlier won a coveted Red Dot award, sponsored by The Design Society of the UK and was shortlisted for the International Yacht & Aviation Awards in the private jet interior category.

Currently in development, the 10X will be the largest purpose-built business jet on the market. The aircraft's 2,780 cubic feet cabin will offer a unique blend of spaciousness, quiet and physical comfort while offering the only modular design of any jet in its category. With the help of sensory design, interior lighting, sound dampening and other advanced interior design techniques, the cabin seeks to make passengers forget they are airborne and instead are in a "penthouse in the sky."



An Embraer Praetor 600 is up for charter with Air Charter Scotland. It is one of two super mid-size Embraer jets.

TWO EMBRAER PRAETOR 600S FOR CHARTER

Air Charter Scotland Ltd has two super mid-size Embraer Praetor 600 business jets available for charter. G-MCEN is positioned out of London Luton Airport at Signature Flight Support's FBO, while G-GDAB's main base is at Liverpool John Lennon Airport.

The Embraer Praetor family has been hailed as a game changer in its size category. With a range of 4,000nm (7,408km), the Praetor 600 is capable of operating direct flights from London to New York in 7.5 hours and London to Dubai in 6.5 hours.

Since coming online in October and December 2022 respectively, Air Charter Scotland's aircraft have undertaken charter flights to the Caribbean and the Middle East.

"We are delighted to have introduced these technologically-advanced aircraft into service and on the G-register," said Air Charter Scotland COO Derek Thomson.

The Praetor offers a generous, exceptional cabin for nine passengers. It is ideal for shorter runway airports too, including Cannes Mandelieu, enabling great flexibility for our clients."

"Private air charter has been embraced by many new customers these past 24 months," he added. Leisure travel has been the prime reason, but since the autumn, business executives and corporates are coming back too.

"Whether it's peace of mind for health, wishing to avoid queues and delays at hub airports, not having to stay overnight for a business trip, or the fact that a once regular air service is no longer the level of charter interest we are experiencing remains strong."

The two new Praetor 600s feature a state-of-the-art air quality management system that delivers 100% fresh air throughout the cabin, further bolstered by HEPA filters that filter out bacteria and viruses. Both aircraft are fitted with MedAire's Universal Precaution Kit, offering further protection for passengers and crew.

The introduction of the latest aircraft builds on a solid 14-year relationship flying Embraer executive jets, which started with Legacy 600 G-WCCI, one of the first Legacy aircraft in the UK.

With recently added CAMO accreditation in the UK and Europe with sister company Air Charter Scotland Europe, Air Charter Scotland was able to facilitate the formal handover of both aircraft in Melbourne, FL. Having an experienced in-house CAMO team is beneficial for aircraft owners whose aircraft they manage, being fully conversant with the flux in regulations supporting aircraft in the UK and European markets.

Air Charter Scotland Europe was one of the first UK air charter companies to be established in Malta in early 2021.



BURKINA FASO SUSPENDS CONCESSION AGREEMENT

By World Airnews correspondent Romuald Nguéyap

In October 2021, the French Meridiam group - specialising in the development, financing and management of long-term public infrastructure projects - was appointed by the previous Burkina Faso ousted government of President Rock Kabore the megaproject for the construction and operation of the new Donsin International Airport.

Located 35 kilometres northeast of Ouagadougou, the project is under a 30-year concession agreement. The military junta, which took power on September 30, 2022, is now demanding clarification on this sensitive issue.

Now Burkina Faso has rejected the current conditions of the 30-year concession agreement that was signed with the French group for the management of the future Donsin International Airport.

During a meeting in Hauts Bassins region on January 3, 2023 in Bobo-Dioulasso (west), the President of the transition government Captain Ibrahim Traoré said that the agreement signed with the French group would be suspended and the texts reviewed.

This is as reported by the Burkina Information Agency (AIB, official). This decision comes at a time when relations between Paris and Ouagadougou are tense.

The Sahelian country of West Africa has indeed requested the departure and replacement of the French ambassador Luc Hallade, in office since the end of 2019.

A spokesman of the Collective of Civil Aeronautics Unions, said the agreement clauses are not good for Burkina Faso. "It

[convention] had unfortunately given pride of place to the French grouping to the detriment of our sovereignty and the major interests of the aeronautical community by alienating the fundamental questions of state security, by programming the certain death of the sovereign structures (ANAC and ANAM) as well as that of the Bobo-Dioulasso International Airport and secondary aerodromes and by selling off the management of the future terminal and ground handling (RACGAE) for a price", said Ahmed Lamizana.

For the latter, "the suspension of the agreement is a final step that should lead to its outright cancellation so that other more advantageous and coherent options can be considered".

According to the contractual terms, the structural work of the project was to have started at the end of 2022.

The final close of the project was to have taken an estimated period of 30 months – with delivery scheduled for 2025.

Meridiam is working in partnership with Marseille-Provence Airport (AMP), which will provide its expertise through a technical assistance contract and a minority stake in the company in charge of the project. It's a colossal project representing a total investment of more than 220 million euros.

"The projected revenues generated by the agreement in favour of the State budget are €4,50 million in tax revenue and €100 million in concession fees," the government said during the Council of Ministers meeting on 30 July 2021.

The new airport will be able to handle one million passengers each year after it is commissioned.

"Once in operation, the total economic impact of the new airport is estimated at €420 million. During construction, direct and indirect job creation is expected to amount to nearly 5,000. While the jobs directly generated by airport activities are expected to reach about 1,400 employees during operation," said Meridiam.



6-8 JULY 2023

Wonderboom National Airport, City of Tshwane, Pretoria

www.aerosouthafrica.com

TAKE FLIGHT TO AERO SOUTH AFRICA

MAKE SURE AERO SOUTH AFRICA 2023
IS PART OF YOUR FLY-IN SCHEDULE FOR 2023

FLY-IN TO AERO SOUTH AFRICA IN 2023!

Pre-register your fly-in once registrations open and receive
FREE landing, approach and ground handling fees.

In co-operation with



Host City



Venue



Organised by



THE FINAL REPORT



By Heidi Gibson

Controversy continues to surround the release last year of the final report by the Ethiopian Aircraft Accident Investigation Bureau or EAIB into the March 10, 2019 crash of Ethiopian Airlines flight 302 involving a Boeing 737 Max 8.

The accident left 157 people dead and followed just months after a Lion Air Max 8 crash near Jakarta, Indonesia.

The Ethiopian crash shook the African aviation world and plunged the US manufacturer Boeing into a crisis that still continues today.

Three years later December 2022 - the country's EAIB released its final report.

Days later two of the primary investigating aviation authorities – the American National Transportation Safety Board and the French Bureau d'Enquêtes et d'Analyses or BEA – published their own comments.

The NTSB stated that while it agreed on the probable cause – Ethiopian investigators had not considered all possible factors and there were gaps and unanswered questions in the report. The US federal agency made the comments public stating that the EAIB had failed to include its comments.

It went on to explain that the most recent and expanded comments were not integrated into the final report. Instead the EAIB included a hyperlink to earlier NTSB's comments.

Ethiopian Federal policemen stand at the scene of the Ethiopian Airlines Flight ET 302 plane crash, near the town of Bishoftu, southeast of Addis Ababa, Ethiopia March 11, 2019. REUTERS/Tiksa Negeri

PART OF THE PROBABLE CAUSE

While the NTSB stated that it generally concurred that the uncommanded nose-down inputs from the 737 MAX 8's Manoeuvring Characteristics Augmentation System or (MCAS) system should be part of the probable cause for this accident.

But it claimed, the EAIB's final report did not thoroughly discuss all relevant factors, including the crew's inadequate use of manual electric trim and thrust to maintain airplane control and potential bird strike damage to the angle-of-attack (AOA) sensor.

Collins Aerospace, the manufacturer of the airplane's AOA sensor, demonstrated that the recorded data from the accident were not consistent with any internal failure of the AOA sensor. Instead, the data was fully consistent with previous instances of partial AOA vane separation due to a bird strike.

The EAIB draft described the runway area search after the accident and suggested that the lack of bird remains or AOA vane remnants indicated that a foreign object did not impact the airplane.

According to the safety board, the search occurred eight days after the accident and did not include the area surrounding taxiway D.

But the flight data recorder data indicated that the airplane would have been positioned above the taxiway when the left sensor data became inaccurate.

It is an interesting aspect as bird strikes are not new to Addis Ababa Bole International Airport. In previous reports the EAIB have found that Steppe and Tawny eagles are common around the airport and have recommended that the Ethiopian Airlines Group Airport authority "take practical measures to minimise/eliminate bird hazards around the airport so that arriving and departing flights are conducted safely without any human and material loss."

The NTSB also suggests that the EAIB did not sufficiently develop a discussion of the accident flight crew's performance in its draft report, which focused heavily on system design issues.

The agency stated that the absence of flight crew performance information limited the opportunity to address broader and equally important safety issues.

Their comments note that the published probable cause indicates that the MCAS alone caused the airplane to be unrecoverable but does not take into account that if the crew had manually reduced thrust and appropriately used the manual electric trim, the aircraft might have remained controllable despite uncommanded MCAS input.

The report also failed to note the operator's failure to ensure that its flight crews were prepared to respond to uncommanded stabilizer trim movement in the manner appropriate.

The processes were outlined in Boeing's flight crew operating manual bulletin and the FAA's emergency airworthiness directive, which were issued four months before the accident.

Following the crash, US representatives and technical advisors travelled to Ethiopia to assist with the EAIB investigation.

THE STICK SHAKER ALERT

A few days later, the French Bureau d'Enquêtes et d'Analyses or BEA also issued a statement.



Wreckage is seen at the site of the Ethiopian Airlines Flight ET 302 plane crash, near the town of Bishoftu, southeast of Addis Ababa, Ethiopia March 11, 2019. REUTERS/Tiksa Negeri/File Photo

It stated that the final EAIB report only contained a link to a BEA document which does not contain the comments the BEA had requested be included.

French investigators have stated that they believe the crew experienced rapidly-developing stress from a stick-shaker alert on take-off, even before they found themselves fighting against the aircraft's MCAS stabiliser-trim system.

The investigation authority or BEA highlighted crew failings which began when the loss of an angle-of-attack sensor during take-off triggered the stick-shaker.

The BEA stated the stick-shaker should have prompted the crew to apply stall-recovery procedures from memory – including applying nose-down input and disengaging the autopilot and autothrottle.



An Ethiopia's Airlines Boeing 737 Max 8 plane to take off on a demonstration trip to resume flights from the Bole International Airport in Addis Ababa, Ethiopia February 1, 2022. REUTERS/Tiksa Negeri/File Photo

"Only the nose-down input was performed by the flight crew," it stated. "The autothrottle remained engaged and the pilot later insisted on engaging the autopilot."

Engineering simulations, it says, demonstrate that the pilots would have been presented with airspeed and altitude 'disagree' messages, and should have run a checklist for unreliable airspeed – which also requires autopilot and autothrottle disengagement, adopting a 10° nose-up pitch and a specific thrust setting.

But the Ethiopian Airlines captain did not disconnect the autothrottle and instead attempted to engage the autopilot, despite being below the autopilot height threshold set by the airline.

"This premature action, although not appropriate in stick-shaker conditions, may be symptomatic of a state of stress that had been rapidly developing following the activation of the [stick-shaker] immediately after take-off," said the BEA.

It said the first officer - who had just 300 hours experience - appears to have been "overwhelmed" by events from the point at which the stick-shaker triggered.

The authority claims parts of the cockpit-recorder transcript, which illustrate the first officer's difficulties, have not been included in the final report into the 10 March 2019 accident.

"Co-ordination and communication between the captain and the first officer were very limited and insufficient," said the BEA.

"There was no discussion nor diagnosis with respect to the nature of the events on board. The situational awareness, problem-solving and decision-making were therefore deeply impacted."

The lack of thrust reduction meant the aircraft accelerated to excessive speeds and made manual control against aerodynamic forces extremely difficult when the false angle-of-attack data, combined with other logic conditions, led MCAS to issue a series of uncommanded pitch-down inputs.

BEA argued that crew-performance aspects of the accident - particularly those which emerged before the MCAS activation - are "insufficiently addressed" by the Ethiopian investigation.

These comments parallel other recent remarks from the US National Transportation Safety Board.

Describing these short-comings as 'regrettable', the BEA and other foreign investigative agencies are calling for an updated report that will incorporate these comments and ensure no such errors occur in the future.

Meanwhile, speculation and discussion in aviation circles also points to what is not said or left out of the report. Namely the extent to which politics and profit and a host of other factors played a role – subconsciously impacting the narratives of all parties involved.

To delve so deep may leave major players exposed and compromised.

It's unlikely that any airline would concur that its training processes and standard operating procedures were weak to the extent that pilot safety was compromised.



Candle flames burn during a commemoration ceremony for the victims at the scene of the Ethiopian Airlines Flight ET 302 plane crash, near the town Bishoftu, near Addis Ababa, Ethiopia March 14, 2019. REUTERS/Tiksa Negeri



CESSNA 3,000th DELIVERY

Brazilian aviation company Azul Conecta, a subsidiary of Azul Airlines based at the airport of Jundiai in São Paulo recently received a Cessna Grand Caravan EX – marking the 3,000th delivery of a Cessna Caravan family turboprop.

Azul Conecta transports travelers from smaller cities and remote locations throughout Brazil.

Textron Aviation employees and representatives from Azul Conecta celebrated this significant milestone with a special delivery ceremony at Textron Aviation's location in Independence, Kansas in the United States.

"The Cessna Caravan's versatility and reliability have made it the most popular aircraft in the utility turboprop category, with now 3,000 delivered globally," said Lannie O'Bannion, senior vice president of sales and flight operations at Textron Aviation.

"I'm thankful to customers like Azul Conecta who continuously rely on the Caravan family of aircraft to fulfill their missions, deliver solutions and improve lives around the world".

Conceived as a rugged utility aircraft with low operating costs, the Caravan was designed for use in remote areas with extreme weather changes, mountainous terrain and rough landing conditions. The aircraft's versatility became renowned in all corners of the world, and the Caravan continues to see wide use in global markets by a variety of customers, including government agencies, law enforcement and militaries, air ambulance operators, freight haulers, corporations and humanitarian organisations.

"This Grand Caravan EX will proudly fly the Brazilian skies and connect our 158 destinations, many of which are made possible by the aircraft's utility and flexibility," said Flavio Costa, chief technical officer of Azul and president of Azul Conecta. "As a longtime Textron Aviation customer with a fleet of over 25 Cessna aircraft, we are happy to be a part of this important milestone."



PILOT SHOP

**THE LARGEST SUPPLIER OF
PILOT ACCESSORIES IN AFRICA**

Lanseria: 011 701 3209
Grand Central: 011 805 0684
Cape Town: 060 983 1812
Email: info@wingsnthings.co.za
or visit the 24 hour online shop www.wingsnthings.co.za



Authorised dealer of Bose



Qualified Reseller of Jeppesen

Authorised re-seller of the following brands of aviation related products:







Handcrafted American Eyewear • Since 1972





The TH-73A is based on the Leonardo Helicopters AW119M single-engine jet-powered multi-role helicopter.

United States Navy helicopter pilot training experts have ordered 26 TH-73A trainer helicopters from Leonardo Helicopters in Philadelphia after announcing a (US) \$110.6 million order last year.

Officials of the Naval Air Systems Command at Patuxent river naval air station have asked Leonardo Helicopters to provide the TH-73A lot-4 helicopters to replace the Navy's Bell TH-57B/C sea ranger training helicopters, which have been in service since the 1980s.

The TH-73A is based on the Leonardo Helicopters AW119M Koala single-engine jet-powered multi-role helicopter, which accommodates a crew of one or two and can carry as many as six or seven passengers. The Navy took delivery of its first TH-73A in June 2021.

The AW119M has Garmin G1000H glass avionics, with a cockpit design to enhance situational awareness to reduce pilot workload. This order is in support of the Advanced Helicopter Training System programme.

The helicopter can carry internal loads as heavy as 6,283 pounds, or external loads as heavy as 6,945 pounds. It can fly as fast as 131 knots, at distance up to 515 nautical miles and for as long as five hours and 20 minutes.

The aircraft with its glass cockpit is 42 feet, 5 inches long; 11 feet, 10 inches high; and has a rotor diameter of 35 feet, 6 inches. It can hover in ground effect at altitudes as high as 11,000 feet and can hover out of ground effect at altitudes up to 7,300 feet.

For this order Leonardo Helicopters will do the work in Philadelphia; Mineral Wells, Texas and other locations outside the US. It is expected to be completed by December 2024.

JOLLY GREEN DEPLOYS TO AFRICA

By Jonathan Welsh

The Air Force last October announced that the revamped combat search and rescue aircraft based on the venerable Sikorsky UH-60 Black Hawk was ready for action.

In November the service shared certain details regarding preparations its members were making for the Jolly Greens' first deployment but did not reveal its location. Air Force officials have not responded to requests for information about the reported deployment.

The US Department of Defence, however, recently posted photos of the HH-60W participating in a casualty evacuation (CASEVAC) exercise at an undisclosed Combined Joint Task Force-Horn of Africa location in Djibouti.

"This is the HH-60W's first deployment to eastern Africa and used in support of exercises such as CASEVACs," DOD said. "These exercises are an important part of the US AFRICOM

mission in co-ordinating efforts between coalition and joint forces in eastern Africa, and enhancing the Combatant Command's Warfighter Recovery Network.

Manufacturer Sikorsky made a number of upgrades to increase the HH-60W's capabilities compared with its predecessor, the HH-60G Pave Hawk. Better range, avionics and survivability were among the improvements.

Former Air Force Secretary Barbara Barrett revealed the new rescue chopper's name during an Air Force Association event in 2020. The Jolly Green II moniker links the aircraft with the legendary Sikorsky HH-3E, a rescue chopper nicknamed the 'Jolly Green Giant' during the war in Vietnam.

While helicopters had been used for search and rescue missions since World War II, the HH-3E, which was a modified version of the CH-3 transport, was the first developed specifically for combat search and rescue missions. It had protective equipment HH-3E also pioneered air-to-air refueling for helicopters.

@JonathanWelsh4 Article courtesy: <https://www.flyingmag.com/>

ADVANCED TRAINING EXCELLENCE SINCE 2003



Specialising in: Boeing 737 NG | Beechcraft B1900 | King Air 200 | Cessna Caravan

- Initial Type Ratings
- IF Revalidations (PPL, CPL and ATPL)
- Foreign License Validations
- ATPL Preparation & Test
- Glass Cockpit Training
- Pilot Proficiency Checks
- Multi-Crew Coordination Training
- TCAS 7.1 Training (Traffic Collision Avoidance)
- GPWS (Ground Proximity Warning System)
- PBN & RNAV / GNSS



SIMULATOR ENGINEERING AND MANUFACTURING SINCE 1995

OUR SENECA SIMULATOR IS NOW APPROVED FOR TCAS 7.1



www.simuflight.co.za
ATO nr: 1050

In-house Type Specific Simulators

18 Suni Avenue, Corporate Park South, Midrand
Tel: +27 11 314 0152 | sales@simuflight.co.za





Photo: <https://airbus.com/en/newsroom/>

AIRBUS TESTS NEW TECH

Airbus UpNext, a subsidiary of Airbus, has started testing new, on ground and in-flight, pilot assistance technologies on an A350-1000 test aircraft.

Known as DragonFly, the technologies being demonstrated include automated emergency diversion in cruise, automatic landing

and taxi assistance and are aimed at evaluating the feasibility and pertinence of further exploring autonomous flight systems in support of safer and more efficient operations.

"These tests are one of several steps in the methodical research of technologies to further enhance operations and improve safety," said Isabelle Lacaze, head of DragonFly demonstrator, Airbus UpNext. "Inspired by biomimicry, the systems being tested have been designed to identify features in the landscape that enable an aircraft to "see" and safely manoeuvre autonomously within its surroundings, in the same way that dragonflies recognise landmarks."

During the flight test, the technologies were able to assist pilots in-flight, managing a simulated incapacitated crew member event, and during landing and taxiing operations.

Taking into account external factors such as flight zones, terrain and weather conditions, the aircraft was able to generate a new flight trajectory plan and communicate with both Air Traffic Control (ATC) and the Airline Operations Control Centre.

Airbus UpNext has also explored features for taxi assistance, which were tested in real-time conditions. The technology provides the crew with audio alerts in reaction to obstacles, assisted speed control, and guidance to the runway using a dedicated airport map.

In addition to these capabilities, Airbus UpNext is launching a project to prepare the next generation of computer vision-based algorithms to advance landing and taxi assistance.

These tests were made possible through cooperation with Airbus subsidiaries and external partners including Cobham, Collins Aerospace, Honeywell, Onera and Thales.

DragonFly was partially funded by the French Civil Aviation Authority (DGAC) as part of the French Stimulus plan, which is part of the European Plan, Next Generation EU, and the France 2030 plan.

SOUTHWEST ESTIMATES LOSS

Southwest Airlines has estimated losing between \$725 million and \$825 million due to its nationwide operational meltdown over the busy end-of-year travel period, and warned investors that it anticipated a net loss in the fourth quarter of 2022.

The Dallas-based carrier cancelled more than 16,700 flights from 21 December to 31 December, according to an earlier January report Southwest filed with the US Securities and Exchange Commission (SEC).

Southwest's losses include between \$400 million and \$425 million in lost revenue, with the remainder coming as the result of 'increased operating expenses' - that is, travel expense reimbursements for disruptions, the value of points provided to affected customers, and overtime pay for employees, the airline said..

Southwest's catastrophic holiday travel period began when a fierce winter storm hit the Midwest and Northeast USA in the busy days before Christmas, and the situation snowballed thanks

to decades-old software that lost track of the location of flight crews and aircraft, according to the Southwest Airlines.

On 27 December, Southwest chief executive Bob Jordan acknowledged that the airline's fleet and crews were out of position in 'dozens of locations'. He promised to fix the IT issues that plagued Southwest during the holiday rush and that the company's customers and employees would 'never again face what happened'.

Though the airline has since resumed normal operations, the episode drew the ire of US regulators and lawmakers and Southwest suffered a public relations disaster as hundreds of thousands of passengers were left stranded, frustrated and angry.

As a result of the widespread disruptions, the airline's fourth-quarter capacity is estimated to have declined 6% as compared with the same period in 2019, the last year unaffected by the Covid-19 pandemic.

The company reported a profitable third quarter on 27 October 2022, posting income of \$277 million and revenue of \$6.2 billion - a company record for the three months ending 30 September.

www.flightglobal.com

IDEX & NAVDEX 2023 TO SHOWCASE A RANGE OF NEW FEATURES

The ADNEC Group is just about to host the 16th edition of the International Defence Exhibition and Conference (IDEX 2023) and the 7th edition of the Naval Defence Exhibition and Conference (NAVDEX 2023).

The events will take place between 20-24 February 2023 in Abu Dhabi and will showcase a wide range of new features while attracting leading participants and exhibitors from the international defence industry.

The upcoming edition of IDEX marks the 30th edition of the event and, along with NAVDEX these events have become the largest of their kind in the world.

As part of the event week, in a first of its kind, ADNEC will host a series of high-level round table discussions with prominent industry thought leaders and commentators. These leading industry experts will gather to discuss recent and critical topics around the defence and naval industries, with an outcomes-based objective to collaborate on focused industry reports.

IDEX and NAVDEX will introduce IDEX NextGen, a space dedicated for start-ups which will enable entrepreneurs to

demonstrate their solutions and technologies in the defence and naval sector to leading figures in the industry. The events will also introduce the Innovation Trail, a focused journey through the exhibition, highlighting the latest products and innovations for the defence and naval community, from the world's leading brands.

Exhibitors will be able to submit their newest and most innovative products and solutions for selection as part of this curated journey, which will attract the interest thousands of international and local buyers.

On the content side, and again as a first of its kind, IDEX and NAVDEX will each feature dedicated free-to-attend theatres for attendees to learn about the latest industry critical topics, NAVDEX Talks, located in the brand-new marina hall, will focus on the naval defence industry, whereas IDEX Talks will include sessions that will cover a variety of engaging topics related to the global defence sector.

These topics include: women and youth in defence, defence heroes and motivational masterclasses.

The events will also feature an area for fans of defence history. Entitled 'Defence Through the Decades' this area will showcase an interactive gallery.

Article courtesy: <https://www.timesaerospace.aero/>



<https://idexuae.ae/media/video-gallery/>



NORTHROP GRUMMAN & NASA

NASA has signed a partnership agreement with Northrop Grumman that seeks to integrate drone operations into an existing air traffic system.

The project, which is a part of NASA's Air Traffic Management eXploration (ATMX) effort, is focused on large cargo drones currently in development.

The goal of the collaboration is to integrate operations of such drones into National Airspace System (NAS), a Federal Aviation Administration (FAA)-managed network of air navigation facilities, equipment and services that ensures smooth operation of all aviation assets in the US airspace.

"Our work together will improve airspace access and transform how uncrewed systems are used to transport goods across US airspace and help establish airspace integration critical to future manned unmanned teaming efforts," Tom Jones, corporate vice president and president of Northrop Grumman Aeronautics Systems, is quoted as saying in the company's press release.

"What we're doing this for is to implement an architecture and a framework that becomes the policy for how uncrewed 767s at FedEx and Amazon and everybody will do things," Richard Sullivan, vice president of programme management at Northrop, explained in a recent press conference.

While Northrop Grumman have not announced a project to develop a commercial unmanned cargo aircraft, it was likely chosen by NASA for its extensive portfolio of autonomous military designs.

The company is known for developing projects like the RQ-4 Global Hawk reconnaissance drone, the X-47B carrier-based combat drone technology demonstrator, and the MQ-8 Fire Scout unmanned helicopter.

Adapting legislation and procedures has long been identified as one of the major barriers for large-scale drone operations, be they small quadcopters for door-to-door deliveries or yet-to-be-developed unmanned cargo aircraft that could compete with manned designs like the Boeing 767.

PHOTO: Northrop Grumman has signed a partnership with NASA to integrate drones such as the RQ-4 Global Hawk into existing air traffic systems. Mike Mareen / Shutterstock

MOVING FAST

Zimbabwe's Fastjet airline ended last year on a high note when the company announced the intention to commence air services to two new domestic leisure destinations - Kariba and Hwange National Park – to start next month.

The new services will be from Harare and Victoria Falls to Kariba Airport and Hwange National Park Airport offering travellers seamless connections to the country's top domestic tourist destination. The flight connections will make use of the Embraer E120, a 30-seater turboprop aircraft.

Nunurai Ndawana fastjet Zimbabwe spokesperson said, "This aircraft is a robust turboprop aircraft designed for domestic operations and offers customers a pressurised cabin with spacious legroom and overhead baggage space. We intend to align our timings to schedule our flights in such a way that we offer customers the flexibility and convenience of multiple frequencies per day".

"Working closely industry stakeholders and partners, including Airports Company of Zimbabwe and the Civil Aviation Authority of Zimbabwe, we continue to explore ways to further develop the domestic Zimbabwean flight network. We are delighted to announce that our new flights to Hwange and Kariba from Victoria Falls and our Harare base, will be supported with onward connections on Mack Air / South West Aviation into the Hwange National Park, the lodges of the Kariba eastern basin and the camps and operations in Mana Pools and the lower Zambezi.

"Mack Air with South West Aviation will be developing a new hub at Kariba, along with their existing hubs in Victoria Falls and Harare to support these seamless connections to and from fastjet's services." said Vivian Ruwuya, fastjet Zimbabwe's chief commercial officer.

Nunurai Ndawana said a key development at the beginning of the festive season last year was the launch of the airline's app available both on Android and iOS.



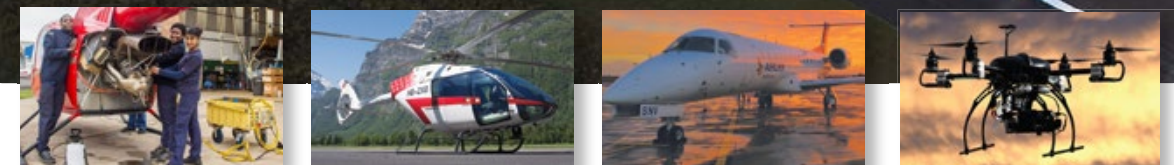
The Commercial Aviation Association of Southern Africa NPC (CAASA) is a non-profit organization formed in 1944 to promote and protect the commercial interest of the general aviation industry in South African aviation.

Our member companies include airport operators, non-scheduled operators, business aircraft operators, flying training organisations, aircraft maintenance companies and companies offering a whole range of supporting and retail services.

If you are a company trading or operating in general aviation, then you should be a member of CAASA.



Pic: Pilatus Aircraft Corp.



www.caasa.co.za

Your Aviation Portal
CAASA office: +27 (0)63 717 3460
Gate 9, Lanseria International Airport
Sam@caasa.co.za





2022 was a year of highs and lows for southern African airlines. Photo credit: Image by ThePixelman from Pixabay

THE STATE OF AFRICAN AIRLINES - AASA

We will approach the year with caution, hoping for the best, but preparing for the worst,” said Aaron Munetsi, CEO of the Airlines Association of Southern Africa (AASA).

AASA represents most of the airlines based in the Southern African Development Community (SADC) region and addresses issues affecting their ability to do business. It acts on behalf of members with regard to engagements with airport and air navigation service operators, meteorological services and their respective tariff regulators.

They also liaise with airworthiness authorities, transport policymakers, legislators and departmental officials. Going into 2023, he said AASA would like to see the recovery of air traffic to pre-pandemic levels and a return to profitability.

South Africa’s economic fortunes remain unclear and depend heavily on global and local geopolitics as well as economic and fiscal policy continuity.

“A stronger rand would help airlines close the gap that has opened up between their cost base, which is heavily dollar-denominated as the standard currency of aviation, and revenues,

which are generated in rand and other relatively softer currencies,” he said.

AASA described 2022 as “definitely a year of highs and lows’ - on one hand welcoming the relaxation and withdrawal of Covid-19 travel restrictions and the re-opening of all of the SADC markets for air travel, which spurred demand for air travel.

“However, geopolitical challenges in Europe dampened the situation sending shock waves, which continue to reverberate through our industry globally and here in Southern Africa. As a result, we saw fuel prices more than double and although the price of crude oil has softened to below \$80 (R1 381) a barrel, the price of jet fuel remains stubbornly above \$138 a barrel with the crack spread between the two items more than doubling from the traditional \$20 a barrel split.

“Compounding this were the critical fuel supply shortages in April at OR Tambo International Airport as a result of the Durban floods and in September/October at Cape Town International Airport. The upshot was two-fold: higher fuel transportation, logistics and storage costs and flights having to tanker fuel to avoid refuelling at affected airports or being diverted to refuel elsewhere,” Munetsi said.

He said “Another low-tide moment was the collapse or winding down of some domestic airlines that were still to finalise their affairs. The exit from the market of these airlines resulted in the

loss of hundreds of skilled jobs, and a significant portion of capacity evaporated from the domestic and Southern African regional market.

“Comair, which operated the British Airways franchisee and low-cost carrier kulula.com brand, earlier this year went belly up. “In response, the country’s mostly privately owned airlines had rallied to address the capacity crunch by expanding their fleets, upping their aircraft utilisation and right-sizing their workforce which put the sector within 80% of its 2019 capacity.

There were still some imbalances. For example, on weekdays there was a surplus of seats due to lower demand, but in most instances Fridays to Sundays and long weekends and holidays, flights were heavily booked with many selling out, he said.

Faced with higher operating costs and other inflationary factors, including higher interest rates on the loans that some airlines took out to stay afloat during the pandemic, airlines had no room to add capacity, except in markets that could support the additional capacity at economically viable fares.

Concerning the previous festive season, AASA said they had just seen the launch of a 17-nation pilot implementation project as a precursor to the Single Africa Air Transport Market (SAATM). The organisation said the policy is intended to demonstrate how freer market access among the participating countries could enhance air connectivity, stimulate economic activity and create much-needed jobs.

Munetsi said that South Africa, one of the continent’s leading markets, was among the participants.

“The country’s airlines are waiting expectantly for the Department of Transport for information on how best they can take part. Our hope is this will inspire the other African Union member states to follow suit and fully implement the SAATM.

“It is an African Union 2063 flagship project intended to underpin the Africa Continental Free Trade Area by removing barriers to intra-Africa markets for the continent’s airlines. However, while market access is a crucial element, it requires the development of harmonised and fair charges, taxes and regulations which will be applied reciprocally. We do not want to see a situation where countries abuse other instruments at their disposal as crude protectionist weapons, as this would run counter to the spirit and intentions of SAATM,” he said.

With the increased volumes and return of air traffic post-Covid, AASA said it was keeping a close watch on local airports after seeing the chaos in airports in the UK, Europe and North America during their peak summer holidays in order not to repeat their mistakes.

These countries lacked equipment and trained, skilled and security-vetted airport workers, which caused chaotic bottlenecks, flight delays and tens of thousands of cancelled or disrupted journeys.

Overall, Munetsi said, the airline industry was renowned for its resilience.

“We’ve come through many crises and faced many challenges. The current ones may be unique but will not be our last. In many ways, it is a lot like playing batsman in cricket. We step out onto the field and play to defend our wickets while trying to make a big score at the same time. Sometimes it can be a bit hit-and-miss and occasionally some of our batsmen falter, but we try to hit as many sixes as possible, which keeps our team and their supporters happy,” he said.

COCKPITS UPGRADED

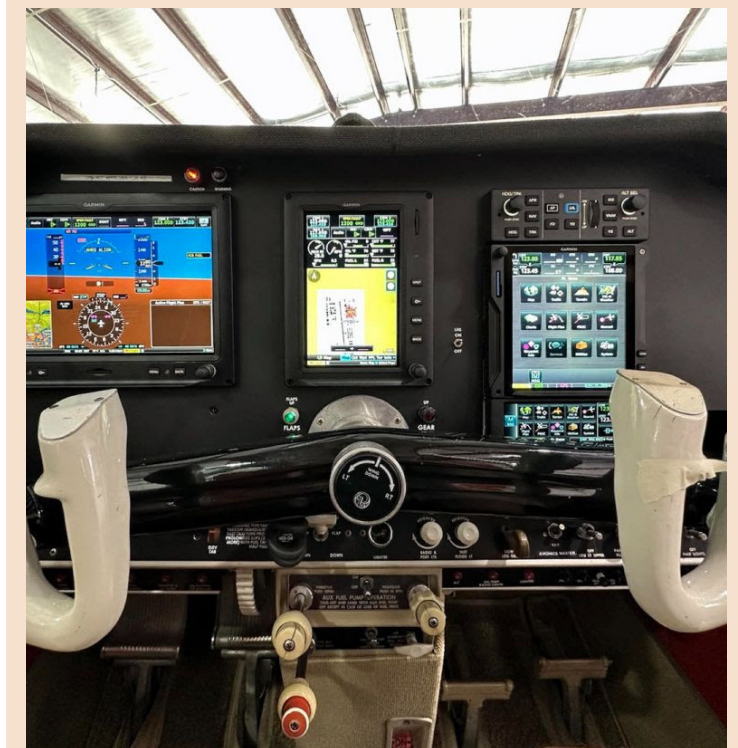
The cockpits of a Piper Meridian and a Beechcraft Debonair have undergone a major upgrade with new panels and avionics – all thanks to Avionics International Services.

On the Meridian turboprop single, ASI replaced the panel and added a quad-display Garmin G700 TXi system with a GI 275 multifunction display.

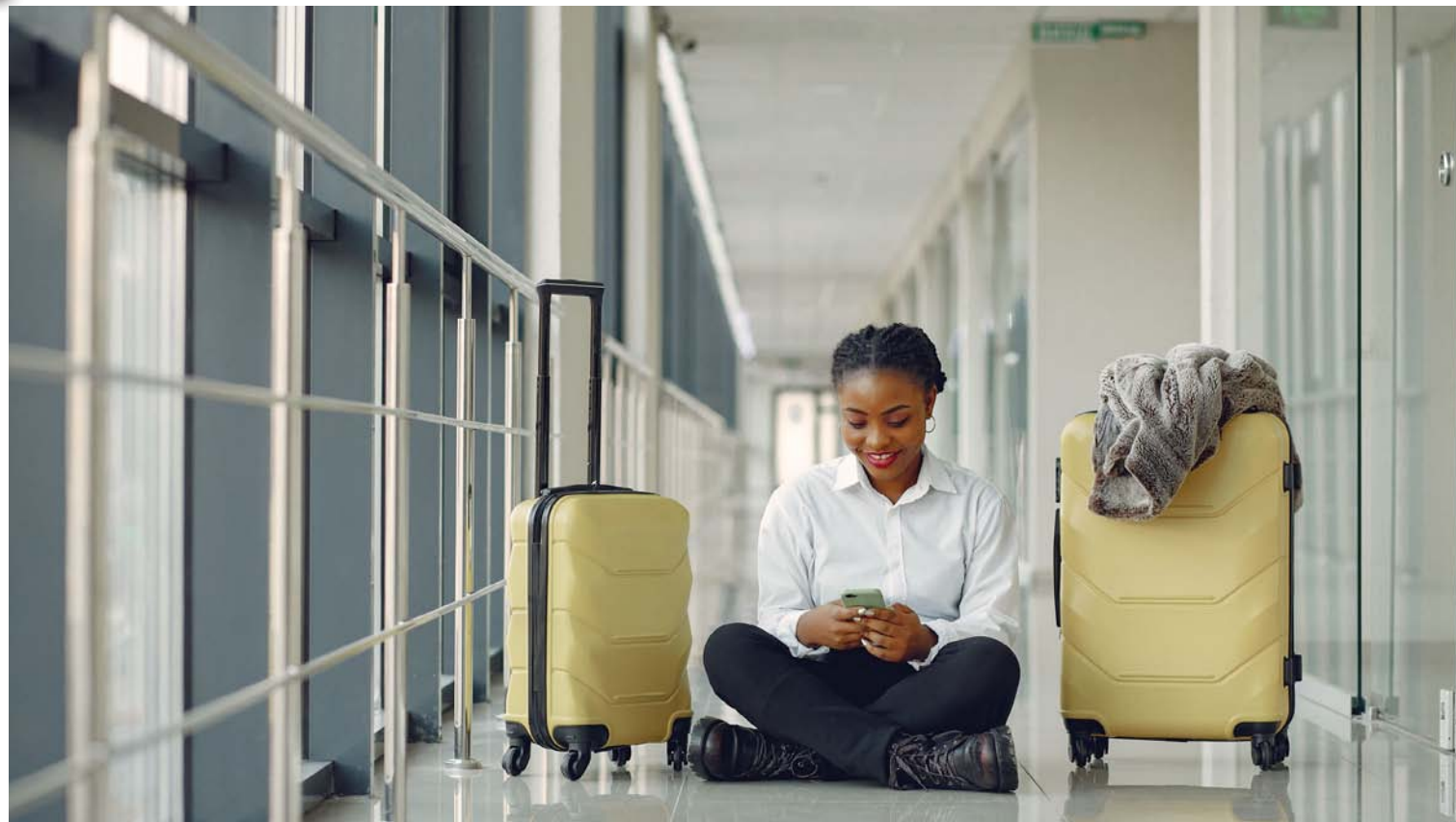
The Debonair received a new panel and dual Garmin G3X Touch displays (10.6-inch landscape and 7-inch portrait), including a four-cylinder engine indication system. ASI also installed a GFC 500 autopilot, GTN 750Xi GPS navcom, GNX 375 navigator with ADS-B, and G5 attitude indicator.

“One of the top reasons for a flight deck upgrade is weight savings,” said ASI’s Ryan Busby.

“We are able to remove outdated instruments and install solid-state digital systems. These also offer better reliability. Pilots and owners see an increase in operational efficiencies.” Founded in 1988, ASI is experienced with all types of general aviation aircraft, from piston singles to business jets.



A Beechcraft Debonair’s cockpit underwent an upgrade including a new panel, dual Garmin G3X Touch displays including 4-Cylinder EIS, as well as a GFC 500 autopilot amongst others. (Photo: Avionics Services International)



LET'S RECAP SOUTH AFRICAN AIR TRAVEL

Let's face it last year saw some dramatic shifts in South Africa's aviation industry.

LONG HAUL AVIATION RETURNED TO AFRICAN SKIES

In January international restrictions started to ease, and international operators began to test the waters of African travel once again.

Old faithful, Emirates, resumed seven of its flights to African destinations at the end of the month.

Qatar never stopped. Also, Qantas was back on track with regular flights to South Africa early in the game.

Virgin Atlantic reappeared in Cape Town skies in May 2022 for the first time since 2015, although it resumed its Johannesburg operations in 2021.

Delta followed, boldly offering services to Johannesburg, Lagos and Dakar early in the year. Delta flights to Cape Town only joined the fray in December after a run-in with United Airlines over the route. The latter resumed its services in November 2022.

United got back to South Africa too, touching down to a hero's welcome in November last year.

This year will see a steady increase in flights to Africa from abroad, with Qatar alone planning to connect Doha with 30 African destinations in 2023.

DOMESTIC SOUTH AFRICAN AIRLINE INDUSTRY RECOVERS

Disaster followed disaster on the domestic front for South African air travel in 2022. SAA was back albeit in a limited capacity, while other prominent airlines succumbed to the pandemic and its difficulties.

In late 2021, or early 2022, the country had seen the demise of SA Express and Kulula, only to face the indefinite grounding of both Mango and Comair in March.

These losses left just four of the country's eight airlines in the skies:

FlySafair, CemAir, Airlink, and newcomer, Lift. Comair dipped in and out of financial woes throughout 2022 and finally gave up the fight in June.

Mango is facing ongoing struggles in its search for investors to get it back in the air. While it's unlikely the airline will take off soon, it hasn't given up the fight just yet.

These closures left the country seriously short of seats for South African travellers,

WHAT'S EXPECTED FOR 2023

Although flights remain in short supply for the present, no one can deny that the domestic aviation industry has rallied to meet consumer needs. Across the board, new routes have opened up introduced on both the regional and domestic front.

The start of the year brought unexpected good news as the oil price plummeted. Believe it or not, you can find reasonably cheap flights between Johannesburg, Cape Town and Durban with Airlink.



Consulting

Our areas of expertise:

Airline Restructuring | Technical & Operations | Training | Safety Finance | Commercial | Aviation Policy | Master Plans



- Cost effective consulting services;
- Tailored solutions from experts who understand the African context;
- High quality deliverables;
- Contribution to improve air transport sustainability in Africa.

Contacts us

African Airlines Association (AFRAA) P O Box 20116 Nairobi 00200 - Kenya

Email: consulting@afraa.org **Tel:** +254 20 23 20 144 / 23 20 148

Office Mobile: +254 722 209708, **Website:** www.afraa.org



WORLD'S LARGEST AIRCRAFT ENGINE

By Loz Blain

Building on the success of its Trent family of engines, Rolls-Royce is looking to “transform performance” with its next engine family.

Rolls-Royce has said it has finished building the first demonstrator for its massive UltraFan engine, which will eventually hit the skies in airliners to be developed in the 2030s. Testing begins soon, with expectations of a 25% leap in efficiency.

Airliners will continue to burn hydrocarbon fuels into the foreseeable future - there's no clean alternative yet that can give you anywhere near the range and endurance of current long-haulers.

So Rolls-Royce will continue to develop its next-generation UltraFan engine.

This giant blue-bladed turbofan is the first of what will become a whole family of engines for narrow- and wide-body aircraft, ranging from 25,000 lbf to around 110,000 lbf of thrust.

Its 140-inch-diameter (3.56 m) fan is nearly 5% bigger than the one in the General Electric GE9X - currently the biggest engine in the airliner class.

With a small increase in diameter, though, comes a pretty decent increase in swept area.

The UltraFan makes use of Rolls-Royce's new robot-controlled 3D composite manufacturing process, which is now capable of producing the complex shapes needed for the aerodynamics of fan blades. Titanium is still the engineers' pick for the leading edges of the blades, but the rest is carbon composite.

This makes it much lighter than the full-titanium fans used in Rolls-Royce's Trent-class engines. This lightweight fan is the

key reason why Rolls-Royce has been able to build an engine this big - but on smaller versions, it'll basically free up weight for extra payload and passengers.

The UltraFan also runs a planetary power gearbox between the fan and the compressors at the back, so the fan can run at its optimal slower speed while the compressors run at their optimal higher speed. In earlier testing, the gearbox handled some 65 megawatts (87,000 hp) of power, another aerospace record.

While the fan has an enormous diameter, the turbines within are kept fairly compact, and Rolls-Royce's engineers have made sure a large volume of air goes around the compressor core and straight out the back of the engine, as opposed to being channeled through the core of the engine to drive the compressors.

This creates a high bypass ratio, which helps cut down noise by an impressive 35%, and gives the engine a significant boost in fuel efficiency.

Rolls-Royce said the UltraFan will use about a quarter less fuel than its own first-generation Trent engines, making them cheaper to run, longer-range and better for the environment. They capture NOx emissions more efficiently, too, dropping these by around 40% and more or less eliminating particulate emissions altogether. It's designed to run on 100% sustainable aviation fuel to begin with, but Rolls-Royce is also looking into hybrid electrification and hydrogen combustion in the drive toward full decarbonization.

Now that the first tech demonstrator is fully assembled, it's gone to the company's brand new, (US) \$108 million Testbed 80 facility in Derby, UK - the 'largest and smartest' test facility in the world, designed and built specifically around the needs of the UltraFan test programme, where the team will start putting it through its paces as development continues.

EMIRATES EXPANDS

Commercial airline giant Emirates plans to again ramp up operations in South Africa with 42 weekly flights between Dubai and Emirates' across three gateways in South Africa - Cape Town, Johannesburg and Durban.

Before the Covid-19 pandemic, Emirates offered 49 weekly flights between South Africa and Dubai, and the airline plans to return to this weekly service schedule by May 2023, said commercial operations Africa senior vice president Badr Abbas.

He said that a recent increase in air travel demand is continuing to outstrip capacity across the airline industry and that Emirates is “working hard” to provide more seat capacity, where possible, across its network to respond to the demand.

“For more than 25 years, we have invested in, and grown our operations to South Africa. We are working hard to restore our services to pre-pandemic levels to help generate more opportunities for South Africans to explore the world and for travellers from around the world to experience South Africa's unique natural experiences, world-renowned cuisine and local culture,” said Abbas.

In addition, Emirates is also introducing new services between major domestic airports, with three daily flights to and from Johannesburg from the start of next month - March 2023.

Cape Town will be served with double daily services starting from February 1, 2023, while Durban was serviced with double daily flights in December last year.

Consumer flight segments have mostly returned to pre-pandemic patterns and the bulk of Emirates' traffic comprises

leisure travellers and those visiting friends, relatives and family, he said.

Abbas also highlights that corporate air travel has been slower to recover post-Covid-19; however, with the need to conduct business in person, as well as an increase in international conferences, Abbas said corporate travel will soon be rebuilt.

“The ramp-up of flights is part of our ongoing commitment to support South Africa's economic and tourism recovery through enhanced connectivity across all of our gateways,” said Abbas. In this regard, he said, airline partnerships with South African Airways, Airlink, Cemair and FlySafair are resulting in high feeder demand in Emirates' domestic market.

However, Abbas notes that air travellers are still planning in late stages - a behaviour developed during the pandemic.

Nonetheless, in May last year, Emirates signed a memorandum of understanding (MoU) with the South African Tourism Board to jointly promote tourism and boost visitor arrivals and inbound traffic to South Africa from key markets across Emirates' network.

“Under the MoU, [Emirates] will jointly explore opportunities to promote South Africa and encourage travellers to experience the abundance of attractions that the country has to offer across our network of over 130 destinations.

“The South Africa Tourism Board will also work closely with us to support travel trade partners and tour operators across the Emirates network to develop and promote itineraries, introduce special packages and promotional giveaways and encourage incentives, among other marketing initiatives,” he said.

Meanwhile, Abbas pointed out that outbound flight demand for the year thus far has exceeded Emirates' expectations and is in line with the current capacity it is operating at, in and out of its South African gateways.

“We are seeing healthy flows in and out of points in Europe, the Middle East and the Indian subcontinent, and we are seeing growing traffic to points in the US,” he said.

He pointed out that South Africans are primarily travelling to the UK, Germany, Turkey, India, Thailand, the US, Saudi Arabia and Dubai.

“These are our top destinations. Dubai is our number one destination this year and we are seeing an increasing demand for Dubai.”





Rob Mather

ADVANCED AIR MOBILITY AWAITS

Advanced Air Mobility in commercial aviation may be in start-up mode now, but the future awaits.

There is no doubt that the AAM industry is at a pivotal point across commercial aviation, according to Rob Mather, vice president aerospace and defence industries, IFS.

He said that most AAM organisations have a “start-up” mentality and it’s those organisations that look beyond initial design and prototyping, and set up a strategy for widescale commercialisation and ongoing operations that stand to gain the most.

That includes the software they use to manage every step of each AAV lifecycle.

The industry is chock full of acronyms in relation to Advanced Air Mobility (AAM) & the Advanced Air Vehicles (AAVs). Some of the industry terms within the commercial aviation ecosystem include:

- Advanced Air Vehicles (AAVs) with commercial and civilian applications
- Urban Air Mobility (UAM) – think flying taxis for short passenger trips or cargo deliveries – is being made possible with Electric Vertical Take-off and Landing (eVTOL) aircraft, through to fully Unmanned Aerial Vehicles (UAVs) much larger than your typical drone, that will be used for last-mile and middle-mile cargo delivery
- AAV does not just relate to air-taxi or unmanned aircraft, it also applies to aircraft with new forms of propulsion - such as Hybrid Electric Aircraft (HEA) and Fully Electric Aircraft (FEA) to reflect electrification of more traditional airframes or new hybrid or all-electric aircraft
- Take all of those vehicles and all the infrastructure and policy required to support them together and you get Advanced Air Mobility (AAM).

AAV Certifications are on the horizon both sides of the Atlantic.

The support challenges - from design through to production, operation and maintenance – await organisations looking to enter or further entrench themselves in a high-growth industry.

Advanced Air Vehicles are not a far-off future technology from the Jetsons; they are coming sooner than you might think - and airworthiness certificates are just around the corner. Consider this 2021 assessment from the European Union Aviation Safety Agency (EASA): “Urban Air Mobility is expected to become a reality in Europe within three-five years. New technologies such as electric propulsion and enhanced battery capacity, applied to vertical take-off and landing systems, make this possible. The first commercial operations are expected to be the delivery of goods by drones and the transport of passengers, initially with a pilot on board. Later remote piloting or even autonomous services could follow. Several pilot projects are underway and some European manufacturers have already applied for certification, including for piloted vehicles for passenger transport. EASA is working with them on the airworthiness of the vehicles.”

In North America the FAA is already focusing on the infrastructure to support AAM. This year, it released interim guidance, via engineering brief, to support the design and operation of facilities that Electric Vertical Take-off and Landing (eVTOL) aircraft will use for initial operations.

It states: “The FAA is including AAM and UAM in our planning efforts, and our work is organized around five areas of activity - aircraft, airspace, operations, infrastructure, and community.”

One of the leading AAM players, Joby Aviation recently received a Part 135 Air Carrier Certificate from the FAA, ahead of schedule, allowing Joby to begin on-demand commercial air taxi operations.

The Part 135 Air Carrier Certificate is one of three FAA approvals required for Joby to operate its revolutionary eVTOL aircraft as an air taxi service in cities and communities across the United States.

The prime targets for AAM - where environmental benefits are highest McKinsey estimates short-haul flights account for more than 17% of total airline CO₂ emissions, making them an important target for decarbonization efforts. Replacing these traditionally-powered flights with lower carbon technologies –

such as green propulsion – could really contribute to lowering aviation emissions—and that’s before factoring in replacing ground transportation emissions for similar journeys.

With today’s emerging technologies, AAM has the highest potential to disrupt travel of distances up to 1000 miles, distances currently served by local ground vehicles and high numbers of short-haul aircraft flights. Ground transportation converting to air travel will represent a brand-new market but for airlines, the impact is most felt with electrification and hybrid usage in short and regional distances. The potential to revolutionize short and medium travel is imminent but it will be a longer path for AAM to impact long-haul and trans-oceanic flights.

Rising fuel prices are driving further airline interest in AAM. In fact, Aviation Week reports that one-third of the current orders for AAVs have been placed by airlines.

At IFS we currently have two customers excelling in the electric propulsion market. Cape Air will become one of the world’s first carriers to go electric in the sky. The company is working closely to develop and operate the Eviation Alice electric aircraft—a nine-seat fully electric plane that has been designed from the ground-up to be the perfect short commute aircraft.

On the OEM side, Rolls-Royce, beside all its work on the Trent engine family running on sustainable aviation fuels, is targeting electrification too. In late 2021 the Rolls-Royce, “Spirit of Aviation”, supported by partner Electroflight, set three new world records for an all-electric aircraft.

Positive societal implications – we’re already seeing a government groundswell.

There is huge societal benefit to be gained by making regional transport more accessible for human and goods transportation.

A recent report by the UK Government revealed that two in three people thought that improved transport links would have a positive impact on people’s ability to access job opportunities. Not only can AAM positively impact commuting opportunities, but from a cargo perspective it could provide better linkage to rural communities by delivering vital supplies and services to underserved areas.

In the U.S., AAM Legislation has also just gained House approval. A bill that gained House passage in June will provide \$25 million in grant funds to support AAM in FYs 2022 and 2023. The Advanced Aviation Infrastructure Modernization Act (AAIM Act), H.R. 6270, authorizes funding to plan and then build new AAM infrastructure by using existing heliports and airports, establishing new “vertiports,” and associated charging infrastructure. But a crucial aim of the legislation is the need to engage communities in the planning process and bring new technologies to a diverse set of communities, while creating hundreds of thousands of new green jobs.

We’re just at the start-up stage – but AAVs are assets to be supported through-life.

There is very much a “Silicon Valley mindset” in the AAM movement right now. The AAV landscape is currently dominated by disruptive start-ups or spin-offs and joint-ventures between leading aviation players—with certification targets ranging from 2022 through to 2028.

Despite this varied landscape, each AAM organization will face the same core challenges—taking a next-generation asset from design and proof-of-concept, through to prototyping, widescale operations and ongoing maintenance. Unlike manufacturing of traditional aircraft, many organizations involved in producing AAVs are looking to become a “one-stop” shop for their assets,

In 2021, Advanced Air Mobility (AAM) and Advanced Air Vehicles (AAVs) attracted \$7 billion in new investment, a record year- more than doubling the total disclosed investments made over the previous decade.

well beyond initial sale. From design, manufacturing, and initial delivery, right through to supporting the spares, parts management and maintenance of that AAV asset throughout its lifecycle. Many, like Joby are even looking to act as the operator of their aircraft, meaning that they will also be responsible for the continuing airworthiness of each aircraft.

Through-life support begins with the right software. The market leaders in AAM will make software a central part of their evolutionary growth to assert their authority in a maturing marketplace. An asset of tomorrow requires software support that can support every step of its journey. The ability to efficiently manage a complex asset through its entire lifecycle requires an underlying data thread—to build, operate, maintain, and support that asset.

With such quick expansion anticipated, it is essential for AAV organizations to have a 360-degree view of operational processes to make informed, data-driven business decisions. This requires supporting software to aggregate, analyze and action this data, as well as to evolve in lockstep with company growth strategy —

from initial design and engineering through to manufacturing and maintenance.

This will put the focus on breadth of functionality for supporting software too, with relevant modules needing to be deployed in line with business requirements. This could span functionalities such as supply chain procurement, HR, payroll, finance, project management in the design and production phases, moving to manufacturing execution systems, regulatory compliance frameworks, export control in the manufacturing phase, and MRO, asset management and workforce management for ongoing maintenance and support.

There's more to AAM than the AAV – there's the bigger picture to take into account. While the AAM industry is still in its infancy, there is a once in a lifetime opportunity to grab market share.

Moving from manufacturing an AAV to operating an air taxi business opens up a whole new set of business processes that will need support, including maintenance planning execution, configuration management and more.

AAV manufacturers shouldn't choose systems that are only good for them today, but will grind to a halt when they reach their maximum capability—meaning the manufacturer must then find and install software that can enable them to take their business to the next level.

Instead, they need a solution that will grow as they do, this means putting a system in place from the very start that can support an AAV company as it shifts from prototype, through to operation and commercialisation.



SAFETY PROMOTION - DELIBERATELY DIFFERENT

**COURSE SCHEDULE
MARCH 2023 NOW
RELEASED
starting at US\$99**



3 REASONS TO JOIN OUR COURSES

- 1 AFFORDABLE QUALITY - STARTING AT US\$ 99
- 2 WE TRAIN YOUR STAFF /IN AFRICA - ALREADY FOR 27 YEARS.....
- 3 ICAO STANDARDS ARE OUR STANDARDS

OUR MARCH COURSES IN KIGALI & NAIROBI INCLUDE

- Human Factors in Aviation
- Ground Operations Safety
- Airport Wildlife Management
- Incident investigation
- Leadership & teamwork in aviation



MORE INFO & BOOKING:
www.aviassist.org/shop



Safety Promotion for the African aviation industry since 1995

RECOVERY HINGES ON PARTNERSHIP INFRASTRUCTURE AND INNOVATION

The African Continental Free Trade Area agreement sets the foundation for African states to establish pro-competitive trade networks. Intracontinental trade excites investors looking for opportunities in Africa.



Photo credit <https://www.freepik.com/free-vector/>

Central to ensuring that all investment opportunities are seized, individual countries and private capital partners start their feasibility studies by looking at the infrastructure landscape.

Regarding trade across borders, the transport sector remains key to unlocking such opportunities.

Research commissioned by the Economic Commission for Africa shows maritime, road and rail freight accounts for most of the trade cargo market share on the continent.

That just 0.9% of cargo is transported by air implies that the market share of this mode will increase significantly by 2030.

There were restrictions on movement as a global policy of Covid-19 containment seriously affected commercial airlines, whose role was to facilitate the movement of business, goods and services through variously inspired forms of tourism.

According to the International Civil Aviation Organisation, passenger numbers fell 50% in 2020, at a cost of (US) \$370m to the industry.

Similarly, the air freight sector experienced a 19% reduction in activity due to global trade bans. To mitigate against a worse effect some commercial airlines were able to repurpose their aircraft to fly cargo such as vaccines, other medical equipment and supplies.

This experimentalism bodes well for airlines to consider finding a mix between commercial passenger flights and air supply and logistics transportation, particularly those facing threats of liquidation or needing capital equity restructuring to meet operational and other cost demands.

The key challenges in unlocking airline potential on the continent relate to issues of infrastructure, fuel costs and interest rates.

While emerging markets such as Nigeria, Egypt, Kenya and Ghana have set their eyes on developing new airports with cargo infrastructure in locations such as Kano, Abuja, Lagos, Mombasa, Malindi, Tamale, Akosombo and Takoradi, complementing these developments and developing the continental sector to claim a larger market share of 2031's projected global freight forwarding market size of (US) \$285.15bn requires policy and stakeholder co-ordination.

CUSTOMER SATISFACTION

With African cargo only accounting for 1.7% globally, the African Continental Free Trade Area agreement sets the foundation for African states to establish pro-competitive trade networks by lifting restrictions, engaging investors and ensuring that the costs of doing air business are strategically managed, particularly regarding landing costs and infrastructure capacity.

This could galvanise booming industries such as e-commerce, in which shipment time contributes greatly to customer satisfaction. It also ensures that agribusinesses that transport perishables can use this mode and reduce the spoilage rate associated with rail and road.

The SA and Kenyan governments resolved in 2022 to come to a new agreement that will enable travellers from both countries to make visa-free visits for up to 90 days annually. With both countries representing emerging markets, this is bound to set a good precedent between other countries in different regional economic zones to promote trade and the movement of people and business in future.

Airlines play a critical role in enabling such agreements as their strategies shape-shift to ensure more routes are introduced by each as part of the drive to supplement each country's capacity to trade.

Healthy competition improves quality and investor confidence for those seeking to invest in African airlines, with the potential to generate revenue and increase the continent's market share in the global markets.

At the cusp of this possibility, the Single African Air Transport Market agreement between 17 countries is expected to create 596,000 jobs and will reduce fares and bolster continental tourism.

Though its implementation time frames are unclear, businesses that promote remote working on the continent can look to spend less on headquarters and buildings and more on hotels, guest houses and other forms of accommodation as businesspeople move around to speak to clients and seek growth opportunities across borders.

Public-private partnerships (PPPs) are expected to play a role in ensuring that airlines are sustainable and the domestic markets of each country have unique offerings sold and challenges sorted.

For cosmopolitan tourist cities such as Cape Town, which had forward accommodation bookings sitting at 32.9% as early as September, there are immense opportunities for airlines and their partners in hospitality and rental services to offer competitive packages and currency movement intracontinental.

The 85% increase in international travel in 2022 also signals a recovery that provides domestic airlines the opportunity to increase their sales for intra country movement, particularly as leisure travel is already booming over the summer season.



Photo Credit: <https://www.freepik.com/free-vector/>

AN AFRICAN TOURISM EVENTS CALENDAR

The African Tourism Board has released a calendar of premier tourism events for the first quarter of the year from January to April.

Two tourism-related events have already taken place, according to the latest ATB Calendar of Events. The year kicked off with the Porto Novo International Festival in Porto Novo, Benin held from January 9 -16.

The second event was the 'Discover Gabon Launch' in Libreville, the country's capital held on January 20. The 'Pearl of Africa Tourism Expo Kampala' was held on February 6 to 9 in the Ugandan capital, Kampala.

Later the same month, the 'Naivasha Festival' in the Kenyan capital Nairobi is due to take place on February 20.

Then the 'Z - Summit 2023' is scheduled from February 24 to 26. An international tourism summit, the event has been organised jointly by the Zanzibar Association of Tourism Investors (ZATI) and Kilifair, tourism exhibition organisers in Northern Tanzania.

This high-level tourism and travel trade business and investment event is being held to strengthen the growth of the tourism industry on the island, showcasing investment opportunities and exhibiting the island's tourism for investors and operators in the sector.

The 'Z - Summit 2023' is aimed at boosting the tourism sector on the island raising the number of tourists to 800,00 by 2025, said



African Tourism Board chairperson Cuthbert Ncube

ZATI chairman Rahim Mohamed Bhaloo.

He said the event will expose Zanzibar's rich tourist resources which are a combination of marine, cultural and historical heritages. The event is aimed at raising the Island's aviation sector by attracting more airlines from Africa and the rest of the world to fly there.

Zanzibar generates more than 27% of its annual Gross Domestic Product from tourism.

He said 10 countries have already requested to participate in the Z-Summit 2023 to be held at the Golden Tulip Airport Zanzibar Hotel.

'Meetings Africa' is another tourism event that will take place in Johannesburg, South Africa from February 27 to March 1. The ATB and CTMB Destinations Conference in Cotonou, Benin will take place from March 16 to 18.

Further afield in Rome, Italy from March 28 -30, Africa and Europe Tourism Exchange is due to take place.

And last but not least, the ATB's quarterly calendar of events included the World Travel Market (WTM) in Cape Town, South Africa, scheduled from April 3 to 5.

The African Tourism Board is a pan-African tourism organisation with a mandate to market and promotes all of the 54 African destinations.

CHINA RE-OPENING

The reopening of travel to China comes amid numerous barriers to travel including Covid tests, rising ticket prices and not enough widebody aircraft.

Travel is returning to China, the world's largest outbound tourism market worth (US) \$255bln in 2019, after the country ended mandatory quarantines earlier this year.

But fares from China are now 160% higher than before the pandemic, data from travel firm ForwardKeys shows, due to limited supply.

US and European airlines will benefit from pent-up demand for travel to China after its recent border re-opening, but route approvals, fresh COVID-19 testing rules and not enough large aircraft remain barriers to rising sales, industry officials have said.

An Iowa-based lawyer Jinying Zhan, 50, said he paid (US) \$1,600 for a one-way ticket in December to fly via Chicago and Dubai to Guangzhou.

"I haven't visited my family in three years, so I will go to the spring festival with my sisters," he said. "Flights were very expensive." Before the pandemic, he used to pay (US) \$1,000 to (US) \$1,500 round-trip direct flight from Chicago.

A round-trip fare from San Francisco to Shanghai on United Airlines for a week-long trip in early March now costs (US) \$3,852 in economy class and (US) \$18,369 in business class, according to a Reuters search on the airline's website.

Global airlines are running only 11% of 2019 capacity levels to and from China in January, Cirium data shows, but the figure is expected to hit 25% by April.

Booking website Expedia said it saw U.S.-China and Europe-China searches double after the reopening announcement.

Chinese airlines, with ample staff and widebody planes, and a cost and time advantage of roughly two hours from flying a more direct route using Russian airspace, are expected to be early winners.

But US and European airlines, which have focused traditionally on the strong business travel market to China, and often cater more to the preferences of Western passengers, are poised to benefit from companies willing to pay a premium to rekindle face-to-face ties.

Trips to China "are already on the books for many companies and travellers as they kick off a new business year," said Suzanne Neufang, chief executive of the Global Business Travel Association.

APPROVALS NEEDED

But the reopening comes amid surging COVID infections that have led the United States, Japan and others to require negative coronavirus tests from Chinese arrivals - ultimately discouraging travel.

Since regulatory approval from both countries is required to add flights, at a time of US-China trade tensions, short-term capacity could be limited, industry sources said.

United, which had 584 flights to and from China in January 2019 according to Cirium, can now fly four times weekly from the US to mainland China.



Image by Joshua Woronicki from Pixabay

United said it could add services pending government authorisations.

Since January this year, Air China, Hainan Airlines and China Southern Airlines have filed schedules with the US Department of Transportation proposing to increase flights to as much as daily on some routes.

"There are some things brewing," said US deputy transportation secretary Polly Trottenberg, but gave no further details on US carriers adding more Chinese flights.

Foreign carriers seeking to add flights to China require approvals from the Civil Aviation Administration of China, which did not respond to a request for comment.

American Airlines said this week it would fly non-stop from Dallas to Shanghai twice-weekly from March, dropping a current stop in Seoul. However, other flights were paused as it assessed market demand and government regulations.

Delta Air Lines expects to cautiously "rebuild capacity to China in line with demand starting later this year," president Glen Hauenstein said when the company reported quarterly results.

China, which accounted for about 5% to 6% of long-haul travel from Europe in 2019, is also a key market for some European carriers including Germany's Lufthansa, Bernstein analyst Alex Irving said.

But European and US carriers may prioritise their widebody planes for lucrative trans-Atlantic travel this summer, leaving them stretched to accommodate fresh demand for China, said George Dimitroff, an analyst with Cirium.

Many Western airlines parked large planes when international traffic plunged and production of new twin-aisle jets has been limited. Article courtesy: <https://www.zawya.com/>



TAILOR MADE
AVIATION NEWS



Africa's oldest circulating magazine
www.airnews.co.za