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A COLOURFUL LIVERY

This colourful Dash 8-400 visited Malta recently sporting a special scheme designed by Sumo Artwork. Surprisingly the aircraft is almost nine years old having been delivered new to Luxair at the end of March 2014. This checklist photo was taken by Mario Caruana / MAviO News. Meanwhile our December front page cover Tails on Apron 9 features (from L to R) Challenge Airlines MT Boeing 767-300 9H-CAD; Canadian Air Force Airbus A310, Ethiopian Airlines ET-AVM B737MAX and HB-JME A340-300 of Edelweiss was also taken by Mario Caruana/ MAviO News - it's once again a double bill by MAviO.

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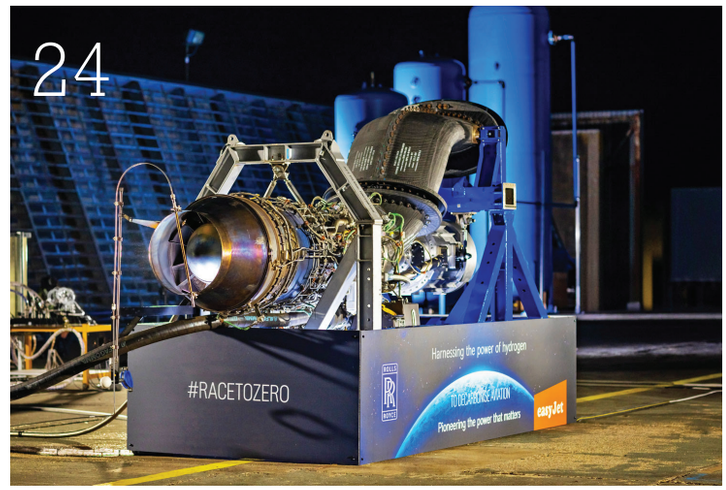

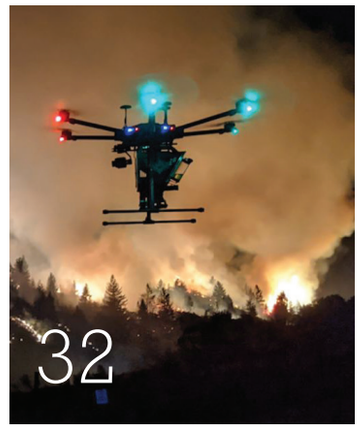

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The competition closes on the 31 January 2023 and the winner will be announced in the March 2023 edition of *World Airnews* .

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THE UPS AND DOWNS OF 2022

Photo by Eva Darron on Unsplash

By Heidi Gibson

What a year! Aviation came back with a vengeance and everything started opening up. With that came the chance to travel and so travel I did. A highlight, of course, was the IATA AGM held in Doha, Qatar and the opportunity to travel business class on the airline's Qsuite. There are no adjectives to describe this experience, it was unbelievable, on an unprecedented level, and probably will not be repeated in my life but will always be remembered. Thank you Qatar Airways and IATA.

2022 was the chance to meet and greet in person – it was time to network and have personal interaction, to listen to presentations, and more importantly to learn. After Doha, I went to Cape Town and Johannesburg (twice) etc and of course – the African Aerospace and Defence exhibition and conference held at Waterkloof AFB just outside Pretoria. 2022 will go down as the year that aviation came back and World Airnews hit the highlights. Many thanks to Brian Emmenis - the legendary air show commentator – whose constant sound bites paid tribute to our magazine's wonderful history. If anything 2022 will be remembered as the year that World Airnews took back AAD.

The year started on a high note, there was a lot of pent-up demand to travel, so much so that Heathrow had to impose quotas, ground staff and other sectors went on strike and all the while the demand for pilots had soared. And then the war broke out in Ukraine and everything changed.

Now energy prices are soaring, the price of Jet-A1 fuel is (US) $124 and the pressure on the economies of both Western and African nations is huge. From a shortage of grain supply to our continent, lack of sustained and reliable food supply to the real possibility of huge power cuts – all the while Russsia continues to bomb the infrastructure of war-torn Ukraine.

What can we expect from next year, everyone is asking? It's impossible to say. The IMF expects inflation and world oil prices to level out, but the ongoing slowdown in China added to the high levels of Covid lockdowns and I would say you can expect a bit of turbulence.

In fact, some economists are warning of a global world-wide recession and South Africa will not escape the effects of this. Soaring airfares, the closure of a number of airlines, the demise of British Airways operated Comair and low-cost airline Kulula are all a sign of the times in 2022.

One issue that looks like it is not going away and that is the Boeing Max saga. In a recent landmark ruling, a US judge in Texas ruled that people killed in two Boeing (BA) 737 MAX crashes in 2018 and 2019 can now legally be considered "crime victims". This after the argument that the US Justice Department had violated their legal rights when it struck a January 2021 deferred prosecution agreement with the Boeing plane maker.

The families of the victims argued that the US government "lied and violated their rights through a secret process" and asked US District Judge Reed O'Connor to rescind Boeing's immunity from criminal prosecution - which was part of the (US) $2.5 billion agreement - and order the plane maker face serious charges. The agreement deal included a (US) $244 million fine, (US) $1.77 billion compensation to airlines, and a (US) $500 million crash-victim fund.

This came after a 21-month investigation into the design and development of the 737 MAX after the deadly crashes in Indonesia and Ethiopia. Boeing did not disclose key details to the FAA of a safety system called MCAS, which was linked to both fatal crashes and designed to help counter a tendency of the MAX to pitch up.

"Had Boeing not committed its crime" pilots in Ethiopia and Indonesia would have "received training adequate to respond to the MCAS activation that occurred on both aircraft," O'Connor ruled. The crashes prompted Congress to pass legislation reforming FAA airplane certification. O'Connor ruled that "in sum, but for Boeing's criminal conspiracy to defraud the (Federal Aviation Administration), 346 people would not have lost their lives in the crashes."

Perhaps we may see this issue reach a conclusion in 2023? My advice is to buckle up, you are going to need to be strong to survive.


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The Bell V-280 Valor tiltrotor

UNMATCHED **NEXT GENERATION HELICOPTERS**

By Heidi Gibson

The US Army is preparing to select a Future Long Range Assault Aircraft (FLRAA) and all eyes are on the airframers that could win this massive prize. The Bell V-280 Valor tiltrotor is a contender. The company also has its Bell 360 Invictus in the running for the Future Attack Reconnaissance Aircraft or (FARA) programmes.

World Airnews spoke to Frank Lazzara, Bell director Advanced Vertical Lift Systems Sales and Strategy on the FLRAA programme and Grady King, Bell director of Future Attack Reconnaissance Aircraft Strategy for FARA.

WAN: Thank you for agreeing to be our key stakeholder focus feature for the month of December. While I am sure some of our readers may have heard about the FLRAA and FARA programmes, others may not. For the sake of clarity can you best describe what the different programmes entail, reasons for them and a bit of the historic context?

BELL: The Future Long-Range Assault Aircraft (FLRAA) and Future Attack Reconnaissance Aircraft (FARA) programmes are part of the Army's Future Vertical Lift (FVL) effort aimed at transforming the service's fleet to better support the Joint-Force as it executes multi-domain operations (MDO).

The FLRAA programme was initiated to replace the UH-60 Black Hawk helicopter fleet with a next-generation medium-lift aircraft. For this programme, Bell is offering the V-280 Valor, a second-generation tiltrotor that offers technical and operational advantages to war fighters with its speed, range, and advanced mission systems.

FARA on the other hand, was initiated to develop a next-generation light attack reconnaissance aircraft as the successor to the Bell OH-58D Kiowa Warrior scout helicopter. For this, Bell has designed the Bell 360 Invictus, a low drag tandem cockpit airframe with a lift-sharing wing, an articulated single main rotor and a supplemental power unit. Its design delivers a lethal, survivable, and sustainable combat aircraft to war fighters.

WAN: As I understand matters, Bell has two contenders - the V-280 Valor and Bell 360 Invictus - one in each programme. Is this accurate? Can you indicate what the current (most up-to-date) status of each of the programmes are and when do you think the US army will announce their preferred choice?

BELL: Yes, the V-280 Valor is our offering for FLRAA and the Bell 360 Invictus is our offering for FARA. The V-280 has unmatched speed, reach, and agility and has proven itself to be the lowest-risk, highest-performance option for the Army. In 2021, we completed our flight test for the V-280. During this time, it achieved 214 flight hours and met all planned key performance parameters including low-speed agility, long-range cruise, 305 knot high-speed flights, and rapid mission systems integration. Since then, we've been laser focused on continuing to burn down risk as we await the Army's decision.

On the FARA side of the house, the Bell 360 Invictus Build has made significant progress for Army's FARA Competitive Prototype, currently we are over 90% complete. Throughout all of this, our team has been in regular contact with the Army about progress and programme requirements. The Bell 360 will be a significant increase in the Army's attack and reconnaissance mission capability with its speed, reach and survivability. These capabilities alongside its low-risk and affordable design will be a game-changer for Army aviation.

Additional Links:

- Bell 360 Invictus Build Makes Significant Progress for Army'sFARA Prototype Competition
- Following Historic Development and Flight Test Program Bell V-280 Valor Focuses on FLRAA Competition
- Bell V-280: Burning Down Risk
- Bell 360 Invictus: Unmatched Manoeuvrability

WAN: If Bell is successful in either one of these programmes - what will this mean in terms of employment, economic input and general reputation?

BELL: At Bell, we're very focused on delivering the best technology to not just the US Army, but the Joint Force, along with allies and partners as well. While we can't speculate on who will win these competitions, we are confident that both Bell aircraft offer exceptional opportunities for the Army and allies. We also see the industrial base benefiting greatly from these FVL programmes. FVL is additive to the industrial base and these new aircraft will fly alongside the current fleet for quite some time.

WAN: Let's deal then with the Vertical Lift/ tilt-rotor V-280 Valour. It is a brilliant machine. What does the V stand for and, more importantly, what sets it apart in terms of efficiency, range and endurance?

BELL: The V stands for Vertical. The V-280 leverages Bell's advanced tiltrotor technology and has demonstrated the ability to go twice as far as the current fleet with an efficiency that will really transform the long-range assault mission. This is largely due to the use of a wing, which is what truly sets it apart from any other helicopter configuration. This design provides a range that is unmatched and offers major advantages to get forces where they are operationally relevant with reduced logistical needs for commanders.

These capabilities also lend themselves to the versatility of this platform. The V-280 could provide the transformational capability to numerous missions such as MEDEVAC, resupply, and utility. Really any mission that requires flying far and fast could benefit from the V-280 Valor.

Bell V-280 Scorecard
Bell V-280 Valor

WAN: I am not sure that I understand what you mean by a Modular Open Systems Approach for both aircraft. Can you explain this in simple terms? And how does this benefit the operation, costs and capability of both aircraft?

BELL: The MOSA and Common Open Architecture Digital Backbone (COA-DB) approach that we have integrated on both weapons systems makes it possible to rapidly integrate mission systems equipment as they emerge. This approach enables the Army to make upgrades quickly and at a more affordable cost. It also ensures that these weapons systems will remain interoperable in future Joint All-Domain Operations and maintain overmatch even as the battlefield changes.

The 360 Invictus is a contender in the US Army's Future Attack Reconnaissance Aircraft (FARA) programme

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WAN: In simple terms does this mean that both the V-280 and the Invictus have similar digital technologies and what was Bell's thinking behind this?

BELL: Yes, both platforms have an open architecture that can rapidly insert a new sensor, weapon, radio, or other new technology. Bell shares the Army's vision of upgrading our aircraft with new mission equipment quickly and affordably.

WAN: What about the fly-by-wire system in the V-280 – what technologies will this bring to this aircraft in terms of its operation and how will this set it apart from its other contenders?

BELL: The V-280's fly-by-wire system aides in providing next-generation performance and the ability to offload workload from the aircrew. Fly-by-wire enables upgradability throughout the lifecycle of the aircraft through software changes allowing integration of new capabilities based on aircrew feedback.

Additionally, fly-by-wire flight control systems provide a path to optimally-manned or autonomous flight. This technology provides war fighters with capabilities that can't be achieved by the weapons systems making up the current fleet.

WAN: Why did Bell opt for the tilt-rotor system, and will this have any impact as far as the noise levels of this aircraft?

BELL: Based on the capabilities required for the long-range mission, the tiltrotor is the only solution that has the agility, range, and speed that the Army needs. The Army needs to be able to go faster and farther than ever before to meet the demands of an MDO environment.

Tiltrotors possess the ability to go more than twice as fast and more than twice as far as the current fleet without sacrificing agility in the hover and low-speed environment.

Bell's tiltrotor design produces an exceptionally low acoustic signature when in cruise mode configuration and a noise signature consistent with a helicopter when in helicopter or VTOL mode.

WAN: Are there any variants of the V-280? Can you tell our readers about the different mission capabilities that it will have - apart from a military one? I have heard rumblings about the footprint of the aircraft - why was this an aspect that needed to be taken into consideration?

BELL: We are focused on providing the military with the next-generation capabilities it needs. The V-280 is extremely versatile and has many possible applications such as MEDEVAC and special operations missions in addition to opportunities focused on the maritime environment.

Regarding footprint, interoperability within the existing fleet is a major consideration for FVL and part of that involves being able to utilize the Army's current infrastructure. With that in mind, the V-280 is sized to execute all the missions of the H-60 in a similar footprint and environment, but with an increase in cabin size, payload, speed, and range well beyond the Blackhawk.

WAN: Now let's move on to the Bell 360 Invictus and the future attack reconnaissance aircraft. What sets this aircraft apart from the others in terms of speed, range and agility?

BELL: The Bell 360 Invictus is a low-drag tandem cockpit airframe with a lift-sharing wing, an articulated single main rotor and a supplemental power unit. This design enables advanced agility and is based on flight-proven Bell rotor systems which have been tested and proven at speeds of more than 200 Knots.

WAN: I am fascinated about the lift-sharing wing and the optimized tail rotor that plays a part in the aircraft's ability to hover, reach top speed and general performance. Can you tell us more about these aspects?

BELL: The 360's lift-sharing wing relieves rotor lift demand at high speeds and suppresses retreating blade stalls. This enhances cruise efficiency and manoeuvrability. The canted open tail rotor is based on Bell's proven technology and significantly impacts the controllability of the aircraft and provides great growth potential.

WAN: I believe the 360 Invictus prototype is more than 90 percent complete or am I way behind here? What is the status of this project? What are you waiting on?

Our team is working closely with the Army's PM FARA on meeting all critical requirements. We are In line with current Army schedules, and we expect to receive the engine in late 2022 with the first flight in 2023. In the meantime, the team has been focused on conducting various tests at the Drive Systems Test Lab to drive down risk before the aircraft starts flying. We've been looking back at the design iterations and that data on the Competitive Prototype to utilise for the Increment 1 weapon system development design.

WAN: Can you please tell our readers about the size of the actual aircraft, its retractable landing gear and weapons pylons and how these aspects reduce the helicopter's drag?

BELL: The Bell 360's size is optimized for the Army's requirements for speed, range, and endurance. As for the gear and weapons, by retracting the landing gear and mission effects launcher the Bell 360 experiences significantly less resistance and becomes more aerodynamic. This in turn reduces its drag and improves its overall performance.

WAN: Lastly, I believe that Bell has built a systems integration lab, a systems test centre and a manufacturing test centre – all in anticipation of being selected. What happens if it does not get the nod? What is Plan B?

BELL: At Bell, we are working toward the future of manufacturing, so these facilities will always be important regardless of the outcome of these two competitions. We also see other opportunities such as Navy Maritime Strike Marine Corps VTOL Family of Systems and High-Speed VTOL. Each of these programs will leverage the advanced capability of these state-of-the-art facilities.

The V-280 has 'the element of surprise and survivability' - coupled with an ability to show low-speed agility within a landing zone.

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Boeing expected an order from the US Army for at least 100 AH-64E Apache attack helicopters in 2022

NAVIGATING - A MILITARY AIR CAMPAIGN

By Helmoed Heitman, World Airnews correspondent

The most common and likely security threats in Africa will come from irregular forces of one kind or another such as a full-scale insurgency, localised guerrilla, terrorism or large-scale organized crime or a combination of one or more of these.

The main challenge when faced with such threats is to find them to be able to engage them and this is precisely what is difficult in Africa where the armed forces are mostly too small for the size of their countries.

Consider the following:

- While the lack of strength can be partly offset by air power, as discussed in the November edition of World Airnews, the right mix of aircraft can find and fix irregular forces for ground forces to engage them.
- But therein lies another part of the challenge - deploying ground forces promptly and swiftly, and then supporting them during the engagement.

One lesson of operations around the world has been the value of helicopters particularly those involved in the transport of miltary personnel.

Transport helicopters can quickly move troops into position for an ambush or to assault a guerrilla base area and then redeploy them as the contact develops. Armed helicopters are more effective at precision close support than fixed wing aircraft, and helicopters can deploy near ground forces command elements to facilitate effective co-operation.

Given these factors, it is surprising how few African states have adequate helicopter forces.

There are probably many reasons, namely that suitable helicopters are costly to acquire, operate and require costly training. Then there are the geographic challenges - dust, high ambient temperatures, distances. Perhaps the key weakness of helicopters is a lack of range and endurance by comparison with fixed-wing aircraft, particularly given the size of many African countries.

That challenge of small helicopter forces in large countries can be addressed by a doctrine focused on facilitating deployment to distant, austere forward bases and supporting operations there. That, together with advance planning, can render a small helicopter force - a key force multiplier.

The first step must be an appreciation of likely threats, followed by reconnaissance of relevant parts of the country to identify locations for forward bases. Those should ideally have an existing airfield or at least airstrip and reasonable overland access to allow supply, by road, rail, river or lake in some countries, or coastal vessel if near the shore. They should, rather obviously, also be locations that facilitate protection against guerrilla attack, direct or stand-off.

These need not be permanent bases, but the staff work to enable prompt deployment of helicopters and ground staff - operations staff, technical personnel and protection elements - and then support operations, needs to be done ahead of time and kept up to date. That staff work should also include identifying suitable forward operating localities in the broad vicinity, to facilitate effective support by helicopters when ground forces engage guerrillas at some distance from a forward base. Again, the planning must also provide for the deployment of fuel, munitions, ground crews and protection elements to such sites as and when needed.

The key to many operations is prompt and swift deployment of forces and sufficient supplies to sustain initial operations. This will, in most cases, best be done by air and the necessary equipment and supply packages need to be identified and developed ahead of time, so deployment becomes a case of implementation or at worst the adaptation of an existing plan. Then helicopter forces can be deployed both promptly and swiftly.

The next question to be addressed will be how to get the helicopters to the relevant forward bases. In many cases a ferry flight will do the job, perhaps using one or even more refueling points along the route. But that assumes helicopters with a substantial ferry range. Lighter helicopters might have to be delivered to the forward base by transport aircraft - assuming a runway - or even by river or lake boat or coastal vessel that can bring them to within easy range of the base. In the latter cases there would even be potential to convert a suitable vessel for use as an afloat helicopter base or offshore workshop and depot.

The question after that will be how to supply helicopters that have deployed from the forward base to a temporary site closer to the ground forces engaged with the enemy. Overland is likely to be vulnerable to ambush or might be ruled out by terrain. In some cases, there might be an airstrip nearby, allowing light transport aircraft to bring up fuel, munitions for attack helicopters and for the ground forces. In another case, helicopters will be needed, with a small fleet of heavy helicopters ideal if they can be afforded. Where distance or lack of transport helicopters make that impractical, supplies can be airdropped, as the French did in Mali in 2013

Then comes the actual operations. However, this is not the place to discuss tactics, which needs to be developed by each military to suit their own circumstances. The spread of light surface-to-air missiles will require helicopters to fly low where there is any enemy presence, to reduce the acquisition/engagement window.

That, however, will mean reduced situational awareness that will need to be offset by an ‘Eye in the Sky’. That could be an aircraft that can remain above the engagement envelope of light missiles, ideally a dedicated type with sensors to monitor the ground situation effectively, or a suitable UAV or set of UAVs.

The bottom line in all of this, is that African forces facing likely threats should look to develop an integrated helicopter operations capability comprising helicopters and the infantry trained to work with helicopters, UAVs or surveillance aircraft with crews specifically trained and practiced in working with helicopters, readily deployable logistic and technical elements to sustain forward operations, and the transport capacity to keep such forces supplied.

Essentially, what is required is an integrated joint army/air force helicopter operations group that develops doctrine and equipment requirements jointly and exercises jointly and frequently.

A CH-47 Chinook helps transport a Blackhawk (both US Army)

Given the financial realities, most countries would find it difficult to establish and maintain such a group as a standing force. But nothing prevents establishing and maintaining a ‘virtual helicopter operations group’ comprising a small standing command and staff element and designated units that can carry out other roles until required for this purpose.

ARNEWS

In Mali supplies for French ground forces were airdropped using different types of helicopters as the quickest way to get equipment, food and troops to the base over long distances.

OPENING UP AFRICAN SKIES

By Roy Ezze, World Airnews correspondent

Air transport liberalisation across African skies inched forwards when 17 African states were formally identified as being ready to participate in a Single African Air Transport Market Pilot Implementation Project (SAATM PIP).

Air transport liberalisation across African skies inched forwards when 17 African states were formally identified as being ready to participate in a Single African Air Transport Market Pilot Implementation Project (SAATM PIP).

The event took place under the shadow of 23rd Anniversary of the Yamoussoukro Decision Day on November 14, 2022 and was held in in Dakar, Senegal.

SAATM is a flagship project of the African Union's 2063 Agenda aimed at creating a single unified air transport market in Africa. Although the major objective of the Yamoussoukro Decision is to improve connectivity and the integration of Africa through the opening up of scheduled and non-scheduled air transport services and the removal of all restrictions on traffic rights, capacity and frequency between city pairs for all African airlines, the continent has struggled to actualize it.

According to the International Air Transport Association (IATA), to date, 35 countries have joined SAATM which translates into 80% of the existing aviation market in Africa.

The African states that attended the event and renewed their commitment towards its implementation and included Cabo Verde, Cote D'Ivoire, Cameroun, Ethiopia, Ghana, Kenya, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Senegal, South Africa, Togo and Zambia.

Shortly afterwards, Niger and Gabon opted in which brought the total number of states participating in the pilot project to 17. According to a statement issued by the African Civil Aviation Commission (AFCAC), the 17 countries have been singled out to participate because they possess the basic enablers for fully open skies.

Although no firm date for the first flight has been set, these countries are expected to "accelerate air transport liberalisation, connectivity and integration in Africa" and to align "their respective Air Service Agreements (ASAs)" during the International Civil Aviation Organisation's Air Services Negotiation event ICAN2022 event that will take place in Abuja this month.

According to a recent study by the African Union on the potential benefits of SAATM implementation, the continent looks set to gain an additional (US) $4.2bn in GDP, 596,000 new jobs, and a 27% reduction in fares.

"The study also assessed the level of the Yamoussoukro Decision (YD) implementation and the efficacy of SAATM operationalisation for each Member State and arrived at a "preparedness" rating using the SAATM enablers. A SAATM enabler is a stand-alone air transport feature or policy that contributes to the holistic aviation framework, which acts as an essential ingredient that leads to a successful aviation sector. These states met the favourable environment for successful SAATM implementation," AFCAC said.

Nigeria minister of aviation Hadi Sirika, announced a donation (US) $200,000 to accelerate success of the project, which received a resounding ovation. Sirika said aviation is one of the highest contributors to Nigeria's GDP.

South African deputy minister of transport Sindisiwe Chikunga said there is a need for states to establish improved infrastructure, safety and security in line with ICAO guidelines. While Angie Elyazzy, the representative of minister of civil aviation Egypt Mohamed Abbas Helmy, said liberalisation in Africa should start immediately with a working group that would speed this up.

According to the Secretary General of AFCAC, Adefunke Adeyemi, the best way to achieve liberalisation in Africa is to start immediately. AFCAC president Silas Udahemuka, said SAATM and YD is in line with the desires of the founding fathers of the Organisation of African Unity (OAU), now the African Union (AU), which is to achieve unity, integration and interconnectedness. Nowel Ngala, of Asky Airlines, with its headquarters in Togo, called on other African airlines to collaborate to ensure that all African capital cities are interconnected. The airline won AFCAC's recognition as the airline with most 5th Freedom Rights routes.

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POLISH PILOTS DOMINATE

by Rob Jonkers - photos by Rob Jonkers and others

The 22nd World Rally Flying Championships has been a protracted postponed event that was planned to take place in 2020 in Stellenbosch, a second one was attempted in 2021 but both had to be cancelled due to the Corona virus pandemic. This time it went ahead at the Brits Airfield, just outside Johannesburg in South Africa over four days in the height of the summer rainy season.

After months of planning, Sunday November 13 dawned and everything was in place. After the morning briefings, preparations for the opening ceremony were carried out and MC Karl Jansen started proceedings promptly at 3pm.

Each country carried their national flag and country signboard as they walked past the podium, to the sounds of their national anthem playing in the background.

Then Nigel and Jason from the 'Absolute Extras' team gave a stunning display against the backdrop of a passing storm cell, providing photographers a good opportunity to get some amazing footage.

They are to be thanked for providing this prestigious event with an appropriate display. The Puma Flying Lions were also planned to appear but threatening weather prevented them from getting through from Rand Airport.

So, while the rain stayed away, the formalities of the opening ceremony continued. First the chairman of the Brits Flying Club Lohan Otto gave a speech, then competition director Rob Jonkers gave thanks to all involved in getting the event to the point where it could take place. Thereafter president of the General Aviation Commission (GAC) of the FAI Hans Schwebel declared the event open, raised the FAI flag. Cocktail snacks and drinks were then enjoyed by all – while the rain descended on the airfield again.

THE COMPETITION BEGINS

The competition week began on a Monday. As the weather cleared up, with a bit of wind and low cloud, it was decided to fly the bad weather route - Granite for the day. All the routes were named after minerals in keeping with the theme of the geographical area being rich in minerals. The only way the departure sequence would work was to use runway 20. At least for Monday the wind was southerly all day - most of the previous week the prevailing wing was northerly. At day 1 Michal Wieczorek from Poland was in first place while in second was our own South African Nigel Hopkins.

The rest of the week had good weather predicted with increasing temperatures. Day two meant the Chrome route was flown, with a landing again at home base. Nigel Hopkins took the lead, with Marek Kachaniak from Poland coming in second, Michal Wieczorek dropped to third. Day 3 and the route was Copper. This route

The stillness of dusk at the end of Day 1 of competition ends.

SA Team of Marko Nel (pilot) and Leon Bouttell (Navigator) in their Evektor Harmony ZU-FWS waiting for their papers

SA Team of Nigel Hopkins (pilot) and Mary de Klerk (Navigator) in their Orion Cub ZU-IVS waiting for their papers

was flown up north with an intermediate landing to take place at Kokoriba, the idea of an away landing was to challenge crews to landing in unfamiliar territory. The runway there was imminently suitable to carry out a touch and go in farm strip conditions.

Some found it difficult and others were able to bingo the landings. Unfortunately, due to a rule technicality, the landings were excluded, much to the chagrin of some competitors who had done well there. After day 3, the standings shown Nigel in the lead with 604 points and Michal Wieczorek in second with 753 points. On Day 4 the route was Gold which meant this route was flown to the west in the Rustenburg area with another away landing planned. But as the rule technicality could not be fixed for the Silver Creek runway, only a runway inspection could be flown. A home landing at Brits was measured. Day 4's results saw Krzysztof Wieczorek in the lead with Nigel having dropped to eighth.

ARNEWS

The largest foreign contingent at the WRFC this year was the Czech Republic team who brought six teams with a number of judges and supporters.

The Opening Ceremony Parade of Nations, led by Austria

After the four days, other than a few aircraft snags, all competitors could fly all the routes. Thursday afternoon and evening is traditionally known as 'International Day' with every country taking part bringing out their specialty food and drink to sample and enjoy. Germany brought Jägermeister, the Norwegians brought their famous Norwegian salmon, the French their French wines and the South Africans showed off their boerewors and melktertjies.

Friday was set out as a reserve weather day but fortunately was not required. Some teams took further scenic flights while others went to visit local game parks. The prize giving ceremony was held at the Fatherland Estate about five kilometres from the Brits airfield - at 7pm. Everybody was on time and David le Roux, MC for the evening, called everyone to take their seats.

PRIZE GIVING

The proceedings began with a speech from the competition director Rob Jonkers giving a speech in which he told those present the key to make this event happen was securing aircraft, as only the South Africans had their own aircraft. He said Martin Meyer and Ron Stirk did a sterling job in securing 14 aircraft for 28 teams in negotiating with the owners to rent them.

All officials received participation certificates after having been thanked for their support - as it takes many functions to pull off an event of this nature successfully.

Then the chief judge began to hand out the prizes. The first was the youngest pilot category and this went to the Czech team of Lukas Behounek and Krystof Bobek. Then the landings category went to the Polish team of Krzysztof Wieczorek and Kamil Wieczorek. Then onto the category of individual team results with first place going the Polish Team of Krzysztof Wieczorek and Kamil Wieczorek, in second place Michal Wieczorek and Marcin Kwiatosz, and in third place South African team of Nigel Hopkins and Mary de Klerk, the first podium finish for the South Africans since 2003. Next was the team trophy that went to Poland in first place, the Czech Republic took second and France third. The Air BP best in navigation and observation trophy went to the Polish Team of Krzysztof Wieczorek and Kamil Wieczorek

After the prize giving, GAC president Schwebel officially closed the event and the FAI flag was lowered. It was folded and competition director Rob Jonkers handed it over to Phillipe Muller of France who is the appointed competition director for the 23rd WRFC to be held in Macon, France in 2023.

With that official proceedings were closed and guests could enjoy the rest of the evening.

Thanks must go to the following all the officials from far and wide, Lohan Otto and the BFC team for preparing the airfield and upgraded the clubhouse, all the SAPFA & BFC committee members, the CAA PEL department carrying out licence validations, the GA department, Piet Fourie and Mothiba Kanyane for the Special Air Event application management and their daily support.

The media was thanked for their support and attendance of recreational aviation. Sponsors, Absolute Aviation, DJA Aviation Insurance, Bill Harrop's Balloons, Brits Auto, Century Avionics, Wings and Tracks, Puma Fuel and various local hotels and restaurants.

"I am sure this event will come around to South Africa sometime in the future again, and that new teams will experience the best of South Africa. I wish all of you, safe skies where ever you fly, and am sure we'll see you again soon at the next events," said Jonkers.

The Polish team of Marek Kachaniak (pilot) and Lukasz Pawlak (Navigator) in their Cessna C172 ZS-MCW coming in to do their spot landing on day 2

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Passionate aviator Chidozie 'Dozie' Uzoezie (top left) and owner of the largest African aviation Facebook page organised a tour of the Air Traffic Control Tower of the Murtala Muhammed Airport Lagos Nigeria.

FOUNDING THE AFRICAN AVIATION FACEBOOK GROUP

The African Aviation Facebook Group is the largest online community of aviation professionals across Africa and the World. It has over 300,000 followers and it keeps on growing. But who is behind it? Who started it? Who manages the page? Why did it start? and How does it keep growing?

World Airnews got a chance to interview the man behind all of this - a Nigerian entrepreneur and passionate aviator Chidozie Uzoezie or 'Dozie' as he is known to his friends. We found an extraordinary human being who wants to inform, educate and inspire the next generation of African aviators and beyond.

WAN: Thank you for agreeing to be featured in our magazine. Can you tell us a bit about your beginnings? Where were you born? Where were you educated?

DOZIE: It's an absolute pleasure and honour to be featured in World Airnews - Africa's oldest circulating Aviation News Magazine.

Perhaps, the first thing people should know about me is that, contrary to what a lot assume, I wasn't born with the proverbial silver spoon in my mouth. I was born in a small town called Ogbunka, in Anambra State of Nigeria. In financial terms, my family was an average family and could only provide the basic things we needed. So, for me, growing up was typical and mostly uneventful. I didn't have access to the luxury of information, the luxury of choice, and the luxuries of life. My growing up was very modest.

As a primary school pupil and a secondary school student, I was very bright and intelligent, always coming top in my class. I was good in both arts and science, at the same time and almost to the same degree. However, I was more inclined to science because we thought science was more glamorous than arts. The common (wrong) assumption at that time was that arts was for those who were less intelligent or for those who just couldn't do science. And that assumption largely shaped what I later became in life.

I did both primary and post-primary education in different schools in my state. The first time I ever left my state was when I went to Cross River State for my university education. Much to the surprise of many who are reading this interview, I have two medical degrees, very much unrelated to aviation. I obtained my first degree from the University of Calabar in Nigeria, and my Master's Degree from the University of East London in the United Kingdom. It was a first-class degree, but I don't have a regard for those degrees anymore - as I now practice what I've always loved - AVIATION.

WAN: When we spoke earlier you told me that aviation was not ever something that you knew about. You told me that the closest you came to this sector was watching planes flying overhead. Can you tell our readers what turned your attention to aviation?

DOZIE: I have always loved aviation; it was my first love. It was just a question of information and opportunity. I grew up not knowing what aviation was because I was not exposed to the right information, at the right time. As a child, the closest I came to aviation was seeing an aircraft's contrails above the clouds as they flew over our little village.

The only things we knew were arts and science. Nobody told us we could become anything else apart from a lawyer or/and a doctor. We didn't know we could become pilots, flight attendants or air traffic controllers or flight dispatches or aircraft maintenance engineers or aerospace engineers or an airline executive. Our circumstances and environment were very limiting and prevented us from dreaming.

So, after 16 years of practicing in the medical field, I decided to hang up my medical boots and do what really makes me happy. Today, I talk about aviation all the time, even in my dreams. I analyse aviation, I discuss it, I pontificate about it. Aviation runs in my veins. It is my life. In fact, I didn't choose aviation, aviation chose me. It's a burning passion which I have never been able to explain it.

When I was doing my masters' degree in the UK, I would often leave the campus in Stratford, London and go to Heathrow Airport just to look at the aircraft take off and land. As a student, I didn't have enough money for the trains, so I would spend long hours on the bus. One day, I was nearly knocked down by a car as I was crossing the road to Heathrow Airport, but that wasn't enough to kill my love for aviation.

Unknown to most one of Africa's most ardent supporters of the aviation sector 'Dozie' started out studying and qualifying as a doctor.

WAN: Let's talk a bit about your Facebook page. Can you tell me when you started the page? What did you do to grow the page in the early years? And of course, what was the motivation behind starting the page?

DOZIE: Growing up without any access to the right aviation-related information determined my career path. I believe that knowledge is power, and having access to the right information helps people to make informed decisions, especially with respect to choosing a profession. So, I created the African Aviation Group in March 2016 to inform, educate, and inspire the next generation of African Aviators.

On a recent tour of South Africa's aviation top spots.

In doing so my major motivation was to give people the opportunity I didn't have while growing up. And that's the least I could do, because I want to do more.

In terms of growth, African Aviation Group is one of the fastest-growing online communities. Our growth has been organic, driven by quality content and programmes that promote engagement and intellectual interaction. During the early years, we experienced rapid growth as we introduced several highly engaging programmes in the group, including Conversation with African Aviators, Ask The Aviator, Jumpseat, On The Spot, and Open Mic.

WAN: How many followers do you have today and how do you manage the page? Do you have help? How has it 'morphed' into what it is today?

DOZIE: We currently have more than 300,000 members from over 100 countries of the world. You can agree with me that managing an online community of this size is not a walk in the park, especially with respect to spammy posts and comments. I do have help from our moderators and the Facebook admin assistant feature which has been a very useful tool for me. One major challenge, though, is responding to private messages. Everyone in the group has a question and wants a personal attention, and that's not always possible.

African Aviation Group is what it is today due to the incredible support and commitment demonstrated by our members. With highly engaging content, we have been able to take the group to an enviable position. Indeed, the group is not about me, but about the members.

An outreach programme as part of the recent African Aviators Tower Awards event held in Johannesburg in October involved a visit by school girls to the Airlink offices.

WAN: Can you tell our readers some of the incredible outreach programmes/events or such like partnership projects that you have been involved with as a result of your page?

DOZIE: The African Aviation Group is probably the only Africa-based online aviation community that has taken its presence offline. We have organisedhip various offline events aimed at informing and educating the next generation of African Aviators.

We had an incredibly useful partners with AviaDev Africa and Airspace Africa. In late 2021 and early 2022, we organised a six-episode webinar series, sponsored by Embraer and hosted on Zoom. This sought to expose participants to the various professions and career paths available in the aviation industry.

We are currently in talks with various African airlines and other partners for our next offline programme tagged 'Embraer Experience Day' that will give participants real-time and first-hand experience of day-to-day airline operations. The first edition will happen early next year. I don't want to let the cat out of the bag.

In 2021, I also organised a tour of the Air Traffic Control Tower of the Murtala Muhammed Airport Lagos Nigeria. We are hoping to make these tours more regular and in more countries across Africa.

We have provided scholarships to some of our members through our partners: Universal School of Aviation in Nigeria and Kubis Aviation College in Uganda. We are in talks with other aviation schools to make the scholarships available in more countries.

WAN: What is your ultimate aim for the page? And where do you see it going in the future?

DOZIE: The African Aviation Group is no longer just an online community of aviators and aspiring aviators. We are pretty much like a family now, bound together by one common goal and touching lives. With what we have done so far, I can say that we are already achieving our ultimate aim. However, we can always achieve more.

In the future, I see the African Aviation Group becoming an international aviation force to be reckoned with. I see us doing more in terms of partnerships and collaborations with aircraft manufacturers, financial houses and flight schools, leading to access to credit facilities, sponsorships, and scholarships for our members. That will make me happy.

WAN: Is the page only open to African Aviators or everyone? Are there any restrictions on entry? How has your target audience grown over the years?

DOZIE: No, African Aviation Group is open to anyone, anywhere. We have members from 101 countries of the world. What that means is that almost half of the member countries are outside Africa. The only requirement is to have a passion for aviation.

I was intentional right from our early days. Even when we had only a few hundred members, our content was highly engaging and that drove the rapid growth we experienced as a nascent online community.

FLYEGYPT MANDATES ZELA TO MANAGE PART OF ITS FLEET

By Romauld Ngueyap, World Airnews correspondent

Since October, Zela Aviation has been promoting the availability (for charter or ACMI charter) of two Fly Egypt aircraft, a Boeing 737-700 and a 737-800.

This is provided for in the recently signed agreement between the Egyptian private low-cost airline and the Europe-based aviation asset manager.

"We are delighted to support and do business with FlyEgypt, an airline we know well. This is beneficial for both companies, as it will further strengthen our working relationship," said Zela Aviation president Andreas Christodoulides.

Based at Cairo International Airport, FlyEgypt operates a fleet of eight aircraft (six B737-800s and two B737-700s) with an average age of 15.1 years. Established in 2014, the low-cost operator specialising in charter flights regularly serves 12 routes across the Middle East and 30 to Europe, including Egyptian tourist destinations such as Cairo, Alexandria, Hurghada, Assiut and Sharm El Sheikh.

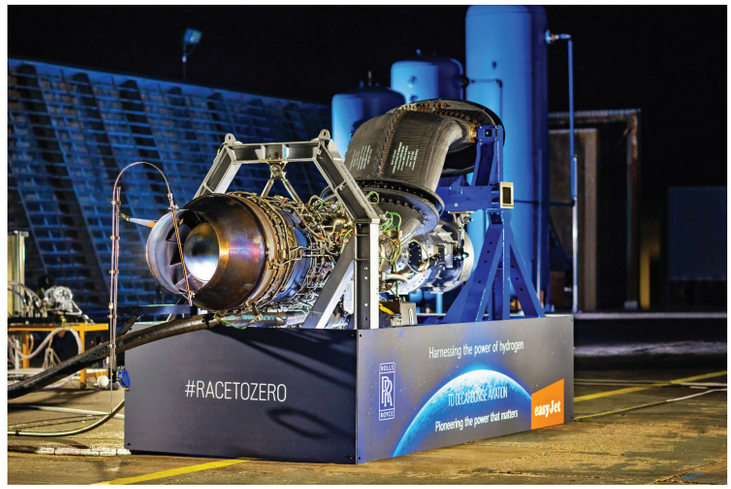
For its part, Zela Aviation, created in 2006, is active in the field of wet-lease and dry lease, chartering and sale of aircraft. The company has offices in Cyprus, Greece and the UK, with clients spread across Europe, Asia, Africa, North and South America.

As a reminder, on the continent, Zela Aviation has signed a similar mandate agreement with Precision Air in Tanzania (September 2021) and Jambojet in Kenya (January 2022). The two deals are for the ATR72-500 and Dash8-400 fleets respectively.

This Airbus A340-300 flew into Malta recently flying in all the way from Cape Town (South Africa). The four-engine behemoth registered HB-JME is an almost 19-year old example that started life at Swiss International Airlines way back in November 2003. The aircraft went onto complete its journey to Zurich. Photos by Mario Caruana / MAviO News.

AN AVIATION WORLD-FIRST SUCCESSFUL HYDROGEN ENGINE RUN

Rolls-Royce and easyJet confirmed they have set a new aviation milestone with the world's first run of a modern aero engine on hydrogen.



The ground test was conducted on an early concept demonstrator using green hydrogen created by wind and tidal power. It marks a major step towards proving that hydrogen could be a zero-carbon aviation fuel of the future and is a key proof point in the decarbonisation strategies of both Rolls-Royce and easyJet.

Both companies have set out to prove that hydrogen can safely and efficiently deliver power for civil aero engines and are already planning a second set of tests, with a longer-term ambition to carry out flight tests.

The test took place at an outdoor test facility at MoD Boscombe Down, United Kingdom, using a converted Rolls-Royce AE 2100-A regional jet engine. Green hydrogen for the tests was supplied by EMEC (European Marine Energy Centre), generated using renewable energy at their hydrogen production and tidal test facility on Eday in the Orkney Islands, UK.

Secretary of state for business, energy and industrial strategy Grant Shapps said, "The UK is leading the global shift to guilt-free flying, and the test by Rolls-Royce and easyJet is an exciting demonstration of how business innovation can transform the way we live our lives.

"This is a true British success story, with the hydrogen being used to power the jet engine produced using tidal and wind energy from the Orkney Islands of Scotland - and is a prime example of how we can work together to make aviation cleaner while driving jobs across the country."

Grazia Vittadini, chief technology officer, Rolls-Royce, said, "The success of this hydrogen test is an exciting milestone. We only announced our partnership with easyJet in July and we are already off to an incredible start with this landmark achievement. We are pushing the boundaries to discover the zero carbon possibilities of hydrogen, which could help reshape the future of flight."

Johan Lundgren, CEO of easyJet said, "This is a real success for our partnership team. We are committed to continuing to support this ground-breaking research because hydrogen offers great possibilities for a range of aircraft, including easyJet-sized aircraft. That will be a huge step forward in meeting the challenge of net zero by 2050."

Following analysis of this early concept ground test, the partnership plans a series of further rig tests leading up to a full-scale ground test of a Rolls-Royce Pearl 15 jet engine.

The partnership is inspired by the global, UN-backed Race to Zero campaign that both companies have signed up to as part of their commitment to achieve net zero carbon emissions by 2050.

COMOROS' AB AIRLINES PARTNERS

Having touted the plan in the pre-Covid era, AB Aviation is set to wet-lease an A330-200 from Heston Airlines to jointly develop a new route from Moroni Int'l, the capital of Comoros, to Paris CDG to boost tourism to the Indian Ocean archipelago off Africa's east coast.

The Lithuanian ACMI/charter carrier will provide either A330 LY-MAC or LY-PLW, chief executive officer Jonas Rinkauskas confirmed to ch-aviation. The aircraft carry 266 passengers including 18 in business and 248 in economy class. The wet-lease contract is set for one year, with extensions possible. Flights should start this month and run twice a week.

AB Aviation was not immediately available for comment. The Comorian airline is working with the local regulator to regain its Air Operator's Certificate which was suspended in March 2022 after 19 people were killed in a crash of a Cessna (twin turboprop) 208 Grand Caravan operated by Fly Zanzibar (Zanzibar) on February 26, 2022.

The privately-owned carrier was only recertified in September 2020, after the local regulator (L'Agence Nationale de l'Aviation Civile et de la Météorologie de l'Union des Comores - ANACM) forced all Comorian operators to undergo recertification in 2017.

AB Aviation's operations specifications are limited to a single aircraft, an EMB-120ER, D6-ABA, leased from Sahara African Aviation (Mbombela), which remains stored in Comoros, according to ch-aviation fleets advanced data.

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JUSTICE FREEZES ETHIOPIAN AIRLINES' ENTRY INTO NIGERIA AIR

By Romuald Ngueyap, World Airnews correspondent

Nigeria, the most populous country in Africa, has been working for almost four years to set up a national airline Nigeria Air, almost 10 years after the previous enterprise disappeared.

It is, now unlikely, that the new flagship in gestation will take to the air by the end of December, as originally planned. The Federal High Court in Lagos has ordered the provisional suspension of ongoing negotiations between the State and Ethiopian Airlines, the selected partner.

The decision follows a complaint filed by Airlines of Nigeria (AON) - of which Azman Air, Air Peace, Max Air, United Nigeria Airlines, and Topbrass Aviation are members - against Nigeria Air Limited, aviation minister Hadi Sirika, Ethiopian Airlines, and attorney general Abubakar Malami.

The complainant alleges, among other things, that the choice of Ethiopian Airlines as a strategic partner (49%) violates the law on government procurement, the regulation of concessions and the federal law on competition and consumer protection.
In its plea, the AON has requested the revocation of Nigeria Air's operating licence, obtained on June 6 this year, because it said the partnership with Ethiopian Airlines would lead to the bankruptcy of local airlines, opening the domestic market to the Ethiopian national flag. The AON members are also seeking 2 billion naira or (US) $4.5 million in damages for the harm suffered as a result of their 'unjustified exclusion' from the tendering process for the choice of technical partner to the national carrier.

(US) $300 MILLION IN INVESTMENTS

According to the initial plan unveiled by aviation minister Hadi Sirika in September, Nigeria Air will be based in Abuja and is to be a joint venture formed by Ethiopian Airlines (49%), the federal government (5%) and a consortium of Nigerian private investors (46%) including MRS and Skyway Aviation Handling Company (SAHCO).

In terms of the contractual terms, the funds mobilised for the launch of Nigeria Air and the obtaining of its AOC will remain and will remain the sole financial contribution of the Nigerian State (5%). For its part, Ethiopian Airlines, as a strategic partner, is expected to contribute a share capital of approximately (US) $300 million. The business plan calls for an initial fleet of three Boeing 737-800s with a target of 30 aircraft, including 787 Dreamliners, by the end of 2024.

The airline will first start operations on the corridor between Abuja and Lagos, Nigeria's political and economic capitals, before serving other domestic destinations. The international deployment is planned after two years of operations.

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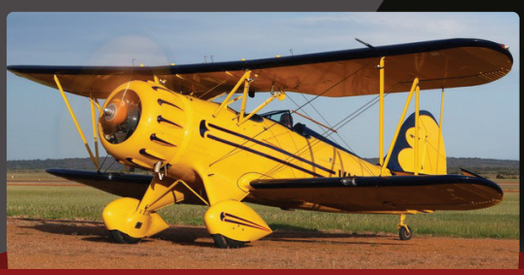

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CAPE TOWN **HELICOPTER RESCUE** MISSIONS

When that well-known bright red helicopter hovers above in the city or surrounding areas, Capetonians know that someone is in trouble - at sea or along the mountainside - and that helicopter, carrying advanced life support paramedics, has been dispatched to help.

Between 2012 and 2016, the South African (SA) Red Cross Air Mercy Service in the Western Cape rescued more than 600 people in distress during 581 helicopter search-and-rescue missions.

According to the University of Cape Town's (UCT) Jocelyn Park-Ross, the red helicopter provides a world-class search-and-rescue service that the province simply can't do without.

Park-Ross is a lecturer of simulation education in the Department of Anaesthesia and Perioperative Medicine in UCT's Faculty of Health Sciences. But before joining UCT in 2020, she worked as a flight paramedic at the SA Red Cross Air Mercy Service.

So, it comes as no surprise that Park-Ross has dedicated her master's research to highlighting the valuable role the rescue helicopter plays in many lifesaving missions across the Western Cape.

"The mountain and sea rescue operations captured my imagination and I needed to understand who we were rescuing and why. There was nothing available in existing literature about our context and I was looking for an interesting topic for my master's thesis," she said.

"In essence, the main aim of this work was to provide the first description of helicopter rescue on the African continent, and to better understand how it is utilised to help people in need."

The SA Red Cross Air Mercy Service is a unique mixed-use emergency medical services model that operates across the Western Cape.

The aeromedical service, staffed with advanced life support paramedics, provides both air ambulance operation services (emergency scene response and inter-hospital transfers), and aquatic and terrestrial rescue in Cape Town and Oudtshoorn.

For the research period under review, Park-Ross said the air ambulance service rescued a total of 644 people, more than half (57%) of which required emergency medical attention.

About 79% of people rescued were uninjured or in need of minor medical attention; these included hikers who were lost on the mountain, or who required assistance from inaccessible areas.

Most rescue missions, Park-Ross added, involved single patients, except for a handful of rescues where groups of uninjured people who were lost on the mountain needed assistance. In one unique rescue mission, a group of people and a cat were rescued from a wilderness fire.

Jocelyn Park Ross hopes her research will shine a much-needed light on the importance of practising effective mountain and water safety. Pictured here with one of her supervisors, Associate Professor Peter Hodkinson from UCT's Department of Emergency Medicine. Photo by Robyn Walker.

Park-Ross said her research revealed that patients needed rescuing for various reasons. However, the common recorded reasons listed included lower limb trauma, dehydration and spinal injuries. Sadly, of the 644 patients rescued, 64 fatalities were recorded.

Interestingly, she said, her research found that of the 451 terrestrial rescues conducted in the five-year period, 50% occurred in the Table Mountain National Park (TMNP). And a quarter of all terrestrial rescue missions took place on three popular hiking trails (Platteklip Gorge, Lion's Head and India Venster).

She said dehydration and heat-related illnesses were the primary reasons for rescue in those areas. On the flip side, 130 rescue missions were carried out at sea during the study period, and in more than half of these cases (54%), no persons were found. More than half of persons found during these missions, including those rescued by boat or ground crew, were fatalities.

The red helicopter provides a world-class search-and-rescue service that the province simply can't do without. Photo Kevin Tromp.

"The emergency medical services helicopter is used in various rescue missions, therefore how we use it is critical. Various rescue missions can take hours and limit the aircraft's availability for others in need. So, understanding how we use the aircraft could help us make decisions about when and how it's dispatched," Park-Ross said.

NOT SUCH A FUN FACT

According to Park-Ross, 42% of all rescue missions are conducted during the summer season, when the air ambulance service records a surge in drownings on beaches, as well as dehydration and heat-related illnesses for hikers in TMNP.

"One in 10 patients in the Western Cape required rescue for dehydration or heat-related illness, and some were critically ill and required advanced life support intervention. The substantial proportion of patients with potentially preventable causes for rescue, such as dehydration and heat-related illnesses on popular hiking trails, and drowning near popular beaches, provide areas of focus for injury prevention strategies," she said.

"Our hope is that this research can be used for awareness campaigns on the importance of water safety, and how to avoid dehydration and heat-related illnesses to keep people safe and to decrease the demand for air rescue. Helicopter rescue is not without risk and takes intensive training and dedication to conduct safely. I hope this work honours those who put themselves at risk to care for others."

Park-Ross said she hopes that her research will shine a much-needed light on the importance of practising effective mountain and water safety. She said too many people who have been rescued from the mountain and the ocean have underestimated both natural wonders, ignored safety signs, or have simply gone unprepared for their hike or swim.

"One million people use the cable car every year and the conditions on the mountain change rapidly and are so easy to underestimate. We hope that our research will raise the necessary awareness on mountain and water safety so that we can work as a collective to save more lives," she said.

Article can be found at https://www.news.uct.ac.za/

A feasibility study on the possible construction of a drone centre in Rwanda is underway. Image by www.freepik.com

AFRICAN AVIATION SUMMIT

African airline leaders are due to meet to discuss the African aviation industry at the Bill Gallagher Room at the Sandton Convention Centre, Johannesburg, South Africa, in May next year.

This after coming together at the 30th African Aviation Summit: Air Finance Africa Conference & Exhibition which took place in June this year.

At this year's meeting the challenge of funding airlines in Africa - both existing carriers and start-ups – was a subject high on the agenda. International and African financial experts and senior officials representing leading airlines from around Africa candidly addressed the pressing issues at hand and, importantly, recommended practical solutions to help resolve the situation.

Great value is provided during the event through in-depth interviews and open discussions. The panel consisted of Vuyani Jarana, former group chief executive officer of South African Airways, captain Ado Sanusi, chief executive officer, AeroContractors of Nigeria, Wrenelle Stander, former joint CEO Comair, South Africa, Mesfin Tasew, chief operating officer, of Ethiopian Airlines, Joao Jorge, chief executive officer, LAM-Mozambique Airlines, and others.

Next year's African Aviation Summit will take place at the same venue from 23rd to 25th May 2023.

AU-EU INITIATIVE IN RWANDA

by Wallace Mawire

The African Union-European Union (AU-EU) Digital for Development (D4D) Hub is conducting a feasibility study on the possibilities of constructing a drone operation centre in Rwanda and the creation of a geospatial hub within the Rwanda Space Agency, according to information released by the Hub.

The activities will be led by the Agence Française de Dévelopement (AFD) in support of the Ministry of ICT and Innovation of Rwanda.

They are part of two broader technical assistance missions that the Hub will conduct at the request of public institutions in Rwanda and Gambia.

The purpose of the missions are to support African governments in their efforts to build strong and resilient digital economies that contribute to their countries' inclusive and sustainable development. The activity is led by AFD, a French development agency, and is aimed at contributing to the implementation of the digital priorities of the Ministry of ICT and Innovation (MINICT), by amongst others:

- Improving the government's efficiency and capacity to deliver services to citizens.
- Supporting geospatial-based policy design, monitoring and evaluation across government.
- Fostering innovation and economic development based on geospatial and drone-generated data and unlocking drone private sector development.
- Enhancing decision-making across most of the sectors of the country using geospatial data (including both public and private actors).

NASA-FUNDED **RESEARCH TEAM EXPLORES ELECTRIC AIRCRAFT**

By John Pullen

In recent years, the sustainability and environmental impacts of air travel have been brought under intense scrutiny from governments, non-profits and the public. This has led to aircraft manufacturers and other aviation companies alike focusing on creating more sustainable and efficient aircraft for use in both commercial and private segments of the industry.

Supported by NASA, CHEETA (the Centre for High-Efficiency Electrical Technologies for Aircraft), is a group of researchers and students that are looking to take this movement further by cutting carbon emissions from aircraft entirely through the development of fully electric aircraft.

Electrifying aviation, while a relatively new concept, has gained traction in the industry. Its popularity has been seen specifically in recent months, as Icelandair conducted its first test flight for an all-electric training aircraft that could have future application in some of the carrier's short-haul, domestic markets.

However, CHEETA is thinking bigger, aiming to harness the power of fuel cells to power large aircraft beyond the size of training aircraft.

While created as a component of NASA's University Leadership Initiative (ULI), CHEETA is composed of researchers, graduates and undergraduate students from nine universities across the country. It fulfils the ULI's goal by allowing talented minds across many disciplines to collaborate with funding from NASA to develop advanced solutions to the challenges facing the aerospace industry today.

Phillip Ansell, CHEETA's director, has highlighted the benefit of this campus involvement. "The students are just so enamoured with our work, which has been really cool to see."

The focus for CHEETA is to harness the power of fuel cells to generate sustainable power for large aircraft. These cells would create electricity by combining oxygen in the air with hydrogen. This chemical process would only result in the emission of water, making this science a promising lead toward sustainable air travel.

While developments like this are much closer in reach thanks to technological advancements, a goal to create electricity to power aircraft using fuel cells comes with logistical challenges that must be faced by the ULI. For one, hydrogen must be in its liquid state in order to be used in the process of generating electricity.
This becomes a significant obstacle for CHEETA researchers, as hydrogen must be stored at -423^0 F in order to remain in its liquid state.

"Storing this super cold, or cryogenic, liquid requires tanks that are heavier than those used to hold regular jet fuel, which has made it difficult for fuel cells from achieving widespread use in aviation," said NASA's Lillian Gipson.

Even if the team is able to address the challenges, they must also find a way to ensure that the fuel cells can power a large aircraft and the complex systems needed for operation.

Despite these headwinds, CHEETA seems determined to propel the aviation industry forward through its research.

Its progress toward sustainable air travel is proving to be a unifying cause in the industry, as even companies like GlobalX are indicating interest in electric aircraft. Given the support for electric aircraft and the bright minds working toward the application of fuel cell generated electricity, CHEETA is taking steps toward making sustainable aviation a reality.

Article courtesy: https://www.aviationtoday.com/ AIRNEWS

University researchers have made strides towards the development of advanced fuel cells and electricity-conducting technology for generating the power that will be necessary to enable fully-electric aircraft.
(Photo: Phillip Ansell, University of Illinois)

FIREBALL DRONES ASSIST IN WILDFIRE PREVENTION

By Natalia V. Osipova and Catherine Thorbecke

As United States wildfires have grown larger and deadlier in recent years, one company is using drones and fire-starting "dragon eggs" to help prevent extreme blazes and save firefighters' lives.

This technique refers to the controlled application of fire by a team of experts to reduce hazardous fuel in areas prone to wildfires.

"More prescribed fires mean fewer extreme wildfires," according to the US Forest Service.

Carrick Detweiler, founder and CEO of Drone Amplified, said that this method works by "doing a very low-intensity burn that will basically burn up the dead leaves and sticks that would cause major wildfires when they dry out later in the summer."

The company was started by two University of Nebraska-Lincoln engineering professors in 2017. In 2020, it was awarded a grant totaling (US) $1 million for research and development from the National Science Foundation and Nebraska Department of Economic Development.

"We can reduce these huge wildfires by using more fire, when it's safe to do so," Detweiler added.

While the technique of prescribed burns has been around for centuries (and was even used by Indigenous Americans for wildfire management), it can be laborious and risky at times for firefighters carrying it out today.

Firefighters often must hike or ride an all-terrain vehicle through dense forest or mountainous terrain, carrying a drip torch to start small fires in specific, remote locations, according to Detweiler.

"Then you have helicopters with a whole crew on board, flying really low and slow over the fire," he added of other methods for prescribed burns.

"About a quarter of all wildland firefighting fatalities are related to aviation," Detweiler said.

"And for me, this really was a motivation to start Drone Amplified and get these systems into the hands of firefighters."

While, he said, a helicopter can cover a larger amount of area than a drone, he noted that firefighters can also deploy "tens or thousands of our systems for the same cost as a helicopter." A drone from the company costs about (US) $80,000.

The drones carry so-called "dragon eggs," or fireballs that ignite when they land on the ground. "They have potassium permanganate," Detweiler said of the dragon eggs, adding that when you mix this with glycol it starts a chemical reaction - resulting in a fire. Some 400 of these fireballs can be secured onto a single 50-pound drone.

The drones allow firefighters to work at a distance from flames, according to Detweiler, and in areas that are difficult to reach due to terrain or visibility. Moreover, the fire-fighting technology can be used, "when it's dark, when it's smokey, and when other airplanes can't be out there."

The drones, which are controlled by an app, can also allow the fire-starting balls to be dropped in very specific locations. Precision is a critical element when conducting prescribed burns, because it is crucial for preventing fire escapes.

While escapes are rare - the US Forest Service reports just one escape for every thousand burns - the outcomes can be devastating. Two recent controlled burns in New Mexico escaped and led to the state's largest wildfire on record.

Detweiler said his company's equipment aims to prevent fire escapes through the use of thermal cameras, visual cameras and other technology that lets firefighters see through smoke.

"Our app also allows the firefighter to put in geofences [boundaries] to prevent any ignitions outside of that area," he added. While Drone Amplified is already being used by the US Forest Service and other federal agencies, Detweiler said he hopes to see the technology on the back of every firefighter's truck in the future.

Article courtesy: https://kesq.com/money/cnn-social-media-technology/2022/11/17/these-fireball-dropping-drones-are-on-the-frontlines-of-wildfire-prevention/

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UAV WINGMAN PROGRAMME

By Valerie Insinna

As the Air Force considers starting a programme of record for autonomous drone wingmen to fly alongside next-generation fighters, the service is tapping one of its test squadrons to begin regularly flying the Kratos XQ-58A Valkyrie.

The 40th Flight Test Squadron at Eglin Air Force Base, Florida in the USA has taken ownership of the first of two Valkyrie drones to be delivered to the unit, with the inaugural flight of the aircraft set to occur by the end of this month, the Air Force said.

Basing the Valkyrie at Eglin, which boasts a test range that spans about 100,000 square nautical miles of airspace overlying the Florida panhandle and Gulf of Mexico, according to the Air Force, will allow the service to evaluate the drone's ability to autonomously operate over vast distances, Maj. John Nygard, the squadron's autonomous aircraft experimentation team lead, said in a release.

Because the Air Force doesn't have experience flying autonomous drone wingmen as part of normal flight operations, test pilots and maintainers from the 40th Flight Test Squadron will be responsible for figuring out the logistics and infrastructure needed to house and operate the Valkyrie, Nygard said.

Their findings will be recorded and could inform "resource requirements that could be used for future combat collaborative aircraft," he said.

In September, Air Force Secretary Frank Kendall said the service could begin a Collaborative Combat Aircraft (CCA) programme as early as fiscal 2024, which would seek to field one or more autonomous drones capable of operating with the fifth generation F-22 and F-35, as well as a part of the Next Generation Air Dominance (NGAD) family of systems.

NGAD is slated to feature a crewed fighter and will replace the F-22 in the early 2030s.

"The expectation is that these aircraft can be designed to be less survivable and less capable, but still bring an awful lot to the fight in a mixture that the enemy has a very hard time sorting out and dealing with," Kendall said.

"You can even intentionally sacrifice some of them to draw fire, if you will, to make the enemy expose himself."

The XQ-58A is one of the autonomous drones the Air Force Research Laboratory is exploring for its Low Cost Attritable Aircraft Technology (LCAAT) and Skyborg technology development efforts. A rail-launched aircraft with a 30-foot wingspan, the Valkyrie does not need to be manually piloted in order to perform flight maneuvers, and can instead be controlled using commands given by a ground control station or nearby fighter jet.

Since 2019, AFRL has carried out Valkyrie test flights at military installations such as Yuma Proving Ground in Arizona. However, officials have said more regular testing will be needed to mature Valkyrie and other drones to be fielded in the mid-to late-2020s - the timeline offered by Air Force leaders.

"The data generated during previous tests, along with feedback provided from our user community, show that in order to rapidly develop and mature tactical autonomy on an appropriate timeline, investment in - and utilisation of - appropriate military range resources is required," said Matthew Niemiec, the Air Force Research Laboratory's autonomous aircraft experimentation portfolio lead.

Eglin AFB's Valkyrie aircraft could host "a variety" of autonomous cores that dictate the performance of the drone, such as the government-owned Skyborg autonomy control system, as well as others created by defense contractors or academia, the Air Force said.

The base will be equipped with a new simulation environment that will provide a feedback loop for XQ-58A users to weigh in on how different autonomy software is performing.

"The goal by fall 2023 is to leverage this platform for experimentation with crewed-uncrewed teaming display solutions," Nygard stated. While the news release didn't elaborate on what these "crewed-uncrewed teaming display solutions" would involve, they could potentially lay the groundwork for Valkyrie to begin flying under the control of a fighter pilot in an airborne jet.

Kendall has said the Air Force fighter pilots need to be able to experiment with potential CCA options, which include the Valkyrie, Boeing's MQ-28 Ghost Bat and General Atomics' MQ-20 Avenger, so that they develop trust in unmanned systems and learn how to incorporate the drones in daily operations.

"You'd be integrating these [drones] with existing aircraft in a way which sort of prove out some of the tactics, techniques and procedures, as well as things like maintenance concepts …and organizational structures," he said in September.

Article courtesy: https://breakingdefense.com

LEONARDO STEPS IN

Helicopter manufacturer Leonardo is to support Vertical Aerospace in developing the fuselage for its VX4 eVTOL aircraft

Under a recent agreement, the Italian group will initially help to build six VX4s to be used for type certification test flights, but the alliance could be extended to cover planned mass production of up to 2,000 of the four-passenger aircraft each year.

At its Grottalglie site in Italy, Leonardo's aerostructure division will design, test, manufacture, and supply the carbon fibre fuselage for the all-electric VX4.

The companies said they will work together to optimise lightweight composite structures, modular design, systems integration and structural testing for the co-development of the fuselage. The Italian facility builds aerostructures for other aircraft manufacturers, including fuselage sections for Boeing's 787 widebody airliner.

Unlike some other eVTOL aircraft developers, UK-based start-up Vertical Aerospace has placed a strong emphasis on including established aerospace companies in its programme. Its partners already include Rolls-Royce, which is developing the VX4's electric propulsion system, avionics group Honeywell, aerostructures manufacturer GKN, and Solvay.

Vertical is expanding its engineering and management team as it prepares for a first test flight of the VX4 prototype later this year. The aircraft, which is expected to complete type certification in 2024, will have a range of more than 100 miles and fly at speeds of up to 200 mph.

Last year, the company announced provisional sales agreements covering up to 1,350 aircraft potentially worth (US) $5.4 billion. Prospective launch customers include American Airlines, leasing group Avolon, helicopter operator Bristow, Virgin Atlantic Airways, Marubeni, and Ibergjet. Avolon has agreements to supply aircraft to other carriers, including Japan Air Lines and Brazil's Gol.

Having earlier shown interest in developing a hybrid-electric tiltrotor aircraft, Leonardo has remained largely silent about possible plans to get involved in the eVTOL sector until now. "Advanced air mobility is part of Leonardo's mandate to innovate using our cutting-edge, human-centered technology, and industrialization expertise," said Leonardo general manager Lucio Valerio Cioffi.

"We're proud to collaborate with Vertical as part of our strategic vision in this brand-new sector."

The Italian group said its partnership with Vertical Aerospace is part of its BeTomorrow Strategic Plan.

"Leonardo, as a partner to the world's leading commercial aircraft manufacturers, is specialised in the production and assembly of major structural composite and metallic components for commercial aircraft," said Giancarlo Schisano, managing director of Leonardo's aerostructures division.

"I have been hugely impressed with Leonardo's highly innovative and industry-leading technology and manufacturing capabilities and our partnership has got off to a flying start," said Vertical Aerospace president Michael Cervenka.

"I am thrilled that Leonardo will be joining us on this journey. We have a market-leading pre-order book for the VX4 and this partnership will ensure we scale the program to meet demand." Leonardo's helicopter-making rival Airbus has already announced plans to develop a four-seat eVTOL aircraft called the CityAirbus NextGen. Boeing is partnered with Kitty Hawk in Wisk Aero's plans to bring autonomous eVTOL vehicles to market.

Separately, Vertical Aerospace has started working with London-area business aviation gateway Farnborough Airport.

The companies said they will explore opportunities to develop eVTOL aircraft operations.

Woman walks through an airport with suitcase. Image by fabrikasimf; www.freepik.com

ENVIRONMENTAL ASSESSMENT CERTIFICATION TO **AIRPORTS**

The IATA Environmental Assessment for Airports and Ground Service Providers - IEnvA - has been launched

Edmonton International Airport is the first participant in the expanded IEnvA and will play a leadership role as the value chain aligns to ensure a sustainable future for air transport.

IEnvA for Airports and GSPs is an expansion of the successful IEnvA for Airlines. IEnvA programmes enable participants to build robust environmental management plans with continual performance improvements. Some 50 airlines are part of the IEnvA programme, with 34 of them fully certified while the others are in the process.

"IEnvA has a solid track record of improving the environmental performance of airlines. As the aviation industry committed to improving sustainability, including achieving net zero carbon emissions by 2050, the expansion of IEnvA to airports and GSPs is critical. With Edmonton International Airport's pioneering participation in the expanded program, we have a clear signal that the industry's sustainability commitments are being actioned in a systematic results-oriented approach across the value chain," said Sebastian Mikosz, IATA senior vice president for Environment and Sustainability.

"This is a significant milestone for airports around the world, and we are proud to be a part of the movement towards a sustainable future for aviation. IATA's Environmental Assessment Programme has supported the sustainability narrative across the aviation industry, and we are excited to be the first airport involved in expanding this program as we continue to prioritize ESG, innovation and forward-thinking solutions to airport operations and strategic partnerships" said Myron Keehn, vice president, air service, business development, ESG and stakeholder relations, Edmonton International Airport.

IEnvA is an environmental management system based on standards and best practices that were built in collaboration with airlines, airports, ground service providers, IATA and sustainability experts.

It complies with ISO14001 (Environmental Management) requirements, and uses IATA's decade's long expertise with safety auditing (IOSA) for oversight, governance and quality control.

IEnvA for Airports and GSPs will make use of tried-and-tested IEnvA oversight, governance, and quality control processes and will include provision of standards and recommended practices, training access, readiness workshops and external assessment.

As the pioneer airport in the IEnvA for Airports and GSPs, YEG will work with IATA to establish the IEnvA Standards for Airports and guidance material to broadly improve performance in areas such as emissions, waste, water, noise, energy and biodiversity.

As with IEnvA for airlines, upon a successful independent assessment, YEG and other successful entities will be included in the IEnvA certification registry.

A VODKA COMPANY MAKES SUSTAINABLE AVIATION FUEL

By Jonathan Small

A Brooklyn-based Air Company in the United States has invented a technology that uses carbon emissions to create alcohol and fuel.

The airline industry produces about 2.1% of all human-induced CO^2 emissions. But the International Air Transport Association (IATA) says they want to reach net zero flying by 2050.

How do they get there? Sustainable aviation fuel (SAF), which produces up to 80% less CO^2 emissions than traditional fuel.

In recent years, the airline companies such as Alaska Airlines and American Airlines have begun flying with SAF as an alternative to fossil fuel. Unlike traditional airline fuel that is derived from oil, coal, or gas, SAF can come from plant and animal materials.

But one company has said they are taking SAF technology a step further, utilizing CO^2 to create sustainable alcohols and fuel.

"For us, climate change is the greatest challenge that we're facing as humanity to date, Gregory Constantine, co-founder and CEO of Air Company said

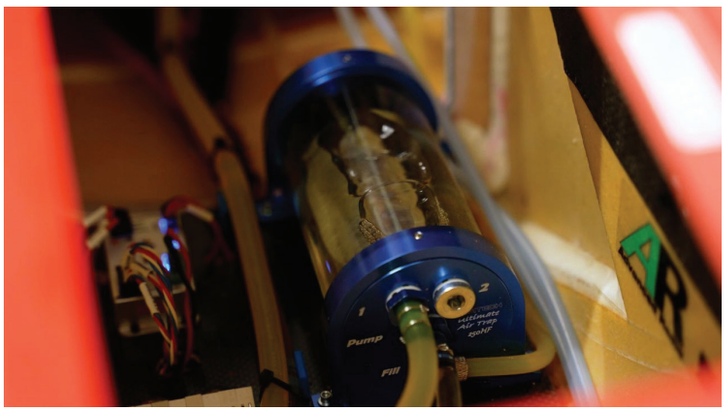
"So if we can work on technologies that take what was once really thought of as a problem and turn it into a solution, then that's a massive win."

HOW THE TECHNOLOGY WORKS

The Air Company says it mimics the process of photosynthesis. For those who flunked high school Biology, that's when plants use carbon dioxide to create energy.

First, the company collects carbon from industrial settings such as ethanol plants. It separates the hydrogen from the oxygen and blends the captured carbon with the hydrogen and a mix of other compounds. The result is Airmade SAF, which takes the world's most abundant pollutant and makes it a never-ending sustainable fuel source.

The company has partnerships with the US Air Force, JetBlue, and Virgin Atlantic. It hopes to have its fuel used on a commercial flight by 2024.



NOT THE COMPANY'S FIRST RODEO

The company made waves in 2019 when it introduced Air Vodka - the "world's first carbon-negative spirit." Using a similar process as their alternative jet fuel, they capture CO^2 and convert it into ethanol. They also make perfume and hand sanitizer.

The Brooklyn-based tech startup was founded by Gregory Constantine and Dr. Stafford Sheehan.

Air Company still has a way to go before it can fuel the entire airline industry. More testing is needed, and they need to increase their manufacturing capability. Their current test facility is about the size of a two-bedroom apartment. Cost is also an issue. "To get to those, you know, large industrial markets like aviation fuel, that are traditionally known as the hottest industry industries to decarbonise, is going to take time, a lot of money and a lot of effort," Constantine said.

Article courtesy: https://www.entrepreneur.com/

https://img.freepik.com/. *Image by Hello David Prado Perucha*

PASSENGERS WANT CONVENIENCE

Travellers' top concerns in the post-COVID environment are focused on simplification and convenience, the International Air Transport Association (IATA) Global Passenger Survey has shown.

This global passenger survey results are based on over 10,000 responses from 222 countries and provides insight into what passengers would like from their air travel experience.

"Travel during COVID-19 was complex, cumbersome and time consuming due to government-imposed travel requirements. Post-pandemic, passengers want improved convenience throughout their trip. Digitalisation and use of biometrics to speed up the travel journey is the key," said Nick Careen, IATA senior vice president for operations, safety and security.

PLANNING AND BOOKING

Passengers want convenience when they plan their travel and when choosing where to depart from. Their preference is to fly from an airport close to home, have all booking options and services available in one single place, pay with their preferred payment method and easily offset their carbon emissions.

- Proximity to the airport was passengers' main priority when choosing where to fly from (75%). This was more important than ticket price (39%).
- Travellers were satisfied with being able to pay via their preferred payment method which was available for 82% of travellers. Having access to planning and booking information in one single place was identified as being a top priority.
- 18% of passengers said that they offset their carbon emissions, the main reason given by those that did not was not being aware of the option (36%).

"Today's travellers expect the same online experience as they get from major retailers like Amazon. Airline retailing is driving the response to these needs. It enables airlines to present their full offer to travellers. And that puts the passenger in control of their travel experience with the ability to choose the travel options that they want with convenient payment options," said Muhammad Albakri, IATA senior vice president of financial settlement and distribution services.

TRAVEL FACILITATION

Most travellers are willing to share their immigration information for more convenient processing.

- 37% of travellers said they have been discouraged from traveling to a particular destination because of the immigration

requirements. Process complexity was highlighted as the main deterrent by 65% of travellers, 12% cited costs and 8% time.
- Where visas are required, 66% of travellers want to obtain a visa online before travel, 20% prefer to go to the consulate or embassy, and 14% at the airport.
- 83% of travellers said they would share their immigration information to speed up the airport arrival process. While this is high, it is slightly down from the 88% recorded in 2021.

"Travellers have told us that barriers to travel remain. Countries with complex visa procedures are losing the economic benefits that these travellers bring. Where countries have removed visa requirements, tourism and travel economies have thrived. And for countries requiring certain categories of travellers to get visas, taking advantage of traveller willingness to use online processes and share information in advance would be a win-win solution," said Careen.

AIRPORT PROCESSES

Passengers are willing to take advantage of technology and rethought processes to improve the convenience of their airport experience and manage their baggage.

- Passengers are willing to complete processing elements off-airport. 44% of travellers identified check-in as their top pick for off-airport processing. Immigration procedures were the second most popular "top-pick" at 32%, followed by baggage. And 93% of passengers are interested in a special programme for trusted travellers (background checks) to expedite security screening.
- Passengers are interested in more options for baggage handling. 67% would be interested in home pick-up and delivery and 73% in remote check-in options. 80% of passengers said that would be more likely to check a bag if they could monitor it throughout the journey. And 50% said that they have used or would be interested in using an electronic bag tag.
- Passengers see value in biometric identification. 75% of passengers want to use biometric data instead of passports and boarding passes. Over a third have already experienced using biometric identification in their travels, with an 88% satisfaction rate.

But data protection remains a concern for about half of travellers. "Passengers see technology as key to improving the convenience of airport processes. They want to arrive at the airport ready to fly, get through the airport at both ends of their journey more quickly using biometrics, and know where their baggage is at all times. The technology exists to support this ideal experience. But we need cooperation across the value chain and with governments to make it happen. And we need to continuously reassure passengers that the data needed to support such an experience will be safely kept," said Careen.

The industry is ready to power airport processes with biometrics through IATA's One ID initiative. COVID-19 has helped governments understand the potential for passengers to share their travel information with them directly and in advance of travel and the power of biometric processes to improve security and facilitations processes and more efficiently use scarce resources. The proliferation of e-gates at airports is proving the efficiencies that can be gained. The priority is to support the OneID standards with regulation to allow its users to create a seamless experience across all parts of the passenger journey.

Visit www.iata.org/gps to access the complete analysis.

ROLLS-ROYCE ENGINE SUCCESS

Rolls-Royce has successfully entered the final phase of testing its ALECSys (Advanced Low Emissions Combustion System) demonstrator engine, this time at altitude.

The demonstrator took to the skies attached to the Rolls-Royce Boeing 747 Flying Test Bed in Tucson, Arizona, USA. The test programme has included flights up to 40,000 feet as well as a number of engine relights at different conditions, all of which have been successful.

The innovative lean-burn combustion system improves the pre-mixing of fuel and air prior to ignition, enabling cleaner combustion of the fuel, which results in lower NOX and particulate emissions.

The ALECSys engine demonstrator has previously completed a comprehensive set of ground tests, including icing, water ingestion, ground operability, emissions and running on 100% Sustainable Aviation Fuel (SAF).

Rolls Royce director of product development and technology, civil aerospace, Simon Burr said, "We are very pleased to see the ALECSys engine now flying. This flight testing is a key part of our drive to not only improve engine efficiency but all aspects of environmental performance. It is part of the wider Rolls-Royce sustainability strategy, which also includes support for the increased use of sustainable aviation fuels (SAF) and intensive research into alternative propulsion architectures and technologies."

The ability to test ALECSys' low-emissions technology in flight will allow the verification of altitude operability performance and provides experience of operating a lean-burn system to maximise maturity ahead of a future entry into service. ALECSys is part of the UltraFan engine demonstrator programme, which offers a 25% fuel saving over the first generation of Trent engines.

The ALECSys programme is supported by the EU's Clean Sky programme, and in the UK by the Aerospace Technology Institute and Innovate UK.

HONDAJET ELITE II RECEIVES FAA TYPE CERTIFICATION

The HondaJet Elite II, pictured above at the NBAA static display in Orlando, received type certification from the FAA last week. (Photo: Jessica Reed)

The HondaJet Elite II aircraft, revealed during the 2022 NBAA Convention and Exhibition in October, has just received type certification from the Federal Aviation Administration.

The Elite II features two key upgrades, said Kie Nagasawa, manager corporate communications.

"Performance-wise, we have more range," she said. "1,547 nautical miles is the new range, with an extension of roughly 110 nautical miles from the S."

Honda Aircraft Company increased the usable fuel capacity of the Elite II by more than 200 pounds compared to the Elite S. The total usable fuel capacity for the new model is 3,165 pounds.
The aircraft received an upgrade to the interior as well as a nose-to-tail acoustic treatment, Nagasawa said.

"The Elite II has two new upgrades for avionics: Autothrottle, which will come in the first half of 2023, and Emergency Autoland in the second half," she said.

The Garmin G3000 offers intuitive controls for the HondaJet Elite II. Nagasawa said that many customers for these aircraft are owner-pilots, but they are seeing growing demand from fleet customers. Mike Murphy, sales director, fleet & mid-Atlantic, said that the Elite II model features an increased maximum take-off weight of 11,100 pounds. The practical capabilities of the aircraft include a range of about 1,100 nautical miles with four passengers and two pilots, he said.

"1,100 nautical miles covers New York to Miami and Miami to New York, the most popular private jet route on the planet," he said.

The G3000 is the "gold standard" for avionics in these types of aircraft, Murphy said. "There are three main screens. Unique add-ons with the Elite II are faster processors and better acuity."

He added that having Garmin Emergency Autoland functionality in 2023 will be a huge milestone, especially for single-pilot operations. The Elite II would be the first multi-engine turbine jet in the world with the capacity to perform an autonomous landing in an emergency, he said.

"The Autoland activates in an emergency situation to autonomously control and land the aircraft without human intervention," Murphy said. "Coupled with the integration of more automated technologies, the HondaJet Elite II offers more confident piloting, enhances operational safety, and reduces pilot workload for more efficient operations."

In designing the Elite II, the Honda Aircraft Company team incorporated a lot of customer feedback. For the upgrade to the interior of the aircraft, it was made to be more refined and a bit more utilitarian, with Onyx and Steel as the two-colour options for the interior.

Tim Fagan, head of cabin design and engineering, said that they did some reinforcing and added insulation around the main entry door to reduce wind noise. "We've taken a couple of decibels out of the cabin noise, which is already very quiet," he said.

"We've also increased the design weight of the aircraft by 200 pounds," Fagan said, which includes the maximum ramp weight, take-off and landing weights, and maximum zero fuel weight.

The higher design weight allows the aircraft to carry more fuel at the same payload, compared to the Elite S, and to carry more payload with the same amount of fuel, he said.

https://www.aviationtoday.com/

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.

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NOVICK'S EXIT FROM SAA BIDDING CONSORTIUM

by Alec Hogg

For many external observers, airline veteran Gidon Novick personified the best chance of a turnaround for teetering South African Airways and saving at least some of the billions injected by taxpayers. But the former CEO of Comair and co-founder of Lift this week announced his resignation as a director of the Takatso consortium which is negotiating to acquire 51% of SAA. Forthright as ever, Novick says his team brought airline expertise to the consortium and invested heavily over 18 months in compiling a project plan - but despite its 20% shareholding was "kept in the dark". He spoke to Alec Hogg of BizNews.

Q: So how did you get involved with the privatisation of South African Airways?

A: Well, you know what, it was actually in the middle of COVID-19. I was out of the industry, as you know, for quite some time. I was sitting in Plettenberg Bay, a little bit bored, thinking of something to do. I called up the Department of Public Enterprises and then got to talk to one or two of their consultants. I just said, what's going on with SAA? It was in business rescue.

I have some thoughts and ideas on how things could unfold and we kind of had a few conversations. But at that time, the DPE was going through an RFP to find a strategic equity partner. As you may recall, they had a bank RMB helping them with that. I think about six months later, that came to nothing. I then got the call from the DPE to say, you know, we've rethought this thing. We would like to do a deal and we're going to be, you know, quite flexible on the terms. It was at that point that I thought, actually, here is something that can be done. Obviously, the aspiration to fix something that was such a burden and continues to be, I guess, on the state and on the South African public, was quite appealing. So, that was the start of it all. As you know, it's had a long, long story since then.

I mean, even at that time, I suppose, in their business rescue, they had already been whittled down quite significantly. In my view, it needed a completely new start. It had potential, the brand had potential if it was relaunched, particularly if it was kind of a ground-up approach to the business. In other words, the market's completely changed. COVID-19 changed aviation, potentially forever.

And this was a chance to do something fresh and new and to get involved. That was the start of it all. And maybe now, even in many respects, I think my whole career has had an element of naivety.

I'm a bit of a dreamer at times but it felt like it was really worth giving it a go and trying to make a difference to not only SAA, but to give South Africans a sense that, a lot of these things that haven't worked in the past can work in the future if they are given the right focus, the right skills and the right intent. These things can be fixed.

Q: How did you get involved with the Takatso Consortium and why did you get into business with them given the massive risk and potential downside?

A: Yeah. I mean, the value of a business, I guess is, what can it do in the future? What can it generate? Our plan and we spent - myself and our team - spent many, many months building the business plan, doing the analysis. And we came up with what we thought was a very viable plan.

It was a very modest plan that basically relaunched the airline, almost from scratch. To relaunch it, you know, on a different basis with very commercial principles; a highly efficient operating structure; extensive use of technology to create efficiencies in the business; and collaborations with other airlines as part of it. That was really the business plan we came up with. And, we were quite confident that there is a scenario where this business works and becomes successful and sustainable.

We had a discussion independently about the aviation sector. They were investors, as you know, or still are in Lanseria airport who had a peripheral interest in aviation. They had also been involved in a couple of other bids for airlines, including the Comair bid, which they weren't successful at. So, they had a residual interest in airlines. And we got talking and there seemed to be some logic in terms of putting a capital provider together with the skills provider into a consortium and doing a deal. The principle of it, I believe, was pretty sound.

They had to find the capital. We had to bring the skills; that was the basis of the consortium and, ultimately, the transaction that is still in progress.

Gideon Novick, helped co-found, SA's newest airline Lift in 2020 and was part of the Takatso consortium that negotiated to help buy shares in SAA. He has now resigned as a director of the Takatso Consortium

Novick also helped set up one of South Africa's first low-cost airlines Kulula in 2001. The airline collapsed when operator Comair went into liquidation earlier this year.

Q: Tell us about the difficulties in the partnership

A: Yeah. I mean, it was difficult. From the start, you know, we just got the sense we were being excluded, which didn't bother us tremendously at the outset. We were but the team was building Lift and spending all our time and effort and energy on Lift, which has turned out really well. It was just kind of on the periphery of the entire transaction but it got to a point – and it's been bothering me for quite some time – where it just was not, you know, comfortable at all to be a director of a company without having any line of sight into what was going on. And really importantly, we committed to raise capital to fund the relaunch of SAA, a large sum of capital. I was just completely in the dark as to whether that capital was being raised or committed or where the progress was being made. I saw that as a red light as to whether this thing is actually going to happen and whether we can make good on the commitments we had made. We are the minority shareholders in the consortium; Erith has 80% of the consortium, we hold 20% and as minority partners, we were kept in the dark.

Q: Why, at this particular juncture, did you decide to withdraw?

A: I think it was just getting to the point, from a time point of view, it's now, 18 months since this thing was announced. If anything, I think, if I look back, I probably should have resigned earlier.

We have been kept out of the loop for a long time now. But, it just felt to me like I had requested meetings, directors' meetings over the last month or so, with no response and I just started seeing red lights. I mean, I wasn't even getting a response to a meeting request or a call request. That made me increasingly worried about what was going on.

Q: What are we as taxpayers to make of this current situation?

A: I think there has to be a line in the sand. If there is one good thing that has come out of the last couple of years, it's that the government has made it very clear they are not going to be throwing good money after bad into assets that are not … well, I'm going to say, not strategic.

That may be a debatable point, but if you really look at it from an aviation point of view, there's a number of local players in the market; very competent local players. There is very strong regional competition from the likes of Ethiopian Airlines, which is highly competitive and efficient.

Then the international airlines are incredible; you have massive scale guys like Emirates, Qatar, Turkish Airlines and many, many others. One really has to look at where we can compete and how we can compete. This is a very strong competitive set in an environment, post-COVID-19, that has changed, potentially fundamentally. If you look at business travel, for example, you know, our view is that. It would be nice to think business travel will recover completely, but it may not. It may be that video conferencing has had a permanent fundamental shift in terms of business behaviour.

Leisure travel is coming back strongly, which is good and this seems like it's going to continue. But there are fundamental changes in a new business - whether it's SAA or any other airline in the space - that needs to be taken into account.

This article courtesy: https://www.biznews.com/global-citizen/2022/11/17/novick-exit-saa-takatso

GULF AIR SIGNS AN EXCLUSIVE MOU WITH MTU MAINTENANCE

Gulf Air, the national carrier of the Kingdom of Bahrain, and MTU Maintenance, a global leader in customised solutions for aero engines, have signed an exclusive contract for the maintenance, repair and overhaul of V2500-A5 engines.

Gulf Air, the national carrier of the Kingdom of Bahrain, and MTU Maintenance, a global leader in customised solutions for aero engines, have signed an exclusive contract for the maintenance, repair and overhaul of V2500-A5 engines. The four-year agreement covers comprehensive MRO services, LRU support, engine trend monitoring and on-site services, as well as spare engine support for Gulf Air's V2500-powered A321ceo aircraft.

Commenting on the agreement Gulf Air chief executive officer Captain Waleed Al Alawi said, "Gulf Air has been maintaining its V2500 Engines of A321ceo fleet at MTU Maintenance facility for the past 10 years under the Engine OEM contract.

"During these 10 years, MTU Maintenance has demonstrated they are the right partners for Gulf Air as we drive forward with our fleet renewal programme in preparation to welcome more new aircraft to replace and modernise our fleet. We trust them to take excellent technical care of our engines, and are convinced they will provide us with the reliable, flexible and cost-efficient services we expect."

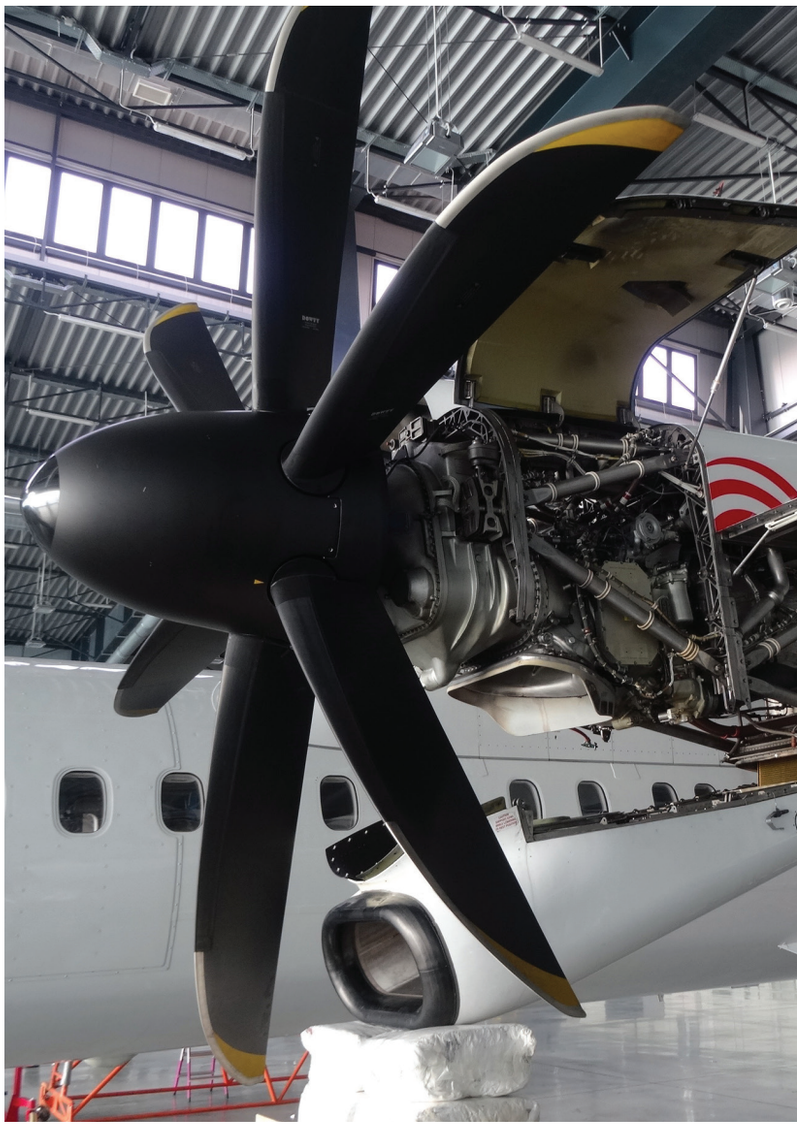
"We are very proud to have been selected by Gulf Air for this contract, which offers the best care package for their engines", said Michael Schreyögg, chief programme officer at MTU Aero Engines.

"We are extremely confident that our in-depth under-standing of the V2500 engine and our many years of experience will enable us to provide Gulf Air with the flexible, cost-effective and highly customised engine MRO services they need."

A CASE FOR THE HUMBLE PROPELLER

By Richard Aboulafia

Decarbonisation is one of the biggest trends in aviation. Yet there is no clear path forward beyond incremental improvements with today's technologies, and we are nearing the limits of what can be achieved with thermal efficiency gains.



Hydrogen, electric and hybrid propulsion, sustainable aviation fuel (SAF) and other emerging technologies offer varying degrees of promise but there are serious questions about their feasibility and cost-effectiveness. With SAF, scalability is a big challenge, too.

The global civil aviation industry has pledged to reach net-zero emissions by 2050. That will require billions of dollars to pursue uncertain solutions, with the strong risk of technological dead ends. But technologies from our industry's past may offer paths forward, or at least a better balance of costs and risks.

Aviation once embraced a more efficient form of propulsion – propellers - and considered embracing related very high-bypass propulsion concepts such as propfans and ducted propellers. Ultimately, turbofans swept them away.

Consider regional aircraft. For decades, most were turboprops. Between 1981 and 1990, 2,356 props were built and just 259 jets. Then regional jets arrived in force, and 1,105 of these were built between 1991 and 2000, along with 2,215 props.

But then all-jet fleets became a mantra for many regional operators. Between 2001 and 2020, 4,204 jets were built and just 1,716 props. Regional jets were seen as more productive, able to pursue traffic from markets close to competing airlines' hubs and more appealing to passengers, although the last point is highly debatable, given the importance of ticket pricing to passengers.

All-jet fleets came at a price. Jets use considerably more fuel than props - a double-digit greater amount, per seat and per mile flown. But these all-jet decisions were largely made between 1997 and 2003, when oil prices were (US) $18 - 36 per barrel, with no big upward spikes.

Fast-forward to 2022. The public is increasingly concerned about global warming. Air travel faces growing scrutiny as a source of greenhouse gas emissions. Oil is in the (US) $85-100/barrel range. More is at stake than public opinion: Airlines are once again highly motivated to cut fuel consumption.

These trends led to the hype at this year's Farnborough Air show for expensive, niche technologies that will not pay dividends for most of the air transport system for decades, if ever. Meanwhile, as Bank of America points out in a recent report, in North America alone, almost 2,000 regional jets are more than 15 years old, as are hundreds more worldwide, so replacements are needed this decade. Yet propellers - an off-the-shelf, zero-risk technology offering double-digit fuel savings - are receiving relatively little attention.

The ATR family is the only prop in production. North America, the biggest regional market by far, remains mostly stuck on regional jets. Embraer's new large turboprop, Deutsche Aircraft's 328eco and a relaunch of the Dash 8Q (now owned by Viking) remain just proposals, garnering less attention (and less cash) than the latest hydrogen fuel system or electric vertical-take-off-and-landing vehicles (although, ironically, almost every new advanced air mobility platform relies on props or blades).

This prioritisation of new and speculative technologies over mature and proven ones echoes the argument made by David Edgerton in The Shock of the Old: Technology and Global History Since 1900. He makes a compelling case for replacing "innovation-centred futurism" with a "use-centred" view, pointing out that often technologies do not live up to their potential until decades after they are invented. Flamboyant, new technologies are often overrated as a consequence, while mature technologies are underrated.

Changing circumstances, such as fluctuating fuel prices or politics, account for part of the gap between invention and rediscovery. The fact that technology often matures at a slower pace than expected also plays a role. Geared turbofans offer an interesting example. The technology has been used on smaller engines for over 50 years, and a large commercial geared turbofan was initially proposed in the 1980s. Yet the first, Pratt & Whitney's PurePower GTF, did not enter service until 2016.

Edgerton's thesis is relevant for aviation beyond regional aircraft. Propfans, or other once-promising propulsion technologies such as ducted propellers, might finally be ready for use. Several propfans were flight-tested in the 1980s, but low fuel prices and technical challenges derailed the idea in the 1990s. CFM is aiming to revive the concept with its RISE program.

In short, the past might yield fuel-savings and emission-reducing solutions not just for regional transport, but for larger aircraft, too. We just need to think beyond - or before - the latest shiny new things.

Article courtesy: https://aviationweek.com/