SOUTH AFRICAN
CIVIL AVIATION AUTHORITY

SKYwatch

SAFETY BRIEF

FIFTEENTH EDITION | MARCH 2025

WEATHER ADAPTION

Safer operations in changing weather conditions

TAKING FLIGHT

Nurturing a Strong Aviation Safety Culture for a Safer Future

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Foreword by **Ms Poppy Khoza – Director of Civil Aviation**

Welcome to the first edition of *Skywatch* for 2025!

I am excited to continue on our journey in promoting aviation safety with all of you through this publication. Over the past year, we've seen incredible strides and resilience amongst the stakeholders who are relentless in the quest to reduce general aviation accidents as is the goal of the General Aviation safety Strategy.

I hope you will enjoy this issue as it continues to explore some of the most crucial aspects of aviation safety – topics that matter to each one of us, whether we're seasoned pilots or newcomers exploring this thrilling world.

In this issue, we delve into the often-overlooked challenge of cognitive load-shedding. As someone who knows how overwhelming aviation can be demanding to the mind, I understand how important it is to manage the mental strain pilots experience. The ability to shed unnecessary cognitive load not only helps pilots stay focused but also plays a significant role in improving decision-making in those critical, high-stakes moments. It's something we can all learn from – finding ways to minimise distractions, prioritise, and keep our minds clear and sharp. It's these small adjustments, often behind the scenes, that ultimately help ensure our flights stay as safe and efficient as possible.

In this edition, we also explore the importance of building a strong safety culture across all levels of aviation. Every decision we make impacts the safety of our flights, the well-being of our passengers, and the future of our industry. It's important to realise that safety isn't something to consider only in times of crisis; it should be woven into the fabric of our everyday practices, ensuring that it becomes second nature at every stage of our work.

The process begins with regular training, clear communication, and a commitment to cultivating an environment where safety isn't just a checklist item, but a mindset. Safety culture is about ensuring that when we step into the cockpit, the highest safety standards are second nature, so that every flight we execute is grounded in the confidence that we've done everything to mitigate risks and protect lives. I hope this issue inspires all of us to further strengthen this commitment – one flight at a time.

As the Regulator we continue to explore progressive and effective ways to improve our own oversight, with a goal in mind to minimise burdening businesses with unnecessary processes hence the introduction of the Risk-based Oversight (RBO) oversight methodology which we cover in this issue as a reminder that we are still on course on our journey to roll out RBO fully in the next three years starting with the 2025/26 financial year. This follows a robust conceptualising and planning process which we are now ready to implement. We thank the industry for walking on this journey with us as a Regulator.

Another interesting point we touch on in this edition is weather conditions and the impact that weather can significantly have on both manned and unmanned flights. Understanding weather adaptation is essential for all pilots. Whether you're flying a drone or a commercial aircraft, staying informed about factors like wind, temperature, and visibility can make all the difference. In the same vein, battery safety continues to be a priority, as advancements in drone technology make battery monitoring tools crucial for preventing mid-air failures. We also touch on the importance of geo-fencing in maintaining safe operational zones, ensuring that pilots avoid restricted airspace to keep flights safe and compliant.

Onto some housekeeping news – I am excited to announce that the SACAA is relocating to new premises from the current Ikhaya Lokundiza headquarters in Midrand. The new facility is located at **Byls Bridge Boulevard Office Park, Centurion, and the move will commence in phases from 1 May 2025. From 1 June 2025 the entire SACAA team will be operating from the new address**. The move caters for the growing needs of the organisation and provides greater efficiency in operations and improved internal coordination that will benefit both the staff and clients of the Regulator. Many of you would know that for the past ten to fifteen years the SACAA team has grown occupying two buildings in the office park in Midrand. The new facility is environmentally friendly and will cater for the business needs of both the staff and the clients.

The SACAA is using this transition to also revitalize and refresh its corporate identity in the form of a new logo that better reflect our growth, aspirations, and commitment to a forward-looking approach. Both these projects will be officially launched at a date that will be communicated soon. Look out for further communication on both projects!

We hope you enjoy this issue and look forward to bringing you more essential insights into aviation safety and culture as we continue to explore the skies together.

Until the next edition, do keep safe in the skies!

Ms Poppy Khoza
Director of Civil Aviation

TAKING FLIGHT

Nurturing a Strong Aviation Safety Culture for a Safer Future

By Bongekile Mtlokwa

Aviation stands as a brilliant example of human creativity and engineering. It connects people and places across the globe. The complexities of taking flight, however, demand an uncompromising focus on safety. Beyond the stringent regulations and advanced technology, there is one other crucial element to taking to the skies - Aviation Safety Culture.

Aviation safety culture goes beyond more than just following rules; it's a shared mindset, a collective commitment to prioritising safety in every aspect of flight operations. This culture extends across all levels of an organisation, from pilots and air traffic controllers to ground staff and maintenance teams.

The South African Civil Aviation Authority (SACAA) is committed to establishing and building a sustainable aviation safety culture. This culture is essential for creating an environment where everyone feels comfortable sharing information and working together to improve safety.

Establishing a safety culture starts with an analysis to determine current safety levels. This is done through safety culture assessments to identify areas for improvement. The data collected through these assessments paves the way for initiatives to establish and build a sustainable safety culture.

As part of its safety strategy, the SACAA is engaged in different initiatives to build and create awareness about safety culture. To ensure industry-wide participation, the SACAA prioritises educating both industry professionals and other regulators on the fundamentals of a positive aviation safety culture. This is done through a safety culture campaign that consists of various initiatives such as safety talks, workshops, promotional posters, electronic content, social media engagement, and collaboration with various industry professionals. This campaign seeks to create awareness and educate the industry on the positive aspects of safety culture. It also serves to set an example for the industry to follow and join the regulator in its initiatives.

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TAKING FLIGHT

Nurturing a Strong Aviation Safety Culture for a Safer Future

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A strong safety culture is built on several key principles that work together to create a safe and supportive environment. Open communication is essential, as individuals must feel comfortable reporting safety concerns without fear of reprisal. This transparency ensures that potential risks are addressed promptly and effectively.

> Equally important is a "just culture" – a system that distinguishes between genuine errors and reckless behaviour, promoting a focus on learning and improvement rather than assigning blame. This encourages employees to report mistakes and hazards, knowing that the focus will be on resolving issues rather than punishment.

Proactive hazard identification plays a pivotal role in a robust safety culture. Vigilant observation and the ability to address potential risks before they escalate are essential to preventing incidents. Continuous learning is another vital component, with ongoing training and education enabling individuals to stay updated on best practices and new safety measures.

Finally, leadership commitment is critical. Top management must actively support and be involved in fostering a safety-conscious environment. Their involvement sets the tone for the rest of the organisation and reinforces the importance of safety at all levels.

A strong safety culture leads to fewer accidents and incidents, protecting passengers, crew, and aircraft. It also enhances operational efficiency by reducing delays and disruptions, building trust among passengers and stakeholders and contributes to the organisation's success by creating a productive work environment that attracts and retains top talent.

Cultivating a robust safety culture is an ongoing process. It requires consistent effort, open communication, and a commitment to continuous improvement. Regular safety audits, employee surveys, and feedback mechanisms are essential tools for assessing and enhancing the culture.

Aviation safety culture forms the cornerstone of a safe and successful aviation industry. By fostering a culture that values open communication, a proactive risk management and continuous learning, we can ensure that air travel remains a safe and reliable mode of transportation for generations to come.

Safety Culture Resource Page

https://www.caa.co.za/industry-information/safety-culture/

What's on the Resource Page

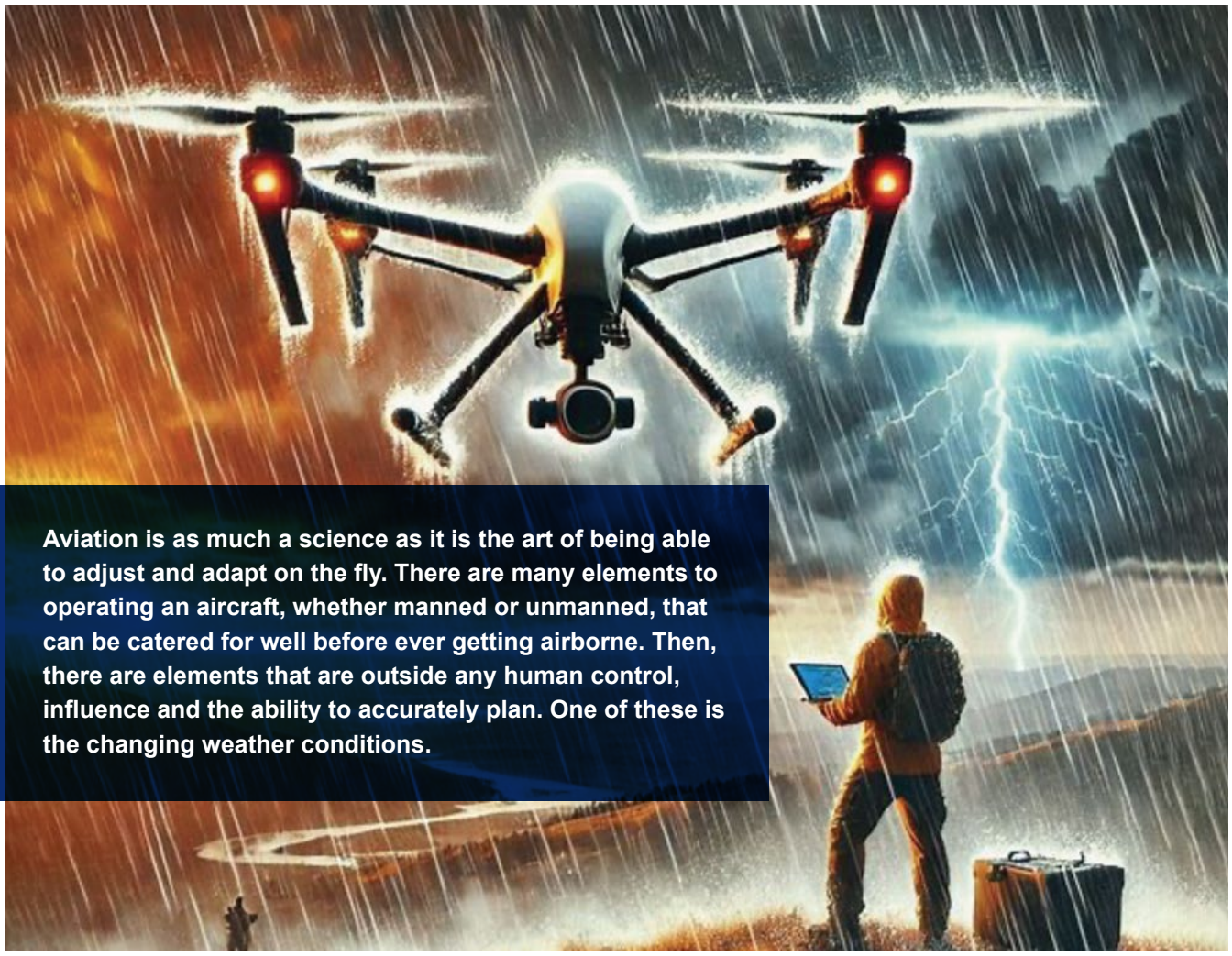
- Safety culture brochure
- Downloadable safety culture posters

Send Us Your Contributions and Feedback
sms@caa.co.za

WEATHER ADAPTION:

Safer Drone operations in changing weather conditions

By Mr Jonathan Bates



Aviation is as much a science as it is the art of being able to adjust and adapt on the fly. There are many elements to operating an aircraft, whether manned or unmanned, that can be catered for well before ever getting airborne. Then, there are elements that are outside any human control, influence and the ability to accurately plan. One of these is the changing weather conditions.

For those involved in aviation we are all familiar with the 'Hot, High and Heavy' analogy. These three critical elements, along with the addition of wind, are all impacted by the existing and forecast weather conditions and are important when planning a flight or drone mission.

We are fortunate to have reliable weather information service providers in South Africa, however even with the best forecasting and modelling, the micro climate can be unpredictable.

These rapidly changing conditions can have a major impact on large commercial aircraft and an even more profound impact in the drone space. This is largely due to the smaller and lighter size of drones. Recreational drones may be more susceptible to even slight weather changes that may exceed either the drone operational limitations or the pilot's abilities.

As part of the commercial drone licencing process, pilots are exposed to modules covering weather and its impact on drones and drone operations. Commercial drone pilots are versed in being able to read and interpret aviation specific weather services. These allow them to operate safely and have some predictability in how the weather may change over the course of a mission and then adapt and anticipate as required.

Recreational drone operators do not necessarily have this safety knowledge available. Pilots in this segment are encouraged to make use of weather services to assist with safety concerns, however, they may not be able to interpret the information provided and how this may impact the operation of their aircraft. Weather elements such as wind speed, wind direction, temperature, moisture content and visibility can, and will impact a drone's and human performance to some degree.

There is a drive to provide all drone operators, private and commercial, with customised tools that will assist with the de-coding and impact of weather on their planned missions. The intended purpose of these platforms is to encourage safety and compliance as well as grow the level of aviation understanding to a wider section of those who are engaged in or have an interest in aviation in South Africa.

GEO-FENCING AND NO-FLY ZONES:
A drone perspective

By Mr Jonathan Bates

The current advancement of drone technology has reached a point where drones can determine their exact three dimensional position on earth with a relatively high degree of accuracy. The need for an expensive drone to achieve this is fast disappearing with even the lower-end 'toy' drones beginning to include these levels of sophistication.

The current drone laws in South Africa (SA CAA Part 101) set out clear guidelines on where and how drones are to be operated within the country covering both commercial, corporate and recreational use. Drones have the capability to import geo-fenced locations as well as no-fly zones. The question becomes not that drones should not be able to fly in these locations, but who is responsible for the enforcement of these restrictions? How are the databases maintained in relation to drones and at what frequency are databases updated? Does the fact that the drone knows where it is absolve the pilot of his or her responsibility of knowing where they may or may not fly?

There are of course a multitude of factors that determine if a drone may or may not fly in a geo-fenced or no-fly zone. An example would be a drone operation at an airport for airplane inspection. If a blanket approach to geo-fencing / no-fly was applied, this service would not be possible. The solution is to make these flights available for legitimate operators without the need to find a technological backdoor through which to disable the in-built safety protocols. Flights in restricted airspace may be possible through the issuance of a NOTAM for a specified area and time. However, this is more commonly – if not exclusively – associated with commercial drone operations

Recreational and un-registered drones should not be operated in geo-fenced or no-fly zones although exceptional cases may introduce this requirement.

Simple visual applications (apps) and information made available to all levels of drone pilots may go a long way in preventing most of the in-advertent breached of no-fly zones. Providing information on why locations are geo-fenced or restricted, along with the safety considerations involved, may discourage those looking to exploit loopholes from operating their drones in these areas. Instead, they may seek approved, alternative safe mission locations.

Drones are becoming an increasingly useful and efficient platform within aviation and in the wider aviation services sector which brings them ever increasingly into contact with geo-fenced and no-fly zones. The most pragmatic way to manage the resulting safety concerns is to provide operators with the tool and information to enable them to take the appropriate decisions and actions with the understanding of why these are necessary. It is simply not good enough to rely on the technology to enforce these decisions as technology cannot be ultimately accountable if something should go wrong.

EMERGENCY PROTOCOLS:

Standardised procedures for drone malfunctions or loss of control

By Mr Jonathan Bates

Aviation is not a very forgiving environment given the speed, height and complexities involved in its very nature. Fortunately, within the drone space there is a degree of separation that is not present in manned aviation, however the resulting consequences of an accident or incident are remarkably similar.

The advancement of drone technology has been rapid, and many of these platforms are equipped with inbuilt autonomous safety protocols. These include detect-and-avoid capabilities, stability overrides, geo-special awareness, and corresponding safety operations.

Accidents and incidents can and do occur and the understanding of what actions to take and where these will occur are vitally important.

A set of standardised actions should be set out with generic actions to be taken by the pilot in the event of an accident or incident. The standardisation sets out a common methodology and starting point from which the CAA are able to begin each investigation and determine the case facts and implement remedies that can be understood by the wider aviation community.

The implementation of any emergency protocol should be driven by the severity of impact to human life and then property and infrastructure (financial) and then downstream impacts. In the case of drones, the cause of an accident or incident may be as the result of a loss of control (fly away or signal) or a miscalculation by the pilot who remained at the controls.

There will be a time whereby more complex drones will be able to execute on the emergency protocols autonomously, however, there are still a number of years before this is available and the autonomous link between the drone and the initiation of emergency activities may not always be there (as is the case for less complex UAS).

Drone pilots in recreational and commercial operations are encouraged to utilise platforms that provide them access to emergency services information and contact numbers as well as having access to an initial plan of action should an accident or incident occur.

BATTERY SAFETY:

Advances in battery technology to prevent fires and mid-air failures

By Mr Jonathan Bates

The power generation units within aviation are the most likely cause of any accident or incident. The failures of the units include the loss of power, fire or electrical fault. Drones, like any aircraft are susceptible to all of these.

There have been huge advancements in the development of drone batteries to make them more reliable, powerful and lighter. With these advancements has come increased safety. However, the rapid growth and expansion also lead to a higher likelihood and number of battery-related accidents and incidents. While this may be a direct result of increased volumes, there are measures that can be implemented to reduce the frequency of these events.

Internal battery monitoring through the drone controller (displays etc) as well as smart charging technologies enable self-identification of potential hazards as it relates to the drone batteries. Typical battery warning signs include swelling, low charge, low power output, and reduced performance. These signs can be influenced by external factors, such as mission weather conditions—especially temperature—which operators should be aware of, as they can impact drone performance.

Simple checklist items, common in aviation, could lead to a significant reduction in the mid-air failure of batteries. There are platforms available that assist pilots with these checks and monitoring of battery performance, reducing unnecessary costs from equipment failure.

Battery health monitoring is a requirement in commercial drone operations (SA CAA Part 101 and TGM Guidelines). The battery health monitoring is recorded for registered drones and submitted to the Regulator, however this is not required for un-registered drones with many being the same make and model as registered drones. The internal monitoring systems made available are useful in preventing poor battery health, however, it is still up to the pilot to interpret that information and make the correct safety assessment. Smaller drones may not have the same monitoring sophistication placing additional reliance on the pilot to assess the battery health before, during and after each mission to identify any deterioration trends.

Battery fires, while uncommon, are a frightening prospect for any pilot given the nature of these fires. Battery fires are not easily extinguished and some of these fires may be self-fuelling and have even been known to re-ignite after initially being extinguished. Pilots are encouraged to know the types and performance characteristics of their done batteries and have an emergency protocol in place should an accident or incident occur.

Advancements in drone battery technology have undoubtedly enhanced safety, but they also demand a heightened awareness from operators. By leveraging technological tools, adhering to strict safety protocols, and embracing a proactive approach, drone pilots can significantly reduce the risks of battery-related accidents.

COGNITIVE LOAD-SHEDDING IN AVIATION:

A Pilot's Guide to Reducing Mental Overload

by Dr Robert Clark

Load-shedding is a controlled procedure used within Eskom to protect and stabilise the national grid during periods of peak demand. It is a balancing act between demand and available supply. If the demand in the winter period is circa 32 000 MW and the available supply is limited to 30 000 MW, load-shedding must be implemented. The system frequency should always be maintained at 50 Hz. Load-shedding is a last resort to prevent a major low frequency incident from shutting down large sections of the national network. Mention the word 'load-shedding' to South Africans and the thought of extended black-outs, traffic jams and a stagnant economy comes to mind. It is undoubtedly a hotly debated topic at most social gatherings and business forums.

There is another type of load-shedding that pilots should be aware of and that is cognitive load-shedding.

In simplistic terms, cognitive load-shedding refers to the process of reducing the mental workload or cognitive demands placed on an individual's working memory. This can be done to improve cognitive performance, focus and ensure correct decision-making in all phases of flight. It is known that when our working memory reaches full capacity, our brain automatically starts "load shedding." Unlike Eskom load shedding that is always implemented in a controlled manner, cognitive load-shedding could be involuntary. In an ideal situation, the long-term memory takes some of the burden, storing important information for later retrieval, whilst we reduce the amount of incoming information, making the load easier to manage. Cognitive load-shedding, however, is not always controlled, especially when our working memory is overburdened. In these situations, we could forget, or overlook important pieces of the puzzle without realising it. Missing small but important data during the critical phases of flight could quickly escalate to an in-flight emergency.

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COGNITIVE LOAD-SHEDDING IN AVIATION:
A Pilot's Guide to Reducing Mental Overload

To help the pilot reduce errors in the cockpit, some of the techniques to reduce cognitive load-shedding can, in no order of importance, include the following:

1 Prioritizing information

We are taught in pilot training that the priority is always to aviate, navigate, and then communicate, in that order. As an example, when your stall warning is sounding on base leg, reporting your position is of little concern to the safety of the aircraft and its crew. Taking immediate evasive action to get some much-needed airspeed over the wings would be a better option to ensure your survival. If you are flying at cruise power and the aircraft is not performing as expected, maybe check the flap position, or see if your retractable undercarriage is inadvertently hanging out.

2 Minimizing distractions

Have you ever been going down the runway, or, on final approach and you have passengers chatting away. In my aircraft, I apply the sterile cockpit rule, where passengers keep quiet during the critical phases of flight, like take-off and landings. They may only talk if it is safety-related, like a bird crossing our flight path or, a dog on the runway. I do this where mental clarity and efficiency are crucial to ensure a safe flight, as you always need two of the following three factors, (airspeed, altitude and brains) for a safe flight. Once we are in the cruise, we all talk and enjoy the absolute beauty of aviation.

3 Complex problem-solving or decision-making processes

As part of my passenger briefing, I hand the pilot check sheet folder to the passenger and show them all the check sheets that I have in place. The check sheet folder is A5 in size, laminated sheets with a plastic ring-binder, as you don't want bulky files in the cockpit. Too much information in check sheets with too much to read can obscure decision-making, as the extra information floods the working memory and makes it hard to focus. The check sheets I need in my Jabiru 430, includes the starting of the aircraft (Too Many Pilots Go Fly In Heaven Early) (T – Throttle check, M – Master & Mags, P – PProp & Pitch, F – Freedom of controls, Fuel (level, cap, pump), I – Instruments, H – H arness, hatches, hydraulics & Safety pins, T – Temperature, E – Engine), my taxi checks, the engine run-up checks, runway checks, EFATO (Engine Failure After Take off), engine failure in flight, landing checks, final approach checks etc. I know these checks should be known by all pilots all the time, but the brain can get a bit fuzzy when the engine starts puffing 400 foot after take-off. Having a passenger reading the EFATO checks if you have an engine failure after take-off can only help the situation and hopefully restore the situation to normal flight.

4 Try to simplify tasks

They say the missing sock in your washing machine comes back as a Tupperware lid that does not fit any of the containers in the cupboard. Whilst I support the Tupperware brand, the cupboard with Tupperware lids and containers can often lead to much frustration and cognitive overload. It is for this reason that a well-organized cockpit layout, with well organised check sheets, maps and flight plans can reduce extraneous load on the brain, allowing the pilot to execute his tasks in a professional manner. Always remember that the clearer the roadmap, the easier the journey.

The Electronic Flight Information system (EFIS) screen can often be viewed as a complex interface. EFIS screens that are too cluttered with irrelevant information can overwhelm working memory. Pilots may struggle to process what they see and find what they need, which leads to frustration and errors. The goal with an EFIS screen is to make these screens helpful, and enjoyable. Yet, in the quest to add features and information, it's common to clutter the space like the Tupperware cupboard, leading to what's known as cognitive overload. Placing related items on EFIS screens in related clusters is a good way to avoid split attention.

Inconsistent cockpit design patterns between aircraft types, where they place the buttons and even inconsistencies in the labelling can add to an overload of the brain, and could result in involuntary load-shedding.

Intentionally applying some of the techniques mentioned above can reduce the mental workload or cognitive demands placed on an individual's working memory and help improve flight safety. Proper planning, having a neat cockpit, understanding your instrumentation and EFIS panel, applying strict discipline during the critical phases of flight and prioritizing information can help reduce the cognitive load on your brain, and lead to many years of happiness as a pilot-in-command of an aircraft.

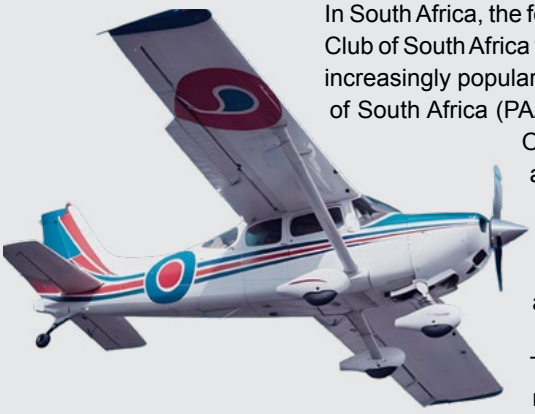
The Legacy and Growth of EAA in South Africa:

From Grassroots Aviation to National Recognition

by Paul Lastrucci – National President, EAA of South Africa

EAA Sun n Fun.
Photo by Ian Wylde

The Experimental Aircraft Association (EAA), founded in the United States in 1953 by Paul H. Poberezny, began as a small group of aviation enthusiasts and has since grown into an international organisation with over 260,000 members worldwide. Poberezny, who served as president from the organisation's inception until 1989, and later as chairman until 2009, was integral to its expansion. EAA's early efforts included the publication of its first newsletter, *The Experimenter*, in February 1953. Initially written, typed, and mimeographed in the Poberezny basement, the newsletter evolved into *Sport Aviation*, the EAA's flagship publication, which continues to be published today.



In South Africa, the foundation for the EAA's involvement began much earlier. The Aero Club of South Africa was established in 1920, and by the 1960s, aviation was becoming increasingly popular. This period saw the formation of the Popular Aircraft Association of South Africa (PAA of SA) in Durban, led by A.J. Oppenheim. In September 1959, Oppenheim contacted EAA Headquarters in the USA, outlining the activities of their growing aviation community. The EAA USA was invited to participate in the Governor General Handicap race in 1960, and by the mid-1960s, international chapters were being established. In 1968, Chapter 322 was created in South Africa and remains active to this day.

The EAA of South Africa is a community of aviation enthusiasts, many of whom are involved in constructing, restoring, maintaining, and operating Non-Type Certified Aircraft (NTCA). These aircraft include amateur-built, production-built, veteran, and ex-military planes, as well as those that no longer qualify—or never qualified—for certification under Part 21. The organisation's mission is to promote the design, building, maintenance, restoration, and flying of vintage, amateur-built, and non-type certified aircraft, with the goal of supporting all South Africans interested in recreational aviation. EAA offers information, assistance, and educational programmes, promoting safety and development in the aviation community.

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The Legacy and Growth of EAA in South Africa:

From Grassroots Aviation to National Recognition

Members of the EAA are encouraged to comply with South Africa's Civil Aviation Technical Standards (CATS) and Civil Aviation Regulations (CARS) 2011, though the organisation itself does not regulate aviation activities. EAA fosters collaboration among its members, offering a platform for them to share ideas and work together on projects. It has created a strong network of skilled individuals, many of whom have become professional aircraft manufacturers, including companies like Sling Aircraft, Skyworx Aviation, and Robin Coss Aviation.

Safety is a core value for the EAA, which addresses various safety issues through forums and interventions held throughout the year. The organisation holds annual events that provide opportunities for members to showcase their aircraft, receive feedback from experienced judges, and enhance their piloting skills. Rand Airport has hosted the EAA Auditorium for over 20 years, where formal meetings are held, and EAA supports flying clubs and airfields nationwide by participating in or hosting aviation events.

The EAA also has a strong focus on youth development through initiatives like the Young Eagles programme, which has provided over 1,000 flights to children aged seven to 17 in South Africa. These flights, undertaken by volunteer pilots at their own expense, aim to inspire young people to explore aviation. Many Young Eagles have gone on to pursue careers in aviation. Additionally, the EAA's Young Aviators group offers a platform for younger pilots or those aspiring to aviation careers to network and learn from senior members and experienced professionals. The transfer of knowledge and mentorship is vital for promoting safety within the industry.

Beyond youth programmes, the EAA offers a variety of initiatives, such as student pilot bursaries and opportunities to attend the annual EAA gathering in the USA. Members also engage in voluntary activities, including conservation efforts. As a wholly volunteer-run organisation, the EAA plays a significant role in aviation activities across the country, supporting initiatives to maintain the freedom of the skies for recreational aviators.

EAA Young Eagle Certificate of participation June 2024 by Charlie Hugo

The EAA's efforts have not gone unnoticed; it has received numerous awards from EAA USA for promoting aviation in Southern Africa. Regular meetings, forums, and gatherings allow members to engage in discussions about flying activities, safety, and technical aspects of aviation. The EAA remains an integral part of South Africa's aviation community, fostering a spirit of camaraderie, learning, and safety.

EAA Young Aviators photo by Tyla Puzey

Significant progress in RISK-BASED OVERSIGHT IMPLEMENTATION!

By Mr Sisa Majola, SACAA

The South African Civil Aviation Authority (SACAA) is pleased to report that we have made substantial progress in 2025 towards fully implementing Risk-Based Oversight (RBO), marking a key milestone in our transition to a smarter, data-driven approach to aviation safety and security.

This significant achievement brings us closer to aligning our oversight methodology with global best practices and advancing our commitment to enhanced efficiency, predictability, and safety and security outcomes.

Since the adoption of the RBO methodology in 2021, the SACAA has been working diligently to transition from traditional compliance-based methods to a more dynamic, risk-focused approach. Our goal remains to optimise resource allocation, streamline inspections, and drive improvements in safety outcomes.

Progress and Achievements

In the 2024/25 financial year, the SACAA launched the first pilot for RBO risk profiles, where selected organisations from each sector were involved. We collected and analysed data on occurrences, previous audit findings, enforcement actions, and exemptions/AMOCs using the Bow Tie method.

The performance of each organisation in managing these risks was assessed, and based on this assessment, a residual risk rating was determined. We then conducted audits based on the Organisation Risk Profile Checklist, with the results helping to determine appropriate surveillance intervals.

This pilot phase has generated significant excitement in the industry, with many stakeholders eager to join the next wave of RBO implementation. The success of this phase demonstrates that our approach is working, and we are well-positioned for the next steps.

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Significant progress in

RISK-BASED OVERSIGHT IMPLEMENTATION!

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What's Next?

As we move forward, the next group of organisations will be selected to participate in the next phase of RBO implementation. These organisations will be contacted directly, where the SACAA will continue work on sector risk profiling. Active participation from our team and across the SACAA will be essential to ensure the continued success of RBO.

In the coming months, the SACAA will continue to engage with the industry through additional workshops, dialogues, and exciting new initiatives like our RBO podcast on demand series, which will be available on SACAA's social media platforms.

Your role in RBO's success

As we advance towards the full implementation of RBO, your continued involvement and engagement are crucial. This is a collaborative effort, and we need your expertise and dedication to make RBO a success.

We encourage you to reach out with any questions, suggestions, or feedback you may have. Together, we are not only shaping the future of the SACAA's oversight model but also contributing to creating a safer, more efficient aviation system in South Africa. For any further information or queries, please do not hesitate to contact the RBO team at rpbo@caa.co.za.

What is RBO?

Just as a reminder, Risk-Based Oversight (RBO) is a proactive approach to oversight that moves away from traditional compliance-based methods. It prioritises regulatory efforts based on safety risk levels, allowing us to:

- Optimise resource allocation
- Streamline inspections
- Improve safety outcomes across the industry

The success of RBO is guided by five key principles that ensure fairness, effectiveness, and transparency:

- Consistent Data Gathering: Continuously collecting and analysing safety risk data from all parts of an organisation's operations and consolidating it as a single regulated entity.
- Performance Assessments: Evaluating how well each entity manages its safety risks and collaborating with the Accountable Manager to agree on actions that ensure safety and security standards are upheld and enhanced.
- Sector-Based Grouping: Grouping entities with similar operations (e.g., small aerodromes, offshore helicopters) to better understand common safety risks and develop best practices for managing them.
- Informed Decision-Making: Making informed decisions about the safety outcomes we aim to achieve and setting clear actions for all stakeholders to manage the top safety risks across sectors.
- Proportional Resource Allocation: Directing regulatory resources towards oversight activities and safety improvement projects focused on areas where standards are at risk or where there is significant potential to enhance safety.

Why does RBO Matter for Us?

The implementation of RBO brings several important benefits for the SACAA as an organisation, including:

- A More Efficient Oversight Process: By prioritising safety risks and streamlining inspections, RBO enhances our ability to conduct effective oversight with optimal resource allocation.
- Data-Driven Decision-Making: RBO allows us to make more informed and targeted decisions, ensuring that we address the most critical safety risks in the industry.
- Improved Industry Collaboration: With a focus on risk management and performance, RBO fosters stronger collaboration between the SACAA and industry stakeholders, ultimately creating a safer aviation environment.

GENERAL AVIATION SAFETY ROADSHOW

Strengthens Safety Culture Across Western Cape

By Tania van den Berg, General Aviation, SACAA

The South African Civil Aviation Authority's (SACAA) hosted a successful roadshow across the Western Cape, designed to elevate safety awareness and foster a culture of safety within the region's general and recreational aviation community.

Held from 6 to 9 November 2024, the event brought together flying clubs, schools, and paragliding groups, providing a platform to share best practices and reinforce critical safety protocols that safeguard everyone involved in general aviation.

The roadshow took flight at The Glen Paragliding Club, where Mr. Mzubanzi Ngcauzele from Air Traffic Navigation Services (ATNS) stressed the importance of understanding airspace restrictions and filing Notice to Airmen (NOTAMs). Ms. Lauren Mitchel from the Aeronautical Rescue Coordination Centre (ARCC) offered valuable insights into search and rescue protocols, while Mr. Kevin Storie from the South African Hang Gliding and Paragliding Association (SAHPA) led a session on accident prevention for paragliders.

Lauren Mitchel from the Aeronautical Rescue Coordination Centre (ARCC)

Claudette George assisting with registrations

From Left Edwin Shabangu, Lesedi Dube, Kevin Maarman, Tshitso Moroane, Anita Juganan and Herman Wiese

The member of the SaldanhaBay Aeroclub

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GENERAL AVIATION SAFETY ROADSHOW

Strengthens Safety Culture Across Western Cape

Mr Pierre Laubscher – Manager GA Ops

Mzubanzi Ngcauzele from ATNS discusses airspace layout and procedures

Claudette George presenting on the safety culture and promoting the SkyWatch News Letter

The roadshow continued at The West Coast Flying Club, where the SACAA spoke about the critical importance of maintaining airworthiness, highlighting key real-world case studies. The SACAA also led a thought-provoking discussion on regional accidents, focusing on the influence human factors play in aviation safety. Additionally, participants were reminded of the significance of meticulous flight planning and the essential survival equipment necessary for successful search and rescue operations.

The roadshow concluded at the Mossel Bay Aero Club on 8 November, with a focus on safety, risk assessment, and the importance of nurturing a strong safety culture in general aviation.

Throughout the event, experts from the SACAA played a leading role in guiding discussions on safety regulations and protocols.

The roadshow proved to be a resounding success, drawing strong attendance and positive feedback from participants. It highlighted the ongoing need for safety education and collaboration within the aviation community to ensure that best practices are maintained, and that general aviation continues to operate in the safest manner possible.

Kevin Storie presenting on the Safety of Paragliding and accidents and incidents

Dave Gove presented on Human Behaviour

Erik Du Rand Programme Director and presenting on Accidents and Incidents Statistics

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GENERAL AVIATION SAFETY ROADSHOW

Strengthens Safety Culture Across Western Cape

Claude Luthage General Aviation Culture Influencer

Mr Neil de Lange – SM:GA closing remarks at the Saldanha Bay

Tshitso Moroane, Airworthiness Inspector and experienced accident investigator.

CAA Presenters, from Left - Tshitso Moroane, Claude Luthaga, Claudette George, Shakil Sayed, and Dave Gove

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