



The Commercial Aviation Association
of Southern Africa NPC

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Lead Partner

From our CEO

The Pilot Pipeline – Are We Training for Tomorrow's Skies or Yesterday's?

As I engage across South Africa's aviation network and especially with operators, training organisations, regulators, and pilots, I find myself returning to a series of uncomfortable but necessary questions.

They all centre on one critical issue: **the future of our pilot pipeline.**

The global demand for pilots is accelerating. Technology in the cockpit is evolving rapidly. And yet, many of the systems used to train pilots remain largely unchanged from decades ago.

So, the question we must ask as an industry is simple: **Are we preparing pilots for the aviation environment they will actually face, or for the one we grew up in?**

And here in South Africa, another two question sits alongside it; perhaps even more difficult ones. **Who is getting access to those cockpits in the first place?**

Who Gets the Opportunity to Fly?

More than 30 years into democracy, the demographics of South Africa's aviation workforce still raise difficult questions. Walk onto many flight decks or into many training schools, and the reality is clear: the industry still struggles to reflect the broader society it serves.

Why?

The barriers are not difficult to identify. Aviation training remains one of the most expensive career paths in the country. The cost of obtaining a private pilot licence runs into hundreds of thousands of rand. Progressing to a commercial licence and the flight hours required to become employable can push the cost into the millions.

For many young South Africans, particularly those from historically disadvantaged communities, this cost places aviation completely out of reach.

Yes, there are programmes that attempt to address this challenge. Government initiatives, industry bursaries, and cadet programmes have helped open doors for some. Airlines such as Airlink and FlySafair have developed pathways that support young pilots entering the profession.

Cont.



But the honest question we must ask ourselves is this:

Are these efforts enough to meaningfully change the face of aviation in South Africa?

Or are they simply isolated initiatives within a system that still fundamentally limits access?

If we believe aviation should be a national economic engine, then we must also believe it should be accessible to the talent that exists across the entire country.

Who Will Fly the Aircraft of the Future? (Will there still be a need for a pilot in the cockpit?)

At the same time that we are grappling with transformation at home, the global aviation industry is confronting a very different challenge: **a looming pilot shortage.**

International forecasts suggest that the world will require **hundreds of thousands of new pilots in the coming decades** as air travel expands and large numbers of experienced aviators reach retirement age.

Major airlines in North America, Europe, and Asia are already recruiting aggressively to meet future demand. This is not a short-term hiring cycle; it is a structural shift in the global workforce.

For South Africa and the African continent, this presents both opportunities and risks.

On the one hand, the country has long been respected for producing highly skilled aviation professionals. Our training standards and operational expertise are globally recognised.

On the other hand, if we fail to develop new pilots locally, we risk constraining our own aviation growth due to a shortage of qualified people.

South Africa's airports are expected to handle increasing passenger volumes in the coming years as tourism and regional connectivity expand.

Which leads to an obvious question:

Who will fly those aircraft if we are not training enough pilots today?

Cont.



Are We Training Pilots for the Aircraft They Will Actually Fly?

Another question that arises repeatedly in conversations with training providers is whether our training systems are keeping pace with technological change.

Modern flight decks are evolving rapidly. Automation, digital avionics, and increasingly sophisticated decision-support systems are becoming standard features of new aircraft.

This does not mean pilots are becoming less important, far from it.

But it does mean that the role of the pilot is changing. Increasingly, pilots must manage complex automated systems, interpret large volumes of information, and make critical decisions when technology behaves unexpectedly.

That requires **judgment, situational awareness**, and **systems thinking**, not just technical flying ability.

Yet many training systems still rely heavily on traditional “teach a task, check a task” methodologies. Students demonstrate that they can perform specific manoeuvres, complete required hours, and pass examinations.

But does this approach fully prepare them for the dynamic environments they will encounter in modern cockpits?

Or are we producing pilots who are technically proficient, but insufficiently prepared for complex decision-making under pressure?

Are Our Training Tools Keeping Up?

Technology is also transforming how pilots can be trained.

Advanced simulators now allow students to experience realistic operational scenarios that would be impossible or unsafe to recreate in real aircraft. Digital learning platforms can accelerate knowledge acquisition and expose trainees to complex situations early in their careers.

Around the world, many training organisations are shifting toward **competency-based training models**, which focus less on the number of hours flown and more on developing core professional skills: decision-making, communication, leadership, and situational awareness.

Cont.



These approaches reflect a simple truth: most aviation accidents today are not caused by an inability to fly the aircraft. They are caused by failures in judgment, communication, and threat management.

So the question for training organisations becomes unavoidable: **Are we developing competent aviation professionals – or simply producing pilots who can pass tests?**

Are We Preparing for the Age of Automation?

Automation is another area where the conversation often becomes polarised.

Some see technology as a pathway toward increasingly automated or even autonomous flight operations. Others warn that excessive reliance on automation can dull pilots' situational awareness and decision-making skills.

The reality is likely somewhere in between.

Technology will continue to assist pilots and improve operational efficiency. But aviation will continue to depend on human judgement, particularly when systems behave in unexpected ways.

This means pilots of the future must possess something that cannot easily be automated: **critical thinking**.

They must be able to recognise when something does not look right, even when the instruments appear normal.

And that capability must be developed during training.

The Questions We Must Answer

All of this brings us back to a few central questions for the aviation industry in South Africa.

Are we doing enough to make aviation accessible to the full spectrum of talent in our country?

Are we training enough pilots to meet both domestic and global demand?

Are our training systems evolving to reflect modern aircraft and modern operational realities?

Cont.



And perhaps most importantly:

Are we preparing the next generation of pilots for tomorrow's aviation environment, or still training them for yesterday's skies?

These are not academic questions.

They will determine the strength of our aviation sector, the sustainability of our connectivity, and the opportunities available to young South Africans who dream of flying.

The good news is that the talent exists. The passion exists. The global demand certainly exists.

There should be no limit on access, based on race-based quotas or employment numbers, but on passion and ability and in this arena, is South Africa going backwards due to failed government policies, where the rest of the world does not have this restriction?

The challenge now is whether we, as an industry, are prepared to rethink how we train, finance, and develop the pilots who will carry aviation forward.

Because the future of our skies will ultimately depend on the people we place in the cockpit *today*.



A handwritten signature in black ink, appearing to read 'K Storie'.

Kevin Storie - CEO

COMMERCIAL AVIATION ASSOCIATION OF SOUTHERN AFRICA (CAASA)



AIC 18.19 Update

DEAD AT LAST: THE 12-YEAR RULE



Click the image above or the link below to watch and listen to how we got here -
<https://www.youtube.com/watch?v=Rsf30edkzL>





**Commercial Aviation Association
of Southern Africa NPC**

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16 - 20 SEPT
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AFRICA'S GATEWAY TO THE GLOBAL DEFENCE AND AEROSPACE COLLABORATION



Africa Aerospace and Defence SHOWCASES AT RAND SHOW 2026

With less than 150 days to go until Africa Aerospace and Defence (AAD) 2026, the AAD team proudly participated in the Rand Show 2026, one of South Africa's most iconic consumer exhibitions. This engagement formed part of AAD's broader awareness and stakeholder engagement campaign, aimed at building momentum ahead of the continent's premier aerospace and defence exhibition.

The Rand Show provided an ideal platform to connect with a diverse audience, ranging from industry enthusiasts and young aspiring professionals to families and key stakeholders. Through an interactive and informative exhibition space, AAD offered visitors a glimpse into what they can expect from the upcoming event, while also highlighting the significance of the aerospace and defence sectors in driving innovation, economic growth, and national security.

A key highlight of AAD's participation was the official walkabout by the Honourable Angie Motshekga, Minister of Defence and Military Veterans. During her visit, the Minister emphasised strong government support for AAD 2026, underscoring the event's strategic importance to South Africa and the broader African continent. Her remarks reaffirmed confidence in AAD as a vital platform for industry collaboration, innovation, and economic development.

Visitors to the AAD stand experienced firsthand the scale and impact of the exhibition. The team engaged attendees through informative discussions, promotional materials, and insights into the opportunities that AAD 2026 will present for exhibitors, partners, and visitors alike. The presence at the Rand Show also allowed AAD to inspire the next generation by showcasing career possibilities within aerospace, defence, and related industries.

With excitement steadily building, AAD looks forward to delivering a world-class event that will once again bring together global industry leaders, innovators, and decision-makers.



View a message from our team at the Rand Easter Show

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Gearing Up for the AAD YOUTH FOUNDATION GOLF DAY

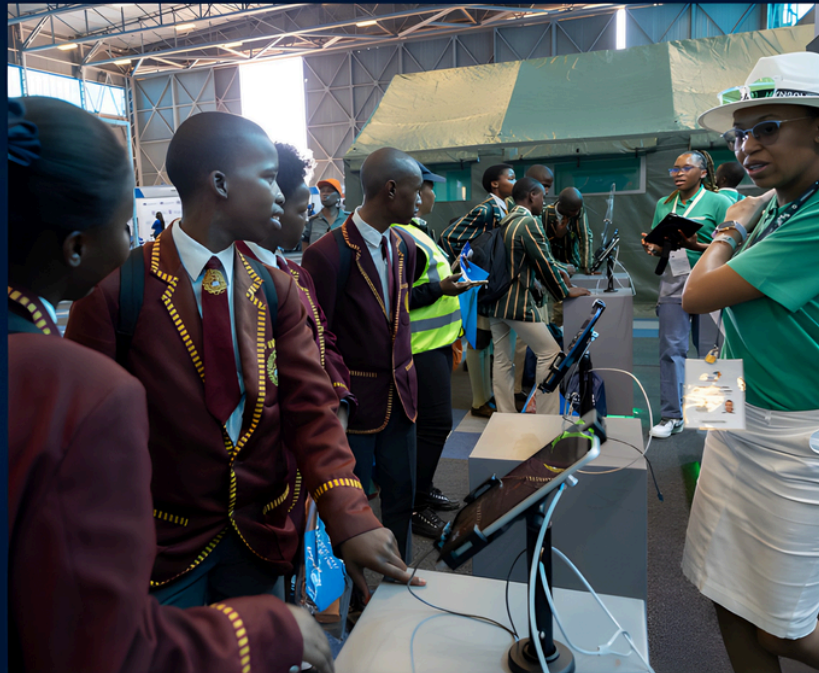
The countdown is on for the AAD Youth Foundation Golf Day, taking place on 19 May 2026 at Waterkloof Golf Club. Bring your clubs and make sure you've fine-tuned your swing. This event is about more than just the game.

It's an opportunity to raise funds for the most disadvantaged youth of our communities, with a strong focus on education. It's also a chance to connect, collaborate, and enjoy the true spirit of sport.

Every swing Counts.

For bookings or sponsorship enquiries, please contact:

Email: marketingcomms@aadexpo.co.za or
marketingpr@aadexpo.co.za



Meet AAD Team AT DSA 2026

Taking place from 20-23 April 2026, the AAD team will be attending DSA Malaysia as momentum builds towards #AAD2026. We'd love to connect with you during the show and share more information about the upcoming Africa Aerospace and Defence Exhibition.

[CLICK HERE TO CONTACT OUR AAD EXPO DIRECTOR](#)



Important dates TO KEEP IN MIND!

To make it easier for our exhibitors to plan their participation at AAD 2026, please see below for an easy breakdown of important dates.

16 - 18 SEPT 2026

TRADE DAYS & CONFERENCING

19 - 20 SEPT 2026

PUBLIC AIR SHOW DAYS

**STAY TUNED TO OUR SOCIAL MEDIA CHANNELS
FOR UPDATES AND ANNOUNCEMENTS!**





Industry News

SAAF LOOKS TO SPACE AND DRONES TO CLOSE CAPABILITY GAPS

The South African Air Force (SAAF) is accelerating its embrace of emerging technologies, including unmanned aerial vehicles (UAVs), artificial intelligence (AI) and space situational awareness, as it works to modernise a force operating under sustained budgetary pressure and growing operational demands.

[READ MORE](#)



Industry News

NEW SAAF CHIEF TO BUILD ON FOUNDATION FOR NEXT 100 YEARS

In a media briefing shortly after taking command of the South African Air Force (SAAF) at a Change of Command parade in Pretoria on Tuesday, Lieutenant General Carl Moatshe stressed that he would focus on skills development to build the Space Command established by his predecessor, Lieutenant General Wiseman Mbambo.

[READ MORE](#)



Industry News

SOUTH AFRICAN DEFENCE EXPORTS ROCKETED UP IN 2025

South African defence companies exported over R10 billion worth of military equipment and munitions in 2025, nearly triple the 2024 total of R3.6 billion, according to the latest National Conventional Arms Control Committee (NCACC) figures.

[READ MORE](#)



19 MAY 2026



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A premium setting for networking, impact, and great golf.

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GOLF DAY

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Join us for a day of purpose and play

An exclusive charity golf day bringing industry leaders together to support youth development in aerospace, defence and STEM.

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Play with purpose

The AAD Youth Foundation is a registered youth development foundation.
Section 18A certificates issued for all contributions

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AAD YOUTH FOUNDATION GOLF DAY

Every Swing Counts



19 MAY 2026

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- Entry for eight (8) golfers, paired into four (4) four-balls.
- Watering hole and Golf cart.

The STEM Advocate: R80 000

- Branding of water bottles for 50 players.
- Co-branding opportunity with your logo on sponsored items.
- Branding at the golf course and at the dinner venue.
- Entry for six (6) golfers, paired into three (3) four-balls.
- Watering hole and Golf cart.

The Future Flight Partner: R60 000

- Sponsorship of the Prize-Giving Dinner.
- Branding and promotional rights at the dinner and golf course.
- Entry for six (6) golfers, paired into three (3) four-balls.
- Watering hole and Golf cart.

The Next Gen: R50 000

- Branding at the golf course and dinner venue.
- Entry for four (4) players (one four-ball).
- Golf cart and watering hole

The Aerospace Champion: R30 000

- Branding and advertising at the golf course and dinner venue.
- Entry for four (4) players (one four-ball).
- Golf cart provided.

Watering Hole Sponsor: R10 000.00

- Branding at designated watering hole.
- One (1) Senior Executive to the prize-giving dinner.

Single Player Entry: R2 000.00

- Individual player entry

We are a registered youth development foundation. Section 18A certificates will be issued for all contributions.





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Are We Training Pilots?

Or Engineering the Future of South African Aviation?

A CAASA Industry Feature | 2026 | Aviation Training & Talent

The history of South African aviation has been shaped by two defining eras: the pioneering days of the mid-20th century and the glass-cockpit revolution of the early 2000s. We are now in a Third Transition. The cockpit is sharing the sky with autonomous systems. Our best people are being recruited offshore at a rate that should concern every operator in this country. And the role of the pilot is quietly but fundamentally changing – from someone who flies the aircraft, to someone who manages energy, airspace, and decisions in real time. The question is whether our training is keeping up with any of that.

This feature poses eight questions to the industry. They are not comfortable questions. But they are the right ones to be asking in 2026, and the honest answers will say a lot about where South African aviation is headed.

Part I: The People Problem

Let's be direct about the talent picture. Globally, we are heading for a shortfall of around 24 000 pilots in 2026 alone — that is not a projection for some distant future, it is this year. And South Africa, with its well-trained, internationally recognised pilots, is one of the most targeted recruitment pools on the planet. Emirates, Qatar, ANA, Cathay Pacific — they are not just advertising. They are here, actively, with packages that are genuinely hard to turn down. We have seen local carriers lose close to 20% of their pilot workforce in a single year. That is not attrition. That is haemorrhaging.

And yes, we understand why pilots leave. Better pay, better rosters, better quality of life for their families. Nobody in this industry should be naive or judgmental about that. But understanding the 'why' is not the same as accepting the outcome. So what do we actually do about it?

Q1: The Global Talent War

With international carriers aggressively recruiting from South Africa in 2026, how must our domestic training philosophy evolve to produce pilots who are also strategically incentivised to lead the local industry?

Here is the uncomfortable truth: we cannot out-pay the Middle East. That battle is already lost on a rand-for-rand basis. What we can do is build something that money alone cannot buy — a career path that feels meaningful, that offers genuine progression, and that gives a young South African pilot a reason to see their future here rather than abroad.

That starts in training. Right now, many programmes produce technically competent pilots who have very little understanding of the industry they are entering. They know how to fly the aircraft. They do not necessarily know how an airline works, what an operations department deals with at 2am, or how their decisions in the cockpit affect the business six months later. If we want pilots who feel a stake in the local industry, we need to train them to understand it — from the inside, from day one.

Think of it like the difference between training a craftsman and training a professional. A craftsman learns the skill. A professional learns the skill, the context, the responsibility, and the community they are joining. Our training programmes need to do the second thing. Structured mentorship, exposure to airline operations beyond the flight deck, leadership tracks built into cadet programmes — these are not luxuries. They are the difference between a pilot who stays and one who leaves the moment a better offer lands in their inbox.

“We cannot out-pay the Middle East. What we can do is build something money cannot buy — a reason to stay.”

Q2: The Experience Paradox

As we fast-track cadets to fill cockpit vacancies, how are we making sure that speed does not come at the cost of the judgment that takes years to develop?

This one keeps a lot of us up at night. The pressure to get people into seats is real. Airlines need crews, training organisations are under commercial pressure, and the temptation is to interpret ‘fast-track’ as simply getting someone to minimums as quickly as possible. But minimums are not the same as ready.

There is a kind of airmanship that does not show up in a logbook. It is the ability to read a situation not yet on the emergency checklist. To feel that something is not quite right before the instruments confirm it. To make a call under pressure that protects the people behind you even when the correct answer is not obvious. That quality is built through exposure to variability — through seasons of flying in different conditions, with different aircraft, with different crews, and occasionally with things going wrong in ways that no simulator can pre-program.

You cannot shortcut that entirely. But you can be smarter about how you build it. The answer is not simply more hours for the sake of hours — it is structured exposure. Pairing fast-tracked cadets with experienced captains in a deliberate mentorship model, not just on the line but in debrief, in scenario review, in conversation about decisions made and why. Think of it like an apprenticeship in a trade: the apprentice may be technically qualified after two years, but you still put them next to a master craftsman for a reason. The hours are the minimum. The relationship is the education.

This is exactly where Competency-Based Training and Assessment — CBTA — has a real role to play. Rather than measuring a pilot’s progress purely by hours accumulated, CBTA asks a more honest question: Can this person actually demonstrate the competencies required, consistently, across a range of conditions? It shifts the focus from time served to capability proven. And when it is implemented properly, it gives instructors and programme managers a much clearer picture of where a cadet genuinely is — and where the gaps still exist — rather than assuming that a certain number of hours in a logbook equals a certain level of readiness.

Alongside CBTA, Evidence-Based Training (EBT) adds another layer of rigour. Instead of running every cadet through the same scenarios on the same schedule, EBT draws on real accident data, operational incident reports, and individual performance records to target training where it is actually needed. If the data show that a particular cadet consistently struggles with energy management on approach, that is where the training focus goes — not just another engine-failure drill because it is next on the syllabus. It is a more intelligent use of training time, and in a resource-constrained environment like ours, that matters.

There is also a strong case — and it is a case worth making loudly — for integrating airline-standard operating philosophy from the very beginning of training. Not as an add-on at CPL stage, not as something introduced at type rating, but as the DNA of the programme from the first dual lesson. When a cadet learns to fly within a Standard Operating Procedure framework from day one — callouts, flows, crew resource management thinking, decision-making structured the way an airline actually operates — those habits do not need to be retrofitted later. They are already instinctive by the time the cadet reaches a multi-crew environment. The analogy is straightforward: if you want someone to think like a surgeon, you do not teach them basic anatomy for three years and then introduce surgical discipline at the end. You build the professional mindset from the beginning and

layer technical knowledge onto it. A cadet who has been operating to airline-standard SOPs since their PPL cross-countries walks into a first officer seat fundamentally better prepared than one who learned those standards three weeks before their type rating check. That is a better product for the airline, a safer outcome for the passenger, and a more confident professional for the cadet.

Part II: A More Complicated Sky

Not long ago, the biggest traffic management challenge at a South African regional airport was sequencing a couple of GA aircraft with a commercial departure. That world is gone. Drones are now operating commercially for deliveries, surveillance, infrastructure inspection, and agricultural applications across the country. The Department of Transport has proposed mandatory registration of all RPAS and the creation of dedicated drone corridors. The SACAA is working to build a framework that can actually manage this. But the regulatory architecture is catching up to a reality that is already happening overhead.

For pilots, this is not an abstract policy issue. It is a practical one. The sky they trained to navigate is not the same sky they are flying in now.

Q3: Manned and Unmanned Synergy

What does a pilot actually need to understand — psychologically and technically — to share airspace safely with systems that do not talk back?

The thing that catches most pilots off guard about drones is not the technology. It is the silence. We are trained in a world of shared radio, transponder codes, and mutual awareness. You call your position, someone acknowledges, and you build a picture of who is where. A commercial RPAS operator may be sitting in an office five kilometres away, managing a flight path that was pre-programmed that morning. No voice. No negotiation. No shared situational awareness in any form we recognise.

That requires a genuine mental shift. Not panic — but a recalibration of what ‘see and avoid’ means when one party to the encounter is invisible until it is very close, and the other party may not even know you are there. Pilots need to understand the operational envelopes of common commercial RPAS platforms, what their failure modes are, and how to respond when an uncooperative drone is detected in close proximity. That is not currently a standard part of most training syllabi. It probably should be.

South Africa has openly acknowledged that the detection and integration of drone operations with the existing ATM infrastructure are not yet in place. That gap is a shared problem — for regulators, for operators, and for training organisations. In the meantime, pilots who understand the unmanned ecosystem are better equipped than those who do not.

Q4: Regulatory Agility

Is the current regulatory framework keeping pace with AI-assisted flight decks and the reality of integrated airspace in 2026?

Let’s be fair to the SACAA here. Aviation regulation is conservative by design, and rightly so. The rules that govern our industry are written in the hard lessons of accidents and incidents across a century of flight. That conservatism has saved more lives than we can count. You do not rip it up because technology is moving fast.

But there is a difference between prudent conservatism and falling behind. AI-assisted decision support, predictive weather systems, automated conflict detection — these are not coming. They are here, on operational flight decks, right now. And the research is already flagging a concern worth taking seriously: automation bias. The tendency for a pilot to trust what the system is telling

them without applying critical evaluation. It is not a character flaw. It is a human response to a machine that is right 99% of the time. The problem is the 1%.

The regulatory conversation needs to move toward frameworks that mandate genuine manual proficiency alongside automation competency — not as a historical courtesy to older ways of flying, but as a live safety requirement. And for the drone integration question, the SACAA's own strategy documentation acknowledges that its capacity to oversee the full drone ecosystem needs to be enhanced. That is honest. Now the industry needs to actively support that process, not just wait for the rules to arrive and then comply with them.

Part III: What Technology Can and Cannot Do

We have better training tools today than at any point in the history of aviation. Full-flight simulators that can replicate Highveld density altitude, Cape Town coastal wind shear, or a thunderstorm cell over Durban with remarkable accuracy. Data systems that can track a cadet's eye movement, heart rate, control inputs, and decision timing simultaneously. AI platforms that can build an individual training profile from thousands of data points and flag specific vulnerabilities before they become habits. This is genuinely impressive, and we should be using all of it. But we also need to be honest about what it cannot do.

Q5: The Simulation Ceiling

At what point does high-fidelity simulation reach its limit, and where does real flying remain irreplaceable?

The simulator is one of the best teaching tools ever invented for aviation. It is also, fundamentally, a place where nobody actually dies. And a part of the human brain knows that, even when the visual scene is perfect and the motion platform is excellent. You can train a pilot to execute a rejected take-off in the simulator until it is automatic. What the simulator cannot fully replicate is the weight of consequence — the knowledge that the decision you are making in the next four seconds is the one that matters, for real, for everyone on board.

Think of it like learning to swim in a pool versus open water. The pool teaches you the technique perfectly. The technique works in open water, too. But the first time you are in the ocean with a current pulling at your legs and no visible bottom, something different is required of you. Real flight hours are that ocean. They are not about adding to a logbook — they are about exposing a pilot to authentic uncertainty, genuine consequence, and the kind of variability that no programmer has pre-loaded into a scenario database.

That said, what modern simulation technology can do is genuinely remarkable — and the industry is still catching up to its full potential. The latest generation of full-flight simulators does not just replicate the aircraft. It watches the pilot. AI-driven eye-tracking systems can now record exactly where a cadet's gaze goes during a critical event — a sudden GPWS warning, an engine failure on rotation, an unexpected ATC instruction in high workload. Did they scan the instruments in the right sequence? Did their eyes freeze on one display under stress? Did they miss the co-pilot's input entirely because their attention had tunnelled? Previously, an instructor could only observe behaviour from the jump seat and draw conclusions from what they saw. Now the data tells you what the pilot was actually looking at, second by second, throughout the entire event.

Combined with biometric monitoring — heart rate variability, galvanic skin response, even subtle changes in voice pattern — modern simulation environments can build a remarkably detailed picture of how a cadet responds under pressure. Not just what they did, but when their cognitive load peaked, how quickly they recovered, and whether their physiological stress response is getting better or worse as training progresses. This is not science fiction. These tools are operational at leading training centres internationally, and the data they generate entirely changes the quality of the debrief conversation. Instead of an instructor saying, 'I thought you seemed

distracted during that approach,' the debrief becomes ' , your scan broke down here, at this moment, and here is exactly what you were looking at instead.' That is a very different kind of feedback.

The practical answer for training design is this: use simulation aggressively for what it does brilliantly — procedure fluency, systems knowledge, rare emergency scenarios, and individual data analysis. Then use real hours deliberately, not just for hour-building, but as the environment where instinct is tested and calibrated. The two are not interchangeable. They are complementary, and a programme that treats them as the same thing will produce pilots who perform well in assessments and struggle when something genuinely unexpected happens.

There is also a strong argument, reflected in emerging best practice internationally, for integrating Full Flight Simulator training from much earlier in a pilot's development — even at PPL and early CPL stage — rather than reserving FFS exposure for type rating. When a cadet first encounters complex multi-crew scenarios in a high-fidelity environment while they are still forming habits, rather than after those habits are already set, the result is a fundamentally different level of airline readiness. The sim becomes a mentor, not just an assessment tool. And with AI now embedded in the simulator itself — watching, recording, and analysing — that mentor is getting smarter every session.

“The simulator teaches you what to do. Real flying teaches you who to be when what you trained for is not quite what is happening.”

Q6: Data-Driven Training

How do we use the data we now have access to — biometric, technical, behavioural — to train each pilot as an individual rather than as a number in a class?

For most of aviation's history, training assessment has been a bit like checking a car's tyre pressure at the end of a road trip. You get a snapshot of where things are. You do not necessarily know what happened during the journey. Modern training platforms are changing that completely. Systems that track eye movement tell you where attention goes under stress. Biometric data shows you when a cadet is operating at the edge of their cognitive load. Flight data captures patterns in control inputs that correlate with future errors long before any error actually occurs.

The world's leading training organisations are already building individual pilot profiles from this data, adjusting training content in real time based on what the data is revealing. One framework that is gaining traction structures Evidence-Based Training so that roughly 70% is driven by standardised aircraft-type content, 20% by what the data shows about a specific crew pairing, and 10% by the individual pilot's own profile. That last 10% is where the real personalisation happens — and it is only possible if you are actually capturing and interpreting the data.

The honest challenge for South African training organisations is less about access to the technology and more about the human capacity to use it well. A biometric dataset is only valuable if your instructor knows how to read it constructively — and how to have a conversation about it with a cadet without it becoming a confidence-destroying experience. Investing in the data systems without investing equally in instructor development is like buying a sophisticated engine analyser and not training your mechanics to use it. You will generate numbers, but you will not improve the aircraft.

Part IV: The Long Game

The conversation about sustainability in aviation has moved past the point of debate. The industry has committed to net zero carbon emissions by 2050. Sustainable Aviation Fuel is the most significant single lever available to get there — estimates suggest it could account for around 65% of the required emissions reductions. South Africa is in an interesting position here: we have deep

industrial experience in synthetic fuel production, significant agricultural feedstock potential, and the two largest hub airports in the region. We are not a bystander in this story. We are, or at least we should be, a central character.

Q7: The Green Cockpit

How do we prepare the next generation of pilots to think of fuel efficiency and sustainability as core professional values, not just something the finance department worries about?

SAF is actually the easy part of this conversation. From the pilot's perspective, it handles identically to conventional Jet A. You do not need a different checklist or a different technique. What needs to change is not procedure — it is mindset.

A lot of pilots, particularly those trained in an earlier era, learned to think about fuel as a cost line. Carry enough to be safe, minimise excess where the operations manual allows, and move on. That is fine as far as it goes. But the next generation of pilots needs to understand fuel management as an expression of airmanship — something you take pride in, the same way you take pride in a smooth landing or a precise approach. Research suggests that optimised flight operations — better routing, better ATC cooperation, more precise fuel loading — can reduce per-flight CO2 emissions by close to 10%. That is not marginal. Over a fleet, over a year, it is significant.

Training programmes that introduce green cockpit principles early — not as a compliance module at the end of a course, but woven into the culture of how flying is taught — will produce pilots who carry those values naturally into airline operations. The instructor who frames a fuel loading decision as a professional and environmental choice, not just a mathematical one, is doing something important. And with South Africa potentially able to produce between 3.2 and 4.5 billion litres of SAF annually — well above our own aviation sector's current fuel consumption — there is a real economic story here too, not just an environmental one.

Q8: Defining the 2026 Pilot

If the 20th-century pilot was a navigator and the early 21st-century pilot was a systems manager, what is the South African pilot of 2026?

Every generation of aviation has had a defining identity. The early pioneers were explorers — people who went where no chart existed and figured it out as they went. The jet age produced systems managers — professionals who could manage extraordinary complexity across multiple integrated platforms with precision and calm. Both of those identities were right for their time.

The 2026 pilot needs to be something different. Not a departure from what came before — the technical foundation still matters enormously — but an evolution. The best way to describe it might be a Strategic Decision-Maker. Someone who is genuinely competent on the controls, but who also understands the airspace they operate in as a shared, dynamic environment. Who sees fuel efficiency as part of their professional identity. Who can work alongside automated systems without being dominated by them or dismissive of them. Who develops the people around them, because they understand that the industry is only as strong as its next generation.

That sounds like a lot to ask of one person. But here is the thing — the best pilots in South Africa are already most of those things. The question is whether our training system deliberately produces that combination, or whether we rely on the best individuals to figure it out for themselves after they graduate. A programme that builds airline-standard operating philosophy, evidence-based decision-making, and genuine CRM culture from PPL level upward — rather than introducing those elements only when a pilot reaches type rating — produces a different kind of professional. One who walks into a cockpit at the first officer level is already thinking like a captain.

“The best South African pilots are already most of this. The question is whether we are building that deliberately, or just getting lucky with the good ones.”

So, Where Does That Leave Us?

None of the challenges in this article is insurmountable. South Africa has navigated harder moments than this one — the sanctions era, the post-1994 transformation, and the industry's complete collapse during COVID. Each time, we came back because the people in this industry refused to let it die. That has not changed.

What has changed is the complexity of what we are being asked to do simultaneously. Retain talent in a global market. Integrate new technology without losing the human skills that still matter. Adapt to a more crowded, more complex airspace. Train faster without training less well. And do all of that under commercial and cost pressures that nobody in this room needs to be reminded of.

The honest answer is that we cannot do it by each organisation figuring things out in isolation. The training organisations, the airlines, the regulators, and the industry bodies need to be in genuine conversation — not just at conferences, but in the design of programmes, the setting of standards, and the building of career frameworks that give South African pilots a compelling reason to stay and grow here.

We are not just training people to fly planes. Or at least, we should not be. We are building the professionals who will carry South African aviation through one of its most consequential transitions. That is worth doing with intention, with ambition, and with a clear-eyed view of what the industry actually needs — not just what the minimum requirement happens to be.

The Third Transition is already underway. The only question is whether we lead it or catch up to it.

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