VOLUME 53 ISSUE 11 / JANUARY 2026

WORLD AIR NEWS

CONNECTING SKIES • BRIDGING CONTINENTS

BLENDED WING
AERODYNAMIC BREAKTHROUGH

PHANTOM 3500
NET ZERO BUSINESS JET

BOMBARDIER
ECOJET LAB IN THE SKY

FUTURE PILOTS
AI INTEGRATION

2026 EVENTS
CALENDAR

COVER IMAGE : © OTTO AEROSPACE – PHANTOM 3500 BUSINESS JET - EVOLUTION IN FLIGHT

THE SUPER VERSATILE JET

More Airports - More Flexibility - More Possibilities

Pilatus Centre SA
Authorised Sales Centre

Crafted in Switzerland

pilatus-aircraft.com/southernafrica

BIRD-INSPIRED VISION FOR ZERO-EMISSION FLIGHT

The FALCON Solar is a conceptual solar-powered aircraft designed by Laszlo Nemeth of Budapest-based Lasko Design, exploring how aviation could achieve zero-emission flight by harnessing solar energy. Departing from traditional aircraft layouts, the design is based on a flying-wing configuration inspired by the streamlined bodies of birds of prey, integrating form and function to maximise aerodynamic efficiency. Its broad, curved wings are optimised to capture solar energy, enabling the vision of completely emission-free flight, while its delta-like, bird-inspired fuselage gives the aircraft a distinctive, futuristic appearance. The concept has gained international recognition, earning a Red Dot Award for its innovative approach to aviation and energy technology, and raises the question of whether future aircraft could combine the natural efficiencies of birds in flight with higher speeds and more sustainable performance.
IMAGE CREDIT ©: Lasko Design

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

CONTACTS

PUBLISHER WORLD AIRNEWS PTY LTD
15 Jacaranda Drive, Craigavon AH, Sandton,2192
Telephone: +27 11 465 7706 / 083 378 2060
info@worldairnews.co.za

EDITORS
Joan Chalmers
Email: joan@worldairnews.co.za

Joey Schulz - Sub Editor
Email: joey@worldairnews.co.za

Keith Fryer -Technical Advisor
Email: keith@worldairnews.co.za

OPERATIONS & ENQUIRIES
Judi Rodokanakis
Email: judi@worldairnews.co.za

ACCOUNTS
Krystyna Zanike Evans
Email: krys@worldairnews.co.za

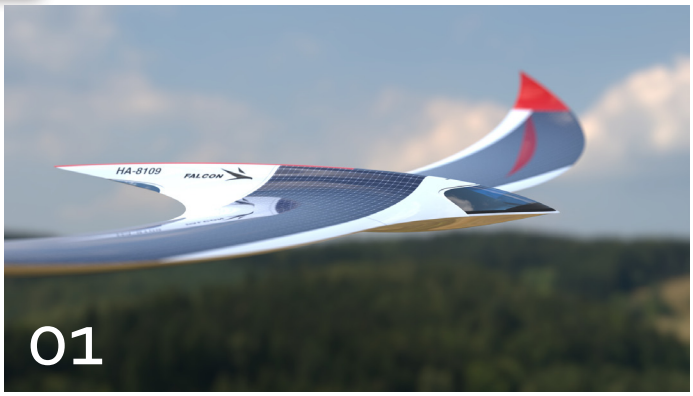
BUSINESS DEVELOPMENT/ SOUTH AFRICA
Hes Kiggen
Email: hes@worldairnews.co.za

Jimmy Skosana
Email: jimmy@worldairnews.co.za

BRITAIN / EUROPE BSP
Sally Passey
Email: sally@worldairnews.co.za

RUSSIA - MOSCOW
Yury Laskin
Email: yury@worldairnews.co.za

DISTRIBUTION CHANNELS
WEBSITE: www.worldairnews.co.za
SOCIALS: Facebook, LinkedIn, Instagram, Twitter, Magzter.
DIRECT MAIL: Monthly emailer to Subscribers and Aviation Sector Specialists.
ON -DEMAND PRINTING: We only print what is needed.



WORLD AIRNEWS

CONTENT

AVIATION'S 2026 FLIGHT PATH

As the new year unfolds, global aviation stands at a decisive inflection point. 2026 may well be remembered as the year the industry took serious, measurable steps toward reconciling its historic growth with the urgent demands of climate stewardship and economic resilience. Three defining forces — sustainability, scalability, and adaptability — are shaping not just the technology in the hangars, but the operational frameworks and market strategies that will determine success in the decade ahead.

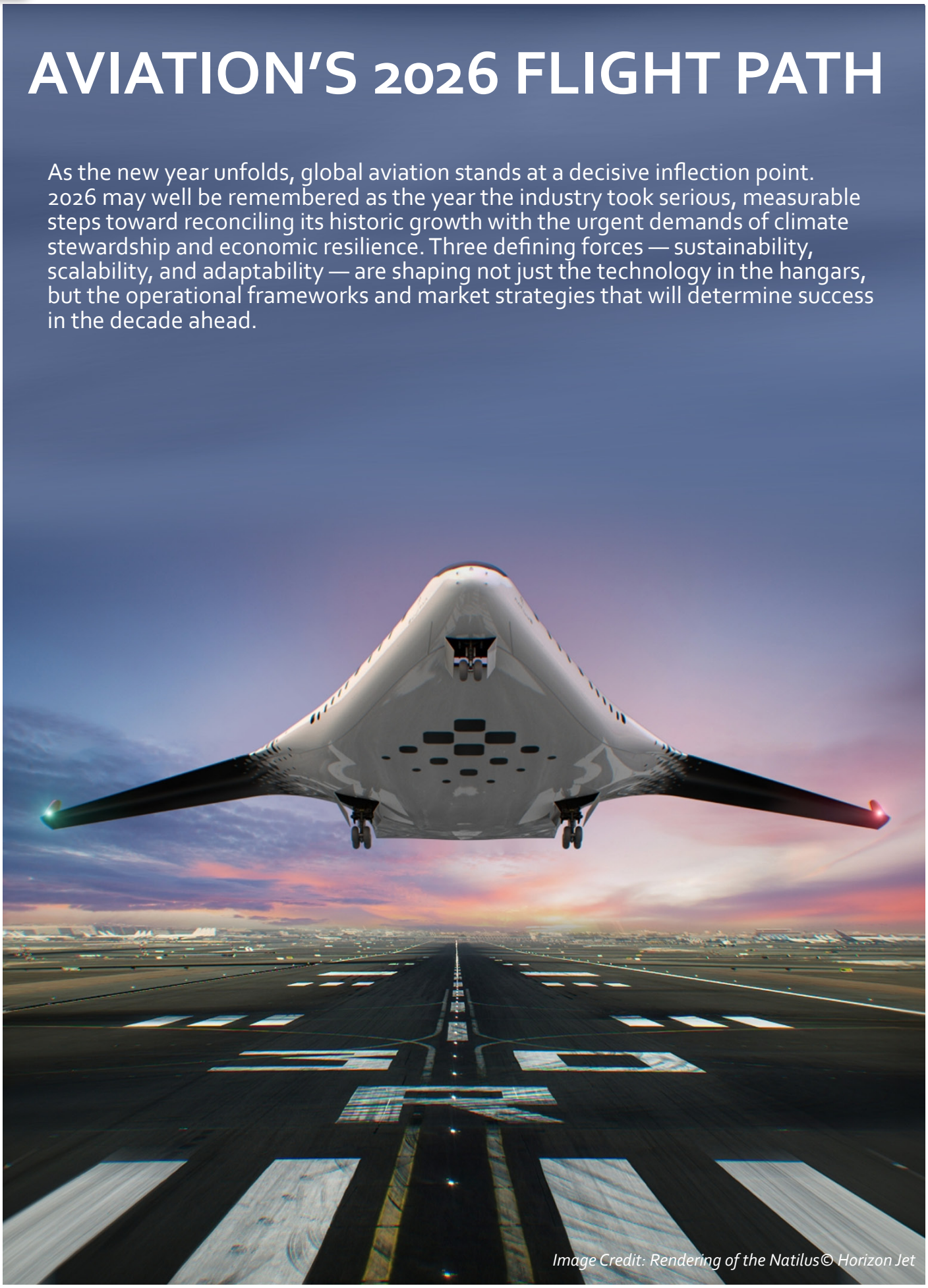


Image Credit: Rendering of the Natilus© Horizon Jet

Aviation has rebounded robustly from the pandemic slump, with passenger volumes continuing to climb and demand spreading into new regions and segments.

Yet this resurgence places unprecedented pressure on an industry already grappling with climate goals, cost inflation, and shifting geopolitical winds. In 2026, sustainability is no longer a peripheral aspiration — it has become a core strategic driver. Airlines and airports must actively reduce emissions while improving operational efficiency, all while delivering growth, reliability, and value for customers and stakeholders alike.

Across global markets, aviation players are responding by accelerating investment in cleaner fuels, digital transformation, and novel aircraft architectures. These investments are not incremental: they signal a fundamental transformation of how the industry operates and competes. As we clear the runway for what lies ahead, this edition explores how sustainability, scalability, and adaptability are intersecting to define aviation's flight path in 2026 and beyond.

Sustainability: The Imperative and the Innovation

Decarbonisation remains aviation's most urgent challenge. With commercial aviation accounting for roughly 2–3 % of global carbon emissions, the pressure to cut greenhouse gas output has spurred new strategic priorities industry wide.

Sustainable Aviation Fuel (SAF) has emerged as the leading near term solution, with global production capacity projected to increase significantly in 2026. Although early capacity will still represent only a fraction of total fuel consumption, dedicated SAF volumes are expected to grow by about one third this year, with Asia leading new developments.

Airlines and partners are also experimenting with next generation airframes and propulsion concepts. Initiatives such as blended wing body demonstrators aim to slash drag and fuel burn, while engine manufacturers pursue open rotor designs to reduce emissions by double digits.

Yet the path is far from straightforward. Hydrogen and electric propulsion — long touted as future game changers — face developmental and infrastructure challenges that may defer their significant contributions to post 2030 timelines.

Scalability: Meeting the Demand Surge

2026 will also be defined by aviation's response to relentless demand growth. Forecasts show global aviation market expansion continuing, with market size rising alongside passenger traffic and cargo operations.

Investments in fuel efficient aircraft, digital air traffic management, and hybrid systems are helping carriers scale operations without proportional increases in emissions.

Digital transformation plays a central role in scalability. Artificial intelligence (AI) and machine learning tools are transitioning from experimental pilots to essential operational layers, supporting flight planning, maintenance, disruption management, and passenger services. Implementing these capabilities effectively requires the infrastructure to support digital twins, meeting the demands of the broader digital revolution and enabling real-time simulation, optimisation, and predictive insights.

Airports, too, are investing in advanced technologies to optimise flows, reduce delays, and improve throughput. These digital capabilities are not luxury add ons; they underpin the scalability that will allow airlines to serve rising traffic volumes with efficiency and resilience.

Adaptability: Navigating the Uncertain Skies

In an era marked by shifting customer expectations, regulatory change, and geopolitical volatility, adaptability has become a competitive imperative. Operators must design systems and business models that can pivot swiftly — whether adjusting to climate policy changes, fluctuating fuel prices, or evolving trade patterns.

The integration of AI into core decision making processes exemplifies this shift. From predictive maintenance to dynamic schedule optimisation, AI enables organisations to respond in real time to disruptions and demand shifts.

New mobility segments, including advanced air mobility (AAM) with eVTOL platforms, are also emerging, pushing regulators and operators to establish frameworks that can accommodate future urban-centric services. This will soon require safe and efficient control of the skies to allow for increased air traffic and the integration of air taxis.

The recent slowdown in hydrogen propulsion progress — and the corresponding pivot back towards scalable solutions like SAF — underscores the need for flexible strategies that balance long term innovation with near term practicality.

Looking Ahead: 2026 as a Year of Transition

As we navigate this pivotal year, the aviation industry must balance three imperatives:

- Sustainability, by decarbonising through fuels, technology, and operations.
- Scalability, by delivering growth without compromising efficiency or resilience.
- Adaptability, by embracing digital transformation and strategic flexibility.

The stakes are high, but so too is the potential for meaningful progress. For leaders across airlines, airports, aerospace, and policy, the choices made in 2026 will influence not just the next decade but the trajectory of global aviation for generations to come.

SKY'S THE LIMIT: FORECASTING AVIATION GROWTH IN 2026

As the aviation industry accelerates into 2026, the global outlook combines robust demand with evolving regional dynamics. Long term structural forces — demographic shifts, economic expansion and strategic infrastructure investments — are driving a re ordering of global aviation growth. Nowhere is this clearer than in the BRICS and emerging economies, where expanding middle classes, rising disposable incomes and rapid urbanisation are unlocking unprecedented passenger and cargo opportunities.

According to the latest data from industry bodies, global passenger traffic is forecast to grow by about 4.9 % in 2026, slightly moderating from 2025's rebound but still signalling a vigorous expansion of air travel demand worldwide. Cargo volumes are also expected to climb, albeit at a gentler pace of around 2.6 % as trade and supply chain dynamics adapt to broader economic trends.

BRICS: Engines of Future Aviation Growth

The BRICS nations — Brazil, Russia, India, China and South Africa — are shaping up to be aviation growth powerhouses in the coming decade with global commitments being laid across the table. While each market faces distinct opportunities and challenges, a common thread binds them: rising demand at a pace that outstrips many mature markets including the regulators.

India is among the most compelling stories. Already the world's third largest domestic aviation market, India's passenger numbers continue to surge, supported by strong economic growth and a vast population beginning to fly in greater numbers. Projections suggest India will remain a leading driver of global aircraft demand, with carriers placing significant orders to expand capacity across domestic and international networks. Being centrally located in the Asian market India's expansion has become a critical requirement in the region.

Infrastructure developments mirror this growth. The new Navi Mumbai International Airport is set to begin operations with phased expansion capabilities that could

Image Credit: Freepik

accommodate up to 90 million passengers annually — a clear strategic response to the capacity constraints at existing hubs. Likewise, ultra large projects such as Jewar Airport near Delhi are positioning India not only to support domestic mobility but to become a global air transport and logistics hub.

Across Central and Eastern Africa, population growth and urban migration are fuelling rising demand for air connectivity, especially in intra regional travel and linkages to global markets. African passenger traffic is forecast to grow faster than the global average at about 6 % in 2026, reflecting stronger demand across a mosaic of markets. However, profitability remains a structural challenge for many African carriers, highlighting the need for supportive policy reform and investment in infrastructure to translate demand into sustainable growth.

Brazil and other Latin American economies continue to contribute to global aviation expansion, buoyed by low cost carrier networks and improving connectivity. Meanwhile, China's outbound travel rebound is complementing domestic growth — reinforcing Asia Pacific as a pivotal growth region that together with India will account for a significant share of future aircraft demand.

Population Growth and New Airport Infrastructure

Population expansion in emerging economies is attenuating traditional traffic forecasts anchored to developed markets. Countries such as India and many African states feature some of the world's fastest population growth rates, directly supporting greater passenger travel and stimulating cargo flows as economic activity evolves.

But growth necessitates infrastructure. India's airport network expansion — from roughly 160 airports today to potentially 350–400 by mid century — underscores that demand cannot be met without forward leaning investment. Across Central Africa, improving airport capabilities and air navigation infrastructure is increasingly seen as vital to unlocking regional economic potential — a shift that aligns with broader continental initiatives to expand connectivity where Africa was once left in the shadows.

The airport landscape in BRICS and emerging regions reflects both ambition and pragmatism: new terminals, expanded runways and enhanced multimodal links (including high speed rail and expressways) are central to unlocking passenger corridors and freight gateways.

Cargo: Parallel Growth, Strategic Importance

Cargo growth, while less dramatic than passenger travel, remains integral to the aviation outlook — particularly as emerging markets deepen their roles in global manufacturing and trade. Airports in Asia Pacific and the Middle East are investing heavily in cargo infrastructure to support e commerce and cross border supply chains, with long term forecasts indicating sustained demand through 2028 and beyond.

BRICS economies — with India and Brazil at the forefront — are increasingly acknowledging air cargo as a growth lever. Logistics hubs, cold chain facilities and integrated freight systems are being planned or expanded to support export oriented industries and domestic distribution networks.

Routes & Markets to Watch in 2026

1. India–Africa Connectors
Strengthened codeshare agreements and expanding airline partnerships are unlocking new corridors between India and African markets. These routes will be crucial for business travel, diaspora flows and tourism, with potential hubs emerging in Nairobi, Johannesburg, Lagos and Addis Ababa.

2. Southern Africa Regional Network Growth
Airlines in Southern and Central Africa are poised to build deeper regional networks, supporting trade and passenger mobility across borders. Expect increased activity at Accra (Ghana), Dakar (Senegal) and Lagos (Nigeria), where demand is rising for both domestic and international connectivity.

3. Middle East Mega Hubs
Although not a BRICS market, Dubai, Riyadh and Istanbul continue to expand as global pivot points, linking East West and North South flows. These hubs remain critical in the 2026 network map, with capacity enhancements and airline partnerships strengthening their roles in passenger and cargo traffic.

4. India's Emerging Aero Cities
Secondary hubs like Chandigarh and other tier II city airports are likely to secure more international connections in 2026, supported by infrastructure investment that attracts long haul and regional services.

5. Latin America's Rising Networks
Markets such as Mexico City and São Paulo will see further capacity growth underpinned by leisure and business demand, low cost carrier expansion and improved border connectivity.

New Global Aviation Topography

In 2026, the sky's the limit is an apt refrain — not as an abstract ideal, but as a factual description of how aviation growth is structurally shifting toward BRICS and emerging economies. Supported by demographic weight, expanding infrastructure and strategic partnerships, these regions are fuelling the next phase of global aviation expansion more especially in the Asia-Africa market where expansion is necessary.

As airlines, airports and policymakers navigate this evolving landscape, the interplay between demand, capacity and connectivity will define not just flight paths, but economic trajectories for decades to come.

Image Credit: Boeing

AFRICA'S SKIES SET FOR SUSTAINED GROWTH AS FLEET DEMAND ACCELERATES

Africa's aviation story is entering a decisive new chapter. As passenger numbers climb and connectivity deepens across the continent, airlines are preparing for a period of sustained expansion that will see commercial fleets more than double over the next two decades, according to Boeing's latest market outlook.

Speaking in Luanda in early December, Boeing outlined a confident forecast for African air travel, projecting average annual passenger traffic growth of six per cent through to 2044. The outlook reflects a convergence of powerful forces shaping the continent's future: a young and increasingly urban population, a growing middle class, and rising investment in airports and air connectivity. Together, these trends are expected to transform how Africans travel, and how airlines structure their fleets to meet demand.

Indeed, Boeing has unveiled an optimistic and rather detailed vision for the future of Africa's through its 2025 Commercial Market Outlook (CMO) with predicted growth of 6% all the way through to 2044.

A fleet reshaped by regional connectivity

To accommodate this growth, Boeing expects Africa's commercial aircraft fleet to expand to around 1,680 airplanes by 2044, more than double its current size. At the heart of this expansion will be single-aisle aircraft, which are forecast to account for around 70 per cent of the more than 1,200 new deliveries over the period. These aircraft are ideally suited to the realities of African networks, supporting domestic routes, short-haul regional services and thinner international connections.

Their versatility and efficiency are expected to underpin network expansion not only within Africa, but also into Europe and the Middle East.

Low-cost carriers are likely to be among the main beneficiaries of this shift. As demand grows for affordable travel options, these operators are well positioned to open new routes, stimulate traffic and improve intra-continental connectivity, helping to knit together markets that have historically been underserved by air transport.

Aviation as an economic multiplier

Beyond fleet growth, aviation's wider economic impact remains a central theme of Boeing's outlook. The expansion of airline networks is expected to support tourism, trade and investment, while strengthening logistics corridors critical to Africa's export markets. The ripple effects extend far beyond the flight deck, generating thousands of indirect jobs across hospitality, manufacturing and service industries.

Shahab Matin, Boeing's managing director of Commercial Marketing for the Middle East and Africa, describes aviation as a catalyst for the continent's economic momentum. He points to the role of more efficient and adaptable aircraft, combined with policies and investments that make air travel accessible to a broader segment of the population, as key enablers of future growth.

People and services in demand

Fleet expansion on this scale brings significant implications for the wider aviation ecosystem. The growth trajectory also implies significant human capital development. Boeing projects a requirement for around 74,000 new pilots, technicians and cabin crew across Africa over the next 20 years, highlighting the urgent need for investment in training and skills development.

At the same time, services demand is forecast to reach approximately $130 billion, encompassing maintenance, repair and overhaul, digital solutions and operational support. This services backbone will be essential to sustaining fleet growth and ensuring operational resilience as airlines modernise and expand.

The outlook also points to continued demand for widebody aircraft, driven by long-haul expansion and fleet renewal, alongside a modest but important requirement for dedicated freighters tailored to Africa's developing logistics and export sectors.

Boeing's 2025 Commercial Market Outlook paints a picture of an African aviation market on the cusp of transformation. With traffic growth outpacing global averages and fleet requirements set to surge, the next two decades will test the industry's ability to scale sustainably.

For airlines, manufacturers and policymakers alike, the message is clear. Meeting Africa's rising demand will require not only new aircraft, but coordinated investment in infrastructure, people and services. If those elements align, aviation will continue to play a central role in unlocking economic opportunity and strengthening connections across the continent's skies.

PHILTON LEATHER'S BRAND REFRESH HIGHLIGHTS PREMIUM SOLUTIONS FOR AVIATION INTERIORS

Philton Leather, one of South Africa's most established suppliers of premium Italian hides, has unveiled a refreshed brand identity and an upgraded website — a move designed to better serve high-specification sectors including aviation interiors.

With a 30-year legacy and a 2 996 m² facility in Waltloo, Pretoria, the company stands out for maintaining one of the country's largest inventories of quality hides, with more than 60 000 m² available at any time. This scale ensures consistency and immediate supply — crucial for aviation refurbishment projects where downtime must be kept to an absolute minimum.

Philton Leather supplies full-grain nappa, corrected-grain, and pull-up leathers widely used in premium cabin seating, crew rest areas, and VIP configurations. Its precision-cutting capabilities and upholstery kit solutions also support the growing demand for durable, lightweight materials aligned with modern aircraft interior standards.

"Our new brand and website mark a renewed commitment to the quality and service our customers have trusted for decades," says Paul Baron, CEO of Philton Leather. "It's a reflection of who we are today — a large, stable business built on expertise, technology, and long-term relationships."

The redesigned website provides clearer product information, improved navigation, and a more streamlined experience for aviation interior designers, MROs, and OEMs seeking certified, high-performance leather options.

Philton Leather continues to supply the furniture, automotive, and aviation sectors, reinforced by expanded festive trading hours to support year-end production demands. For more information visit: www.philtonleather.co.za

BUILDING AFRICA'S NEXT INDUSTRIAL FRONTIER: THE ROLE OF SUSTAINABLE AVIATION FUELS

By Henok Teferra Shawl

Henok Teferra Shawl, Boeing managing director for Africa

As Africa's aviation sector grows to meet rising demand for connectivity, trade, and tourism, the challenge of reducing environmental impact becomes increasingly important. Sustainable Aviation Fuels (SAF) produced from renewable or waste-based sources, offer a practical pathway for Africa to decarbonize air transport while supporting economic development.

Sustainable aviation fuel (SAF) presents a strategic opportunity not only to reduce lifecycle emissions but to retain value in African economies and create skilled jobs.

Today, Africa imports most of its jet fuel, sending billions of dollars off the continent each year and leaving airlines and governments vulnerable to volatility of oil prices and currency shocks. At the same time, Africa's diverse agricultural and renewable resources provide a strategic advantage for SAF production. Domestic SAF production could help address structural cost disadvantages facing African airlines — higher jet fuel prices, weak supplier competition, low procurement volumes, and higher taxes.

The World Bank projects Sub Saharan Africa will see a major working age population expansion by 2050 and capturing this demographic dividend depends on creating skilled jobs at scale. SAF value chains – from feedstock cultivation to refining and logistics – can drive employment and economic growth. Turning this potential into production requires coordinated action across three mutually reinforcing areas: feedstock, policy and finance.

Today, SAF carries a price premium due to limited production. Africa's abundant renewable energy resources and diverse feedstocks could make the continent a key contributor to bringing costs down – an industrial opportunity not to be missed.

From years of research in Africa and globally, including a 2019 study (https://apo-opa.co/4iCdXAY) with WWF South Africa and the International Institute for Applied Systems Analysis, and a 2023 study (https://apo-opa.co/4atc87s) in Ethiopia and South Africa with the Roundtable on Sustainable Biomaterials (RSB), Boeing has found that data driven local feedstock assessments are the essential first step.

Building on this experience, Boeing and RSB are engaging other African countries to assess sustainable feedstock potential and SAF production capacity to support creation of a regional SAF ecosystem and inform national policies. Convening governments, research bodies and airlines will help produce credible baselines for such work.

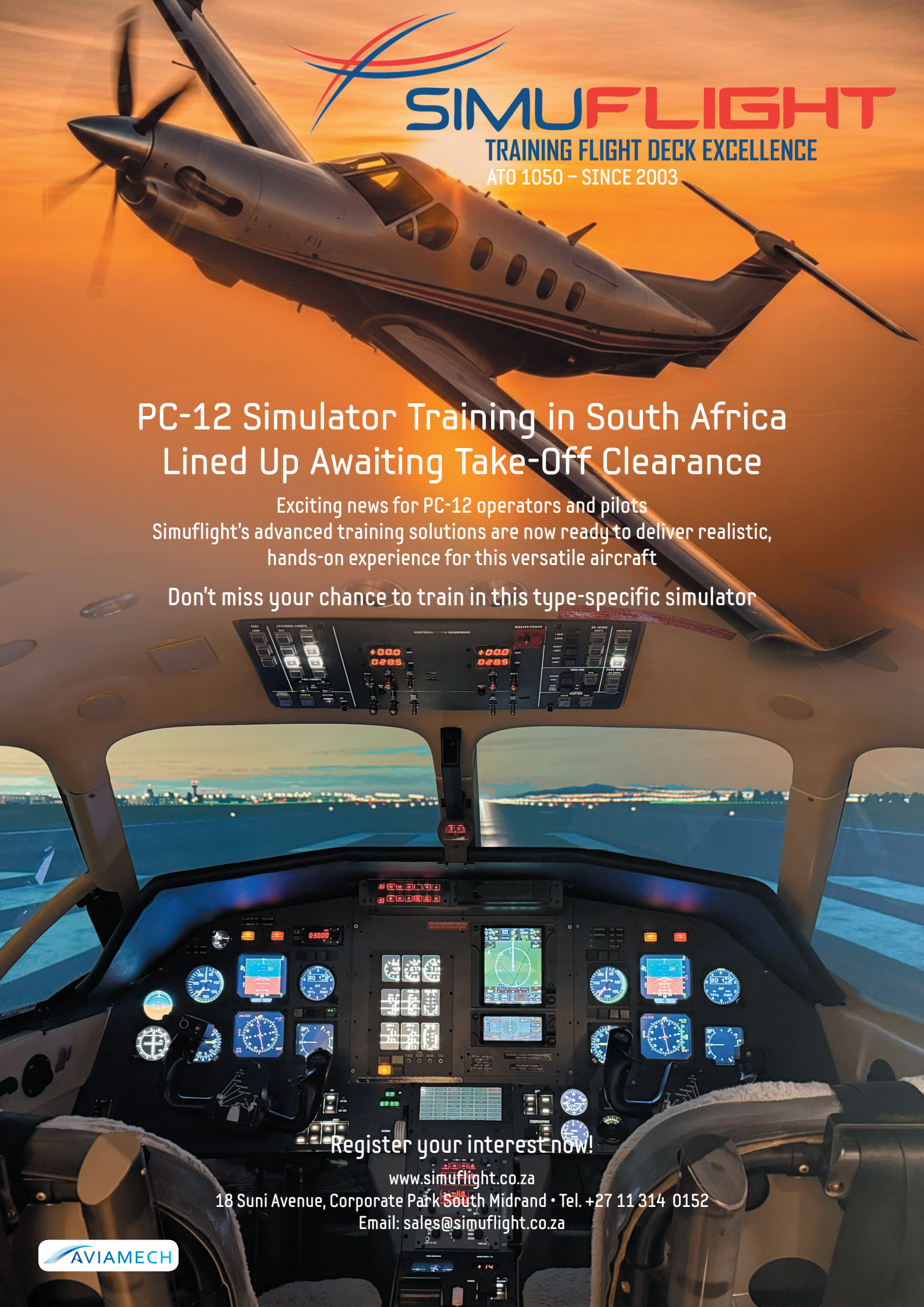
SAF can cut carbon emissions by up to 80% over the fuel's lifecycle compared to conventional jet fuel. However, in order to achieve the aviation industry's decarbonization goal, SAF production worldwide must grow from anticipated 2 million tons in 2025 (https://apo-opa.co/49XflfA) to roughly 500 million tons within 25 years (https://apo-opa.co/3Kf8X8Z), according to the International Air Transport Association (IATA).

SAF will not scale overnight, hence maximizing the impact of every liter of SAF must be paired with reducing fuel demand. Modern airplanes like the Boeing 737 MAX and 787 Dreamliner help airlines cut fuel burn and lower operating costs. In Africa, where about 70% of future deliveries are narrowbody airplanes and intraregional connectivity is a priority, efficient airplanes can expand routes and support trade and tourism while the industry is working to scale SAF supply.

Working together we can turn Africa's potential into local industries, jobs, connectivity and shared prosperity. Building sovereign SAF markets while accelerating fleet modernization and operational efficiency can power that transformation and unlock lasting economic benefits across the continent.

Sustainable Aviation Fuels offer Africa a powerful opportunity to address climate change while unlocking economic, social, and strategic benefits. With abundant natural resources, growing air travel demand, and increasing global support for low-carbon solutions, Africa is well positioned to play a leading role in the future SAF market.

By investing in SAF production and adoption, African nations and airlines can reduce emissions, enhance energy security, create jobs, and ensure that aviation continues to be a driver of sustainable development across the continent.


SIMUFLIGHT
TRAINING FLIGHT DECK EXCELLENCE
ATO 1050 – SINCE 2003
PC-12 Simulator Training in South Africa
Lined Up Awaiting Take-Off Clearance
Exciting news for PC-12 operators and pilots
Simuflight's advanced training solutions are now ready to deliver realistic, hands-on experience for this versatile aircraft
Don't miss your chance to train in this type-specific simulator
Register your interest now!
www.simuflight.co.za
18 Suni Avenue, Corporate Park South Midrand • Tel. +27 11 314 0152
Email: sales@simuflight.co.za
AVIAMECH

AFBAA 2025 HIGHLIGHTS AND WRAP

By Jane Stanbury

AfBAA 2025 — As the industry enters 2026, 2025 stands out as a transformative year for the African Business Aviation Association (AfBAA), marked by leadership change and renewed strategic focus. Dawit Lemma assumed the role of Chairperson in May 2025 and, together with Vice Chair Craig Middleton, ushered in a new chapter for the Association, injecting fresh momentum into its mission to represent African business aviation locally and on the global stage.

Soon after taking office, Lemma and his leadership team introduced a set of strategic pillars designed to underpin AfBAA's future direction. These include growing membership and strengthening internal and external communications; streamlining governance and operations; broadening eligible aircraft segments to include unpiloted aerial vehicles and general aviation; and expanding AfBAA's visibility beyond Africa.Designed to build momentum and reinforce AfBAA's role as a unified industry voice, the impact of these initiatives became evident as the year progressed.

"Without members, we don't have an Association, so we focused on reconnecting with former members, attracting new ones, and identifying where we can add meaningful value," explains Lemma. A notable milestone in 2025 was AfBAA's collaboration with the organisers of Aviation Africa 2025, which saw the introduction of a dedicated AfBAA pavilion. The pavilion hosted members and stakeholders with an interest in Africa, providing a focal point for engagement. *"This was a real highlight of the year as we brought our members together to engage with national, regional, and international delegates. We do not operate in isolation, and this platform allowed us to share our vision more widely."*

Throughout 2025, Lemma and Middleton also prioritised engagement with organisations critical to keeping Africa connected. *"We interline with airlines, regional networks, and connect international travellers with the rest of Africa. While our business models differ, the various aviation sectors intersect at many levels, which makes alignment essential,"* Lemma notes.

A significant achievement during the year was AfBAA's milestone meeting with the African Civil Aviation Commission (AFCAC). Discussions focused on creating and sharing aviation data to support AFCAC's advocacy on AfBAA's behalf. Agreements reached will see AFCAC representing business aviation interests at national civil aviation authorities and external bodies such as ICAO. The organisations also committed to jointly lobbying for a single environmental abatement or tax framework for Africa, while collaborating on safety, workforce development, and infrastructure initiatives. *"This was a breakthrough discussion, and we are delighted that AFCAC can better support us in engagements with governments and regulators. The cooperation benefits all African aviation stakeholders,"* Lemma says.

During 2025, AfBAA also signed two additional memoranda of understanding with the Commercial Aviation Association of South Africa (CAASA) and the Airlines Association of South Africa (AASA). Recognising the influence of each organisation, these agreements are intended to strengthen collaboration on regional and national aviation issues.

"As one of AfBAA's core pillars, communication between associations is essential if we are to build shared knowledge and understanding. Together, we can contribute to advancing aviation standards across the continent," Lemma adds.

Another notable development in 2025 was the successful launch of AfBAA's RPAS committee, reflecting the Association's commitment to integrating non-scheduled and emerging aviation stakeholders. *"We are committed to growing membership among those working in advanced air mobility, UAVs, and next-generation aviation. Africa offers an ideal test environment, and we are excited about supporting these evolving sectors."*

International engagement featured strongly throughout the year, with Lemma and Middleton travelling extensively to position AfBAA more prominently on the global aviation stage. Their involvement extended beyond attendance to active participation. At Aero South Africa, AfBAA led discussions on safety; at EBACE, Lemma met with EBAA, BBGA, and other associations to present AfBAA's renewed approach; and at Aviation Africa 2025, he delivered a keynote address that challenged delegates to rethink perceptions of African business aviation.

"It is crucial that we continue to address and correct outdated perceptions," says Lemma. *"International engagement, modernised communications, and the sharing of practical solutions to continental challenges all play a role. Over the course of 2025, I saw many 'lightbulb moments' as colleagues recognised the opportunities across Africa. That, for me, was a major achievement."* The results speak for themselves, with AfBAA's membership doubling within six months during the year.

Now, as AfBAA looks ahead into 2026, the momentum shows no sign of slowing. *"Our plans include launching an association newsletter, establishing North, South, East, and West AfBAA chapters, and forming an ESG committee. We are also preparing to begin formal research into African business aviation,"* Lemma says. Discussions are already underway with members and suppliers to conduct studies that will provide a comprehensive picture of the sector's current state and future opportunities.

BLENDED WING BODIES AND AERODYNAMIC BREAKTHROUGHS

Traditional tube and wing airframes have carried passengers for a century, but a new generation of aerodynamic innovation — led by blended wing body (BWB) designs and advanced materials — is redefining what efficiency means for 21st century flight promising the most futuristic development in aircraft design and configurations.

Against the backdrop of rising fuel costs and tightening emissions regulations, aircraft designers are pushing beyond incremental improvements to pursue fundamentally different airframe architectures. Chief among them is the BWB concept, where wing and fuselage merge into a single, smooth lifting surface. This geometry promises dramatic reductions in drag and improved lift to drag ratio characteristics, making it a front runner for future high efficiency commercial transports.

The BWB concept is gaining traction both in research and commercial planning. Defined by a near seamless integration of fuselage and wing, BWB aircraft deliver lower drag and higher lift compared to conventional designs, leading to potential fuel burn reductions of up to 30–50 % and significant emissions savings. This aerodynamic breakthrough stems from distributing lift across the entire aircraft surface, allowing more efficient airflow and reduced parasitic drag.

Industry actors are moving beyond theory. San Diego based Natilus has charted a commercial BWB course with its HORIZON jet, which has secured a major order from India's SpiceJet and is targeting certification and production partnerships that could bring the design into revenue service in the early 2030s — particularly to serve high growth markets like India. At the same time, U.S. startup JetZero is advancing a wider body BWB aircraft concept capable of slashing fuel consumption by roughly half versus comparable conventional jets.

Beyond pure aerodynamics, advanced materials and structures are critical enablers. The blended wing body configuration allows for more efficient structural layout. Lightweight composites and distributed electronic architectures support the unique load distributions of BWB platforms while maintaining structural integrity and safety — a trend that represents a broader shift toward highly integrated, digitally managed airframes.

Blended wing bodies exemplify the next frontier of aircraft design, where aerodynamic ingenuity and advanced materials converge to meet the efficiency demands of future flight. While commercial entry remains near to mid term, the momentum building around BWB concepts signals a pivotal departure from century old design conventions, preparing aviation for a more sustainable and capable era.

The blended wing body represents a significant step forward in aircraft design offering clear advantages in fuel efficiency, emissions reduction, structural performance with improved payload capacity.

Image Credit: © JetZero

Image Credit: © Natilus

ELECTRIFICATION, HYDROGEN, AND SOLAR: THE POWER TRIO OF 2026

As the aviation industry confronts the twin imperatives of decarbonisation and economic growth in 2026, three propulsion paradigms — electrification, hydrogen, and solar energy — are emerging as the defining power trio shaping the next chapter of flight. 2026 marks a pivotal point of transformation as the industry moves towards more sustainable technologies to meet rising environmental pressures, stricter emissions targets and growing public demand for greener solutions. Across research labs and testbeds, yesterday's experiments are maturing into tomorrow's potential pathways for low-emission air transport.

Decarbonising flight remains aviation's most formidable challenge. Conventional jet fuel accounts for the lion's share of CO_2 emissions, prompting a global pivot toward alternative power solutions. In this evolving landscape, battery electric systems are making inroads on short range platforms, hydrogen fuel cells are advancing toward larger applications, and solar powered concepts are inspiring long duration endurance milestones. Each technology carries distinct advantages — and limitations — as developers converge on a multi pronged strategy for sustainable propulsion.

Electrification has accelerated beyond early proof of concepts into active flight testing and commercial planning. Battery electric aircraft, particularly in the light and regional segment, leverage rapid improvements in motor efficiency and systems integration. Industry analyses project that, over the next two decades, electric aircraft could capture a significant share of small aircraft deliveries as energy density improvements continue —

Decarbonising flight remains aviation's most formidable challenge. Conventional jet fuel accounts for the lion's share of CO_2 emissions, prompting a global pivot toward alternative power solutions. In this evolving landscape, battery electric systems are making inroads on short range platforms, hydrogen fuel cells are advancing toward larger applications, and solar powered concepts are inspiring long duration endurance milestones. Each technology carries distinct advantages — and limitations — as developers converge on a multi pronged strategy for sustainable propulsion.

Electrification has accelerated beyond early proof of concepts into active flight testing and commercial planning. Battery electric aircraft, particularly in the light and regional segment, leverage rapid improvements in motor efficiency and systems integration. Industry analyses project that, over the next two decades, electric aircraft could capture a significant share of small aircraft deliveries as energy density improvements continue — though heavy battery weight remains a key constraint for larger aircraft. The development in hybrid systems is set to take a major leap in 2026.

Meanwhile, hydrogen propulsion commands intense interest as a scalable zero carbon alternative. Airbus has reaffirmed its commitment to hydrogen electric propulsion through its ZEROe programme, presenting a concept aircraft powered by hydrogen fuel cells and electric motors that could lay the groundwork for future commercial service beyond 2030. This approach, centred on converting hydrogen into electricity via fuel cells, offers the promise of virtually emissions free flight. Other industry initiatives, such as collaborative hydrogen summits and test summits, continue to refine the technical and regulatory frameworks needed to integrate hydrogen into aviation at scale. Demonstrators like Germany's HY4, a four seat hydrogen fuel cell aircraft that has logged multi hour flights on liquid hydrogen, underscore progress toward real world viability.

Solar powered flight, though further from commercial application, remains a valuable proving ground for clean energy integration. Record breaking flights by solar assisted aircraft such as SolarStratos demonstrate the potential for solar cells to extend endurance in lightweight platforms — offering inspiration for hybrid systems that might combine solar recharging with electric propulsion on long duration missions.

In 2026, electrification, hydrogen and solar are not competing alternatives but complementary technologies in aviation's broader decarbonisation toolkit. Short haul electric aircraft will scale with advancing battery tech and intelligent energy management. Hydrogen fuel cell systems hold promise for regional and, ultimately, medium range flights. And solar innovations continue to innovate the margins of endurance and energy self sufficiency. Together, this power trio represents a mosaic of innovation that will expand aviation's sustainability frontier well into the next decade with minimal emissions and mush quieter operations.

Image Credit: © Natilus

SLEEK NEW BUSINESS JET TARGETS AVIATION NET ZERO 20 YEARS AHEAD OF SCHEDULE

A new generation business jet under development in the United States is aiming to achieve net-zero flight two decades ahead of the aviation sector's 2050 targets, combining transonic speed, long range and dramatically reduced fuel burn through advanced laminar flow aerodynamics.

A new performance benchmark

Florida-based Otto Aviation is developing the Phantom 3500, a nine-seat business jet designed to redefine efficiency, range and environmental performance. The aircraft employs an AI-driven, transonic super-laminar flow architecture which, according to the company, delivers more than 60% lower fuel consumption than comparable aircraft.

When operated on sustainable aviation fuel (SAF), overall carbon emissions are expected to fall by up to 90%. Speaking at the Paris Air Show earlier this month, Otto Aviation chief executive Paul Touw confirmed the company's ambition to have the Phantom 3500 in service by 2030.

"The Phantom 3500 is the result of relentless innovation and bold thinking," said Touw. "By achieving carbon neutrality 20 years ahead of the 2050 target, we're not just meeting expectations — Otto is redefining what's possible in aviation. It's a transformative step toward a future where cutting-edge technology and sustainability go hand in hand."

Laminar flow at the core

At the heart of the Phantom 3500 programme is Otto's full laminar flow design philosophy. By maintaining ultra-smooth airflow over the fuselage, the aircraft dramatically reduces aerodynamic drag — a long-standing limitation in conventional aircraft design that drives fuel burn, emissions and operating costs.

This reduction in drag underpins what Otto describes as a series of "virtuous cycles", in which each performance gain reinforces the next. Lower drag

reduces fuel burn, enabling lighter aircraft structures, extended range and improved payload efficiency. In turn, higher efficiency allows for more direct routing, fewer stops and lower overall operating costs.

According to Otto, these interlinked performance gains are not incremental but compounding, unlocking levels of efficiency and sustainability not previously seen in aircraft of this class.

Image Credit: Phantom 3500 © Otto Aerospace

Performance and capability

The Phantom 3500 is designed to cruise at transonic speeds while maintaining ultra-low drag. It will operate at altitudes of up to 51,000 ft, allowing flights above weather, turbulence and commercial traffic, offering smoother operations and greater routing flexibility.

Range is quoted at more than 3,500 nautical miles, with a balanced field length of less than 3,500 ft, enabling operations into significantly more airports than comparable business jets. Otto states this combination of range and runway performance effectively doubles airport access while allowing longer, more direct sectors.

Operating economics are a central focus of the design. The aircraft is expected to deliver approximately


Image Credit: Phantom 3500 Cabin © Otto Aerospace

50% lower operating costs than comparable jets, driven by reduced fuel burn, streamlined systems and simplified maintenance.

Cabin design and passenger experience

Inside, the Phantom 3500 features a 1.98 m-high (6 ft 6 in) stand-up cabin, allowing most passengers to stand comfortably. Cabin volume is quoted at 800 cubic feet — around twice that of comparable aircraft — providing space for passengers, work or equipment without compromise.

A distinctive feature is Otto's SuperNatural Vision™ system, which replaces conventional rear-cabin windows with high-definition digital displays. These provide live panoramic external views while eliminating the structural and aerodynamic penalties associated with traditional windows, helping to preserve laminar flow over the fuselage.


Image Credit: Phantom 3500 cabin © Otto Aerospace

According to Otto, the system delivers an immersive visual experience while contributing directly to aerodynamic efficiency and overall performance.

Propulsion, avionics and systems

Power for the Phantom 3500 will come from Williams International's FJ44-4 QPM turbofan. The Quiet Power Mode variant integrates auxiliary power unit functionality, enabling independent ground operations and reducing the need for additional ground support equipment.

The first test aircraft will be equipped with Garmin G700 TXi flight-deck displays, incorporating next-generation avionics to support precision control and optimised performance.

Manufacturing and certification pathway

Otto Aviation plans to relocate its headquarters and invest approximately US$430 million (£340 million) in a new manufacturing facility at Cecil Airport in Jacksonville, Florida.

Initial flight testing is scheduled for early 2027, with certification and entry into service targeted for 2030. The Phantom 3500's lower weight enables certification under FAA Part 23, offering a more streamlined certification pathway than that applied to most business jets.

The company states it is working closely with regulatory authorities, supported by advanced digital-twin modelling, rigorous testing and established laminar flow expertise to meet safety, performance and reliability requirements.

Image Credit: Phantom 3500 © Otto Aerospace

A new category of business aviation

Otto Aviation positions the Phantom 3500 as more than a conventional business jet, describing it as a new category that combines speed, range, luxury and sustainability within a single performance framework.

By integrating aerodynamic efficiency, advanced manufacturing and scalable production, the company aims to set new benchmarks not only for aircraft performance but for the economics of business aviation itself.

As the industry continues to pursue credible pathways to lower emissions, the Phantom 3500 programme offers a clear illustration of how aerodynamic innovation — rather than compromise — may play a defining role in shaping the future of flight.

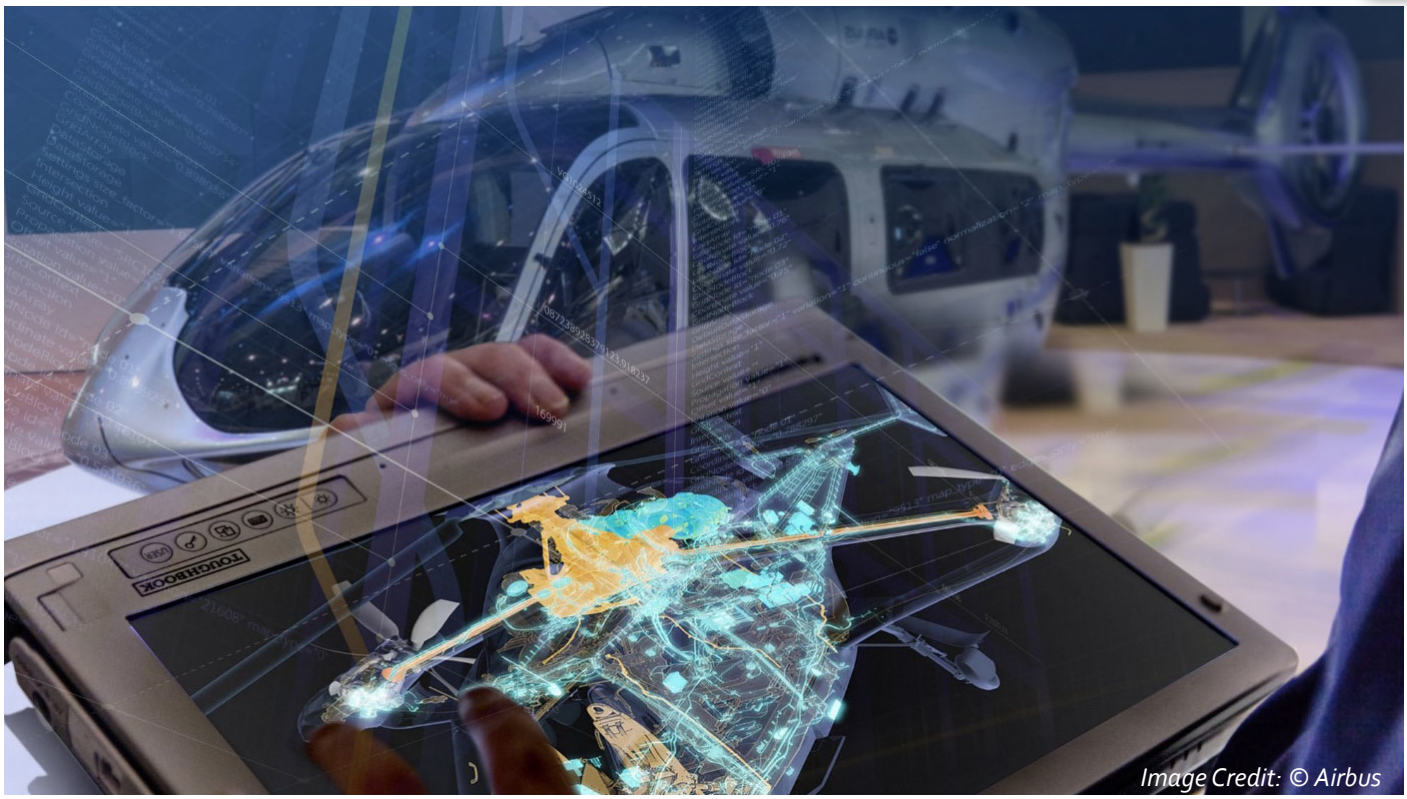


Image Credit: © Airbus

AI IN AVIATION: FROM OPTIMISATION TO OPERATIONAL INTELLIGENCE

In 2026, artificial intelligence (AI) is no longer a speculative concept in aviation but a mission critical engine for optimisation, safety and efficiency across the industry — from flight planning and traffic management to design and predictive maintenance.

As flight operations scale and complexity rises, industry leaders are deploying AI to extract value from data streams that were once too large or too dynamic to manage. At its core, AI enables better decisions, faster responses and smarter design — advancing aviation toward heightened efficiency and resilience.

AI needs to perform consistently under all operating conditions across all operations, AI driven flight optimisation tools analyse weather, traffic and performance data to produce fuel efficient routings that reduce cost and emissions. These algorithms adapt in real time to changing conditions, enabling airlines to cut fuel burn while maintaining schedule integrity.

In air traffic management, AI contributes to congestion mitigation and safety. Systems infused with machine learning can prioritise sector flows, predict conflict zones and automate routine control tasks, augmenting human controllers and enhancing airspace throughput without compromising safety.

AI's impact extends to aircraft design, where generative models accelerate conceptual exploration and optimise complex structures. Research into physics constrained generative AI shows how machine learning can quickly generate feasible designs within tight aerodynamic and structural envelopes — drastically reducing design cycle times compared with traditional simulation intensive methods.

Operationally, predictive maintenance is redefining reliability. By continuously analysing sensor data, AI models forecast component wear and potential failures before they occur, enabling airlines to schedule maintenance proactively and minimise unscheduled downtime.

AI systems rely heavily on large volumes of high-quality data and this remains a challenge in the industry. By becoming more integrated into aircraft, air traffic control and airport operations the exposure to cyber security also remains a risk. Balancing the relationship between humans and AI also remains a risk where AI is supposed to support rather than replace human operators.

AI's integration into aviation is emblematic of how digitalisation intersects with aerospace engineering and operations. From enhancing safety and efficiency to reducing environmental impacts and enabling smarter design, AI is not an ancillary technology but a core enabler of the industry's next generation. As we look through 2026, the smartest skies will be those that pair human expertise with machine intelligence — producing safer, greener and more responsive air transport for the future.

SKYGUARD GLOBAL©: NINE YEARS IN THE MAKING, READY TO REDEFINE AVIATION INSURANCE

After nearly a decade of development, research, and meticulous refinement, SkyGuard Global is stepping into the spotlight, officially introducing itself to the aviation insurance world. This is not just another insurer entering the market; it is the culmination of nine years of innovation, built to bring intelligence, precision, and operational insight to one of the industry's most complex and high-stakes sectors.

Image Credit: Beechcraft Kingair © Textron Aviation

Uniquely, SkyGuard Global enters the market as both a next-generation Property & Casualty aviation insurer—covering aircraft hull and operational risks—and a ground-breaking Life insurer dedicated to aircrew. By uniting these traditionally siloed disciplines, SkyGuard delivers a holistic insurance ecosystem that recognises the aircraft, the operation, and the human life at the centre of every flight as inseparable elements of risk.

In a field where every flight hour carries significant financial, operational, and human consequence, SkyGuard Global promises something fundamentally different: an insurance model powered by real-time flight data, artificial intelligence, and a deep understanding of how risk actually manifests in aviation.

This launch marks the first public reveal of a platform that has quietly evolved behind the scenes, aligning aviation operations, underwriting, analytics, and life-risk protection into a single, coherent approach.
The company's philosophy is deceptively simple: insurance should anticipate, not just respond. By integrating Flight Data Monitoring (FDM), AI-driven analytics, and advanced actuarial modelling, SkyGuard dynamically assesses risk across aircraft performance, crew behaviour, maintenance trends, operational profiles, and environmental factors. Coverage is continuously informed by real-world activity—no longer static, but responsive, adaptive, and operationally intelligent.

This vision is expressed in SkyGuard's pioneering concept of "Pay-As-You-Fly / Pay-How-You-Fly" coverage, directly linking premiums to how aircraft are operated and how risks are managed. For operators, this represents a powerful incentive to optimise safety, discipline, and operational excellence. For aircrew, it introduces a new generation of life and income-protection solutions that are aligned with actual exposure, flight activity, and occupational risk—rather than blunt, traditional underwriting assumptions.
Driving this ambitious launch is a leadership team uniquely positioned at the intersection of aviation, insurance, and technology. Andre Roos, Founder and Chief Executive Officer, conceived SkyGuard during his studies in aviation safety and accident investigation at Cranfield Aerospace University. With nearly three decades of aviation experience and more than fifteen years in insurance, Andre is widely recognised as an authority in aviation risk, underwriting design, and claims investigation. A licensed pilot and accomplished investigator, he ensures that SkyGuard's solutions remain grounded in operational reality, not abstract theory.

Supporting him is a distinguished group of industry veterans. John McIlraith, Non-Executive Chairman, brings over 40 years of strategic business experience spanning financial services, aviation leasing, and global operations. Ronald Richman, Chief Actuary, applies deep expertise in machine learning and actuarial science to refine predictive risk models across both P&C and Life portfolios. Willie van Graan, Non-Executive Director, oversees underwriting governance and reinsurance structuring, while Steve Garlick, Non-Executive Director, contributes decades of experience in governance, marketing, and international business development.

Together, they translate nine years of research and design into a disciplined, scalable insurance platform. Complementing this leadership is a reinsurance panel of exceptional calibre—arguably one of the most trusted and forward-thinking assemblies in aviation insurance today. Partners include Munich Re, Swiss Re, Hamilton Re, Renaissance Re, Mereo Insurance, SiriusPoint Ltd., and Hannover Re. Each brings strong financial ratings, deep technical capability, and a shared commitment to long-term aviation risk management. For SkyGuard clients, this means protection that is robust, resilient, and aligned with the most advanced risk insights available.

This is insurance that does not merely absorb loss—it anticipates risk, measures behaviour, and actively contributes to safer aviation outcomes.

SkyGuard Global's launch is more than a market entry; it is a statement of intent. In an era of expanding fleets, rapidly evolving aircraft technologies, and unprecedented volumes of operational data, SkyGuard arrives as a forward-looking solution. By embedding analytics, AI, and real-time intelligence into both aircraft and aircrew insurance, it shifts the industry from reactive coverage to intelligent, preventative risk management.

For the first time, the world sees the culmination of nine years of dedication, testing, and strategic design—backed by exceptional leadership and a world-class reinsurance panel. SkyGuard Global is ready not merely to participate in aviation insurance, but to redefine it.

Every policy, every analysis, and every data point reflects a platform designed to make aviation safer, smarter, and more resilient, where insurance evolves from a safety net into a true strategic partner in flight.

For more information visit: www.skyguardglobal.com

Getting you there

- Safely
- Reliably
- Comfortably
- Cost Effectively

Training

AIR-TEC has the only appro
FNPT 2 Simulator in the So
Hemisphere.

AOCs

- SACAA South Africa
- DCA Mauritius
- IACM Mozambique

sales@air-tecm.com | www.air-tecm.com

29	L410 / L420
11	B1900D
1	B200
1	BELL 206

oved L410 –
uthern

Our Core Business

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

AIR-TEC GLOBAL

BARS BASIC AVIATION RISK STANDARD GOLD FLIGHT SAFETY FOUNDATION

AIRCRAFT ELECTRICAL SYSTEMS EMERGE AS A CORNERSTONE OF NEXT-GENERATION AVIATION

By Mr. Rohan Salgarkar – MarketsandMarkets™ INC

As aviation moves steadily towards cleaner, more efficient flight, the quiet transformation taking place beneath the skin of modern aircraft is becoming impossible to ignore. Electrical systems, once secondary to hydraulics and pneumatics, are now at the heart of aircraft design, propulsion and operations, driving a global market set to exceed $110 billion by the end of the decade.

According to new market forecasts, the global aircraft electrical systems market is projected to grow from $94.06 billion in 2025 to $110.40 billion by 2030, reflecting a compound annual growth rate of 3.3 per cent. This growth is not being driven by a single aircraft programme or technology, but by a broad structural shift in aviation itself. The industry's transition towards More Electric Aircraft (MEA) and the longer-term ambition of All-Electric Aircraft (AEA) architectures are redefining how power is generated, distributed and managed on board.

Coupled with fleet expansion, aircraft modernisation and advances in power electronics, electrical systems are increasingly central to performance, efficiency and sustainability across commercial, business, military and emerging aviation segments.

From systems support to systems leadership

Historically, electrical systems played a supporting role, powering avionics, lighting and cabin services.


Image Credit: © AdobeStock

Today, they are integral to propulsion, flight control, environmental systems and mission-critical avionics. The requirement for backup power of the past has developed into a growing technology with multiple electrical systems being embodied for each system with separate functions unlike the sturdy yet predictable aircraft battery systems of bygone eras. Power generation, conversion, distribution, storage and management technologies are evolving rapidly, enabling aircraft designers to replace heavier, less efficient mechanical systems with electrically driven alternatives.

This shift is reshaping aircraft architectures and supply chains alike. Leading aerospace suppliers such as Safran, Honeywell, Thales and RTX are investing heavily in advanced power management, high-density energy distribution and intelligent monitoring solutions, reflecting the growing strategic importance of electrical systems in aircraft design and lifecycle management.

The aftermarket takes centre stage

One of the most striking features of the market outlook is the dominance of the aftermarket, which is expected to account for around 83 per cent of total market share during the forecast period. This reflects the reality of a global fleet that is both growing and ageing, placing sustained demand on maintenance, repair and replacement of electrical components.

Airlines and operators are increasingly upgrading legacy electrical systems with more energy-efficient, digitally monitored solutions. The adoption of predictive maintenance tools and real-time diagnostics is accelerating this trend, allowing operators to anticipate failures, optimise component lifecycles and reduce unscheduled downtime. As aircraft service lives extend, the aftermarket's role in maintaining safety, reliability and regulatory compliance becomes ever more critical.

Advanced air mobility reshapes demand

While traditional aviation segments continue to drive volume, the fastest growth is expected to come from advanced air mobility. Between 2025 and 2030, AAM is forecast to be the most rapidly expanding aircraft type segment, fuelled by the commercialisation of electric vertical take-off and landing aircraft, urban air mobility platforms and hybrid-electric propulsion systems.

These aircraft place unique demands on electrical systems, from high-power energy distribution to advanced thermal management. Manufacturers are responding with innovations such as liquid-based and microchannel cooling architectures optimised for eVTOL and regional AAM platforms. As urban air transport moves from concept to early operation, AAM is set to become a key catalyst for new electrical system designs and technologies.

Europe's role in the electrical evolution

Regionally, Europe is projected to hold the second-largest share of the global aircraft electrical systems market through to 2030. The region's strength lies in its established aerospace manufacturing base, the presence of major OEMs and suppliers, and sustained investment in sustainable aviation technologies.

Countries including France, Germany and the UK are leading the development of next-generation commercial and defence aircraft, supported by strong research frameworks such as Clean Aviation and Horizon Europe. Europe's mature MRO ecosystem and stringent regulatory environment further stimulate demand for efficient, reliable electrical systems across both OEM and aftermarket channels.

As aviation charts its course towards a more electric future, aircraft electrical systems are emerging as a defining enabler of progress. From modernising today's fleets to unlocking the potential of advanced air mobility, the sector's steady growth reflects its expanding role in safety, efficiency and sustainability.

By 2030, the aircraft electrical systems market will not simply be larger; it will be more central to how aircraft are designed, operated and maintained. In an industry increasingly defined by electrons as much as engines, electrical power is fast becoming one of aviation's most valuable currencies.

MarketsandMarkets™ INC

EVTOL & URBAN AIR MOBILITY: THE NEW FRONTIERS OF SHORT RANGE FLIGHT

Urban skies are poised for transformation as growing transportation pressures driven by population growth increase. As 2026 dawns, electric vertical take off and landing (eVTOL) aircraft and urban air mobility (UAM) solutions are evolving from demonstration projects into tangible mobility networks — with companies such as Volocopter, Lilium and Alidus at the forefront.

Once the domain of sci fi futurism, eVTOL aircraft are taking increasingly concrete shape as short range connectors in congested urban environments. Powered by distributed electric propulsion and designed for vertiport integration, these platforms aim to offer quieter, more efficient alternatives to traditional ground transport while alleviating urban congestion.

Volocopter has long championed the urban air taxi concept, developing multi rotor electric aircraft tailored to short point to point hops within cityscapes. Its designs prioritise redundancy and safety through multiple electric rotors, while digital systems like VoloIQ lay the groundwork for automated urban air traffic management and operations.

Lilium, by contrast, has pursued a ducted fan, fixed wing eVTOL architecture designed for higher cruise speeds and regional connectivity. Its vision encompasses vertiports and digital service networks that link suburbs with city centres and regional nodes — a model aimed at scaling beyond pure intra city hops to shorter inter urban distances.

Emergent players like Alidus are also contributing to the ecosystem, proposing tailored urban air solutions that bridge gaps between traditional helicopters and fixed wing short haul flights. While each manufacturer's approach differs, the shared objective is unmistakable: transform short range travel through electric propulsion and digital integration.

The broader market continues to mature despite challenges. A comprehensive analysis by industry consultancies shows over 11,000 order commitments across nearly 30 eVTOL OEMs, indicating sustained interest even as companies refine designs and navigate regulatory hurdles.

Though mass commercial operations are still emerging, eVTOL and UAM innovations are steadily reshaping expectations for short-range travel. From Volocopter's urban air taxi ambitions to Lilium's regional connectivity strategy and Alidus's emerging urban connectors, these platforms signal a new era of mobility — one where the sky becomes an extension of urban infrastructure rather than a distant frontier.
eVTOL aircraft have the potential to redefine urban mobility by offering fast, clean and flexible air transportation within cities. However, their long-term success will depend on how effectively the industry addresses sustainability challenges, integrates with existing transport ecosystems, and navigates regulatory, infrastructure and operational complexities as urban air mobility matures.

Image Credit: © Lillium

UNITED'S MOBILE APP EVOLVES INTO A DIGITAL FLIGHT DECK FOR PASSENGERS

As airlines continue to digitise the passenger journey, United Airlines is pushing the boundary of what a mobile app can do, transforming it from a boarding pass repository into an intelligent, real-time travel companion.

With a suite of new features unveiled in December, the carrier is using data, automation and AI-supported tools to streamline decision-making for travellers at every stage of their journey.

From gate anxiety to situational awareness

Among the most notable enhancements is Virtual Gate, a feature designed to remove one of the most familiar sources of airport stress. Rather than crowding around boarding areas, customers can now view real-time updates on which boarding groups are being called, accompanied by a progress bar showing how many passengers have already boarded. The concept mirrors avionics-style situational awareness, giving passengers clear, continuously updated information that allows them to manage their time more efficiently.

In a similar vein, United has introduced a United Club 'closest and best' recommendation tool. Using gate proximity and lounge capacity data, the app suggests the most suitable United Club location nearby. Capacity insights are initially available at Chicago O'Hare, with plans to expand to additional airports during 2026.

End-to-end visibility for bags and passengers

Baggage tracking has also taken a significant step forward. United's upgraded bag tracker now functions much like a package delivery app, displaying the real-time location of checked luggage throughout the journey. Combined with the airline's existing integration of Apple's Share Item Location for AirTag, the system aims to improve transparency and reduce uncertainty in the event of mishandled baggage.

Beyond bags, the app is becoming increasingly personalised. Travellers receive tailored guidance based on their specific needs, whether flying with strollers or wheelchairs, navigating travel document requirements, or opting for biometric boarding. Arrival information is also delivered directly to the app.

AI at the core of the experience

Underlying these features is a broader shift towards predictive, AI-supported navigation. United says the app now anticipates which tools will be most useful

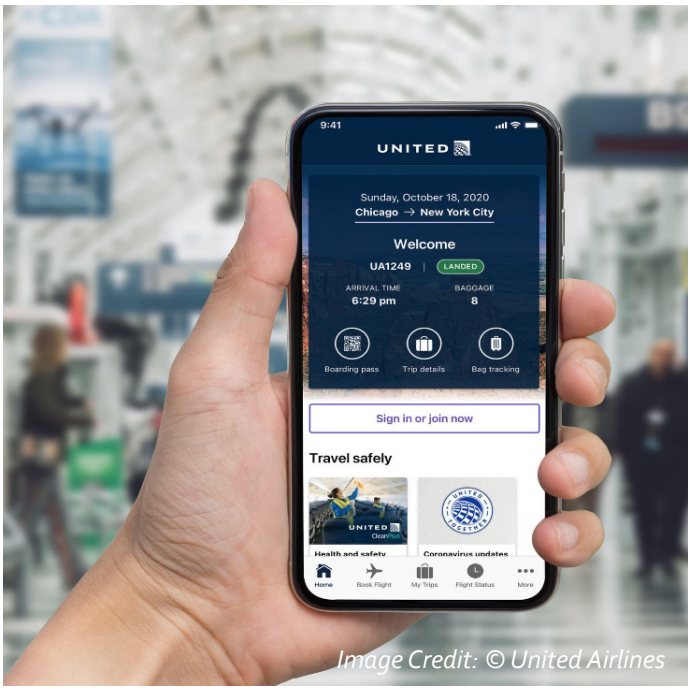


Image Credit: © United Airlines

to customers at different points in their journey, presenting relevant information without the need for manual searching. With more than 84 per cent of United customers using the app on the day they fly, the airline is effectively treating the platform as a digital extension of its operational systems.

The timing is deliberate. United expects to carry more than 10 million passengers during the winter holiday travel period, its busiest ever for that season. According to David Kinzelman, United's Chief Customer Officer, providing timely, personalised information is central to building passenger confidence, particularly during peak travel periods.

Building on a foundation of self-service technology

The latest updates build on a series of app-based innovations United has rolled out in recent years. These include personalised connection guidance with turn-by-turn directions and walk-time estimates, automatic rebooking assistance during disruptions, and real-time weather delay updates supported by generative AI tools. Collectively, these features point to a strategic focus on self-service and transparency, reducing reliance on airport queues and call centres while keeping passengers informed.

United's newest app enhancements reflect a broader trend in commercial aviation, where digital tools are increasingly designed with the same principles as cockpit avionics: clarity, real-time data and decision support. While none of the features changes the aircraft itself, together they reshape how passengers interact with the airline's systems on the ground.

Image Credit: © Boom

A SMALL FLAME WITH BIG IMPLICATIONS: TESTING SYMPHONY'S COMBUSTION SYSTEM

Spend enough time with engineers, and you notice they're usually chasing a moment. Sometimes it's a fraction of a second, where months or years of research and development come to life in a flash. For the Boom team developing Symphony, an engine built from the ground up for supersonic flight, one of those moments happened recently at the Ben T. Zinn Combustion Lab at Georgia Tech, a leading research centre in the fields of combustion and propulsion.

Through the window of a superalloy chamber, propulsion engineers from Boom, along with Georgia Tech researchers, watched as an igniter fired, filling the chamber with a blue-orange flame hot enough to melt aluminium. The single fuel nozzle, designed to help Symphony achieve 40,000 pounds of thrust, had come to life.

"It is amazing," says Boom Senior Propulsion Engineer Dr. Nishant Jain. "It's like rubbing sticks and seeing the first fire. It's the same kind of exhilaration."

For Boom, this wasn't just a test. It proved that the team's combustor design can handle the extreme conditions required for sustainable supersonic flight, rethinking not just higher speed but the entire propulsion ecosystem.

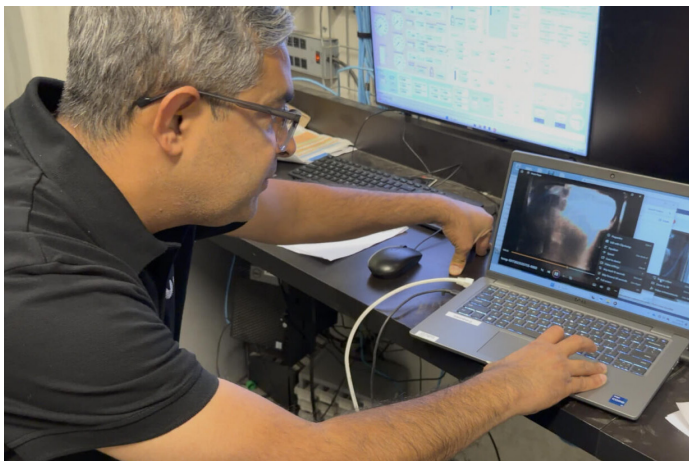
The Tiny Part Powering Flight

A fuel nozzle doesn't look like much. Passengers boarding a plane likely won't see it. It's a small metal piece deep inside the engine, yet critical to achieving propulsion.

The fuel nozzle's job is to precisely mix fuel and air so ignition happens cleanly and reliably, ultimately driving the turbines. "You've got to mix the fuel with the air at the right time, in the right amount, and at the right distance," says Jain.

The challenge is that the combustor needs to stay lit across a wide range of conditions — from idle on the runway to supersonic cruise — and do so cleanly enough to meet performance and emissions standards. "We are basically starting a fuel nozzle and combustor design from a sheet of paper," he explains.

This approach is rare in aerospace today, where most engines evolve from legacy designs. Symphony and



Boom Senior Propulsion Engineer Dr. Nishant Jain studies video from a recent fuel nozzle test.

its combustor are part of Boom's strategy of vertical integration in designing and building Overture, the world's fastest airliner.

How a Single Fuel Nozzle Simulates an Entire Engine

Boom engineers teamed with Georgia Tech scientists to build a custom testing rig housing a single fuel nozzle and the combustion chamber. While the rig contains just one nozzle, a full ring of nozzles will eventually wrap around Symphony's core.

Isolating to a single nozzle allows engineers to study details almost impossible to observe in a fully assembled engine. "Isolated rig tests let us use more instrumentation and advanced optical diagnostics to gain insight into areas we can't easily study in full engine tests," says Boom Hot Section Lead Kevin Song.

Over the next several months, Boom and Georgia Tech engineers will conduct weekly combustion tests, simulating various flight conditions and studying fuel nozzle performance. Each ignition captures thousands of data points per second, validating combustor design models and serving as a dress rehearsal for the main event: Boom's 2026 sprint core engine test.

The sprint core — measuring 12 feet long and four feet in diameter — is the high-pressure spool of the engine, made up of the compressor, combustor, and turbine. "The test results will enable us to design a more sophisticated Symphony combustor that's regulation-compliant," says Song.

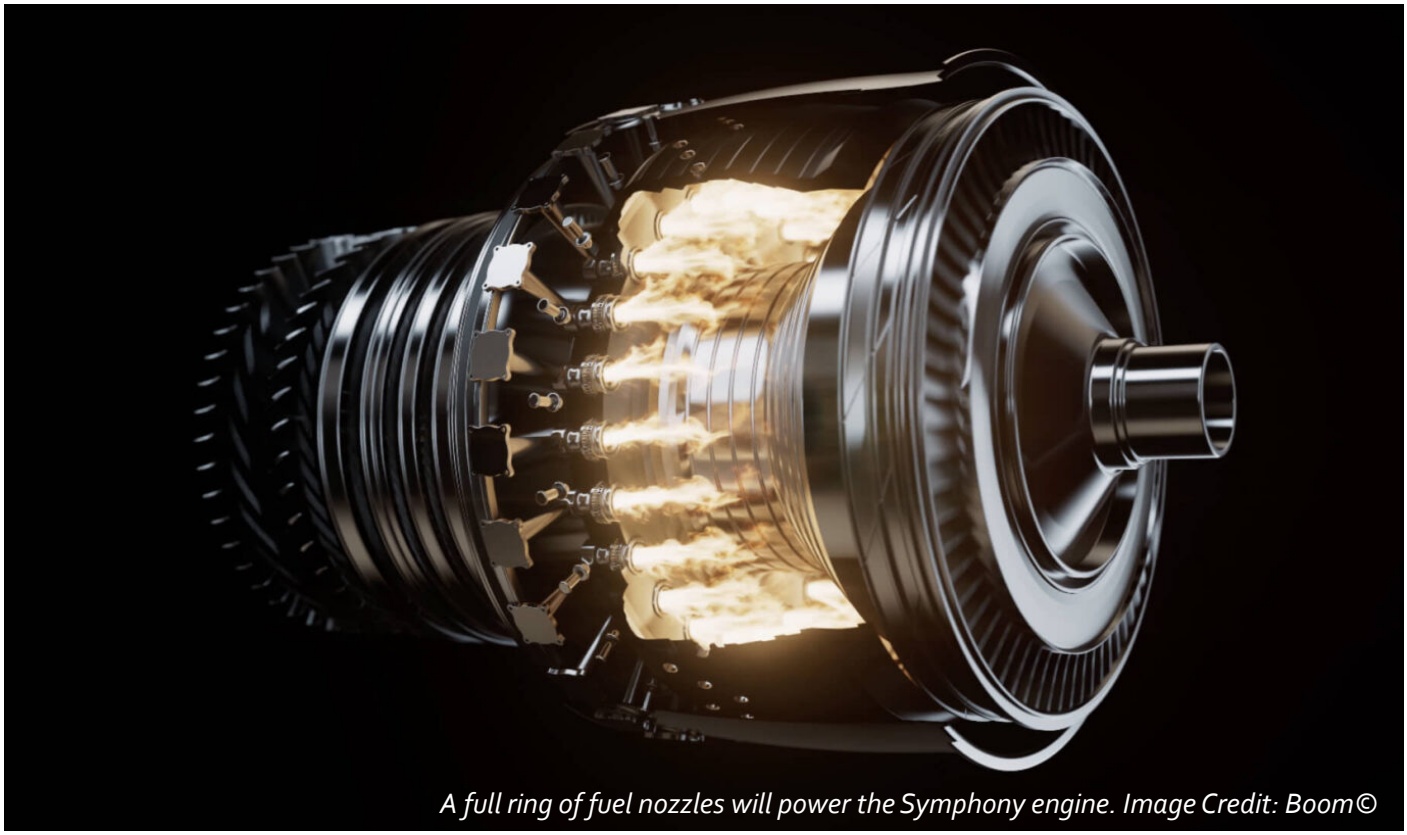
Built for Progression

The rig itself is a product of the partnership between Boom and Georgia Tech, alongside modern manufacturing advances. Additive manufacturing, industrial-grade 3D printing, produced many of the rig's key components, including the fuel nozzle. Combined with AI and digital design tools, this approach allows engineers to iterate faster and integrate design changes as new data comes in.

For Jain, Georgia Tech was a bit of a homecoming. He earned his master's studying combustion under Professor Zinn, the lab's namesake, and completed his PhD there. Now, standing in the same lab, he watches a flame that will one day power Symphony. "It's a full-circle moment to support a lab that continues to pioneer propulsion innovation and foster industry partnerships."

What They're Watching For

The rig is packed with sensors measuring temperature, pressure, and more, while cameras capture the flame



A full ring of fuel nozzles will power the Symphony engine. Image Credit: Boom©

in high-speed detail. "We're looking at things like flame shape, emissions, and ignition," says Dr. Connor Godbold, a Georgia Tech research engineer. "We're using cutting-edge, world-class diagnostics to understand the thermodynamic and fluid dynamic conditions inside the combustor."

During a test, engineers focus on three forms of validation: safety, ignition, and flame stability. A safe test means combustion is fully contained and controlled, with precise adjustment of fuel and airflow to manage heat release. Successful ignition occurs when the flame lights cleanly on one of the first sparks. From there, stability is critical: the flame must sustain itself as long as the fuel-air mix is correct. "We know it's working when we can repeat that result again and again," says Jain.

The Supersonic Factor

Building engines for supersonic flight changes the rules. "A supersonic engine sees a wider operating envelope," says Song. Compared to subsonic engines, Symphony will face more varied and demanding conditions, particularly in how long and intensely hot-section components endure heat.

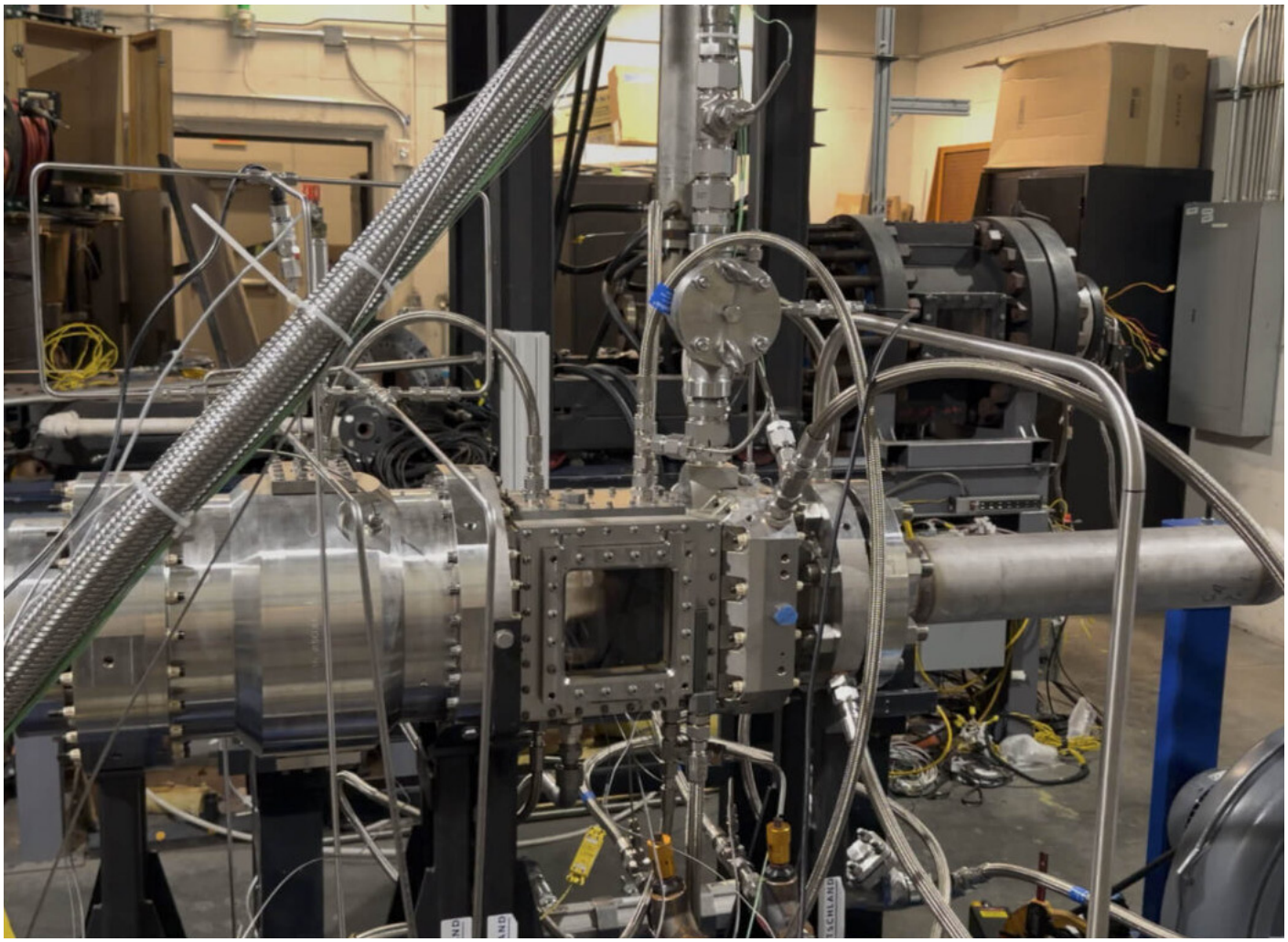
As one engineer explains, engines still need subsonic airflow through the engine to operate — supersonic airflow creates shock waves at the intake that disrupt smooth operation. This principle underpins why Symphony's combustor and fuel nozzle are designed to carefully manage airflow, ensuring that even at supersonic speeds, combustion remains stable and efficient.

In a typical subsonic engine, the hottest moment occurs during takeoff. But for a supersonic aircraft, the peak operating point comes during supercruise, when the engine runs at high speed for an extended period. The combustor, turbine, and other hot-section components must continuously endure scorching temperatures while maintaining reliable performance.

What Comes Next

The fuel nozzle will next be tested on Symphony's sprint core at the Colorado Air and Space Port (CASP) in Watkins, just 35 miles from Boom headquarters. The site, previously used for hypersonic engine development, is being upgraded with more than $3 million in new infrastructure for the next phase of testing.

When the data collected at Georgia Tech is validated in sprint core testing at CASP, it will mark a key step in optimising Symphony's design — the engine built to power Overture and make supersonic flight efficient and sustainable for the future.



Boom engineers worked with scientists at Georgia Tech to build a custom testing rig for Symphony's fuel nozzle.

ANGOLA STRENGTHENS ITS BORDERS AS IT BUILDS A GLOBAL TRANSPORT HUB

As passenger numbers rise and international travel becomes ever more complex, border management is fast emerging as a defining capability for aspiring aviation hubs. Angola is now placing digital borders at the centre of its strategy, deploying advanced passenger data technology to strengthen security.

In a move that signals a decisive step in the modernisation of its aviation ecosystem, Angola's National Civil Aviation Authority (ANAC) has implemented SITA's Advance Passenger Information and Passenger Name Record Gateway at Dr. António Agostinho Neto International Airport. The deployment is part of a broader national programme to modernise border operations, supported by SITA's Passenger Information Unit consultancy services and anchored by the creation of a new Passenger Information Monitoring and Management centre in Luanda.

Together, these initiatives are designed to give Angolan authorities earlier visibility of inbound passengers, faster decision-making capabilities and a stronger operational framework to manage growing volumes of international travel.

At the heart of the upgrade is the ability for airlines to transmit passenger information to authorities before departure. Advance Passenger Information provides passport and identity details, while Passenger Name Record data offers insight into itineraries and booking histories. By bringing these datasets together through a single gateway, authorities gain a more complete and timely picture of who is travelling to Angola.

With SITA's guidance, this data is not simply collected, but structured and analysed within defined governance frameworks. The result is a shift from reactive border control to a more preventive model, allowing officials to identify irregularities, detect suspicious travel patterns and prevent unauthorised passengers from boarding flights bound for the country.

The system also aligns Angola with international requirements set by the United Nations Security Council, the International Civil Aviation Organization and the European Union, reinforcing compliance as travel volumes increase. This places Angola at the forefront of many other Africa destinations while improving the whole flying experience for all involved.

A national command centre for border operations Complementing the technology rollout is the establishment of a national Passenger Information Monitoring and Management centre in Luanda. Scheduled for inauguration on 26 November 2025, the facility will serve as the central hub for Angola's border operations, bringing together multiple workstations where specialists can monitor and analyse API and PNR data in real time.

Located adjacent to the centre is a dedicated data facility with high processing and storage capacity, ensuring secure and uninterrupted communication between systems. The close integration of analytics and infrastructure is intended to support rapid assessment of large volumes of passenger information and enable coordinated responses to potential risks.

For Angola's leadership, the significance of the project extends well beyond technology. State Secretary for Civil Aviation, Maritime and Port Sectors Rui Carreira has described the initiative as a historic milestone, strengthening border security while reinforcing Angola's position as a modern and competitive international transport hub.

ANAC President Amélia Kuvíngua echoes that sentiment, noting that the system allows authorities to act preventively, manage migratory flows more effectively and strengthen preparedness against transnational crime, all while operating with greater confidence and efficiency.

SITA views Angola's approach as emblematic of a wider shift across Africa, where governments are accelerating digital transformation to keep pace with rising demand. By combining API and PNR capabilities with a national monitoring centre, Angola is adopting an operational model that improves predictability at the border, reduces risk for airlines and authorities, and supports the seamless travel experience passengers increasingly expect.

These digital investments are closely aligned with Angola's broader infrastructure ambitions. The new Dr. António Agostinho Neto International Airport, designed to handle up to 15 million passengers a year, is integrated with road, rail and port networks, strengthening national and regional connectivity.

Visa-free entry for citizens of 98 countries and growing international visibility as a tourism destination further underscore the country's outward-looking strategy.

As global travel continues to rebound and diversify, the ability to manage borders intelligently is becoming a competitive differentiator for aviation hubs. By deploying SITA's API PNR Gateway and investing in a national Passenger Information Monitoring and

Management centre, Angola is putting in place the digital foundations needed to balance security, efficiency and growth.

In doing so, the country is not only modernizing its borders, but signaling its readiness to play a larger role in the global transport network, where data-driven decision-making is fast becoming as critical as runways and terminals.

Find out more at www.sita.aero

CLEARING THE SKIES: 2026'S PUSH TOWARD CARBON NEUTRAL AVIATION

In 2026, aviation stands at a defining crossroads. After years of ambitious pledges and incremental progress, the industry is moving from conversation to tangible action in its pursuit of carbon neutral skies. From scaling Sustainable Aviation Fuels (SAF) to electrifying airports and charting realistic timetables for electric and hydrogen aircraft, 2026 is shaping up as a pivotal year — a year in which sustainability shifts from aspiration to application.

Flying Greener with Sustainable Aviation Fuels

At the heart of aviation's decarbonisation strategy for 2026 is Sustainable Aviation Fuel (SAF) — bio and synthetic fuels that can cut lifecycle CO_2 emissions by up to 80% compared with conventional jet fuel. What makes SAF compelling is its drop-in compatibility with existing aircraft and fuel infrastructure, meaning airlines can begin lowering emissions today without waiting for new propulsion systems. This is a major cost saver in the development of the industry and has thwarted initial concerns about the use of SAF.

Governments and industry bodies are accelerating SAF adoption through policy and market innovation.

In Europe, the ReFuelEU Aviation mandate requires a minimum SAF blend at departure — starting at 2% in 2025 and ramping up toward 70% by 2050 — signalling a firm regulatory backbone for uptake. In parallel, industry collaboration models such as Airbus's Book and Claim scheme aim to unlock SAF volumes by separating where fuel is used from where emissions reductions are claimed, helping smaller operators access supply they otherwise couldn't.

SAF is increasingly visible at the airport level too: airports are forging supply partnerships, hosting blending facilities, and elevating public awareness through initiatives that embed SAF into passenger and stakeholder engagement. The 2026 SAF Global Summit in London will further propel policy coherence, investment momentum, and supply logistical planning — essential building blocks for scaling production and narrowing the gap between ambition and reality.
SAF is currently aviation's most scalable pathway to near term emissions reduction. While cost and supply remain challenges, policy mandates and collaborative market mechanisms are forging clearer pathways for expanded use in 2026 and beyond.

Airports Fuel the Green Transition

Decarbonising aviation extends well beyond the fuel pumps. Airports themselves are rapidly embracing green energy and operations, transforming into hubs of sustainability rather than just transit points.

Renewable power adoption, microgrid integration, and electrification of ground equipment are becoming mainstream. Elsewhere, solar and wind partnerships are enabling airports to power facilities with clean energy, reducing Scope 1 and 2 emissions — a critical prerequisite for broader sustainability goals.

Hydrogen and electricity infrastructure planning is now a strategic imperative rather than a distant aspiration. Research shows that the first commercial hydrogen flights could depart as early as 2026, and airport planning cycles now routinely incorporate hydrogen production, distribution, and storage solutions. However, meeting future electrification needs — where airports might see a five fold increase in electricity demand by 2050 — requires long lead investments and cross sector partnerships starting now. The airport of the future is a clean energy hub. Success in 2026 will be measured by how well airports integrate renewable power, SAF logistics, and hydrogen readiness into core operations.

Electric and Hydrogen Flight: Timelines for Adoption

Beyond fuel and power supply, the aircraft themselves are evolving.

Electric aircraft are advancing most rapidly in the regional and short haul sectors. Battery technology remains a barrier for long range operations today, but by the early 2030s, several models capable of regional flights (roughly up to 1,000 km) are expected to enter service.

Hydrogen propulsion — whether via fuel cells or combustion of liquid hydrogen — represents one of the most promising low carbon alternatives for medium range flights. Industry research and emerging infrastructure planning suggest that hydrogen powered aircraft could begin commercial operations as early as 2026 for niche routes, with broader regional rollout between 2030 and 2035.

Notably, airlines and manufacturers are already conducting trials and forming strategic alliances to accelerate this pipeline. While mainstream long haul hydrogen or electric flights remain a longer term goal, early deployment on shorter routes this decade will create vital operational data and infrastructure investments that benefit the entire sector.

2026 marks the start of real flights driven by alternative propulsion technologies. Electric and

hydrogen aircraft will initially serve short to medium sectors, laying the groundwork for more ambitious future adoption.

2026 as a Sustainability Milestone

If 2025 was a year of commitments and blueprints, 2026 is shaping up as the year of implementation — where policy, infrastructure, and technology intersect to make measurable inroads toward carbon neutral aviation.

The SAF ecosystem is growing from pilot projects to structured markets supported by regulation and innovative commercial mechanisms. Airports are evolving into sustainability platforms powered by renewables, readying for new fuel types and propulsion demands. And electric and hydrogen aircraft are transitioning from lab benches and testbeds to scheduled service on shorter routes.

For industry stakeholders and passengers alike, the message is clear: the pathways toward carbon neutral aviation are becoming operational realities, not distant ideals. Success in 2026 will fundamentally shape aviation's trajectory toward the net zero goals set for 2050, providing momentum while illuminating key challenges ahead.

Clearing the Skies: 2026's Push Toward Carbon-Neutral Aviation

2026 marks a pivotal year in aviation's sustainability journey, with measurable progress across fuels, airport operations, and aircraft propulsion. The industry is transitioning from commitments to tangible implementation, driving carbon reduction across multiple fronts.

Key Highlights:

- Sustainable Aviation Fuels (SAF): SAF adoption expands through regulatory mandates and market mechanisms, offering up to 80% lifecycle CO_2 reduction. Airlines and airports are increasingly integrating SAF supply into operations.
- Green Airports: Renewable energy, microgrid integration, and electrification of ground support equipment are accelerating. Airports are emerging as clean energy hubs, preparing for hydrogen and electric aircraft infrastructure.
- Electric & Hydrogen Aircraft: Regional electric aircraft are entering service, while hydrogen propulsion trials for short- and medium-haul flights begin. Practical adoption timelines suggest broader deployment between 2030–2035.
- Takeaways: 2026 is the year sustainability moves from planning to operation, creating actionable pathways for the industry's 2050 net-zero targets.
- Implications for the Industry: Immediate reduction of emissions via SAF.
- Airports investing now in renewable energy and alternative fuel readiness will benefit long-term operational efficiency.
- Early electric and hydrogen flights provide critical data to scale sustainable propulsion technologies.

SAF PRODUCTION GROWTH RATE IS SLOWING DOWN, ESSENTIAL TO CORRECT COURSE AHEAD OF E-SAF MANDATES

Sustainable Aviation Fuel (SAF) production is increasing, but not at the pace required to support aviation's decarbonisation ambitions. New figures released by the International Air Transport Association (IATA) show that while output will double year-on-year in 2025, momentum is already weakening, raising serious concerns as SAF and e-SAF mandates draw closer in Europe and the UK.

IATA estimates that global SAF production will reach 1.9 million tonnes (Mt), or 2.4 billion litres, in 2025, up from 1 Mt in 2024. Growth is expected to slow further in 2026, with output rising to just 2.4 Mt. Even at these levels, SAF will account for only 0.6% of total jet fuel consumption in 2025, increasing marginally to 0.8% the following year.

The financial implications for airlines remain substantial. At current prices, the SAF premium will add an estimated USD 3.6 billion to industry fuel costs in 2025.

SAF prices continue to exceed conventional jet fuel by a factor of two, and by as much as five times in markets where mandates apply.

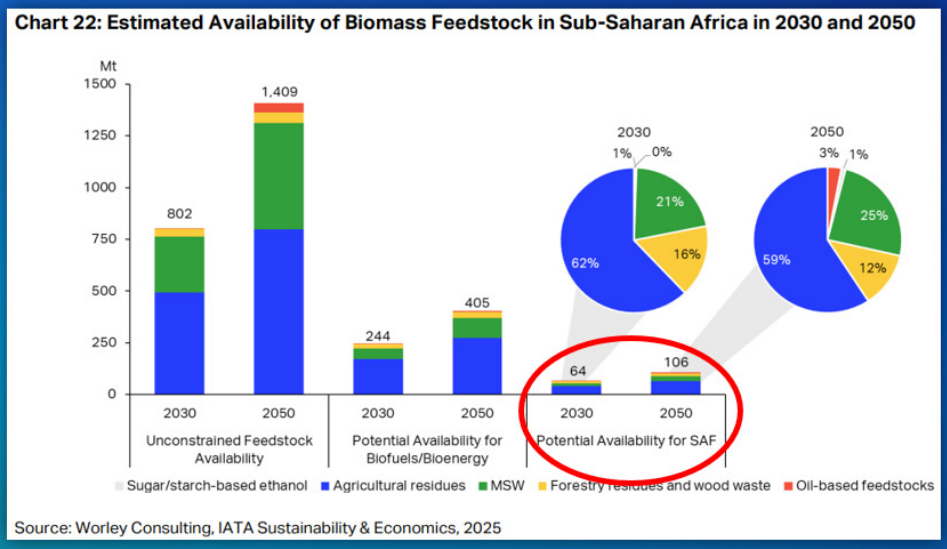
Notably, IATA has revised its 2025 SAF output forecast downward. The association attributes this to insufficient and poorly aligned policy support, which has prevented the industry from fully utilising installed production capacity. Instead of stimulating investment and scaling supply, existing mandates have constrained growth and inflated costs.

"SAF production growth fell short of expectations as poorly designed mandates stalled momentum in the fledgling SAF industry," said Willie Walsh, IATA's Director General. "If the goal of SAF mandates was to slow progress and increase prices, policymakers knocked it out of the park. But if the objective is to increase SAF production to further the decarbonisation of aviation,

Image Credit: © Wan

African SAF Opportunity – Domestic Use Case

SUSTAINABLE AEROSPACE TOGETHER



A recent IATA study analyzed biomass feedstock available for SAF production in several regions. They determined that there was 106 Mt available in Sub-Saharan Africa. A further 114 Mt was available in MENA (not shown in this graph)

then they need to learn from failure and work with the airline industry to design incentives that will work."

IATA has been particularly critical of the outcomes of SAF mandates in the European Union and the United Kingdom. In Europe, the ReFuelEU Aviation framework has significantly increased costs in an environment of limited SAF capacity and highly concentrated supply chains. Fuel suppliers have widened margins to such an extent that airlines are paying up to five times the price of conventional jet fuel and double the prevailing market price of SAF, often without guaranteed supply or consistent documentation.

In the UK, SAF mandates have similarly driven price volatility, leaving airlines to absorb sharp increases without corresponding improvements in availability. As a result, airlines paid a cumulative premium of USD 2.9 billion for the limited 1.9 Mt of SAF available in 2025. Of this, USD 1.4 billion reflects the standard price differential between SAF and conventional jet fuel, with the remainder attributed to mandate-driven market distortions.

"Europe's fragmented policies distort markets, slow investment, and undermine efforts to scale SAF production," Walsh said. "Europe's regulators must recognise that its approach is not working and urgently correct course. The recent European Commission STIP announcement is a step forward though it lacks a clear timeline. Actions, not words, are what matter."

The impact is now extending beyond costs and into airline sustainability commitments. According to IATA, many carriers that pledged to achieve 10% SAF usage by 2030 may be forced to reassess those targets due to insufficient supply.

"Regrettably many airlines that have committed to use 10% SAF by 2030 will be forced to reevaluate these commitments," Walsh noted. "SAF is not being produced in sufficient amounts to enable these airlines to achieve their ambition. These commitments were made in good faith but simply cannot be delivered."

Looking ahead, IATA has warned regulators not to replicate the same policy missteps as e-SAF mandates approach. The UK is set to introduce e-SAF requirements in 2028, followed by the EU in 2030, yet e-SAF already faces a much higher cost base, potentially up to 12 times that of conventional jet fuel.

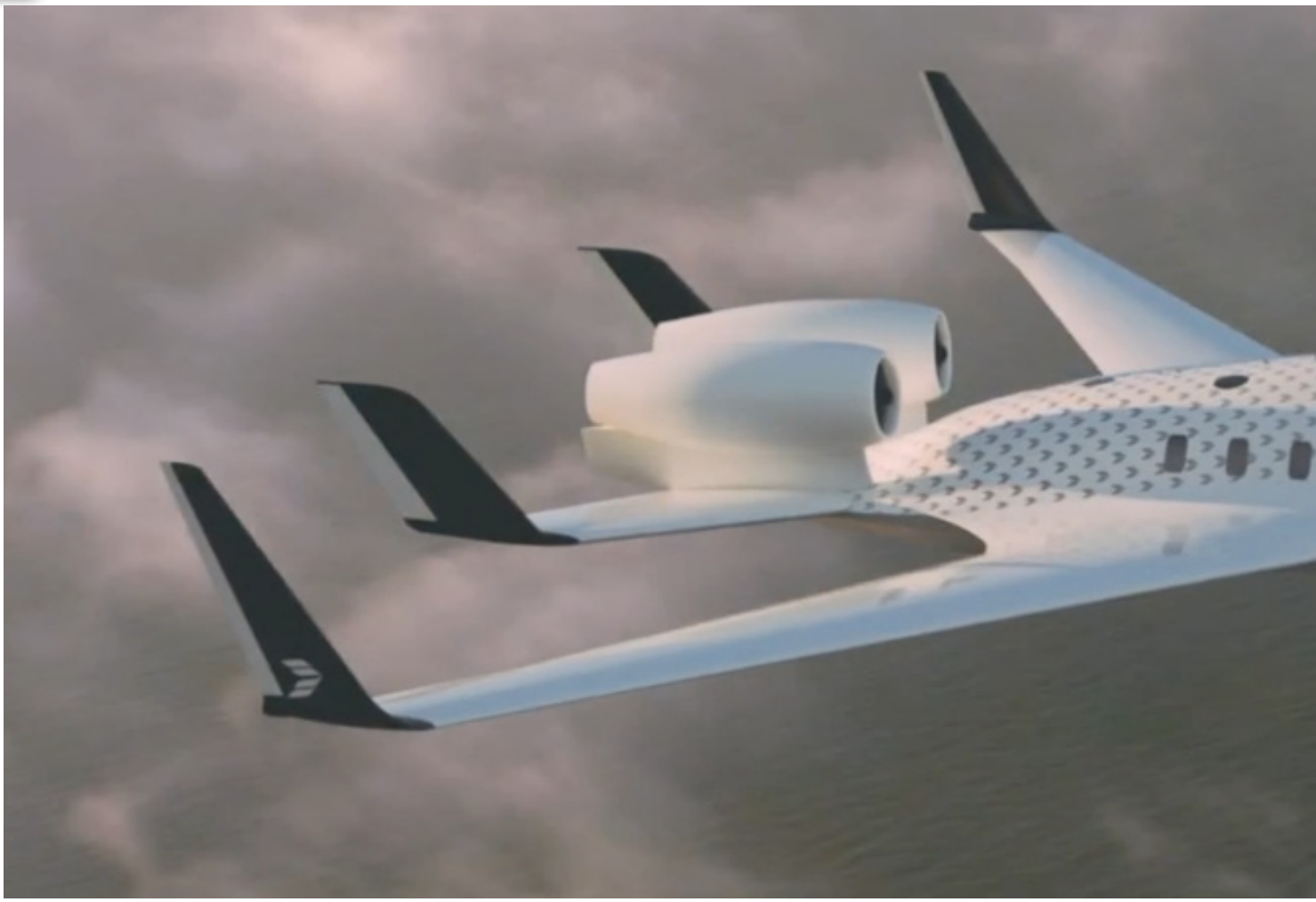
Without strong production incentives, rather than an overreliance on mandates, supply is expected to fall well short of targets. Under the current policy framework, compliance costs could reach EUR 29 billion by 2032 if obligations are not met.

"Given the low SAF production volumes, it is evident that current policies are not having the desired effect," said Marie Owens Thomsen, IATA's Senior Vice President for Sustainability and Chief Economist. "Faced with such facts, regulators must course-correct, ensure the long-term viability of SAF production, and achieve scale so that costs can come down. Mandates have done just the opposite, and it is outrageous to repeat the same mistakes with e-SAF mandates."

-As the industry edges closer to binding SAF and e-SAF requirements, IATA's position is unequivocal. Without coherent, incentive-based policies that encourage investment, expand capacity and support long-term scale, mandates risk entrenching high costs while delivering limited environmental benefit.

Correcting course now, before e-SAF requirements come into force, will be essential if sustainable fuels are to fulfil their intended role in aviation's transition.

Article Adapted from IATA Press release No. 57
For more information : www.iata.org



BOMBARDIER ECOJET: A LABORATORY IN THE SKY SHAPING THE FUTURE OF SUSTAINABLE BUSINESS AVIATION

While the business aviation sector continues to balance performance expectations with mounting environmental pressures, Bombardier is quietly advancing a research programme that challenges the very shape of future aircraft. Known as the EcoJet, the project is less about an imminent product launch and more about redefining what sustainable business aviation could look like in the decades ahead.

At first glance, the Bombardier EcoJet appears almost futuristic, its blended wing body silhouette departing dramatically from the familiar tube-and-wing configuration that has defined jet design for generations. Yet the ambition behind the programme is firmly rooted in today's realities. With global aviation aligned to net-zero carbon emissions by 2050, Bombardier has positioned the EcoJet as a flying laboratory, designed to explore the technologies, materials and aerodynamic principles that could enable a step change in efficiency for future business jets. Rather than promising a near-term aircraft, the EcoJet serves as a research platform, allowing engineers to test ideas that would be difficult or risky to introduce directly into a certified production programme.

Rethinking the shape of efficiency

At the heart of the EcoJet concept lies the blended wing body (BWB) configuration. By merging the fuselage and wings into a single, continuous lifting surface, the design significantly reduces aerodynamic drag while increasing lift efficiency. The result, in theory, is a dramatic reduction in fuel burn, with Bombardier targeting up to a 50 per cent improvement compared with conventional business jet architectures.

This radical airframe shape also opens new possibilities beyond pure aerodynamics. The internal volume of a BWB design offers flexibility for alternative

Image Credit: © Bombardier

propulsion systems and fuel storage, supporting future compatibility with Sustainable Aviation Fuels (SAF), hybrid-electric architectures and, potentially, hydrogen-based systems as these technologies mature.

Materials, systems and future propulsion

Beyond its distinctive outline, the EcoJet programme is examining the building blocks of next-generation aircraft. Advanced materials form a key area of investigation, with the aim of reducing structural weight while maintaining strength and durability. Lighter airframes, combined with aerodynamic gains, are central to achieving the project's ambitious emissions-reduction targets.

The EcoJet is also conceived as a future-proof platform. Its design philosophy allows for the integration of increasingly sophisticated flight control systems, including autonomous and semi-autonomous capabilities, as well as digital design tools that refine performance models through real-world flight data.

From models to meaningful data

Progress to date has been deliberate and methodical. Bombardier has adopted a phased testing approach, beginning with small-scale demonstrators featuring an approximately eight-foot wingspan, before advancing to larger prototypes measuring around 18 feet. These scaled aircraft have enabled engineers to validate aerodynamic behaviour, control laws and flight stability in real conditions, providing data that cannot be fully replicated in simulation alone.

As of late 2025, testing continues to focus on refining aerodynamic models and performance assumptions, with the larger prototypes delivering increasingly representative insights. The programme draws on Bombardier's internal research capabilities, complemented by collaboration with industry and academic partners.

A long-term vision, not a 2026 aircraft

Despite its progress, Bombardier has been clear that the EcoJet is not destined for certification or delivery in the near term. It is not a 2026 product, nor a standalone aircraft programme. Instead, it represents a long-range investment in knowledge, aimed at ensuring that future Bombardier platforms can adopt proven technologies as they become viable.

Lessons learned through the EcoJet are expected to influence future production aircraft, including potential enhancements to the Global family, where incremental gains in efficiency, materials and systems can be introduced within established certification frameworks.

In an industry often driven by programme launches and delivery milestones, the Bombardier EcoJet stands apart. It is a research aircraft in the truest sense, a laboratory in the sky designed to explore how business aviation can meet the environmental demands of the coming decades without compromising performance or capability.

While its commercial realisation lies beyond 2026, the EcoJet's significance is already clear. By testing bold ideas today, Bombardier is laying the groundwork for a greener generation of business jets tomorrow, ensuring that sustainability is engineered into the future of flight rather than retrofitted after the fact.


Image Credit: © Lillium

PILOTS OF THE FUTURE: SKILLS FOR A HIGH TECH SKY

As aviation technology accelerates into a new era, the role of the pilot — long defined by mastery of aircraft and airspace — is being reshaped around software, data, artificial intelligence (AI), electrification, and systems integration. In 2026 and beyond, the aviation workforce must evolve just as rapidly as the machines it flies. The future belongs to professionals who can blend traditional aeronautical skill with digital fluency and adaptive learning.

The aviation industry's technological frontier is expanding beyond metal and wings into code, algorithms, and electric systems. From AI assisted avionics to advanced flight simulation, the modern cockpit demands a new set of competencies. Pilots — and the broader aviation workforce — now face unprecedented demand for expertise in electrification, software systems, real time data integration, and intelligent automation to safely and efficiently navigate the skies of tomorrow. Training programmes and certification pathways are evolving alongside these changes, forging a new generation of high tech aviation professionals.

Demand for Tech Expertise in the Cockpit

Pilots of the future will be system managers, not just operators of throttle and yoke. As AI and automation systems assume more support functions — from predictive analytics to decision assistance — aviators must become adept at interpreting and supervising complex software outputs rather than merely reacting to analog instruments. This paradigm shift elevates digital literacy to a core competency.

In parallel, electrification and software driven aircraft technologies — such as more electric aircraft architectures and electric vertical take off and landing (eVTOL) platforms — require pilots and maintenance crews to understand electrical power management, systems integration, and energy flow dynamics that were once peripheral to flight operations.

This is not aspirational. The ICAO forecasts a massive workforce requirement — hundreds of thousands of pilots and technicians by 2037 — underscoring that aviation's future is as much about human capital as hardware.

Clear takeaway: Digital literacy, software fluency, and systems integration skills are no longer optional for aviation professionals — they are fundamental to safe and effective operations in a high tech sky. Fortunately the younger generation of today are more computer adept and more knowledgeable in terms of the digitisation of the cockpit.

Training Programmes and Certification

To bridge the gap between traditional pilot training and future skill needs, educational institutions, regulators, and industry partners are retooling curricula and certification standards.

AI enhanced simulation and adaptive learning are transforming how pilots train. Flight simulators now incorporate advanced AI and virtual/augmented reality technologies, allowing trainees to engage with complex scenarios that adapt to individual performance — improving readiness for real world operations.

These immersive systems do more than replicate flight physics. They analyse a student's cognitive load and decision patterns in real time, providing personalised feedback — a leap ahead of traditional instructor centred methods.

Regulatory bodies are also preparing for this shift. The European Union Aviation Safety Agency (EASA) and the FAA are drafting AI roadmaps that will define frameworks for the certification of intelligent avionics systems — including rules for AI enabled tools and human machine interfaces. This will in turn shape the training and examination requirements for pilots working with such technologies.

Meanwhile, industry roadmaps like IATA's New Aviation Ecosystem envision cross disciplinary training pathways that integrate digital systems, human factors, and novel propulsion technologies into standard certification frameworks.

Clear takeaway: Pilot training is rapidly expanding beyond traditional aerodynamics and instrument flying to include AI, software systems, VR/AR simulation, and electric aircraft competencies — and certification pathways are evolving alongside these changes.

Human Tech Integration: New Roles and Mindsets

The future sky demands more than technical know how. As intelligent systems become prevalent, pilots must balance machine generated insights with human judgment. Aviation educational research highlights the importance of human AI collaboration skills, ethics, and critical thinking alongside traditional piloting abilities.

Moreover, aviation roles are diversifying. Technologists, software engineers, data analysts, and systems integrators will increasingly collaborate with pilots and air traffic professionals to ensure system reliability, resilience, and safety. This trend aligns with ICAO's call for more interdisciplinary and digitally

Image Credit: © Eurofighter Typhoon

oriented training to prepare the coming workforce. Clear takeaway: The future aviation professional will blend traditional flight expertise with digital, analytical, and collaborative capabilities — giving rise to new roles and career pathways within the industry.

Navigating the High-Tech Horizon

Aviation's shift into a high-tech ecosystem represents a fundamental change in how aircraft are flown, managed and maintained. Tomorrow's pilots will do more than operate aircraft; they will work alongside advanced software, interpret AI-assisted systems and integrate electrified and digital technologies into everyday flight operations.Training and certification frameworks are evolving in response, incorporating virtual reality, AI-enabled instruction and broader cross-disciplinary learning. As digitisation accelerates, continuous professional development will become an essential feature of an aviation career, ensuring skills remain aligned with rapidly advancing technologies.

Success in this new era will depend on a commitment to lifelong learning, adaptability and a balanced view of automation. AI and advanced systems are not substitutes for human expertise, but tools that enhance decision-making and situational awareness. As cockpit technologies advance, so too must the professionals at the controls, equipped to lead aviation confidently into its increasingly intelligent future.

MANAGING DIVERSITY AT 35,000 FEET: HOW AIRLINES KEEP MULTICULTURAL COCKPITS SAFE AND EFFECTIVE

Modern airline cockpits are no longer defined by nationality, language or culture. Instead, they reflect the global nature of aviation itself, bringing together flight crew from dozens of countries, backgrounds and belief systems. While this diversity brings undeniable strengths, it also presents airlines with a complex operational question: how to respect cultural, linguistic and religious differences without compromising safety. According to Franco Narcisi, Chief Pilot at Avion Express, the answer lies in disciplined standardisation supported by practical flexibility.

From local crews to global flight decks

Historically, many airlines recruited almost exclusively from their home markets, shaped by national regulation and local labour pools. That model has shifted dramatically. Today, international carriers, ACMI operators and airlines in fast-growing regions such as the Middle East and Southeast Asia routinely draw pilots from across the globe.

"For most airlines, multinational flight crews are now the norm," says Narcisi. "This is especially true for carriers based in countries like the United Arab Emirates, where the majority of residents are expatriates. ACMI operators such as Avion Express are no different. Depending on the season, we have pilots from around 55 different countries flying our aircraft."

For ACMI providers in particular, this diversity is not incidental. Their business model depends on rapidly deploying aircraft and crew across regions to meet fluctuating demand, making cultural adaptability an operational necessity rather than a corporate aspiration.

One language, many accents

To manage the complexity of multicultural flight decks, aviation has long relied on a single unifying standard: English. Recognised by the International Civil Aviation Organisation as the language of aviation in 1951, and reinforced through formal language proficiency requirements introduced in 2003, English remains central to safe global operations.

"Our internal policy is clear," Narcisi explains. "English is the official language on the flight deck, even when both pilots come from the same country where English is not their first language."

This standardisation goes beyond regulatory compliance. It supports consistency in decision-making and reduces ambiguity, particularly in high workload or abnormal situations. Yet, as Narcisi notes, the effectiveness of language requirements can vary depending on how they are assessed and enforced. Within EASA environments and at Avion Express, this risk is addressed through structured recruitment screening and simulator-based evaluations that include language proficiency as part of overall competency.

Chief Pilot Franco Narcisi. Image Credit: © Avion Express

Avion Express Crew. Image Credit: © Avion Express

Where standardisation meets reality

While aviation English works well between pilots and air traffic controllers, challenges can emerge on the ground. Ramp staff, fuelling crews and other operational personnel may have only basic English proficiency, particularly outside Europe and North America. "In non-standard situations, ground staff may revert to their native language," Narcisi observes. "This is something we see more frequently in regions such as Latin America."

Airlines often respond pragmatically. Assigning crew members who speak local languages to certain routes can improve communication and operational flow. For highly multinational operators like Avion Express, the diversity of the pilot pool itself becomes an asset, increasing the likelihood that relevant language skills are available when needed.

Respecting belief systems without compromising safety

Cultural diversity in aviation extends beyond language. Religious practices and cultural customs also require thoughtful management. Crew members may need to observe prayer times or fasting periods, while passengers may have specific religious requirements during flight. A critical requirement when it comes to flight scheduling and crew allocation.

Airlines approach this in different ways. Some Middle Eastern carriers, for example, display the direction of Mecca on passenger screens, allowing prayer without disrupting cabin operations. At the crew level, airlines may discuss religious observance during recruitment, not as a matter of discrimination, but to ensure that operational responsibilities can always be met during critical phases of flight.

"The balance is essential," Narcisi notes. "Respecting individual beliefs must never interfere with safety. Clear expectations and open communication help achieve that balance."

The road ahead

Since ICAO first formalised aviation language standards, the industry has made significant progress in managing multicultural crews. Yet much of the responsibility still rests with individual airlines, which must invest in cultural awareness, training and flexible operational strategies to bridge the gaps left by regulation alone. Success, as Narcisi suggests, requires more than a shared language. It demands an understanding of cultural dynamics, robust training frameworks and a commitment to maintaining uncompromising safety standards in an increasingly diverse operating environment.

As aviation continues to expand across borders, diversity in the cockpit will only deepen. For airlines, the challenge is not to dilute that diversity, but to manage it intelligently. By combining firm standardisation with practical adaptability, carriers can ensure that multicultural flight decks remain not only a reflection of global aviation, but a cornerstone of its safety and resilience.

About Avion Express:

Avion Express is a leading narrow-body ACMI (Aircraft, Crew, Maintenance, and Insurance) operator, specializing in the operations of Airbus A320 family aircraft. With over 20 years of experience in the industry, Avion Express has built long-term partnerships with clients across Europe, Africa, Asia-Pacific, and the Americas. To strengthen its market position, the company established Avion Express Malta in 2019 and Avion Express Brasil in 2025 – subsidiary airlines that also operate fleets of Airbus A320 aircraft.

Avion Express is part of Avia Solutions Group, the world's largest ACMI provider, with a fleet of 145 aircraft. The group is the parent company of over 250 subsidiaries, including BBN Indonesia Airlines, KlasJet, FL Technics, BAA Training, and many others.
For more information visit: www.avionexpress.aero .

RAAF MQ-28 Ghost Bat. Image Credit: ©Boeing

RAPID £140 MILLION BOOST FOR DRONE AND COUNTER-DRONE TECH

UK Defence Innovation commits over £140 million in rapid investment to drone and counter-drone technologies, strengthening UK Armed Forces capability and supporting British defence SMEs.

Britain's Armed Forces are set to benefit from a significant uplift in drone and counter-drone capability as the UK Government accelerates investment into defence innovation, while providing rapid growth opportunities for small British defence businesses.

UK Defence Innovation (UKDI), launched earlier this year, will inject over £142 million into drone and anti-drone systems during its first year of operation.

The rapid investment focuses on advancing uncrewed and counter-uncrewed technologies to strengthen UK Armed Forces capability and address the growing Russian-linked drone threat across Europe.

Of the total, around £30 million has been allocated this year to counter-drone technologies designed to protect the UK homeland and allied nations. The funding supports a new approach to defence innovation, enabling faster scaling of prototypes through alternative contracting models.

UKDI was launched by Defence Secretary John Healey MP in July as the focal point for innovation within the Ministry of Defence, backed by a ringfenced annual budget of at least £400 million. The initiative prioritises rapid development and deployment, drawing lessons from the war in Ukraine where drones and unmanned systems have evolved at pace.

While many participating companies remain unnamed, this year's drone investment involves 20 British SMEs, 11 British micro-SMEs and two British academic institutions. The programme aligns with the Strategic Defence Review, which highlighted the need for the UK to remain at the leading edge of innovation within NATO.

Speaking on the investment, Defence Secretary John Healey MP said the surge in funding reflects the urgency of adapting to a new era of threat. He emphasised the importance of learning from the war in Ukraine, citing Russia's continued bombardment of Ukrainian civilians and grey-zone drone incursions across Europe as key drivers behind the accelerated programme.

Among the specific investments announced this year are several high-profile uncrewed and counter-drone initiatives:

- Over £25 million to deliver the Royal Navy's new uncrewed AI submarine, Excalibur. The platform will play a key role in defending against hostile submarine threats as part of the Atlantic Bastion programme to establish a new hybrid Navy. Excalibur was recently unveiled in Portsmouth alongside other Atlantic Bastion capabilities.
- £20 million to support the development of additional laser weapons to complement the UK's DragonFire system. This follows a £300 million contract to install the first DragonFire anti-drone systems on Type 45 destroyers from 2027, five years earlier than planned, sustaining almost 600 jobs nationwide.
- £7.5 million for a new uncrewed helicopter as part of the Royal Navy's future hybrid air wing concept for aircraft carriers. Flight trials are already under way, with the project expected to deliver one of the world's first full-sized autonomous helicopters.
- £12 million to support development of an air-launched collaborative uncrewed air vehicle, enhancing effectiveness against air-to-air threats.
- £5 million in seedcorn funding for prototypes of Land Autonomous Collaborative Platforms, including autonomous drones intended to support British Army Apache helicopters.

The rapid investment into emerging British uncrewed systems businesses is supported by wider commitments under the Defence Industrial Strategy, which aims to position the UK as the best place in the world to launch and grow a defence business.

The Commercial Aviation Association of Southern Africa

CAASA is a non-profit organisation formed in 1944 to promote and protect the commercial interests of the general aviation industry in South Africa

Melissa Sewgolam

Mobile: +27 (0) 82 847 3403

Email: mellisa@caasa.co.za

Gate 9, Lanseria International Airport

www.caasa.co.za

BEYOND THE ATMOSPHERE: SPACE TECHNOLOGIES SHAPING 2026 AVIATION

In 2026, the boundaries between aviation and space technology have never been more permeable. What began with government led exploration is now driven by private enterprise, led by commercial space pioneers such as Elon Musk, Jeff Bezos and Sir Richard Branson. Their ventures are not just reshaping access to space; they are catalysing innovations in propulsion, materials science and navigation that are beginning to reshape the very nature of flight within Earth's atmosphere. These cross industry influences promise to redefine speed, efficiency and safety in commercial and defence aviation alike.

The coming year is set to mark a pivotal moment in aerospace history. Commercial space companies, once fringe upstarts, are now mainstream technological powerhouses. SpaceX, Blue Origin and Virgin Galactic have pushed reusable launch systems, advanced materials and autonomous navigation into public consciousness and industrial reality. As these firms mature, their breakthroughs are not confined to rockets and space capsules — they are finding fertile application in advanced aviation technologies. This article explores the impact of these commercial space players on aviation and how space derived propulsion, materials and navigation systems are influencing aircraft design and operations for the next generation of flight.

The New Space Influence on Aviation

The commercial space race has been characterised by bold visions and risk tolerant innovation. SpaceX, founded by Elon Musk in 2002, has transformed rocket technology with partially reusable launchers and rapid development cycles that dramatically cut costs and accelerate experimentation. The company's engineering philosophy emphasises rapid iteration, systems redundancy and advanced materials — approaches now informing aerospace designs beyond space launchers.

Jeff Bezos's Blue Origin, established in 2000, has taken a more incremental approach, developing reusable suborbital vehicles such as New Shepard and the heavy lift New Glenn rocket. Richard Branson's Virgin Galactic, focused on suborbital tourism, is pivoting to scalable commercial operations with its next generation Delta class spacecraft, a platform that combines aircraft like operations with spaceflight capabilities. These diverse business models share a common denominator: they push technological boundaries that aviation can leverage.

Propulsion Breakthroughs and Aviation Compatibility

Space grade propulsion systems emphasise efficiency, reusability and performance in extreme conditions. SpaceX's dramatic reductions in launch cost stem from reusable booster technology and highly optimised rocket engines capable of withstanding multiple flights. These engineering principles — reusability and robustness — are now influencing next generation aviation propulsion research, especially in the developing high speed and hypersonic flight sectors where traditional jet engines face efficiency bottlenecks.

Meanwhile, experimental propulsion concepts such as air breathing rocket engines and combined cycle systems, though still nascent, point to a future where propulsion technologies may blur the line between atmospheric and exo atmospheric flight. Although not yet commercially realised, these hybrid approaches aim to combine the sustained thrust of rocket systems with the efficiency of air breathing jets — a promising crossover for ultra fast aircraft.

Materials Science: Lightweight, Resilient and High Temperature Capable

Materials innovations driven by space exploration — from heat resistant ceramics to advanced composites — are directly relevant to aviation. Space vehicles operate in extremes of temperature and stress that far exceed typical aircraft conditions. Consequently, materials engineered for space heat shields, structural panels and engine components inform aviation efforts to produce lighter, stronger and more heat tolerant airframes and turbine components. Alongside this, advanced manufacturing techniques such as 3D printing, first widely applied in rocket engine components to reduce weight and complexity, are now increasingly commonplace in aerospace production.

Navigation and Autonomy: From Orbit to Airspace
Space applications have long driven advancements in navigation. Satellite systems pioneered for space missions — particularly global navigation satellite systems (GNSS) — are now integral to precise aircraft routing, enabling performance based navigation and optimised flight paths. The seamless integration of space derived navigation and Earth based avionics improves fuel efficiency, reduces congestion and enhances safety. Other space inspired technologies, including autonomous guidance and fault tolerant systems developed for spacecraft, are influencing aviation's move towards greater autonomy and resilience in both crewed and uncrewed operations.

The Broader Sector Impact

The intersection of space and aviation extends beyond technology. Commercial space's high cadence of testing, data driven design and risk pragmatic engineering is reshaping aerospace development culture as a whole.

NASA's Technology Transfer and Spinoff programme, for example, has long aimed to transfer innovations from space to terrestrial applications, including aviation, fostering economic growth and technological adoption across industries.

As we stand on the threshold of 2026, the convergence of space and aviation technologies is accelerating. Commercial space players — SpaceX, Blue Origin and Virgin Galactic — are not just expanding humanity's reach beyond Earth's atmosphere; they are catalysing innovations that are filtering down into aviation. From propulsion systems and advanced materials to navigation and autonomous control, technologies once exclusive to spaceflight are now reshaping the future of atmospheric flight. The result is an aviation landscape poised to be faster, safer and more efficient, reflecting a new era where boundaries between air and space technology are increasingly fluid.

In this evolving aerospace ecosystem, the legacy of space innovation will be measured not merely by missions to the Moon or Mars, but by how deeply it transforms flight here on Earth.

Image Credit: ©SpaceX

2026 AVIATION EVENTS CALENDAR

JANUARY 2026

- **Wings India 2026** — 28–31 January | Hyderabad, India
  Biennial civil aviation airshow featuring aerial displays, static exhibits & industry networking.
- **Dubai Aviation Career Fair 2026** — 21–22 January | Dubai, UAE
  Major recruitment and networking event with airlines, OEMs, and aviation employers.

FEBRUARY 2026

- **Singapore Airshow 2026** — 3–6 February | Singapore
  One of Asia's largest aerospace & defence exhibitions with aerial displays and forums.
- **World Defense Show 2026** — 8–12 February | Riyadh, Saudi Arabia
  Major defence & aerospace expo emphasizing interoperability and air/space technologies.
- **IATA World Legal Symposium** — 17–19 February | Warsaw, Poland
  Legal track for aviation law professionals (regulation, AI, consumer protection).
- **NBAA Regional Forum** — 25 February | Opa Locka, Florida, USA
  Business aviation regional gathering.

MARCH 2026

- **Routes Americas 2026** — 3–5 March | Rio de Janeiro, Brazil
  Air service development for airlines and airports.
- **Verticon 2026** — 9–12 March | Atlanta, Georgia, USA
  World's largest vertical aviation (rotorcraft) event and conference.
- **IATA World Cargo Symposium** — 10–12 March | Lima, Peru
  Key air cargo conference on digitalisation, sustainability, safety/security.
- **Passenger Terminal EXPO (PTE World)** — 17–19 March | London, UK
  Airport terminals and passenger experience event.

APRIL 2026

- **World Data Symposium (IATA)** — 8–9 April | Singapore
  Focus on data, AI, cybersecurity, robotics in aviation.
- **Passenger Experience Conference (PEC)** — 13 April | Hamburg, Germany
  Part of Passenger Experience Week.
- **MRO Americas — 21–23** April | Orlando, Florida, USA
  Maintenance, repair & overhaul expo.
- **AERO Friedrichshafen 2026** — 22–25 April | Germany
  Europe's premier general aviation showcase.

MAY 2026

- **EBACE 2026 — 27–29** May | Geneva, Switzerland
  Flagship European business aviation convention & static display.

JUNE 2026

- Eurosatory 2026 — 15–19 June | Paris, France
  Defence & security exhibition with air defence and rotorcraft sectors.
- **IATA World Maintenance & Engineering Symposium** — 23–25 June | Madrid, Spain
  Aerospace supply chain and engineering maintenance focus.
- **Aero South Africa 2026** — 10–12 June | Lanseria Intl Airport, South Africa
  Southern Africa's leading general aviation trade show.
- **ILA Berlin Air Show 2026** — June (dates TBC) | Berlin, Germany
  Major biennial aerospace exhibition.

JULY 2026

- **Royal International Air Tattoo (RIAT)** — 17–19 July | RAF Fairford, UK
  World's largest military airshow.
- **Farnborough International Airshow 2026** — 20–24 July | Farnborough, UK
  Major global airshow, flying displays and trade exhibition.
- **EAA AirVenture Oshkosh 2026** — 20–26 July | Wisconsin, USA
  The world's biggest general aviation fly in and exposition.

AUGUST 2026

- **Pacific Airshow Gold Coast** — 14–16 August | Australia
  Large public aerobatic airshow.

SEPTEMBER 2026

- **MRO Asia Pacific** — 22–24 September | Singapore
  Commercial aircraft maintenance & overhaul conference.
- **Wings of Change MENA (IATA)** — 8–9 September | Manama, Bahrain
  Regional aviation growth & sustainability.
- **Africa Aerospace and Defence Expo (AAD)** — 16–20 September | AFB Waterkloof, South Africa
  Africa's flagship aerospace & defence exhibition with public airshow displays.

OCTOBER 2026

- **World Safety & Operations Conference (IATA)** — 6–8 October | Istanbul, Türkiye
  Safety and operational risk forum.
- **World Sustainability Symposium (IATA)** — October (dates TBC) | Brussels, Belgium
  Net zero, SAF and energy transition discussions.
- **Routes World 2026** — 18–20 October | Riyadh, Saudi Arabia
  Key global route development summit.
- **NBAA BACE 2026** — 20–22 October | Las Vegas, USA
  Premier business aviation convention & exhibition.
- **MRO Europe 2026** — 27–29 October | Amsterdam, Netherlands
  Key commercial aircraft maintenance show.

NOVEMBER 2026

- **Bahrain International Airshow 2026** — 18–20 November | Sakhir, Bahrain
  Biennial regional airshow with trade and public activities.
- **Texas Capital Air Show** — 7–8 November | San Marcos, Texas, USA
  New airshow featuring major military demonstration teams.


Image Credit: © Travel Trends

FLYING FASTER INTO UNCERTAINTY

As the industry accelerates into a high-tech future, aviation enters 2026 caught between unprecedented innovation and a world that feels anything but stable.

Aviation has never been short of ambition, but as 2026 approaches, the sector finds itself advancing at speed while the ground beneath it remains unsettled. Artificial intelligence is moving rapidly from experimental to essential, urban air mobility is edging closer to real-world operations, and biometric processing is quietly redefining how passengers move through airports.

Yet these technological gains are unfolding against a backdrop of geopolitical tension, supply chain fragility, rising costs and growing cyber and regulatory pressure. The result is an industry pushing forward while constantly scanning the horizon for disruption.

What is striking about this moment is not simply the pace of innovation, but its depth. AI is no longer a back-office efficiency tool; it is becoming aviation's connective tissue. From trip planning and customer engagement to disruption management and payments, intelligent systems are embedding themselves across the travel journey. For airlines and airports, the message is clear: those that fail to adapt to AI-driven operations risk falling behind passenger expectations that increasingly demand speed, personalisation and seamless service, even when the system is under strain.

At the same time, advanced air mobility is beginning its transition from vision to validation. The eVTOL sector has learned that progress will not be measured in headlines, but in certification milestones, infrastructure planning and carefully managed proof-of-concept flights. Early deployments in markets such as the United States and the Middle East are less about scale and more about learning—testing how new aircraft integrate into crowded airspace, urban environments and existing aviation systems. 2026 will not deliver mass urban air taxi networks, but it will provide the data that determines who is serious about making them viable.

On the ground, biometrics are steadily reshaping the passenger experience. Facial recognition and digital identity are moving beyond novelty, becoming core to how borders and airports manage flow, security and capacity. Adoption remains uneven, shaped by regional regulation and public trust, but the direction of travel is unmistakable. Passengers who experience faster, document-light journeys quickly come to expect them, raising the bar for airports and airlines alike.

Perhaps most telling is that all of this progress is occurring despite persistent uncertainty. Global demand remains robust, and profitability projections suggest the industry has regained some financial confidence. Yet the operating environment remains fragile, with geopolitical shocks, regulatory complexity and infrastructure constraints never far away. As aviation heads into 2026, success will hinge less on bold vision alone and more on execution—on the ability to deploy new technologies while managing risk, resilience and trust.

As 2026 comes into view, aviation is entering a phase that will test not only its capacity to innovate, but its ability to absorb shock and adapt under pressure. Technology is advancing quickly, passenger expectations are rising, and new operating models are taking shape, yet the industry remains tightly bound to global political, economic and regulatory realities. The year ahead will reward airlines, airports and service providers that combine digital momentum with operational discipline, resilience and foresight. In a world where progress and instability now move in parallel, aviation's challenge is clear: to keep flying forward without losing sight of the risks that come with speed.

TAILOR MADE
AVIATION NEWS

Looking to showcase your brand to a highly engaged audience of aviation professionals, enthusiasts, and industry leaders? World Airnews offers premium advertising opportunities across our print and digital platforms—ensuring your message reaches the right people, at the right time.

Don't miss your chance to be featured in our next edition.

Contact us today to explore advertising options:
Email: advertising@worldairnews.co.za
Web: https://worldairnews.co.za/advertise/
Call: 011 465 7706

World Airnews – Connecting Skies • Bridging continents