Apave News

Risk management news

2025 Paris Air Show Special Edition

Our objective: safety
Our focus: innovation

apave

High altitude challenges

CONTEXT • The aviation industry is undergoing profound change, driven by environmental, technological and economic challenges. After the historic shock of Covid-19, which grounded aircraft and put the entire value chain to the test, the sector has seen **a rapid recovery in traffic, driven in particular by Asia and the Middle East.** This recovery is accompanied by profound transformations. **Decarbonisation is becoming an absolute priority,** with major advances in the development of sustainable aviation fuels (SAF) and projects for hybrid, electric and hydrogen-powered aircraft. At the same time, **the rise of drones for civil and military use** is redefining the way we use the skies. **Artificial intelligence and on-board connectivity are revolutionising fleet design, maintenance and management of fleets,** promising greater performance and cost optimisation. Faced with unabated global demand, major traditional manufacturers such as Airbus and Boeing are stepping up their efforts, while new players, particularly in Asia and Russia, are challenging the historical balance. More than ever, the aeronautics industry combines long-term vision with immediate responses to the needs of a changing world.

CHALLENGES • In this context, Apave's role is more strategic than ever. **Supporting ecological, energy and digital transitions is part of the Group's DNA.** Thanks to its wide range of expertise, Apave provides concrete solutions to its customers' needs, particularly in terms of certification, testing, training, cyber security and advanced modelling. Its ability to independently assess the reliability of equipment, simulate ageing scenarios and train men and women in the field makes it a trusted partner for the entire industry. More than just an expert, **Apave is a committed player in the sustainable and high-performance aeronautics industry of tomorrow.**

SIGNALS

PASSENGER TRAFFIC

4.89 billion airline passengers in 2024

representing a **10.4%** increase from 2023. This figure exceeds the pre-pandemic level of 2019 by 4.54 billion

+17%

growth in passenger traffic in mainland France compared to 2022

EDITORIAL

OUR OBJECTIVE: SAFETY
OUR FOCUS: INNOVATION

Philippe Maillard
CEO of the Apave Group

The aeronautics, aviation, space and defence sectors are undergoing unprecedented transformation. Driven by massive investment, technological acceleration and decarbonisation imperatives, they face a triple challenge: **innovating, securing and becoming more resilient.**
The Apave Group is fully committed to this dynamic. As a leading player in risk management, we place **safety, security and performance at the heart of our assignment.** Supporting industry players in their industrial ambitions while ensuring the reliability of their operations is the responsibility we assume with our **17,500 employees, including more than 12,000 engineers and technicians.**
We offer a wide range of complementary expertise. With our newly formed aeronautics division, built around our subsidiaries OSAC and Apave Aeroservices, we are at the heart of the regulatory and operational challenges facing the industry. With Sopemea, we qualify equipment to meet the most stringent technical requirements. Our design offices specialise in calculation and simulation model behaviour and ageing, as we already do for the nuclear sector.
Our subsidiaries Camas (training), SixFoisSept (artificial intelligence) and Oppida (cyber security) further expand the range of solutions we offer. And tomorrow? Zero-emission aircraft, the industrialisation of hydrogen propulsion, the digitalisation of operations and the securing of supply chains will require an even more integrated approach to risk management. **Apave intends to be a trusted partner in this new era.** Finally, by joining GIFAS this year, we are reaffirming our ambition to actively contribute to the sector's transition, while remaining true to our DNA: that of an independent expert third party, committed to safe progress. ●

EMPLOYMENT IN THE SECTOR

300,000

direct and indirect jobs in the aeronautics and space industry

MARKET

The **Asia-Pacific region** is at the heart of the sector's growth, accounting for a significant share of future demand for aircraft.
Over the **next 20 years,** the sector expects to deliver:

45,900 aircraft,
representing a value of
3,300 billion dollars,
despite delays due to supply chain issues

SUPPLY CHAIN

1 Train, build reliability and provide support

With aircraft production on the rise, the global supply chain is facing unprecedented pressures. Complexity, quality, human resources and cyber security: an overview of the main challenges facing this strategic sector.

In aeronautics, the supply chain extends across the globe. Aircraft manufacturers source materials, components and sub-assemblies from all corners of the world. This globalisation exposes the sector to geopolitical, social and environmental risks, as demonstrated by the post-war reorganisation in Ukraine around titanium. Added to this is economic tension: the industry is currently operating below capacity. The market is demanding more aircraft than factories can deliver. As a result, the entire chain must speed up. In such a demanding environment, increasing production is no small feat.

With thousands of players (from aircraft manufacturers to system integrators to subcontractors), getting everyone to comply with quality standards is a real challenge. Regulations and standards are strict, and responsibilities are clearly defined. Every part produced must be perfectly compliant. In an aircraft, it is impossible to deviate from the specifications: everything is validated, certified and traceable. However, this increase in production is taking place in a tense context for industrial employment. Generational renewal is accelerating, profiles are changing and skills must be passed on. It is necessary to train, support and ensure reliability... while producing ever faster!

The very structure of the supply chain adds to the complexity: each critical part must now come from at least two different sources. This is a beneficial risk mitigation strategy, but it requires more suppliers to be qualified and therefore brought up to the same level of requirements. In this complex landscape, trusted third parties such as the Apave Group play a key role: ensuring the conformity of raw materials or parts, supporting the skills development of suppliers and assessing the robustness of digital systems. There are therefore many opportunities at the crossroads of quality, regulatory and technological challenges. ●

Cyber security, a new challenge

Long confined to data protection, cyber security is now considered a key issue for aviation safety. The aeronautics industry is adopting a European regulatory framework to integrate it into flight safety. The aim is to protect information systems throughout the supply chain. Through its subsidiary OPPIDA, Apave supports companies in the sector in testing and strengthening the robustness of their digital products and infrastructure.

INTERVIEW

The aeronautics industry is on track

Frédéric Parisot
General Delegate of GIFAS

What is the current state of the aeronautics industry?
Frédéric Parisot: We are emerging from a period of unprecedented turbulence. After an almost total shutdown in 2020, the recovery has been much faster than expected. Demand for new, more fuel-efficient and higher-performance aircraft is booming: Airbus is aiming for 1,000 deliveries a year within a few years, with an order book already full for the next decade. This recovery is putting pressure on the entire supply chain: increasing production rates, recruitment, financing... These are our major challenges.

How is the supply chain doing?
F. P.: This is one of GIFAS's main areas of focus. Our SMEs and mid-cap companies, which supply both the civil and military sectors, are recognised worldwide for their expertise. But after the crisis, we need to rebuild teams, find financing, repay state-guaranteed loans and support the transition to maturity. We have launched several initiatives, including Aéro Excellence, a programme that creates a common standard of operational maturity for all players in the supply chain. This will enable us to move forward together, at the same pace. Operational excellence is essential to our competitiveness.

What are the other structural challenges?
F. P.: Preparing for the future. Together with the Civil Aviation Research Council (CORAC), we are co-piloting major R&D projects with the DGAC to ensure that France remains a leader in the coming decades. And we are accelerating the decarbonisation of the sector: more efficient aircraft, sustainable fuels, optimised flight paths, etc. The French aeronautics industry is one of the best in the world: let's fully support this unique expertise that makes our country shine far beyond its borders! ●

FOCUS

GIFAS, at the heart of the aeronautics ecosystem

Created in 1908, GIFAS (Groupement des industries françaises aéronautiques et spatiales) brings together more than 500 companies, including Apave, representing 95% of the sector's turnover.
From SMEs to aircraft manufacturers, GIFAS works to promote the competitiveness of the industry in France and internationally through industrial coordination, export promotion, support for innovation and environmental transition.

"Tech" at the service of safety

Today, inspecting a structure no longer means working with cherry pickers, rope access technicians or difficult access points. At Apave, innovative technologies such as drones, 3D modelling and artificial intelligence are changing the game. **An example?** Inspecting an airport platform: in just a few hours, teams carry out an automatic flight, capture thousands of images, model the structure in 3D and integrate the data into an algorithm capable of identifying faults. Far from replacing humans, AI provides support: it identifies 95% of minor defects, allowing experts to focus on the critical 5%. **The result** is greater safety, less time on site and a significant reduction in operating losses for the client. This approach, which is now well established, can be applied to all types of structures, including buildings, roads and linear structures. And thanks to its internally trained remote pilots, Apave retains complete control over its operations. ●

INDUSTRY AND AERONAUTICS: RESPONDING TO THE URGENT NEED FOR SKILLS

● Vocational training to address recruitment challenges

Faced with growing tensions in the recruitment of technical professions, particularly in industry and aeronautics, Apave is rolling out a tailor-made professional offering that combines training engineering and regional roots. The Apave Group's Training Department structures and implements qualification and certification programmes – through work-study programmes, apprenticeships or continuing education – to support companies in their specific needs in maintenance, production, energy, electricity, welding and nuclear power. Supported by trainers with practical experience (inspectors, technicians), the offering is tailored to each company's project: candidate sourcing, recruitment support, educational engineering, logistics, mobile technical platforms, local partnerships, etc. The goal? To effectively train employees, job seekers and temporary workers, enabling them to obtain recognised qualifications (in France CQP, TP from the Ministry of Employment).
With 650 people trained in 2024 across 140 technical career paths, Apave has proven its ability to meet skills needs, including in the aeronautics industry, by drawing on its internal resources and in-depth knowledge of the regions.

SAFETY-SECURITY

2 Cyber security, regulations are changing

With the increasing digitisation of systems, the aeronautics industry is strengthening its defences against cyber threats. This is a major regulatory shift that Apave Aeroservices is closely monitoring alongside its clients.

Aviation is undergoing a quiet but decisive revolution: the integration of cyber security into European regulations. The European Union Aviation Safety Agency (EASA) has published a transverse regulation that applies to the vast majority of players in the sector, from manufacturers to air operators, maintenance workshops, CAMOs (continuing airworthiness management organisations) and civil aviation authorities. *"This regulation aims to ensure information security and the preservation of confidentiality, integrity, authenticity and availability of networks and information systems. The overall objective is clear: to improve cyber resilience in order to guarantee flight safety,"* explains Hugues Carrière, Director of Methods and Development at OSAC.

ANTICIPATE, SUPPORT, TRAIN

Since 2022, OSAC has been actively preparing for this regulatory change by recruiting experts, conducting impact analyses, defining monitoring methods and producing educational videos to raise awareness among industry players. Cyber threats are no longer an abstract concept. *"Take the example of a CAMO organisation that uses software to manage aircraft maintenance tasks. An intrusion could change the replacement schedule for a critical part... and jeopardise flight safety,"* adds Hugues Carrière. *"In March 2025, we reached an important milestone by publishing the initial appraisal procedures for implementing this new regulation. Our role is central: we must help our inspectors and clients understand these new requirements."* This commitment involves clear methods, guidelines and free training for clients and partners.

TOWARDS OPTIMISED SURVEILLANCE

To provide the best possible support to all players in the sector in monitoring these regulations, the DGAC and OSAC have decided to pool their surveillance activities.

The aim is to avoid duplication during audits of multi-approval bodies and to optimise the efforts of both authorities and organisations. *"When one of the authorities has audited the maturity of the information system management system, the second authority will be able to rely on the results of this monitoring. This is a real step forward for everyone,"* emphasises Hugues Carrière. *"Many of our clients did not wait for the regulations to come into force before implementing protection against cyber attacks. But now a common framework exists. It is up to us to provide them with the best possible support."* ●

INTERVIEW

Producing safety for the aeronautics industry

Cyrille Duvivier
Director of State Aeronautical Safety

What exactly is State aeronautics?
Cyrille Duvivier: It is a unique ecosystem that brings together eight employment authorities: the three branches of the armed forces, the Directorate General of Armament (DGA), the gendarmerie, the national police, civil security and customs. It includes all types of aircraft, from training gliders to Rafale fighter jets, various helicopters and Falcon jets for government use. Unlike civil aviation, the State is exempt from ICAO[1] and EASA[2] regulations. This does not mean that it systematically disregards them, but rather that it adapts them to a sovereign logic where the mission takes precedence, with an accepted and controlled level of risk.

What is Apave Aeroservices' role in this context?
C. D.: We outsource some of the audits of approved organisations – maintenance, training, continuing airworthiness management – so that we can focus on highly operational or more complex issues.
The contract, which was renewed in September 2024, extends the mission to overseas territories and airworthiness examinations on light civil aircraft. Apave Aeroservices' expertise is highly relevant in these areas.

How does its assignment differ from the one it carries out for the DGAC?
C. D.: Apave Aeroservices carries out its activities under our direct supervision. It identifies discrepancies, but the final decision on approvals or airworthiness certificates rests with us, unlike the DGAC, where it acts on behalf of the authority. We set the course and the framework, while the responsibility for oversight remains ours. All of this is therefore based on trust and a good mutual understanding of the issues at stake.

How would you describe this partnership?
C. D.: It's a mature and balanced relationship. We even coordinate our HR needs to avoid any "competition". This partnership allows us to evolve together in a win-win situation, with our only guiding principle being to "produce safety" for the benefit of State aeronautics. ●

« Aviation is undergoing a quiet but decisive revolution: the integration of cyber security into European regulations. »

1. International Civil Aviation Organisation: a specialised agency of the United Nations that establishes the standards and regulations necessary for the safety, security, efficiency and regularity of international civil aviation.
2. European Union Aviation Safety Agency: European authority responsible for promoting the highest standards of safety and environmental protection in civil aviation within the EU.

FOCUS

Apave Aeroservices, a partner of choice for players in the aeronautical sector

Apave Aeroservices advises players in the aeronautics industry on improving their air safety and operational performance. It is notably involved with EASA in an international cooperation project aimed at promoting European aeronautical standards among its partners and harmonising regulations.
To ensure the success of this cooperation, Apave Aeroservices has joined forces with leading European aeronautical organisations and companies. This relationship, which has been in place for around ten years, has led to the creation of a close alliance with AESA (ES), SENASA (ES), CAAI (GB) and ALG-INDRA (ES). Apave Aeroservices also works closely with airlines, MROs and equipment manufacturers to assist them in obtaining aeronautical approvals and improving their operational processes.
Thanks to its team and international network of highly qualified professionals, Apave Aeroservices is a partner of choice for players in the aeronautical sector, contributing to the reliability and performance of the aviation industry.

AI, data and prediction: the new flight plan for aeronautics

Onboard connectivity, algorithms, predictive maintenance... Digital technology is redefining the rules of the game in civil aviation. For both authorities and private players, it is now a question of anticipating, prioritising and supporting the transformation.

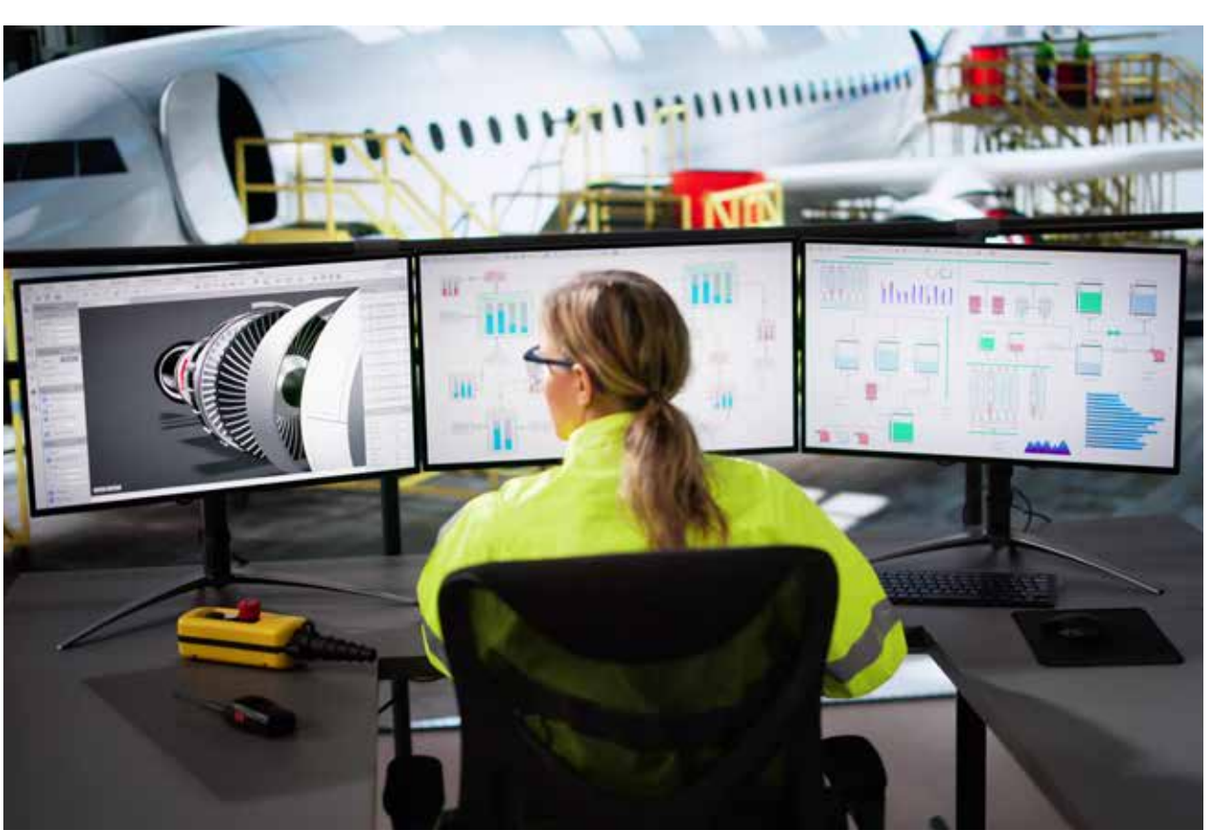
Artificial intelligence, data science and predictive maintenance" are already technologies used by various players in the sector. As the civil aviation authority, we also use these technologies, particularly to optimise our surveillance plans," explains Hugues Carrière, Director of Methods and Development at OSAC. Indeed, thanks to the power of data analysis, the focus is now on prioritisation and prediction.

ALGORITHMS IN THE FIELD

By cross-referencing reports from the Civil Aviation Safety Investigation and Analysis Bureau (BEA), safety notifications and the results of audits by aviation organisations or inspections, OSAC can prioritise its inspections where the risks are considered to be highest. *"We identify weak signals. The aim is to anticipate rather than react,"* adds Hugues Carrière. SixFoisSept, a subsidiary of the Apave Group specialising in smart data and AI, supports this strategy. *"Each aircraft has a non-compliance risk score, broken down by area: maintenance, documentation, cyber security, etc.,"* explains its founder, Erwan Prud'homme. Fed by multiple data sources (audits, incidents, organisational and financial information), this score makes it possible to objectify decisions, adjust the frequency or depth of controls, and above all, better allocate scarce resources. All without a black box: *"All our algorithms are explainable and approved by business experts,"* he insists.

SUPPORTING THE REVOLUTION

Applications are diversifying: automated visual inspection, AI-analysed engines, chatbots facilitating the search for technical documents, etc. These are powerful tools, but they need to be regulated. *"The EASA is preparing regulations on these technologies. The challenge for us is not to slow down innovation, but to make it safer,"* says Hugues Carrière. *"Humans remain in control. But with the right tools, they can see further and fly safer,"* concludes Erwan Prud'homme. ●



«We are working alongside Airbus to prepare for the future and the aircraft of tomorrow.»

For over 30 years, SOPEMEA, a subsidiary of the Apave Group specialising in industrial testing, has been supporting AIRBUS to ensure that its aircraft comply with strict electromagnetic compatibility (EMC) and lightning protection requirements.

*"The effects of lightning and electromagnetic disturbances represent major safety issues,"*explains Gwénaëlle Renouard-Vallet, Head of Lightning Protection at Airbus. SOPEMEA is involved in programme certification, risk mapping and dossier preparation for the EASA and FAA[1]. *"We support Airbus in the EMC qualification of equipment, ranging from vital systems to peripheral devices, to ensure aircraft safety,"* explains Jean-Luc Le Doaré, Head of the Design Department at SOPEMEA. A key element is the "transfer function" test, which simulates the impact of lightning on aircraft to test their integrity. *"These complex tests guarantee the resistance of our systems in extreme conditions,"* adds Gwénaëlle Renouard-Vallet.

A strategic partnership for safety and innovation

Today, the collaboration continues on groundbreaking projects such as zero-emission aircraft."*The ecosystem is still under construction, but we are working alongside Airbus to prepare for the future and the aircraft of tomorrow,"* emphasises Jean-Luc Le Doaré. This partnership is based on mutual trust and technical expertise, which are essential for meeting the challenges of tomorrow and ensuring aviation safety. ●

Objective: clear skies

A zero-emission aircraft is an aircraft whose propulsion system does not generate any CO_2 or greenhouse gas emissions during flight. To achieve this goal, manufacturers are exploring several technological avenues, including electric motors, hydrogen fuel cells and synthetic fuels produced from renewable energy sources. While technical and regulatory challenges remain significant, these solutions pave the way for carbon-free aviation that is compatible with the sector's climate commitments.

1. The FAA, or Federal Aviation Administration, is the federal aviation administration of the United States.

Sémaphore Risk Monitoring©: a revolution in aeronautical surveillance

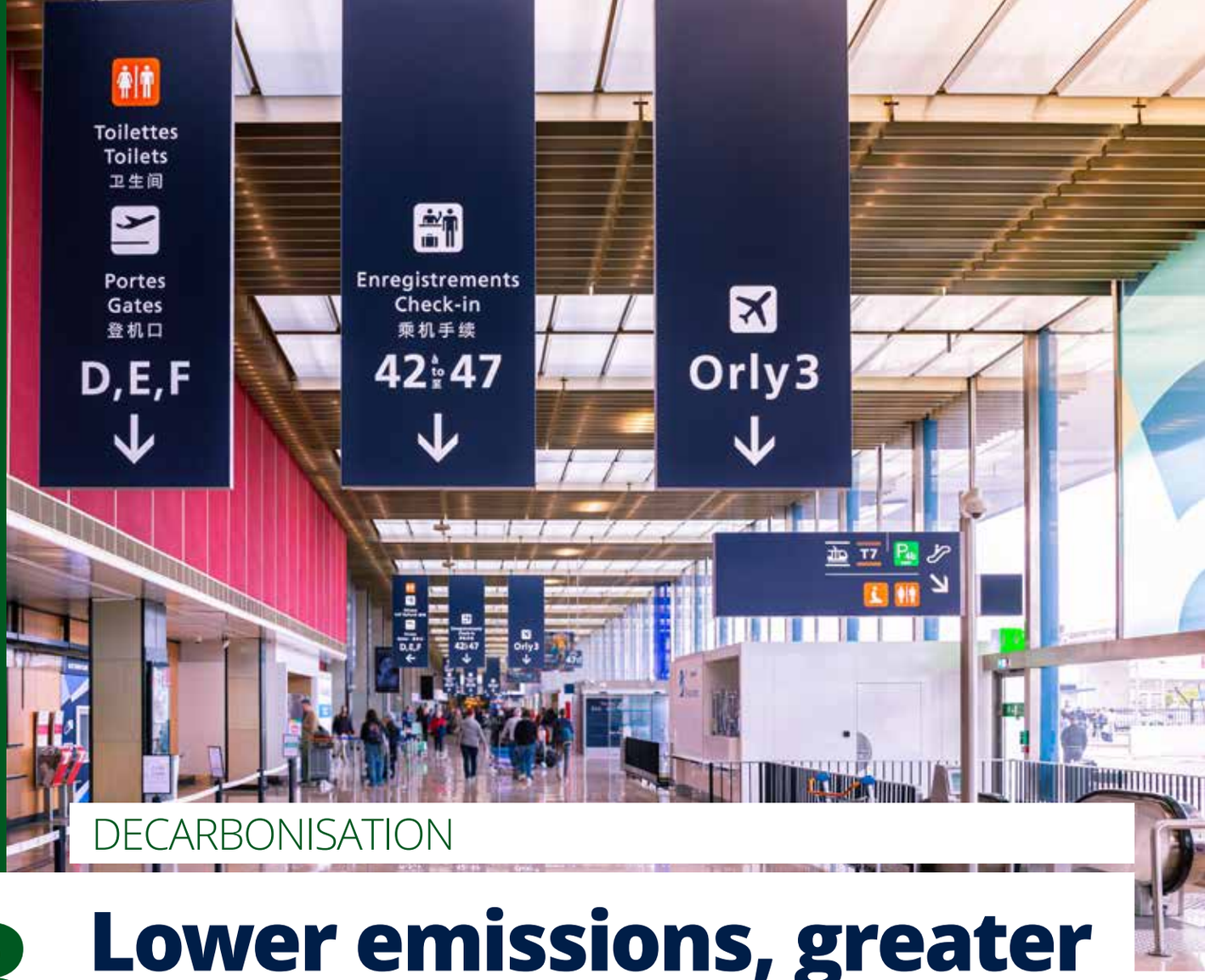
How do you effectively inspect 14,000 aircraft every year? With *Sémaphore Risk Monitoring*© , Apave offers an innovative approach based on detailed risk analysis. This risk calculation engine optimises inspection plans guarantee even greater and modulates surveillance to guarantee safety even further.

Managing the monitoring of an aircraft fleet requires a rigorous strategy. To meet this challenge, the Apave Group has developed *Sémaphore Risk Monitoring*©, a data science tool deployed in production at OSAC. The principle behind it is to calculate the risk of non-compliance for each aircraft, for each registration, based on past audits, non-compliances identified and their resolution times. *"Sémaphore doesn't just identify the riskiest aircraft: it also takes into account business constraints to ensure comprehensive coverage of aircraft types and maintenance workshops,"* explains Erwan Prud'homme. The result is an 'ideal list' of aircraft to be inspected. Since 2019, *Sémaphore Risk Monitoring*© has also made it possible to adjust the frequency and scope of inspections. An efficient maintenance workshop can now space out its checks from two to four years, while a struggling organisation will be monitored more closely. Each area (human resources, tools, archiving, etc.) is assessed independently for the most accurate management possible. "What makes this tool unique is that it is based on an explainable calculation engine, without the use of opaque artificial intelligence algorithms. Successfully audited by EASA in 2024, *Sémaphore Risk Monitoring*© is also used in the nuclear industry and was recognised as one of the three best innovations in operational excellence at WNE[1] 2023." ●

1. World Nuclear Exhibition: global trade fair dedicated to the civil nuclear industry

A synergy serving flight safety

OSAC, SixFoisSept and Apave Aeroservices have combined their expertise to adapt *Sémaphore Risk Monitoring*© to the OSAC environment, offering a risk calculation tool for use by the authorities. By cross-referencing consolidated data, standardised indicators and artificial intelligence algorithms, the solution makes it possible to adjust the frequency and nature of inspections according to the level of risk. This makes monitoring more targeted, optimises resources and provides a scientific basis for justifying controls.



DECARBONISATION

3

Lower emissions, greater discipline: the CO_2 mission at the ADP Group

Support, question, improve: since 2024, Apave has been assisting the ADP Group in verifying its carbon quotas. This mission of trust is part of a shared goal of decarbonisation.

Each tonne of CO_2 emitted is expensive (more than €60) under the European Union Emissions Trading System (EU ETS). To prevent abuse or omissions, operators such as Groupe ADP must have their declarations verified each year.

Since 2024, Apave's Environment, Energy and Carbon teams have been supporting the airport operator on a seven-year mission at Paris-Orly and Paris-Charles de Gaulle, two major airports. The aim is to ensure that CO_2 emissions from combustion installations (boiler rooms, emergency generators) are measured correctly before being submitted to the authorities.

A FRESH LOOK AT ESTABLISHED PRACTICES

On site, Apave inspects meters, collects physical data and analyses calculation methods. These regular exchanges also enable the ADP Group to challenge its practices. *"Changing our point of contact has taken us out of our comfort zone,"* says Anibal Bernardo, Concessionaire Relations & Regulatory Compliance Manager at Paris-Orly Airport. *"It has enabled us to re-examine our procedures and maintenance plans and make our data more reliable."* At the same time, Groupe ADP is pursuing its decarbonisation strategy: developing geothermal energy, recovering heat from the Rungis incinerator, etc. Fewer emissions means fewer quotas to buy. And Apave provides precise, technical and responsive support to transform efforts into verifiable results. ●

Controlling climate impact

The EU ETS is the European Union's main tool for reducing greenhouse gas emissions. It sets an emissions cap for certain industries. Companies receive or purchase allowances, which they can trade. The less CO_2 they emit, the fewer allowances they need, which encourages them to reduce their climate impact.

Apave in action on airport walkways

Between safety, economic performance and environmental challenges, airport passenger boarding bridges are a strategic asset for airports. With its innovative approach, Apave supports operators in maintaining this critical equipment in operational condition.

How can the longevity of airport walkways be guaranteed while controlling risks? Apave, a specialist in this field and particularly in the diagnosis of metal structures, offers a comprehensive method that combines strategic thinking, asset management, mechanical behaviour analysis, non-destructive testing and targeted inspection. *"With around 100 walkways already inspected for the ADP Group since 2021, this proven solution is based on a three-step approach: detailed digital modelling, identification of critical areas, and on-site intervention using cutting-edge methods such as ACFM to detect fatigue cracks,"* explains Nicolas Queva, Unit Manager.

ADAPTING THE APPROACH TO THE CHALLENGES OF EACH AIRPORT

Each site has its own specific characteristics, and Apave's expertise can be adapted to all challenges, regardless of the size of the airport. This ability to adjust the method according to needs and available data is Apave's real strength. *"Beyond the technical aspects, individualised support is our priority and guides us in all the recommendations we make, whatever the stage of the process."* The result is a triple benefit for the operator: safety, cost savings and a positive environmental impact. ●

Air transport & decarbonisation

3 QUESTIONS FOR...

Pascal de Izaguirre
President of FNAM (National Federation of Aviation and Related Professions)

How does fleet renewal enable airlines to meet decarbonisation challenges?
Pascal de Izaguirre: The A220, A320neo, A330neo and A350 consume on average 15 to 25% less fuel than previous generations. This performance is due to more efficient engines, optimised aerodynamics and the use of lighter materials. As a result, CO_2 emissions per passenger have fallen by 31% since 2000. But this renewal is not only aimed at improving energy efficiency: it also paves the way for the integration of sustainable aviation fuels (SAF) and helps to limit other pollutants, particularly nitrogen oxides (NOx), which are responsible for indirect climate effects. It also reduces noise pollution and local emissions of fine particles, which is essential for the acceptability of airport hubs.

What other levers are available to reduce the environmental impact of airlines?
P. I.: In flight, airlines are implementing eco-piloting procedures (continuous climbs and descents, optimised speed and altitude management), adopting more direct flight paths and reducing the weight of aircraft by lightening equipment. On the ground, they are rolling out more environmentally friendly practices (use of a single engine, electric towing and pushback), limiting taxiing time and gradually replacing their equipment with electric or hybrid solutions. These actions deliver immediate CO_2 savings of up to 3-5% per flight.

What projects are underway or planned for sustainable aviation fuels (SAF)?
P. I.: SAFs are the main lever for achieving carbon neutrality in air transport by 2050. Several structural projects are in the pipeline at national and European level. The industry is calling for a rapid increase in production, in line with the targets set by the European RefuelEU Aviation Regulation: 6% SAF (including 1.2% e-fuel) by 2030 and 20% (including 5% e-fuel) by 2035. Industry players (airlines, producers, manufacturers) are signing long-term supply agreements, co-finance local sectors and support R&D. The development of national production capacity is also considered strategic for energy sovereignty, job creation and competitiveness. ●

Read the full interview

A new organisation se and military markets

Change of direction for OSAC and Apave Aeroservices: the Apave Group is reorganising its aeronautical activities to better support the sector's changes and growth. A new strategic, operational, and symbolic stage.

Since 2010, OSAC has played a central role in France's air safety system. As a third-party body authorised by the DGAC (French Civil Aviation Authority), it issues, monitors, suspends, or withdraws approvals for production, maintenance, airworthiness management, and maintenance training organisations. *"In total, 800 approvals are managed, and OSAC supervises the airworthiness of over 14,000 aircraft,"* explains Thomas Counioux, Sector Line Director for Transport, Defence & Telecoms Markets. A sensitive assignment, at the heart of the sector's safety challenges, which will continue until 2028 as part of the third consecutive authorisation.

A NEW BRAND FOR A NEW MOMENTUM

But this historical exclusivity also has its limits. *"OSAC has become a very well-known brand in the sector, but solely associated with our sovereign assignments,"* admits Thibaut Liblin, head of the new Apave Aeroservices division. *"We therefore needed a fresh start to bring our expertise to other clients, particularly internationally or in the military field."*
This is the whole point of the ongoing reorganisation: to clearly separate the regalian activities, carried out for the DGAC under the OSAC banner, from the service offering developed for other clients, civil or military, now carried by Apave Aeroservices. This is a brand that already exists in the Group's portfolio, but has been little exploited until now. *"Today, we are activating it as the spearhead of our aeronautical strategy,"* Thibaut Liblin continues.

A STRATEGIC TURNING POINT IN SERVING THE MARKET

"By asserting its identity, the Group is undertaking a profound reorganisation of its aeronautical activities," adds Thomas Counioux. A strategic turning point, initiated in 2023, which aims to consolidate Apave's presence in the sector while gaining agility and clarity with new civil and military markets. This entity now unifies all the Group's expertises around the historical subsidiaries OSAC and Apave Aeroservices Consulting dedicated to the sector.

« Apave fully intends to make this reorganisation a springboard towards international leadership. »

Thomas Counioux
Sector Line Transports Director Apave

800 approvals managed

14,000 aircraft supervised

THE COMPONENTS OF THE APAVE AEROSERVICES SERVICE OFFE

THE CLIENT OFFERING

- Compliance with aeronautical regulations
- Reinforcement of civil and military Authorities
- Growth of airlines and MROs
- Safety performance
- Certification of quality management systems
- Training and recruitment of teams
- Risk management of critical equipment
- Regulatory compliance of equipment and installations
- Integrity, quality, conformity of products and equipment, and installations
  - Qualification, tests and measurements
  - Non-destructive testing (NDT)
- Cyber security, data compliance and security
- AI and Data Science

SPECIALISED ENTITIES AND SERVICES...

OSAC Habilitation
Surveillance Authority

OSAC Apave Aeroservices
Support for Civil and Military Authorities

Quality Management Systems Certification

Apave Aeroservices Consulting
Aeronautical Safety Consulting

Apave NDT Metalscan
Non-Destruc Testing (NDT)

... COMPLEMENT APAVE'S EXPERTISE: INSPEC

rving the civil

A GLOBAL REFERENCE IN RISK MANAGEMENT

This new organisation falls within the broader framework of the strategic plan launched by the Apave Group at the end of 2020. Its objectives: to double the turnover in five years and position the Apave brand as a global reference in the management of technical, human, environmental, and digital risks. All of the Group's core business activities are thus mobilised to support stakeholders in the aeronautical sector in this dual transformation, both quantitative and sustainable. *"By relying on strong brands, a dense territorial network, and solid experience in critical environments, Apave fully intends to make this reorganisation a springboard towards international leadership,"* concludes Thomas Counioux.

« The Apave Aeroservices brand is today the spearhead of our aeronautical strategy. »

Thibaut Liblin
President of OSAC
Managing Director of Apave Aeroservices

The 3 segments of the aeronautical market

Apave Aeroservices' assignment? To coordinate the Group's efforts across all 3 segments of the aeronautical market:

- **Civil and military authorities,** both in France and internationally, where the objective is to transpose the OSAC model to other countries or regulatory contexts (European DGACs, DSAE, DGA, etc.).
- **Air transport operators,** i.e. airports and airlines, a segment where the Group is already well established (Roissy, France), Lyon, Mulhouse, etc.) through its inspection, training, or consulting activities.
- Finally, **the aeronautics industry,** with a clear ambition: to address major contractors and their supply chain by relying on specialised entities such as SOPEMEA (qualification tests), OPPIDA (cyber security), or Apave Interservice Inspection (quality controls).

RING **www.aeroservices.apave.com**

tive

Apave Interservices Inspection
Quality Assurance QA/QC

APTH-BVT
Transport of dangerous goods

CAMAS Formation
Training and Team Recruitment

SixFoisSept
Inspection Optimisation *via* AI and Data Science

Oppida
Audit and Cyber security Consulting

CERTIFER Solutions
Critical Embedded Systems Security

SOPEMEA
Qualification, Tests and Measurements

CTION, TRAINING, CONSULTING, TESTS & MEASUREMENTS, CERTIFICATION

Expertise dedicated to aeronautics

The Apave Group offers comprehensive support and risk management solutions to meet the safety needs of the civil and military aeronautical community.

PRODUCTION QUALITY CONTROL

- Management systems
- Product quality
- Personnel recruitment and training

INDUSTRIALISATION

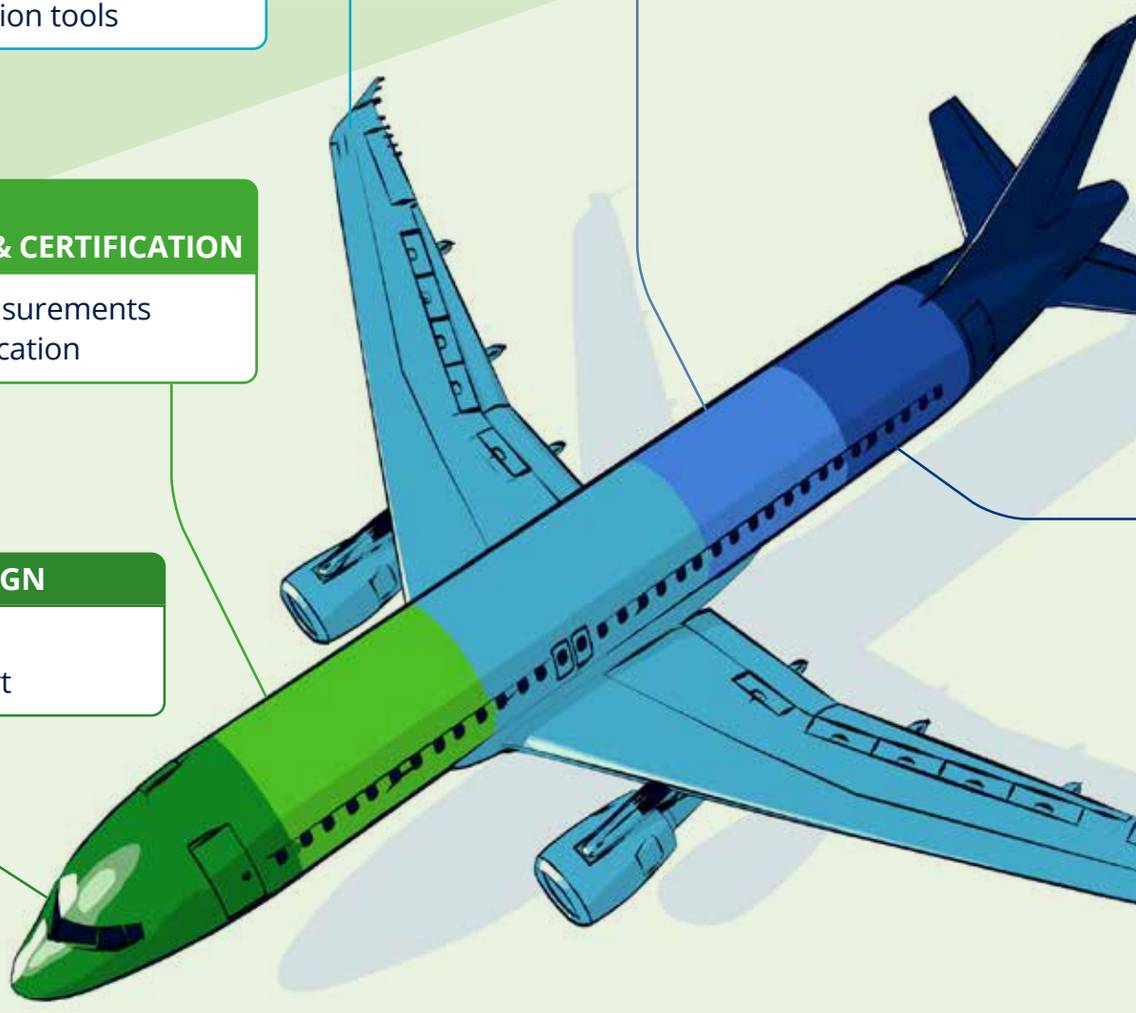
- Management systems
- Production tools

DEVELOPMENT QUALIFICATION & CERTIFICATION

- Tests and measurements
- Product certification

INNOVATION / DESIGN

- Consulting
- Technical support



CLIENT FOCUS

The A350's RGAU: top certification with CERTIFER Solutions

To guarantee the reliability of the RGAU, a key flight control system for the A350XWB, Parker Meggitt called upon Certifer Solutions, a subsidiary of the Apave Group. Between regulatory rigour and tailored support, let's take a look back at a successful collaboration.

● **Ensuring flight precision and safety:** this is the role of the RGAU ("Rate Gyrometer and Accelerometer Unit"), developed by Parker Meggitt for the A350XWB. Placed at the aircraft's centre of gravity, this device measures angular velocity and linear acceleration, transmitting its crucial data to the flight computers. It relies on a set of inertial sensors and high-tech embedded electronics. *"To obtain its certification, Parker Meggitt relied on CERTIFER Solutions, a specialist in the safety of critical embedded systems,"* explains Raphaël Lattion, Technical Director at Parker Meggitt. From the first version in the 2010s, then during a major product evolution in 2023-2024, the teams conducted cutting-edge analyses, code reviews, and rigorous testing campaigns, in accordance with Development Assurance Level A requirements, the highest level of software criticality.

To learn more, watch the video

A quality certification to structure, perform... and stand out

Babcock International France Aviation obtained EN 9110: 2018 and EN 9120: 2018 certifications in April 2024. They were issued by OSAC Apave Aeroservices, a certifying body specialising in quality management systems in the aeronautical sector.

Certification according to the EN 9100 series standards for Quality Management Systems, specific to the Aerospace, Space, and Defence (ASD) sector, allows companies wishing to work in these sectors to meet the requirements of major contractors. *"This voluntary certification allows organisations to demonstrate their performance. It serves as a lever for them to structure their processes, improve their efficiency, and gain competitiveness,"* explains Houda Janhaoui, Certification Director at OSAC Apave Aeroservices.
Babcock followed a complete pathway, offered by OSAC Apave Aeroservices: generic training on standards, a mock audit in 2022, then the initial audit in 2024. *"This is a client with whom we deployed all our expertise,"* says a delighted Houda Janhaoui. The certified scope covers both aircraft maintenance (EN 9110) and the supply of aeronautical products and equipment (EN 9120). *"This dual recognition strengthens Babcock's position in the market and opens up new business opportunities, while demonstrating our commitment to high standards of quality and rigour"*, adds Caroline Dumortier, Chief of Staff and formerly Director of Quality, Compliance, Safety, HSE, Babcock France.

A RENOWNED EXPERTISE

For OSAC Apave Aeroservices, this success illustrates a clear positioning, as confirmed by Houda Janhaoui. *"We are a human-sized structure, with about fifteen specialised auditors. What makes us different is our responsiveness, our transparency, and our knowledge of the sector. Our clients appreciate it, and it shows: since our launch in 2018, we have shown a 100% satisfaction rate, and our renewal rate in 2024 is 100%."*

DISMANTLING & VALORISATION

- Asbestos removal
- Waste recovery

OPERATION MAINTENANCE & REPAIR

- Management systems
- Identification and anticipation of equipment aging
- Personnel recruitment and training

Modifying the RGAU involved not only modernising the components, but also adapting the entire embedded software to current standards. A complex process, requiring constant dialogue with EASA and Airbus. *"CERTIFER Solutions' in-depth knowledge of standards allowed us to proceed serenely with the auditors,"* highlights Raphaël Lattion. Beyond technical skills, it was also the human approach that made the difference: autonomy, rigour, ability to find pragmatic solutions while taking into account the project's financial challenges. *"It is today a privileged partner that we will continue to support,"* confirms Matthieu Samson, Safety and Software V&V Manager at CERTIFER Solutions. Thanks to this close collaboration, the certified RGAU is ready to accompany the A350 in its new airborne adventures with, always, the same requirement for reliability.

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