



## PRESS RELEASE

Paris Air Show, June 21<sup>st</sup> 2023

### **Groupe ADP joins forces with leaders in carbon-free regional aviation to accelerate the sector's environmental transition**

#### **Key messages**

- Groupe ADP joins forces with six leaders in carbon-free regional aviation to accelerate the introduction of electric- and hydrogen-powered 2 to 100-seat aircraft on its airfields and at Paris-Le Bourget, Paris-Orly and Paris-CDG airports before 2030.
- These new aircraft are thus set to decarbonize flights around aerodromes, and to serve radial, regional and short-haul routes in Europe.

Within the framework established with each manufacturer, Groupe ADP will work alongside them to:

- ◆ **Identify potential substitutes for existing flights** on its platforms, notably in conjunction with airlines;
- ◆ **Consolidate the need for new energies** (electric, hydrogen, SAF) and identify the necessary facilities;
- ◆ **Define supply chains, logistics and aircraft fuelling** and its infrastructure (storage, handling, setting up H2 stations).
- ◆ **Collaborate with regulatory authorities** on safety, procedures, training, etc.

Over the next year, the Groupe ADP will be working alongside its partners to make progress on these points, and other companies may join the alliance.

Each of the manufacturers, with its own specific features, is helping to make possible the transition of the sector in the very short term, which will be based on:

1. The electrification of general aviation fleets is already underway, with the **Pipistrel's** Velis Electro at the forefront.

#### **Pipistrel'Velis Electro**

- 100% electric
- Passengers: 2 seats
- Cruise speed: 167km/h
- Range: up to 50mn
- Certification horizon: EASA since 2020

2. Hydrogen, thanks in particular to the conversion and retrofit of regional aircraft, with technologies developed by **Universal Hydrogen**, **ZeroAvia** and **Beyond Aero**.

#### **Universal Hydrogen**

- Hydrogen engine
- Passengers : 56 seats
- Range: 1 000 km
- Certification horizon: 2025

#### **ZeroAvia**

- Hydrogen engine
- Passengers: 90 seats
- Range: 1 900 km
- Certification horizon: 2027

#### **Beyond Aero's One BYA-1**

- Hydrogen engine
- Passengers: 4 to 8 seats
- Cruise speed: 575 km/h
- Range: 1 500 km
- Certification horizon: by 2029

3. Hybrids, with aircraft using electric power and sustainable fuels developed by **VoltAero**.

#### **VoltAero** Cassion 330, Cassio 480 & Cassio 600

- Electric-hybrid and Hydrogen-hybrid engine
- Passengers: 4/5 seats for Cassio 330, 6 seats for Cassio 480 and 10/12 seats for Cassio 600
- Range: 200 to 1 200 km
- Certification horizon: 2024 for Cassio 330

#### **Daher**

- Hybrid engine
- Passengers: 6 to 12 seats
- Developed from the results of the EcoPulse demonstrator
- Certification horizon: TBM and/or Kodiak hybrid to be marketed by 2027
- Performance similar to the current range

Groupe ADP has undertaken specific actions with each manufacturer to accelerate their integration on its platforms, and the marketing of their aircraft:

- **Pipistrel**: Toussus-le-Noble aerodrome was the launch site of the Velis Electro, after the aircraft received EASA certification in June 2020. The Groupe ADP and TotalEnergies are also deploying a network of self-service electric terminals at airfields in the Paris region to support fleet conversion (Etampes, Toussus, Pontoise).
- **VoltAero**: experts from the Groupe ADP's laboratory help to measure the aircraft's acoustic impact. Test flights to link Paris airports are in preparation.
- **Universal Hydrogen**: studies and tests to be carried out to demonstrate the entire logistics of hydrogen capsules under real operating conditions.
- **ZeroAvia**: studies and future developments to enable the supply of liquid or gaseous hydrogen at Paris-Le Bourget airport.
- **Beyond Aero**: initial results from substitution studies at Paris-Le Bourget show potential for over 15% of aircraft. Flight tests are planned at other airfields in the Paris region.
- **Daher**: the Toussus-le-Noble airfield will be the site of a test center for the technological building blocks of the electric-propulsion aircraft.

**Augustin de Romanet, CEO of Groupe ADP:** "With these six leaders in innovation and decarbonization, new modes of propulsion are already a reality. In this alliance, the only one of its kind in the world, for carbon-free regional aviation in the Paris region, the Groupe ADP intends to play its full role as booster and integrator of new aircraft at its airports and for the sector as a whole. Without appropriate infrastructures connected to the entire airport ecosystem, these new aircraft would not be able to integrate into the landscape of our Paris Region hubs, whose decarbonization is expected by all: our passenger customers and all our stakeholders."

**Gabriel Massey, president and managing director of Pipistrel:** "Pipistrel is the global leader in electric aviation and manufacturer of the world's first type-certified electric aircraft in commercial service, the Velis Electro. The Velis Electro is a two-seater light sport aircraft, primarily used by flight schools for pilot training. The aircraft reduces training costs and is making a real-world impact on the environment, including reducing noise pollution in the surrounding areas of the flight schools in which it operates."

**Jean Botti, CEO of VoltAero:** "We are proud to join forces with Groupe ADP and other leaders in carbon-free aviation, as we strive to accelerate the environmental transition of this vital sector. Together, we will leverage our collective expertise to drive the development and adoption of sustainable aviation technologies, creating a cleaner, greener future for generations to come. This partnership underscores the importance of our work at VoltAero which is providing innovative solutions such as the electric-hybrid and hydrogen-hybrid aircraft Cassio 330 that are essential for the general aviation and its ecosystem."

**Mark Cousin, CTO of Universal Hydrogen:** "We are delighted with our close collaboration with the Groupe ADP, which is deeply involved in the implementation of the green aviation value chain. Together, Groupe ADP and Universal Hydrogen will study the integration of regional aircraft converted to fly utilizing our proprietary hydrogen fuel cell powertrain and leveraging our modular hydrogen logistics fuel services. Furthermore, this collaboration will quickly demonstrate how hydrogen management at airports can be straightforward and safe, and how it can be applied to equipment and products beyond aircraft."

**Val Miftakhov, Founder and CEO of ZeroAvia:** "When the operator of one of the world's largest airports, as well as many important regional hubs for connectivity, start planning for delivering zero-emission flight using hydrogen, it is a clear signal that this change is coming. This should be one of the clear indications from Paris Air Show that progress is being made to enable the solutions that will tackle aviation's climate impact."

**Eloa Guillotin, Founder & CEO of Beyond Aero:** "We are delighted to have the opportunity to study the feasibility of operating our hydrogen-electric business aircraft in airports managed by Groupe ADP. The utilization of hydrogen as a clean and renewable energy source holds immense potential in reducing the aviation industry's carbon footprint and fostering environmental sustainability. We strongly believe in Groupe ADP's ability to play a crucial role in adopting innovative technologies. Together, we aim to identify opportunities, overcome challenges, and propose tangible solutions for efficient hydrogen utilization in airports."

**Nicolas Chabbert, Senior Vice-président Aircraft de Daher :** "This initiative by the Groupe ADP is in line with the arrival of the hybrid aircraft in 2027, which will thus be able to benefit from adapted infrastructures. In the short term, we are working with the Groupe ADP to make biofuel (SAF) available on the Toussus-le-Noble airfield so that our based customers can benefit from it."

## About GROUPE ADP

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Groupe ADP develops and manages airports, including Paris-Charles de Gaulle, Paris-Orly and Paris-Le Bourget. In 2022, the group handled through its brand Paris Aéroport 86.7 million passengers at Paris-Charles de Gaulle and Paris-Orly, and nearly 193.7 million passengers in airports abroad. Boasting an exceptional geographic location and a major catchment area, the Group is pursuing its strategy of adapting and modernizing its terminal facilities and upgrading quality of services; the group also intends to develop its retail and real estate businesses. In 2022, group revenue stood at €4,688 million and net income at €516million. Registered office: 1, rue de France, 93 290 Tremblay-en-France.

Aéroports de Paris is a public limited company (Société Anonyme) with share capital of €296,881,806. Registered in the Bobigny Trade and Company Register under no. 552 016 628.

Find more informations at [www.groupe-adp.com](http://www.groupe-adp.com) and on twitter [@GroupeADP](https://twitter.com/GroupeADP)

## About Pipistrel

In 2020, Pipistrel's Velis Electro became the world's first, and currently only, electric aircraft to receive full type-certification from the European Union Aviation Safety Agency (EASA). This achievement followed a series of electric aircraft introductions since the company began research and development of electric propulsion in 2000. Pipistrel's pioneering work has been recognized through awards from NASA, IDC, and other organizations. The company, which offers a family of gliders and light aircraft with both electric and combustion engines, has delivered more than 2,500 light aircraft worldwide since its founding in 1989 and additionally has both hybrid and electric propulsion models under development.

For more information, visit: [www.pipistrel-aircraft.com](http://www.pipistrel-aircraft.com)

## About Textron Inc.

Textron Inc. is a multi-industry company that leverages its global network of aircraft, defense, industrial and finance businesses to provide customers with innovative solutions and services. Textron is known around the world for its powerful brands such as Bell, Cessna, Beechcraft, Pipistrel, Jacobsen, Kautex, Lycoming, E-Z-GO, Arctic Cat, and Textron Systems.

For more information, visit: [www.textron.com](http://www.textron.com)

## Forward Looking Information Statement

Certain statements in this press release may project revenues or describe strategies, goals, outlook or other non-historical matters; these forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update them. These statements are subject to known and unknown risks, uncertainties, and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements.

## About VoltAero

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VoltAero takes electric aircraft to a new level. Benefitting from 80-plus years of combined pioneering expertise, VoltAero is developing a family of Cassio aircraft for general aviation, including the Cassio 330 unveiled at Paris Air Show. These unique aircraft are designed for safe, quiet, high-performance and environmentally-friendly flight in electric and hybrid-electric modes, and hybrid-hydrogen in the future. VoltAero is the only French and European manufacturer to have already flown a hybrid-electric aircraft, the Cassio S.

For more information, visit: [www.voltaero.aero](http://www.voltaero.aero)

## About Universal Hydrogen

Universal Hydrogen is building a hydrogen logistics network to fuel the future of aviation, today. Hydrogen is the ideal fuel for flight and will power aviation's new golden age, where planes are powered by renewables and emit nothing but water. The company's modular hydrogen capsules move over the existing freight network from production directly to the airplane anywhere in the world. Universal Hydrogen is also working to certify a powertrain conversion kit to retrofit existing regional aircraft to fly on hydrogen. The company has gathered the world's leading aviation and hydrogen talent to give the industry the option of clean flight, forever.

## About ZeroAvia

ZeroAvia is a leader in zero-emission aviation, focused on hydrogen-electric aviation as the initially targeting a 300-mile range in 9–19 seat aircraft by 2025, and up to 700-mile range in 40–80 seat aircraft by 2027. Based in the US and the UK, ZeroAvia has already secured experimental certificates for its three prototype aircraft from the CAA and FAA, passed significant flight test milestones, secured a number of key partnerships with major aircraft OEMs, secured pre-orders for nearly 2,000 engines from a number of the major global airlines, with future revenue potential over \$10bn. The company is on track for commercial operations in 2025. ZeroAvia is part of the UK Government's Jet Zero Council.

For more, please visit [ZeroAvia.com](http://ZeroAvia.com), follow @ZeroAvia on [Twitter](https://twitter.com/ZeroAvia), [Instagram](https://www.instagram.com/zeroavia), and [Linkedln](https://www.linkedin.com/company/zeroavia).

## About Beyond Aero

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Beyond Aero is a pioneering company in the field of hydrogen-electric aviation. Founded in December 2020, Beyond Aero is dedicated to developing a new generation of hydrogen-powered electric aircraft, starting with a business jet. The company has redesigned the architecture and developed an innovative thermal management system, enabling six passengers to fly up to 800 NM across Europe, five times further than a battery-powered aircraft. With offices in Toulouse and Paris, the start-up

boasts a team of 30 highly qualified engineers from leading aerospace companies such as Airbus, Safran and Lilium. Beyond Aero has confirmed market interest with Letters of Intent (LOIs) totalling \$580 million, as well as investor interest with over \$10 million raised to date. The company recently completed the design of an 85 kW aircraft propulsion system - the most powerful in the European Union - at its Franczal airport site. This technology represents a significant breakthrough in aviation, offering a greener, more efficient alternative to traditional aircraft.

Find more informations at <https://www.beyond-aero.com/>

## About **Daher**

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Aircraft manufacturer, industrial service provider and logistician, Daher achieved sales of 1.3 billion euros in 2022. Backed by family shareholders, Daher has been committed to innovation since its creation in 1863. With over 10,500 employees and operations in 13 countries, mainly in Europe and North America, Daher designs and develops value-added solutions for its aerospace and industrial customers and partners.

More information on [www.daher.com](http://www.daher.com)