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PRESS RELEASE

Paris Region, Choose Paris Region, Groupe ADP, Air France-KLM and Airbus reveals the winners of the worldwide call for expressions of interest regarding the setup of an Hydrogen branch in airports

Groupe ADP, Airbus, Air France-KLM and the Île-de-France Region, with the support of Choose Paris Region, have launched, last February 11th, a call for expressions of interest named "H2 HUB AIRPORT", to explore the opportunities offered by hydrogen and to boost air transport decarbonization.

This initiative, with an international dimension and unprecedented in the air transport industry, was a big success with 124 applications received. 11 winners have been selected to contribute to the surge of the hydrogen airport ecosystem of tomorrow.

The energy transition in Air transport is underway and the hydrogen airport ecosystem is one of the essential operational building blocks **to shape the arrival of the Airbus hydrogen aircraft planned for 2035**, while promoting the short-term development of hydrogen uses on the ground.

That is the purpose of this call for expressions of interest, structured around three fields:

- ◆ **Upstream of the value chain: production, storage, transport and distribution** of hydrogen (gaseous and liquid) in the airport environment (storage systems, micro-liquefaction, aircraft fueling, etc.);
- ◆ **Downstream of the value chain: diversification of hydrogen uses and services in airport and aeronautical** (ground handling vehicles and equipment, rail transport at airports, energy supply for buildings or aircraft during ground handling operations, etc.);
- ◆ **Circular economy around hydrogen** (recovery of hydrogen dissipated during liquid hydrogen fueling, recovery of a by-product from a reaction to produce decarbonized hydrogen, etc.).

"H2 HUB AIRPORT" call for expressions of interest allowed for the auditioning of major industrial players, SMEs, startups and entities from the academic and research world, sometimes gathered in consortium. To select the winners, the jury relied on the expertise of Philippe Boucly, Chairman of France Hydrogène, and Emmanuel Julien, Senior Advisor at Enea Consulting, a firm specialising in energy transition.

The 11 winning projects are key building blocks for the building and the expansion of the hydrogen value chain in an airport environment and, through their complementarity, cover all the specific issues for an airport ecosystem, with different timeframes: some projects are in the R&D phase, while others, more advanced, could be subject of displays or commissioning in the medium term.

Over the next few weeks, working meetings between partners and winners will be held to discuss the issues at stake, to share roadmaps of the various projects. **The purpose is to contribute to surging long-term solutions that are economically feasible, and to be able to carry out the first on-site experiments from 2023.**

On this occasion, **Augustin de Romanet, Charmain and of Aéroports de Paris SA - Groupe ADP**, stated: *"The success of this call for expressions of interest is proof of the growing interest for hydrogen technologies. With all our partners, we are today laying the foundations of an ecosystem that will enable the progressive integration of this clean and sustainable energy carrier at Paris airports, transforming them into true hydrogen hubs. Our ambition is also to develop new uses around ground mobility, both airside and landside."*

Jean-Brice Dumont, Executive Vice President Engineering at Airbus, said: "I see a real interest in decarbonising our industry as a whole, and the quality of the projects received and selected demonstrates this. Hydrogen is a major lever for aviation to reach its emission reduction targets. Our ambition is to play a pioneering role in this field and to support all the initiatives and skills that will enable us to collectively meet this challenge."

Anne-Sophie Le Lay, Executive Vice President, corporate secretary of Air France-KLM, stated: "The Air France-KLM Group is convinced that the use of new energies such as hydrogen is an essential component of the energy transition. By writing the history of sustainable travel together, we are enabling future generations to travel freely and responsibly. The winners selected today are pioneers who will contribute within our ecosystem to the transformation of our sector. I would like to honour their commitment, innovative spirit and enthusiasm."

For **Valérie Péresse, Chairwoman of Paris Île-de-France Region**: "We are pleased by the success of this call for expressions of interest, which will contribute in making Paris Region a territory for the deployment of hydrogen. These projects will contribute to create a robust sector, serving the different uses of this energy of the future that enables us to meet the challenge of decarbonization of transportation."

And **Franck Margain, President of Choose Paris Region**, to conclude: "This call for expressions of interest has been a great international success. 50% of the applications received came from abroad. Thanks to the efficiency of the collaboration between public and private players, we are contributing to the implementation of new solutions that will very quickly meet the energy transition objectives of the Paris Region and its international attractiveness."

The 11 winners of the "H2 HUB AIRPORT" call for expressions of interest are:

- ◆ **For production, storage, transportation and delivery of hydrogen:**
 - **Air Liquide Advanced Technologies** (France): this Air Liquide's subsidiary has developed a refueling truck with a large liquid hydrogen capacity;
 - **Ecodrome** (France): this consortium, formed by 3 partners, proposes to set up a multi-service supply station (hydrogen and electricity) on general aviation airfields that can be used, for example, by electric passenger aircraft and hybrid land vehicles;
 - **Geostock** (France): this engineering group specialising in underground energy storage works on a very large hydrogen storage solutions in lined mined cavities;
 - **Hylandair** (France): this consortium of 4 industrialists has developed a gaseous hydrogen ecosystem for use as well on land side (trucks, buses, tippers, energy supply for buildings) and air side (passenger shuttle buses, ground support equipment, etc.);
 - **Sakowin** (France): this company is developing compact reactors producing hydrogen in a decarbonized manner, based on an innovative technology using methane;
 - **Universal Hydrogen** (United States): this Californian start-up aims to convert regional aircraft to hydrogen using modular liquid hydrogen capsules on board the aircraft.

- ◆ **For diversification of use cases in airports and in aeronautics:**
 - **Hydrogen for Airport Handling** (France, Germany): this consortium of 6 operating in the field of ground handling is designing hydrogen-powered ramp vehicles (aircraft tractor, loader, baggage tractor);
 - **Use-In H2** (France): this consortium, bringing together 3 public partners including the DGAC, supports hydrogen deployment projects by proposing a risk analysis and recommendations on safety and security. It also assesses the sustainability of the solutions implemented;
 - **Plug Power** (United States): this company develops and markets ground support vehicles powered by fuel cells.

- ◆ **For circular economy around hydrogen:**
 - **Absolut System** (France): this specialist in cryogenics applied to space and aeronautics has developed solutions to optimize the quantity of hydrogen produced and stored via, in particular, systems for recovering dissipated hydrogen and mobile refrigeration;
 - **Ways2H** (United States): this startup offers a patented solution for the local production of hydrogen from the reprocessing of waste, including organic and plastic waste, which is then gasified.

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 2019, the group handled through its brand Paris Aéroport more than 108 million passengers and 2.2 million metric tons of freight and mail at Paris-Charles de Gaulle and Paris-Orly, and more than 110 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 2019, group revenue stood at €4,700 million and net income at €588 million.

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About **Air France-KLM**

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A global player with a strong European base, the Air France-KLM Group's main areas of business are passenger transport, cargo transport and aeronautical maintenance.

Air France-KLM is a leading airline Group in terms of international traffic on departure from Europe. It offers its customers access to a worldwide network, covering over 300 destinations thanks to Air France, KLM Royal Dutch Airlines and Transavia, mainly from its hubs at Paris-Charles de Gaulle and Amsterdam-Schiphol.

Its Flying Blue frequent flyer programme is one of the leaders in Europe with over 17 million members.

Together with its partners Delta Air Lines and Virgin Atlantic, Air France-KLM operates the largest transatlantic joint venture, with more than 275 daily flights in 2019.

Air France-KLM is also a member of the SkyTeam, the alliance dedicated to providing passengers with a more seamless travel experience at every step of their journey 19 member airlines working together across an extensive global network.

Recognized for 15 years as an industry leader in sustainable development, the Air France-KLM Group is determined to accelerate the transition to more sustainable aviation. Since 2003, the Air France-KLM Group has been a member of the United Nations Global Compact. The aim is to make a significant contribution to the UN Sustainable Development Goals in connection with the Group's activities.

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About **Airbus**

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Airbus pioneers sustainable aerospace for a safe and united world. The Company constantly innovates to provide efficient and technologically-advanced solutions in aerospace, defence and connected services. In commercial aircraft, Airbus offers modern and fuel-efficient airliners and associated services.

Airbus is also a European leader in defence and security and one of the world's leading space businesses. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions and services worldwide.

More information on: www.airbus.com and on twitter: [@Airbus](https://twitter.com/Airbus) & [@AirbusPress](https://twitter.com/AirbusPress)

About **Paris Region**

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Paris Region is a driving force for French employment and growth, both in terms of its economic weight and its influence. As the leading economic region in Europe and the third-largest urban economy in the world, behind Tokyo and New York, Paris Region is a hotbed for innovation due to its concentration of 40% of France's R&D activities. By and large, Paris Region benefits from a great international appeal.

Paris Region is active in most of the areas that affect the daily lives of its 12 million residents: transport, education, economic development, environment, etc. In an area that covers only 2% of France but is home to 18% of the country's population and nearly 30% of the national GDP, Paris Region is implementing a development policy which places the environment at the heart of its priorities. It is investing 10 billion euros towards it. The launch of an innovative aeronautics industry in Paris region is therefore fully in line with its policy in terms of attractiveness and economic development.

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About **Choose Paris Region**

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Choose Paris Region is a catalyst for business and innovation which supports international companies wishing to expand in the Paris Region. As a non-profit governmental agency, Choose Paris Region works with local public entities to provide free tailor-made services.

Choose Paris Region brings its deep market and industry expertise together with an extensive network to support international companies in building tech partnerships, designing their go to market strategy, and providing guidance to implement their local presence.

Every year, with a team of 80 dedicated professionals across Europe, the US and China, Choose Paris Region supports 1,000+ international companies looking to grow their business in Paris Region, one of the leading tech and business hubs in the world.

More information on: www.chooseparisregion.org/en and on twitter: [@ChooseIDF](https://twitter.com/ChooseIDF)