

INNOVATIONHUB

Groupe ADP welcomes you to the Olympic Games ... and to innovation

PRESS PACK

MAY 2024



Innovation Hub: 7 years of innovation and transformation

2017/2023

Since 2017, Groupe ADP's open innovation approach has aimed to spread a culture of innovation within the company by connecting it to the Parisian innovation ecosystem (**OPEN**), running pilot projects with startups (**CONNECT**), and taking stakes in startups and investment funds (**INVEST**).

In 2022 we added a new, forward-looking pillar (**RE.INVENT**) to our approach. It means we will explore new business opportunities and areas of activity, like advanced air mobility (AAM), that can only be explored through strengthening our ecosystem by working with regulators, industrialists, public authorities and more.

2024

IN A FEW WEEKS' TIME, GROUPE ADP WILL BECOME THE MOST IMPORTANT GATEWAY TO THE OLYMPIC AND PARALYMPIC GAMES. Our airports will be the first and last memory of the games for the majority of athletes and spectators alike.

Welcoming the world is always the focus for all our operations, but even more so in the summer of 2024.

2024 is a pivotal year because the innovation projects we have developed to put us on the top step of the podium are a guide to the routes, construction and mobility of the airport of tomorrow.

We are continuing to build our network of innovation centres as well as Groupe ADP's global network, with the **CREATION OF THEMATIC AND TECHNOLOGICAL CENTRES OF EXCELLENCE.**

INNOVATION HUB

SINCE 2017

3 PROGRAMS

OPEN

To spread a culture of innovation and be at the heart of the local innovation ecosystem.

CONNECT

To roll out pilots with start-ups.

INVEST

To take equity stakes in start-ups and investment funds.

COMPLETED BY SOME CENTRES OF EXCELLENCE

NOUVELL'AIRe

Developing low-carbon infrastructures

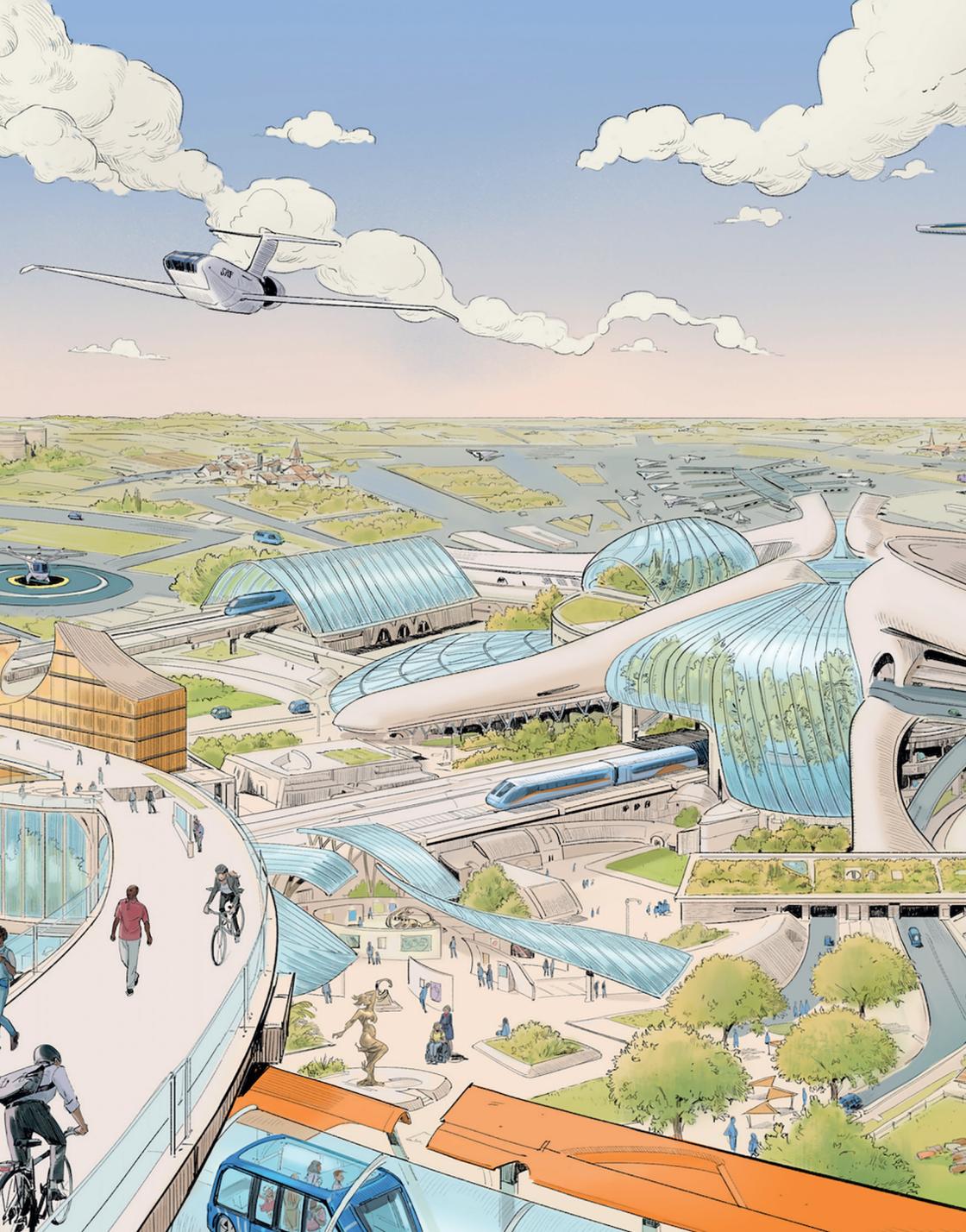
RE.INVENT

Advanced Air Mobility

HOLOGARDE

Anti-drone security

35 EVENTS A YEAR 5,000 PARTICIPANTS a year (average)	130 pilots carried out since 2022	10 direct holdings in start-ups
12 OPEN INNOVATION CHALLENGES		
3 LOCATIONS AND TECHNOLOGY SHOWROOMS 40,000 PERSONNES visitors in Paris	over €130m invested in partner funds	over €25m invested through minority stakes



Innovation Hub:
everyone innovates.
In all our businesses,
in every geography

OPEN

Spreading our culture of innovation at the centre of the local innovation ecosystem

— A WIDE RANGE OF EVENTS AND CONFERENCES TO SPREAD THE CULTURE OF INNOVATION

- ◇ **CONFERENCE:** familiarising all staff with innovations and new business practices in a hybrid format.
- ◇ **INNOVATION CAFÉ:** giving the floor to an employee to share an innovation with a small group.
- ◇ **INNOVATION DAY:** dedicated days with our partners to explore innovation and transformation issues in depth.
- ◇ **REVERSE PITCH:** pitching a strategic challenge for the Groupe's transformation to one or more of our partners, to share and generate innovation proposals.

**INNOVATION CAFÉ
DRONES**
(MAY 2022)



**CONFERENCE
ON ARTIFICIAL
INTELLIGENCE**
(MAY 2023)



**WORKSHOP
ON INNOVATION
METHODS
AND TOOLS FOR
SUSTAINABLE
CONSTRUCTION**
(APRIL 2024)



OPEN

— GROUPE ADP AT THE CENTRE OF THE PARIS REGION'S INNOVATION ECOSYSTEM

The Innovation Directorate has developed partnerships with:

- ◇ **LOCAL INCUBATORS AND INNOVATION ECOSYSTEMS:** Paris&Co (City of Paris incubator), Choose Paris Region (attractiveness and innovation agency of the Île-de-France region), the Paris-Saclay agglomeration community and more.
- ◇ **THEMATIC ACCELERATORS:** Mobility Club and Via ID on mobility, Impulse Partners on sustainable construction, etc.
- ◇ **THINK TANKS AND OPEN INNOVATION CHALLENGES:** including Futura Mobility on mobility and Hub Institute on the Future of Work
- ◇ **VENTURE CAPITAL FUNDS AND CORPORATE VENTURE CAPITAL STRUCTURES.**

Thanks to this rich ecosystem, Innovation Hub teams have facilitated 12 open innovation challenges over the past seven years.

In September 2024, an **OPEN INNOVATION CHALLENGE WILL TAKE PLACE AT ZAGREB AIRPORT** in Croatia. And for the first time in 2024, **INNOVATIONS DAYS** will take place simultaneously at three airports in our network: Paris-Charles de Gaulle, Ankara in Turkey and Amman in Jordan.

ZOOM ON
**REVERSE PITCH WITH
IMPULSE PARTNERS**

Poser les prémices d'un centre d'excellence de la construction durable

In June 2023, Groupe ADP teams took part in a *Reverse Pitch* exercise, pitching to Impulse Partners, a consultancy specialising in sustainable transformation issues. We shared the strategic challenges of sustainable construction, a key element in the transformation of Groupe ADP's airports. 40 solutions have since been sourced, meetings have been arranged with 20 companies, and several projects have been initiated.



INNOVATION HUB
Salles de réunion
Le PING PONG
Le PARLOIR
Le FABLAB
Le PITCH



OPEN

– NETWORKING OF NEW INNOVATION LOCATIONS, THEMATIC CENTRES OF EXCELLENCE IN PARIS AND AROUND THE WORD

The maturity of our innovation approach can be demonstrated by how information is disseminated across in the Groupe’s business divisions. Thematic centres of excellence with dedicated facilities are being set up in Paris and in the rest of the network.

NOUVELL’AIRe
THE CENTRE OF
EXCELLENCE FOR
LOW CARBON
CONSTRUCTION

As part of the “Pioneers 2025” strategic roadmap, sustainable construction is a area of transformation, involving design, operation, materials used and more.

Led by Groupe ADP architects, experts, engineers and design offices, the **NOUVELL’AIRe hub at Paris-Orly** is a new business and transformation approach which aims to be a catalyst for internal and external solutions in sustainable construction in terms of design, construction and energy consumption.

NOUVELL’AIRe SUPPORTS THE GROUPE’S AMBITIONS FOR LOW-CARBON CONSTRUCTION, as illustrated by the project to build a new high-energy performance facade for level 6 of Paris-Orly airport (pictured below) using a wood construction process.



NOUVELL'AIRe HUB IS A SPACE FOR INTERNAL AND EXTERNAL EXCHANGES AND CREATION IN PARIS-ONLY. It is equipped with a materials library – bio-based materials in particular – a documentation centre and a space for creation and meetings with other Groupe ADP departments and external partners.



OPEN



2024
HUB NOUVELL'AIR^e
PARIS-ORLY

INNOVATION CENTRES
IN PARIS AND ABROAD



2025
ENVIRONMENTAL
INNOVATION
PARIS-ORLY



2023
INNOVATION HUB
ISTANBUL
TAV AIRPORTS



2021
INNOVEX
HYDERABAD
GMR AIRPORTS



2017
INNOVATION HUB
PARIS-CHARLES
DE GAULLE

CONNECT

Experimenting and deploying new innovative solutions in our airports

– EXPERIMENTING WITH START-UPS:
ACCELERATING THE UPTAKE OF
NEW PRODUCTS, SERVICES AND BUSINESS
APPROACHES

- ◇ We offer **A UNIQUE PLAYGROUND** for experimentation through the diversity of components and professions represented at the airport.
- ◇ We are alongside **ENTREPRENEURS** through development and co-development of their solutions.

CONNECT

— WE INNOVATE IN THREE AREAS TO PROVIDE NEW SOLUTIONS FOR ADP'S ENVIRONMENTAL AND OPERATIONAL TRANSFORMATION CHALLENGES

EFFICIENCY AND SUSTAINABILITY

1—PASSENGER EXPERIENCE

- ◇ Autonomous and electric mobility
- ◇ Biometrics
- ◇ Luggage services
- ◇ Services for people with disabilities

2—OPERATIONS AND INFRASTRUCTURE

- ◇ Monitoring and predicting flows
- ◇ Automation and decarbonisation of operations
- ◇ Energy
- ◇ AI and machine learning-powered industrial equipment
- ◇ Robotics
- ◇ Sustainable construction and innovative materials

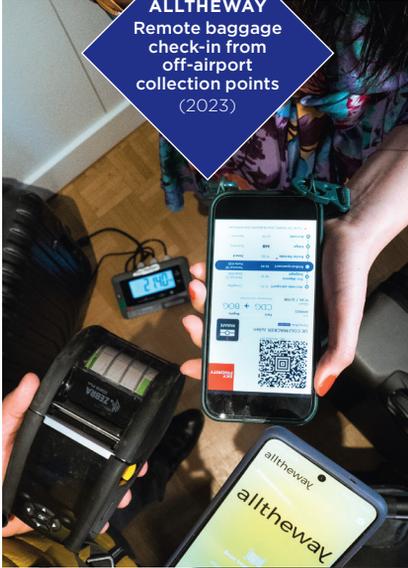
ATTRACTIVENESS AND RESPONSIBILITY

3—EXPERIENCE COLLABORATORS

- ◇ Listening
- ◇ Collaborative working methods
- ◇ Work rhythms
- ◇ Personalised support for personal situations

As part of Groupe ADP's strategic roadmap "2025 Pioneers", the group has set a target of 120 pilots including 30 industrialisations by 2025. This objective also involves the airports of TAV Airports.

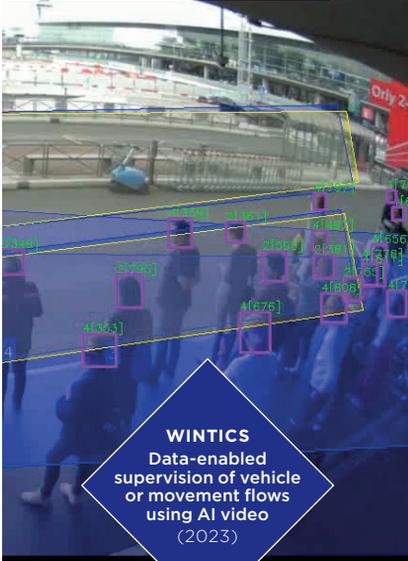
ALLTHEWAY
Remote baggage
check-in from
off-airport
collection points
(2023)



OUTSIGHT
LIDAR technology for
monitoring passenger
and baggage flows
(2020)



WINTICS
Data-enabled
supervision of vehicle
or movement flows
using AI video
(2023)



ALTEIA
Biodiversity
mapping using
drones and artificial
intelligence
(2022)



CONNECT

ZOOM ON
REGIONAL
DECARBONISED
AVIATION

AN ALLIANCE TO ACCELERATE THE SECTOR'S ENVIRONMENTAL TRANSITION BEFORE 2030

In 2023, Groupe ADP joined forces with six leaders in decarbonised regional aviation to **ACCELERATE THE ARRIVAL OF ELECTRIC OR HYDROGEN-POWERED AIRCRAFT WITH BETWEEN 2 AND 100 SEATS** at its aerodromes and at Paris-Le Bourget, Paris-Orly and Paris-Charles de Gaulle airports.

These new aircraft will decarbonise flights between aerodromes and will provide radial and regional routes and short-haul flights in Europe.

Working in partnership with manufacturers (Pipistrel, Universal Hydrogen, ZeroAvia, Beyond Aero, VoltAero, Daher), Groupe ADP will:

1 – IDENTIFY THE POTENTIAL FOR SUBSTITUTION of existing flights in conjunction with the airlines;

2 – CONSOLIDATE THE NEED FOR NEW ENERGY SOURCES (electric, hydrogen, SAF)

3 – DEFINE THE SUPPLY, LOGISTICS AND REFUELLING CHAINS for aircraft (storage, handling, installation of H₂ stations);

4 – COLLABORATE WITH THE REGULATORY AUTHORITIES regarding safety, procedures, training, etc.

Finally, in the field of freight (forestry, humanitarian, industrial, construction), Groupe ADP is working with the company **FLYING WHALES** to create tailor-made bases throughout the world for the operation of the company's very large-capacity airships (60 tonnes).





INVEST

A hybrid investment model in start-ups and funds

— OUR START-UP INVESTMENT PORTFOLIO: DYNAMIC MANAGEMENT WITH AN EYE FOR NEW OPPORTUNITIES

- ◇ Groupe ADP makes minority investments in innovative companies with high growth potential and sectoral exposure related to airports, to meet its operational needs, support its development projects and explore new business.
- ◇ Groupe ADP has opted for a **SMALLER PORTFOLIO** size by making an average of two direct minority investments per year in start-ups. This choice is motivated by support for the **INDUSTRIAL DEVELOPMENT OF PROJECTS** in our airports, which is a condition of the investment, and so the company can **ACTIVELY SUPPORT** start-ups during their development (strategy, financing, marketing, business development, etc.).



- ◇ Like a venture capital investment fund, Groupe ADP has a **DYNAMIC APPROACH TO MANAGING ITS PORTFOLIO**, which has led it to sell some of its holdings at the end of an initial five-year investment cycle as opportunities for consolidation or mergers have arisen.



INVEST

— PARTNER INVESTMENT FUNDS: STEPPING UP ENVIRONMENTAL TRANSFORMATION

Investments in funds, particularly venture capital funds, are based on a logic of thematic and geographical complementarity, with the aim of covering all the innovation issues that the Groupe may encounter on its various platforms, and of capturing the trends in the world's main technological ecosystems.

The monitoring of innovative companies, which is shared by these partners, feeds the various Groupe ADP businesses.

In 2024, Groupe ADP naturally joined the **TIBI INITIATIVE** of the French Treasury, a scheme designed to support the growth of early start-ups, and “Je choisis la French Tech” (I choose French Tech), which aims to double public orders and purchases by major groups from French start-ups.



10 DIRECT HOLDING IN START-UPS

14 EQUITY INVESTMENTS IN SEVEN YEARS
(APPROX. TWO PER YEAR)
MORE THAN €25 MILLION INVESTED IN EQUITIES



Imaging and artificial intelligence
for pollution detection.

www.waltr.fr



Lidar sensors for
3D flow monitoring.

www.outsight.ai



Security for
sensitive areas.

www.egidium-technologies.com



Software to optimise
air traffic management.

www.innov-atm.com



Real-time environmental intelligence
solutions.

www.ellona.io



Dirigible balloons for transport
and logistics.

www.flying-whales.com



Hybrid platform for recruitment
and employer branding.

www.welcometothejungle.com



Infrastructure for eVTOL
and drone operators.

www.skyports.net



onepark

Online parking reservation
platform.

www.onepark.fr

NON DISCLOSED HOLDING
Monitoring works
and construction sites.

8 PARTNER INVESTMENT FUNDS

OVER €130M COMMITTED TO PARTNER FUNDS



Early and Late-stage multi-sector fund,
investing in France.
www.bpifrance.fr



Fund dedicated to developing
the hydrogen industry
worldwide.
www.hy24partners.com



Late-stage multi-sector fund,
with global coverage.
www.cathayinnovation.com



Multi-sector late-stage fund
with global coverage.
www.whitestarcapital.com



Multi-sector early-stage fund
investing in France and Europe.
www.siparex.com/xange



Early-stage fund dedicated
to Deeptech, investing
in France and Europe.
www.elaia.com



Early and late-stage fund dedicated
to environment and decarbonisation,
investing in France and Europe.
www.group.bnpparibas.com
www.solarimpulse.com



United Airlines Sustainable Flight
Fund: fund dedicated to
the development of sustainable
aviation fuels (SAF)
with worldwide coverage.
www.united.com



PARIS
2024

50 ANS

Terminal 1

Before and after the 2024 Olympic and Paralympic Games

BEFORE AND AFTER

— INNOVATION AS A LEGACY

While the legacy of the Paris 2024 Olympic and Paralympic Games should benefit the experience of all our passengers, it also provides an opportunity to accelerate our transition towards a sustainable and performance-orientated airport model.

The Games will not only be an opportunity to demonstrate the expertise of Groupe ADP; they will also be beneficial in the long term, by acting as an accelerator of innovation and transformation. This is shown in particular by some of the projects presented on Groupe ADP stand:

- ◇ **BAGGAGE AND PASSENGER JOURNEY INNOVATION**
- ◇ **AI FOR MORE ROBUST AND RESPONSIBLE OPERATIONS**
- ◇ **MORE SUSTAINABLE OPERATIONS**
- ◇ **NEW AIR MOBILITY**

1/ BAGGAGE AND PASSENGER JOURNEY INNOVATION

BIOMETRY WITH EASIER

◆ **THE SOLUTION:** equipment and hardware supplier for the deployment of a biometric, autonomous check-in and boarding process.

◆ **WITH GROUPE ADP:** two initial trials have already taken place in Paris airports on targeted flights, starting in 2021. During check-in, passengers' identity documents and boarding passes are linked to their faces, while respecting their personal data. This allows passengers to check in their luggage and pass through the boarding gate without having to show all the documents needed for their journey. This summer, Groupe ADP is starting a third, more extensive phase of tests, in collaboration with Air France, to cover all Paris-Orly-Toulouse flights for several months.



1/ BAGGAGE AND PASSENGER JOURNEY INNOVATION

ALLOBRAIN



◆ **THE SOLUTION:** Allobrain has developed a virtual voice assistant that allows customers to get answers more quickly and efficiently over the phone. If the system cannot answer a question, the call is transferred to an operator, who therefore only deal with the most complex questions.

◆ **WITH GROUPE ADP:** this solution is implemented on our freephone number, 3950. Thanks to this technology, the percentage of unanswered calls has been reduced from 50% to 10%, and average waiting time has been cut from 4 minutes to 1 minute 20 seconds.

ALLTHEWAY



◆ **THE SOLUTION:** Alltheway offers a suite of technology solutions allowing travel professionals to manage off-airport baggage check-in to make travel easier and more sustainable. Alltheway offers a solution for checking in luggage at home, in hotels, train stations, amusement parks, convention centres, ski resorts and holiday resorts, as well as for collecting luggage directly from the airport delivery belt and during train transfers.

◆ **WITH GROUPE ADP:** offered since 2023 at Paris-Charles de Gaulle airport to passengers travelling with Air France, this innovative service is supported by Groupe ADP's teams. The plan is to expand its use across the airport, to share it with other airlines and, eventually, to deploy it Paris Orly and internationally.

2/ AI FOR MORE ROBUST AND ACCOUNTABLE OPERATIONS

WINTICS



◆ **THE SOLUTION:** Wintics has developed a technology for analysing surveillance video images with artificial intelligence to decipher vehicle or movement flows.

◆ **WITH GROUPE ADP:** this solution is being trialled at Paris-Orly airport, where 11 cameras have been installed along the lines of two bus stations. The aim is to monitor activity at the bus stations, collect statistical data (such as the number of passengers and buses) and quantify the share of the Orly Bus in access to the airport. The solution offered by Wintics enables us to monitor the flows, and the responses made, in a reliable manner.



WALTR



◆ **THE SOLUTION:** this start-up has developed a spatial imaging technology, coupled with AI, for mapping and tracking pollutant emissions in the air.

◆ **WITH GROUPE ADP:** cameras are currently being installed at aircraft stations at Paris-CDG to optimise the use of APUs (Auxiliary Power Units), the auxiliary units producing electrical energy on board aircraft to power the various on-board systems on the ground. Cameras can be used to monitor the correct use of these APUs to reduce emissions on the ground.



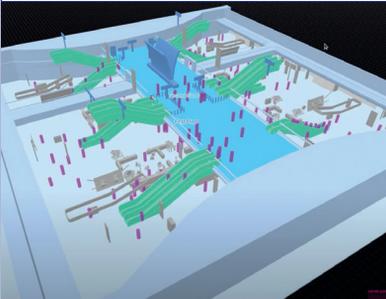
2/ AI FOR MORE ROBUST AND ACCOUNTABLE OPERATIONS

OUTSIGHT



◆ **THE SOLUTION:** Outsight is the creator of a unique software solution for mapping a 3D environment, based on sensors using LIDAR (Light detection and ranging).

◆ **WITH GROUPE ADP:** after being deployed in the baggage delivery rooms at Paris-Charles de Gaulle to monitor passenger flows in real time, this solution is now the subject of a new series of experiments, in partnership with the SNCF at CDG2 station, to collect precise data on station attendance, waiting times and the use of services and shops in the station. This information is used to improve operations and optimise the visitor experience.



WEMAINTEIN



◆ **THE SOLUTION:** WeMaintain has designed sensors to monitor the use, energy consumption and potential breakdowns of automatic equipment (lifts, conveyor belts, etc.) using artificial intelligence.

◆ **WITH GROUPE ADP:** WeMaintain sensors are currently being tested on a battery of 30 lifts at Paris-Orly airport. The information collected allows analysis of lift usage patterns, peak hours, frequent stops, etc. Initial results show that this information can help understand usage, optimise investments, maintenance costs and energy consumption. Finally, WeMaintain's sensors allow early detection of technical failures, improving the reliability of lifts.



3/ MORE SUSTAINABLE OPERATIONS

TAXIBOT BY SMART AIRPORT SYSTEMS

◆ **THE SOLUTION:** TaxiBot is a vehicle designed to tow aircraft from the gate to the runway. It allows airlines to switch off their engines while planes are taxiing to reduce emissions and noise. Developed by the French Groupe TLD in collaboration with Israel Aerospace Industries (IAI), TaxiBot is produced in France and sold by Smart Airport Systems.

◆ **WITH GROUPE ADP:** Groupe ADP tested this TaxiBot from November to February 2024 at Paris-Charles de Gaulle. The environmental benefits (in terms of kerosene and noise) and operational impacts of this experiment are currently being analysed with the airlines concerned and France's Directorate-General for Civil Aviation.



4/ ADVANCED AIR MOBILITY (AAM)

VOLOCOPTER

◆ **THE SOLUTION:** Electric Vertical Take-Off and Landing (eVTOL) aircraft.

◆ **WITH GROUPE ADP:** since 2020, Groupe ADP has a gradual approach to testing new electric air mobility in the Ile-de France area. The aim is to support the development of electric aviation and new uses, particularly in the health and medical sectors.

The expansion of EVTOL passenger transport is envisaged at the end of the decade thanks to a new generation of aircraft capable of carrying 3-4 passengers over longer distances (50-100 km).

Following the example of the work carried out by Volocopter with ADAC (the German Sanitary Emergency Service), Groupe ADP will simulate three specific use cases with the Assistance Publique des Hôpitaux de Paris (AP-HP): the transport of grafts, the transport of slightly injured people and the movement of doctors to accident sites.

eVTOLs foreshadow the decarbonised aviation of tomorrow and are a lever of transformation for the aviation industry, offering quieter flights, reduced energy consumption and a smaller carbon footprint.

The summer of 2024 will see eVTOL take off in Île-de-France: a world first.



VOLOCOPTER



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Design & production: ©Aurélien Saublet





GROUPE ADP

SHARING NEW HORIZONS

www.groupe-adp.com

@GroupeADP

1 rue de France

93 290 TREMBLAY-EN-FRANCE

FRANCE