

COMPANIES DIRECTORY

French technologies for sustainable airports



2019 - 2020



www.greenairport.fr



The professional association **PROAVIA** was founded in 1976 as a joint initiative of the Directorate General of Civil Aviation, French equipment manufacturers, and consultants to the airport and air traffic control sectors. Its dual goals are to promote French know-how in these sectors as well as to inform the market about innovations and trends in France and throughout the world.

PEXE, the French Cleantech network, is the leading network of French cleantech clusters. Its main objective is to structure and promote the cleantech industry to accelerate the development of its 5000 SMEs.

In line with their goals, PROAVIA and PEXE has created this directory to highlight French expertise in sustainability in airports. Handling increasing numbers of passengers every year, airports are at the cutting edge of technology in many ways. Solutions designed to serve passengers as well as airlines, airport operators and air traffic controllers must be innovative and the same applies to solutions that protect the environment.

This first edition of the directory “French technologies for sustainable airports” identifies a range of innovative solutions available to airports to improve their ecological impact and energy efficiency.

The products and services presented are proven so-lutions that can help airport managers meet their internal commitments to sustainability, as well as the Airport Carbon Accreditation programme goals set out by Airport Council International.

Whether in sustainable design, construction, and maintenance, energy production, water treatment or waste management, French companies have ideas, solutions and experience that can be of value.

PROAVIA and PEXE help you match your needs to the solutions.

www.proavia.com

www.greenairport.fr/

ecoentreprises-france.fr/

SHOWCASING INTERNATIONAL SUSTAINABLE BEST PRACTICES



AIR QUALITY / ODOUR / NOISE

Taxibots reduce taxiing aircraft emissions

Use of a semi-autonomous taxibots to reduce fuel consumption – and carbon emissions – of taxiing aircraft by up to 85%. The taxibot also greatly reduces noise levels and the risk of foreign object damage to engines.

Landscaping that cuts aircraft noise

Transformation of land adjoining the runway into a series of trenches and ridges which deflect half of the ground noise generated by taxiing aircraft, providing a relief to the nearby residents. As an additional benefit, the labyrinth formed by the land works has become popular with walkers and mountain bikers!



CIRCULAR ECONOMY

Plastics-to-textiles

Support of a circular economy by collecting plastic bottles to be transformed into recycled fiber for use in athletic and fashion apparel. In partnership with a global textiles provider and other airport-based corporate partners.

Light as a service

Redesign of the lighting fixtures in a departure terminal resulting in a reduction of raw material consumption. Complete fittings can be reused. 75% longer service life of the fittings, and 50% reduction in energy consumption from LED lightbulbs.

Reducing food waste

Pilot of a new app that allows airport visitors, passengers and employees order surplus food prepared by restaurants and other food service establishments at special reduced prices for pick-up between 8pm and 9.30pm.

Recycling construction waste

Construction of four cafeterias from recycled materials from dismantled machine parts, and scrap from building projects elsewhere in the airport. Table tops, seats, and lampshades are among the items that have been created from construction waste.



WATER CONSERVATION

Natural wastewater filtration

Creation of a marsh filtration system consisting of 12 large basins planted with 35,000 reeds. This reed-based filtration treats the de-icing residues in a fully natural manner, supplementing the existing treatment system which processes 3 to 5 million cubic meters of runoff wastewater annually through the storm water treatment system.

Runoff water reuse

Collection of rainwater runoff and air-conditioning condensate. This system collected 103,000 gallons just from the air-conditioning runoff from its 14 boarding bridges.



ECO-DESIGN

New “bioclimatic” terminal

Design of a new terminal with a wooden structure along with local, bio-sourced materials. It will also feature a system of natural ventilation using the island's trade winds, a unique application for an airport of this size.

The first BREEAM “Excellent” airport

Use of snow for cooling and geothermal heating, walls and windows are designed to make maximum use of sunlight and generous use is made of locally sourced stone and sustainably grown wood.



ECO-MOBILITY

Autonomous electric vehicles for the last mile

Trial of autonomous electric vehicles within closed on-airport roadways. Airports are seen as a very promising market for autonomous vehicles due to their high density of traffic between transport nodes (railway and bus stations), terminals and car parks combined with the capability to create restricted, “geo-fenced” roadways.

Electric vehicles everywhere

Replacement of 120 petrol and diesel powered vehicles with fully electric versions. In addition to cars and apron utility vehicles, electric mobility scooters and ground support equipment will be deployed. By 2030 the airport plans to have a fully electric fleet of vehicles.

The most bike-friendly airport

This airport put in place several elements to encourage passengers to arrive by bicycle: secure bike parking, an assembly and repair station, tools for rent (pedal wrenches, air pumps, etc.), and paths that hook up with the regional bike trail system for the 9-mile ride to and from the city's central business district.



RENEWABLE ENERGY

Solar energy for an airport grid

Installation of a large-scale solar PV park with a current total of 2 MW of peak power. The PV park will be expanded to 6 MW of capacity, or about 24% of the total electrical power needed by all the country's airports. In addition to reducing carbon emissions from fossil fuel-generated electricity, the PV park will ensure a more reliable supply of electricity than the national grid.

“Green hydrogen” coming

Construction of a plant to produce and distribute hydrogen on the airport premises. Initially the system will provide fuel for 5 buses and 50 vehicles when it is operational in 2020. Plans are for the plant to eventually feed a network of service stations in the surrounding area in support of the regional government's goal to reach 20% of all renewable energy from hydrogen by 2050.

Solar at the gate

Installation of a local grid for electrifying its APU and pre-conditioned air facilities that is entirely powered by a 1.25 Megawatts solar PV array on the airport.

Geothermal sourced heat

Two geothermal wells were drilled in 2011 and now provide over 70% of this airport's heat and sanitary water and save over 9000 tonnes of CO2 annually.

Dutch wind turbines

Creation of a wind farm in April 2018 which supplies 20 GWh per year to the airport, the equivalent energy consumption of 17,000 homes. More wind turbines will be built so that by January 2020 all 6 airports operated will be powered by wind.



BIODIVERSITY

Mapping and managing biodiversity in French airports

An association of environmentalists, airports, and aviation partners, has helped a French airport manage its nearly 500 hectares of prairie land in a way which eliminates herbicides while protecting against the proliferation of bird populations which pose the greatest risk of airstrikes. Through its efforts, the association has revealed the unexpected biodiversity of the largely untouched land belonging to 18 of the country's largest airports.

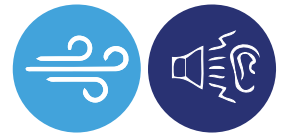
Apiaries at airports

Since 2011 several airports have created apiaries which are now home to million of bees. In addition to the beneficial effects on the local environment (and the honey) the beehives in can also be used to monitor air quality.

Rewilding airport land

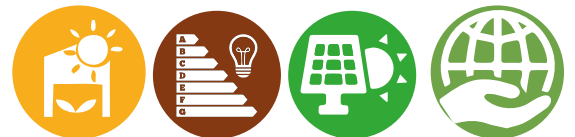
Striking a balance between wildlife conservation and aerodrome safety (i.e., avoiding bird strikes) is a challenge. A major airport has been working with biologists and conservation experts for years to achieve this balance and has “rewilded” some pockets of grassland which were formerly pasture land.

01dB



THEMATIC :	Air quality; Noise
COMPETENCY :	Analysis / Control; Training / Awareness
WEBSITE :	https://www.01db.com
ACTIVITIES :	Products and services to monitor and control air, noise and vibration pollution for airport environmental management, including training.
REFERENCES :	Paris CDG, Bogota, Hongqiao Shanghai

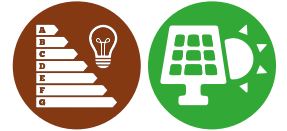
ADP Ingénierie



THEMATIC :	Sustainable design and materials; Sustainable transport; Energy efficiency; Ecological engineering and biodiversity
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	www.adp-i.com
ACTIVITIES :	ADP Ingénierie (ADPI) provides a full range of design services for the whole airport (and airport cities) putting adaptable functionality, connectivity and sustainability at the forefront of its mission. ADP Ingénierie takes a global approach to its projects, re-thinking airports as ecosystems and considering how an airport can positively interact with its environment and participate sustainably in the broader community. From lessons learned in operating airports managed by the ADP Group throughout the world, ADP Ingénierie continuously applies this experience in.
REFERENCES :	France : Paris CDG and Paris Orly, Le Bourget, Toulouse, Lyon World : Manama (Bahrain), Manama (Bahrain), Chengdu (China), Dubai (UAE), Doha (Qatar), Santiago (Chile), Nairobi (Kenya), Shanghai, Kathmandu (Nepal), Bogota (Colombie)

AHCS

Conception de Solutions Energétiques



THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturing; Construction
WEBSITE :	www.ahcs.fr
ACTIVITIES :	AHCS has unique know-how in: - project management: engineering and legal and administrative editing, financial, search for grants & subsidies ... - technical engineering: 2 & 3D design, thermal, aerualic, fluidic, mechanical calculations, compression and compaction, granulation, combustion and gasification of carbonaceous materials, heat networks, centralized technical management, energy management ...
REFERENCES :	Please, visit the website for updated references list

AIA LIFE DESIGNERS



THEMATIC :	Sustainable design and materials; Energy efficiency; Ecological engineering and biodiversity
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	http://www.aialifedesigners.fr/
ACTIVITIES :	AIA Life Designers, an architecture and engineering agency of 690 employees, develops within its Generative City business unit an airport offer based on a bioclimatic terminal design and a built-in temperate and tropical environment including a "natural ventilation" system which avoids air conditioning. AIA considers the global dimension of sustainable design: environmental labels (HEQ, BREAM, LEED), rainwater harvesting, solar panels, biosourced materials, airtightness, etc. - The first large-scale airport with 100% natural ventilation in St Denis de la Réunion ; - The extensive restructuring on an occupied site at Nantes Atlantique Airport ; - The extension to Aimé Césaire de la Martinique Airport in Fort de France
REFERENCES :	

AKVO PARIS



THEMATIC :	Water
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Works / Construction; Analysis / Control
WEBSITE :	http://www.akvo.fr/
ACTIVITIES :	<p>AKVO specializes in water economics and management, optimizing our customers' water supply and consumption. It provides technical solutions for installation, repair and maintenance. The main activities are:</p> <ul style="list-style-type: none">- Water and sanitation systems (study and diagnosis)- Leak detection (investigation and repair)- Technical and sanitary equipment (installation and maintenance)- Watering of green spaces ...
REFERENCES :	Please, visit the website for updated references list

ALGOPAINT



THEMATIC :	Air quality
COMPETENCY :	Manufacturer
WEBSITE :	http://www.peinture-algo.fr
ACTIVITIES :	<p>ALGOPAINT PAINTING BASED ON ALGAE. A unique and innovative concept, our ALGO® paint clearly contributes to the air quality of homes, offices and public spaces. Our paint emits less than 1g / L of volatile organic compounds (VOCs), contributing to our well-being. ALGO® is a bio-based paint using raw materials from natural, local and renewable sources. Indeed, our paint is free from petroleum derivatives and relies on vegetable-based chemicals, not only reducing its inherent carbon footprint but also resulting in short supply chains.</p>
REFERENCES :	Please, visit the website for updated references list

ALSTEF AUTOMATION SAS



THEMATIC :	Energy efficiency
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Operation / Maintenance
WEBSITE :	www.alstef.com
ACTIVITIES :	ALSTEF, a B2A Technology group company, is one of the world's major suppliers of baggage handling systems. ALSTEF's solutions integrate all the functions from baggage check-in to baggage reclaim. The systems are designed to ensure a flexible operation, reduce maintenance costs, enable future developments and optimise the process time between check-in and loading bags into plane holds.
REFERENCES :	Lyon Airport Terminal 1 – France Moscow Sheremetyevo airport Terminal B – Russia Paris Charles de Gaulle Airport Terminal 1 - France

ANTEA GROUP



THEMATIC :	Air quality; Waste reclamation; Water; Risk management; Soil decontamination
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Works / Construction; Digital Platform / Digital Services; Analysis / Control
WEBSITE :	www.anteagroup.com
ACTIVITIES :	Worldwide air traffic is set to grow twice as fast as the global economy. Airport operators must meet the challenge of increasing traffic through the sustainable development of their activities. Antea Group tems supports airport through an approach based on a proven methodology : - understand the issues - preserve the resources - limit the impacts. - Environmental plan of Beauvais airport - Aircraft de-icing water treatment unit and runway - Orly Airport
REFERENCES :	- Mastery of design and construction - Historical studies and diagnosis of the hydrocarbon deposits of airport platforms

AQUASSAY



THEMATIC :	Water
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	www.aquassay.com
ACTIVITIES :	<p>Aquassay is a start-up provider of the eDATAMOTIC service: data collection and analysis solution for a better industrial and environmental performance with a specialty in water efficiency and a strategy of action at the source (reduced consumption and rejected pollution) acting on the causes, rather than trying to deal with the consequences. eDATAMOTIC is marketed worldwide and already present at 40 sites in 5 countries in the world.</p>
REFERENCES :	ADP

ARIA Technologies



THEMATIC :	Air quality
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	www.aria.fr
ACTIVITIES :	<p>Our key assets are based on our know-how and advanced technologies in the field of numerical modeling tools for air quality at various levels (regional to microscale). Our solutions are in daily operation in several countries worldwide, for studies and for the management of air quality. Being a company completely dedicated to atmospheric environment, ARIA Technologies can deliver various computerized modeling systems for the purpose of managing air quality around any airport platform around the world.</p>
REFERENCES :	<ul style="list-style-type: none">- Health assessment risks for an oil storage depot (Nice Côte d'Azur)- High resolution modeling of wind effects (Paris CDG)- Emission and air quality assessment of a new terminal (Paris CDG)

ARMOR



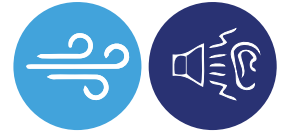
THEMATIC :	Sustainable design and materials; Renewable energy
COMPETENCY :	Manufacturer
WEBSITE :	http://www.armor.com
ACTIVITIES :	Armor, founded in 1922, is the world leader in ink induction on thin films. In 2008 we began our involvement in renewable energy producing a photovoltaic film containing no silicon or rare metals. Extremely light, flexible, semi-transparent and with high performance whatever its orientation, this film can be mounted on any type of building surface or material. It is 100% made in France and 100% recoverable. Our low carbon manufacturing process makes it the only decarbonized photovoltaic solution addressing global warming.
REFERENCES :	A demonstrator is currently being discussed with an airport company.

ATERMES



THEMATIC :	Ecological engineering and biodiversity; Risk management
COMPETENCY :	Manufacturer
WEBSITE :	https://www.atermes.fr
ACTIVITIES :	As a HighTech manufacturer for defense and security industry Atermes is constantly looking for new technology to protect the environment. We developed an automatic laser bird repellent system A-TOM500 to scare birds on or aside the runway. Birds never get used to the laser and the only way for them to escape the laser threat is to fly away.
REFERENCES :	France : Beauvais Export : China, Norway, Romania, Bangladesh, Spain.

ATMOTRACK by 42 Factory



THEMATIC :	Air quality; Noise
COMPETENCY :	Manufacturer; Digital Platform / Digital Services
WEBSITE :	www.atmotrack.fr
ACTIVITIES :	<p>Atmotrack is the first environmental life quality monitoring network, street by street in real time. Based on a large network of embedded sensors on professional fleets, street furniture or buildings, our platform provides access to actionable and precise information on environment quality. All these data are then combined with your business data, before being redistributed on our dashboards.</p> <p>Our decision support system can then be used by companies and communities to better understand the impact of local air quality on their activities.</p>
REFERENCES :	Please, visit the website for updated references list

AUGIER Energy



THEMATIC :	Energy efficiency
COMPETENCY :	Manufacturer
WEBSITE :	http://www.augier.com
ACTIVITIES :	Specialist in the engineering of transmission and management of medium voltage electricity over distances up to 50 kilometers.
REFERENCES :	Nice, Hong Kong, Sydney.

AUTOMATIQUE INDUSTRIE



THEMATIC :	Energy efficiency;
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Operation / Maintenance; Digital Platform / Digital Services
WEBSITE :	www.aifrance.com
ACTIVITIES :	AI specialises in automation, SCADA and IT for energy performance. AI covers the entire energy chain: supervision of renewable energies, supervision and regulation of utilities, Electrical Management and Energy Monitoring via the CACTUS Energy Suite software containing artificial intelligence bricks. AI can assist you in the processing and securing of your data: predictive maintenance, search for optimal parameters, cybersecurity. AI has the expertise to implement airport energy management projects with ease of integration.
REFERENCES :	Le Bourget (France), Djeddah (Saudi Arabia), Rome.

BE ENERGY



THEMATIC :	Sustainable transport; Energy efficiency
COMPETENCY :	Manufacturer
WEBSITE :	www.batteryregeneration.net
ACTIVITIES :	Regenerate your batteries and double or triple their lifetimes! We are the only French manufacturer of battery regenerators. We manufacture the most powerful regenerators on the market. Our process has been certified by the Central Laboratory of Electrical Industry (Bureau Véritas). Traction batteries, stationary batteries or starting batteries, open lead, GEL or AGM, we regenerate all types of batteries up to 3500Ah! Whether through our products or our services we are the ecological way to your OPEX reduction!
REFERENCES :	For almost 15 years we are the leader in this market and present in more than 43 countries. Paris CDG, Toulon-Hyères (regeneration of rolling stock batteries) Dubai (rolling stock and stationary batteries)



THEMATIC :	Energy efficiency
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	https://beebryte.com
ACTIVITIES :	BeeBryte has developed a software as-a-service using artificial intelligence (Machine Learning, Big Data, IoT) to automatically control electrical equipment in real-time (e.g., cold units, HVAC, batteries, charging stations for electrical vehicles, solar panels ...). We created a predictive control strategy based on weather forecasts, building load forecasts. Our solution saves up to 40% on electricity bills.
REFERENCES :	We are in discussion with French and Singaporean airports to control in a smart way their thermal groups. We are also working with them on solar energy + storage system optimization projects.

BERTIN TECHNOLOGIES



THEMATIC :	Energy efficiency; Renewable energy; Risk management
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Digital Platform / Digital Services
WEBSITE :	https://bertin.fr/activites/energie-et-environnement
ACTIVITIES :	<p>We are committed to supporting both industry and local governments moving to energy independence by implementing reliable and efficient solutions:</p> <ul style="list-style-type: none"> - Architecture of decentralized energy systems: hybrid power plants, renewable and local energy microgrids - Feasibility studies and engineering, suppliers selection, Project Development (EPC) - Energy management systems and optimization (EMS)
REFERENCES :	<ul style="list-style-type: none"> - Feasibility study for the implementation of collective self-consumption in an area of activity - Project management for the installation of photovoltaic / thermal hybrid panels - Recharging architecture for electric vehicles

BIOFLUIDES



THEMATIC :	Water; Energy efficiency; Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Operation / Maintenance
WEBSITE :	http://www.biofluides.com/
ACTIVITIES :	With a thermal engineering office and a team of maintenance technicians, Biofluides develops solutions for water treatment and energy saving. Biofluides designs, develops and markets the ERS®, a 100% French concept for the recovery of thermal energy contained in greywater.
REFERENCES :	Please, visit the website for updated references list

BIOTOPE



THEMATIC :	Ecological engineering and biodiversity
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Works / Construction; Analysis / Control; Training / Awareness
WEBSITE :	www.biotope.fr
ACTIVITIES :	Feasibility assessments, screening and scoping, baseline studies, impact assessment, design and monitoring of mitigation and compensation / offset measures (biodiversity action plans), on-site inspections during construction and operations, restoration associated with decommissioning wildlife hazard unit, communication, training.
REFERENCES :	Paris Orly, Nantes, Marseille, Libreville (Gabon).

BIOVITIS



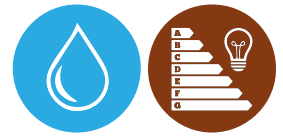
THEMATIC :	Water; Soil decontamination
COMPETENCY :	Manufacturer
WEBSITE :	www.laboratoires-biovitis.fr
ACTIVITIES :	Production and marketing of microbial consortia for the degradation of hydrocarbons and propylene glycol.
REFERENCES :	Zurich Airport

BLUECLOUD



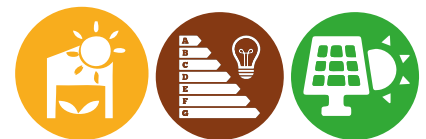
THEMATIC :	Waste reclamation
COMPETENCY :	Digital Platform / Digital Services;
WEBSITE :	https://www.blue-cloud.fr
ACTIVITIES :	<p>There are two things we cannot deny anymore:</p> <ul style="list-style-type: none">•Waste and water management are growing issues in cities all around the world and the population is growing dramatically.• By 2050, it is expected that 80% of the world's population will be living in the Urban Cities. If we have trouble managing waste and water today, how are we going to manage them in the future? Keep doing the same is not sustainable! Cities need innovative solutions! <p>Our Company, BLUECLOUD, develops and uses two core main technologies : -Internet of Things (IoT) – Hardware (devices)</p>
REFERENCES :	City of Paris, City of Besançon, City of Antony

BOOSTHERM



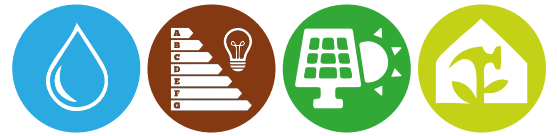
THEMATIC :	Energy efficiency
COMPETENCY :	Manufacturer
WEBSITE :	www.boosttherm.com
ACTIVITIES :	Boosttherm recovers the heat rejected by cooling systems to produce free hot water at 55°C minimum. The water can be used for sanitary hot water or for low temperature heating applications.
REFERENCES :	Restaurant franchisees : Mc Donalds, Burger King, Prêt à manger Central Kitchens : Elior

BOUYGUES CONSTRUCTION



THEMATIC :	Sustainable design and materials; Energy efficiency; Renewable energy;
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Works / Construction
WEBSITE :	www.bouygues-construction.com
ACTIVITIES :	Bouygues Construction is one of the pioneers of « near zero energy » buildings in France and actively invests in innovative research in renewable energy production and efficient energy storage systems. Protecting biodiversity plays an important in our designs and we helped create an international certification standard « BiodiverCity ».
REFERENCES :	Lyon, Zagreb, Iqaluit (Canada)

BURGEAP



THEMATIC :	Water; Energy efficiency; Renewable energy; Soil decontamination
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Training / Awareness
WEBSITE :	http://www.burgeap.fr
ACTIVITIES :	<p>Our multidisciplinary teams offer comprehensive expertise and innovative technology for water, air, soil and energy issues for the airports: environmental impact studies of projects; polluted sites and soil management; rainwater management; geothermal energy : implementation of a range of techniques from drilling to heat pumps (sheets, probes, piles); regulatory approaches and funding; hydrogeology for buildings and civil engineering; energy efficiency and renewable energy.</p>
REFERENCES :	<p>Works supervision for ADP on environmental studies. Work supervisions for the implementation of a solution using geothermal energy (Airbus - Toulouse). Polluted sites and soils studies and storm water management (Lyon St Exupery)</p>

C4HYDRO



THEMATIC :	Water; Risk management
COMPETENCY :	Manufacturer; Analysis / Control; Training / Awareness
WEBSITE :	https://www.c4hydro.com
ACTIVITIES :	<p>C4HydroTM is an innovative company that develops and provides fast, simple and accurate tools for monitoring the presence of pathogenic microorganisms in water. Using a CNRS patented innovation, our first product, Legio EZ-TestTM, is the only testing solution capable of detecting exclusively living L. pneumophila, of all serogroups and in 48 hours, making it the most advanced and reliable alternative to the standard culture method.</p>
REFERENCES :	Engie ; Dekra ; Eurofins

CHEMDOC WATER Technologies



THEMATIC : Water;

COMPETENCY : Manufacturer

WEBSITE : <http://www.chemdocwater.com>

ACTIVITIES : We deliver turnkey containerized units from 5 to 200m³/h ready to connect. Reverse osmosis for seawater desalination, and ultrafiltration for drinking water.

The company develops innovative and compact solutions based on membrane technologies for water reuse (rainwater, greywater and treated wastewater recycling), for green spaces watering or process water for cooling towers. Our equipment allows customers to consume less water, less energy, less chemicals, and are in line with the "green airport" approach.

REFERENCES : Please, visit the website for updated references list

COMATELEC SCHRÉDER



THEMATIC : Energy efficiency

COMPETENCY : Manufacturer

WEBSITE : www.schreder.com

ACTIVITIES : Large scale lighting solutions. Comatelec Schröder products are designed to comply with the Product Environmental Profile (PEP) certification, which comprehensively analyzes the environmental impact throughout its product life cycle, from design to recycling.

REFERENCES : Paris CDG, Brussels, Quebec

Compagnie Française de Géothermie (CFG)



THEMATIC :	Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	https://www.brgm.eu/brgm/brgm-group/cfg-french-geothermal-company
ACTIVITIES :	CFG (French Geothermal Company), a BRGM subsidiary, is an engineering company specialising in industrial geothermal applications for heat and power production in France and abroad.
REFERENCES :	Orly airport

COVALSENS



THEMATIC :	Risk management
COMPETENCY :	Operation / Maintenance; Analysis / Control
WEBSITE :	https://filab.fr/
ACTIVITIES :	SELVIUM is a tool to help assess the salt remaining on the roadway to facilitate decision-making during wintertime salting operations. Designed in collaboration with the company APRR and approved by many road networks, SELVIUM optimizes the safety of users and staff, while respecting an ecological approach and budgetary control.
REFERENCES :	Please, visit the website for updated references list

DAIFUKU AIRPORT TECHNOLOGIES



THEMATIC :	Energy efficiency
COMPETENCY :	Manufacturer
WEBSITE :	www.daifukuatec.com
ACTIVITIES :	<p>Daifuku Airport Technologies has implemented an environmental policy "Vision 2020" which provides for:</p> <ul style="list-style-type: none">- Reduce CO2 emissions by 25%,- Promote the management and recycling of waste internally and with its partners (green procurement),- Develop and promote to its customers products and services that respect the environment (eco-products). <p>For example, the "wave concept" mode, implemented on the majority of our installations, triggers the conveyor when a piece of luggage is detected in the system</p>
REFERENCES :	<p>Paris Orly, Roissy CDG, Nantes, Bordeaux, Beauvais, Marseille, Montpellier, Bastia, La Réunion, Nouméa Gatwick, Birmingham, Bristol, Warsaw, Krakow, Charleroi, Geneva Morocco, Egypt, Ethiopia, Kenya, United States, Canada, Quebec, China, Australia,</p>

Deprofundis Ingenium



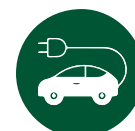
THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	http://www.deprofundis.com
ACTIVITIES :	<p>Deprofundis is specialized in SWAC systems ecological air conditioning technology using cold deep water.</p> <p>The group also offers consulting services to analyse the energy consumption of a given building or larger area and then bring various solutions thanks to renewable energies.</p>
REFERENCES :	<ul style="list-style-type: none">- Renewable thermal generation for the new terminal at Nice Airport- Dynamic thermal modeling of the thermal requirements of the terminal.- Comparison of different thermal energy production systems renewable

EasyLi Batteries



THEMATIC :	Sustainable transport; Energy efficiency; Renewable energy
COMPETENCY :	Manufacturer
WEBSITE :	www.easylibatteries.com
ACTIVITIES :	easyLi designs and manufactures in France custom-made Lithium-ion battery systems for electric vehicles and trucks < 20 kW. We also supply turnkey solar energy storage solutions for energy passive building and off-grid equipment.
REFERENCES :	Confidential programs in progress

ECCITY MOTOCYCLES



THEMATIC :	Sustainable transport
COMPETENCY :	Manufacturer
WEBSITE :	www.eccity-motocycles.com
ACTIVITIES :	eccity designs and manufactures 100% electric two and three wheel scooters.
REFERENCES :	Nice City

ECOBIRD



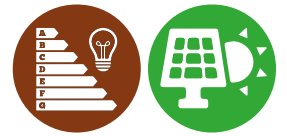
THEMATIC :	Water; Ecological engineering and biodiversity
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	www.ecobird.com
ACTIVITIES :	<p>During winter airport operations, the use of deicing fluids (glycol, potassium formate ...) results in large quantities of contaminated runoff that is extremely variable in both flow and load.</p> <p>Eco Bird offers extensive solutions by aerated gravel filters (vegetated or not) providing the most robust and cost-effective solution for treating deicing runoff. Our qualitative approach coupled with knowledge of airport operations and constraints allows us to optimize our offer to airport engineers.</p>
REFERENCES :	<ul style="list-style-type: none">- Treatment feasibility study of airport runoff contaminated by deicing fluids (Paris Airport)- Treatment feasibility study of wastewater from deicing area (Paris Airport)

ECODAS



THEMATIC :	Waste reclamation
COMPETENCY :	Manufacturer
WEBSITE :	www.ecodas.com
ACTIVITIES :	<p>Ports and airports bring together many businesses including catering companies (production of meal trays) and other hospitality segments. Their food and putrescible waste must be treated to prevent any spreads epidemics or outbreaks like the bird flu, H5N1, SARS, Ebola...</p> <p>ECODAS's system is well-suited to effectively process and treat these types of materials as well as infectious waste.</p>
REFERENCES :	<p>With more than 480 machines installed in more than 80 countries, ECODAS is the leader in the field of infectious waste treatment.</p>

ECOME Entreprendre



THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Digital Platform / Digital Services
WEBSITE :	www.ecome.fr
ACTIVITIES :	<p>Our company is specialized in geothermal energy and particularly in geothermal foundation systems which consist of directly integrating geothermal networks into the foundations of buildings. These systems already equip Zurich airport, for example.</p> <p>These solutions allow remarkable energy performance to be achieved. We also have expertise with other potential geothermal systems (e.g., groundwater or probes).</p>
REFERENCES :	<p>Construction of Zagreb Airport:</p> <ul style="list-style-type: none">- Feasibility study for the implementation of a heat pump on underground water for energy production- Realization of a dynamic thermal simulation and assistance to obtain LEED certification

ECOMESURE



THEMATIC :	Air quality; Noise
COMPETENCY :	Manufacturer; Digital Platform / Digital Services; Analysis / Control
WEBSITE :	www.ecomesure.com
ACTIVITIES :	<p>ECOMESURE is a technology-driven company, specialized in instrumentation and connected systems for environmental data monitoring. Active and recognized in the cleantech ecosystem, ECOMESURE develops and sells since 2014, in France and internationally, connected systems that democratize access to environmental data and simplify their processing.</p>
REFERENCES :	<p>Paris Aeroport (ADP Group): Installation and maintenance of scientific instruments and connected stations for air quality monitoring associated with web services on our platform.</p>

ECOSEC



THEMATIC :	Waste reclamation; Water
COMPETENCY :	Manufacturer
WEBSITE :	www.ecosec.fr
ACTIVITIES :	Expert in ecological dry toilets and dry urinals, Ecosec specialized in (1) the design, the management of ecological sanitary installations: dry toilets with separation and dry urinals with anti-odor membranes, and (2) the agronomic valorization of collected effluents.
REFERENCES :	- Urban Lab Paris: 1st dry toilets in an urban environment - 24 indoor sanitary facilities, Dol de Bretagne

ECO-TECH CERAM



THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer
WEBSITE :	http://www.ecotechceram.com
ACTIVITIES :	ECO-TECH CERAM is an engineering firm specialized in industrial and territorial ecology. We have developed a patented and award-winning technology (SOLAR IMPULSE, EDF PULSE, Concours Mondial de l'innovation 2030), ECOSTOCK. It allows the storage and recovery of high temperature heat (200-1000°C) from industrial processes (ceramic, metallurgical, glass, etc.) to thermal processes (heating / drying), heat networks / domestic hot water.
REFERENCES :	Please, visit the website for updated references list



THEMATIC : Energy efficiency

COMPETENCY : Studies / Consulting / Engineering / Project Management;
Manufacturer

WEBSITE : www.ffienergy.com

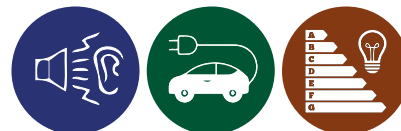
ACTIVITIES : Electrical energy savings (5 to 15%) by voltage management. Its principle

is based on an international IEC 60038 standard which stipulates that your electricity supplier has the capacity to deliver current at +/- 10% of the nominal voltage (230V), i.e. from 253V to 207V. (400V +/-10% in three-phase).

All receivers work perfectly because they have been designed in accordance with IEC 60038. Voltage regulators reduce the input voltage of your installation to the necessary and sufficient level of the installation's need within the framework of the standard.

REFERENCES : Logistic Buildings with cooling in 3 temperatures





THEMATIC :	Noise; Sustainable transport; Energy efficiency
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Operation / Maintenance; Training / Awareness
WEBSITE :	www.egis.fr
ACTIVITIES :	<p>Egis is dedicated to supporting energy, ecology, digital and territorial transition to shape tomorrow's world. In Aviation, our global approach in consultancy, engineering and airport operation underpins our capacity to offer tangible and operational solutions to our customers. Whether it is through strategic support for choices that are consistent with the environment, eco-design of low-energy buildings, and renewable energy solutions, our vision is that of a safe, profitable, resilient Smart Airport integrated in an urban ecosystem that serves the population.</p>
REFERENCES :	<ul style="list-style-type: none"> - PMC of new terminal building & support to GRIHA1 certification at Lucknow Airport - Shareholder-operator of 16 airports, including Abidjan: only ACA level 3+ airport in Africa'Consultancy to Gatwick Airport on noise relief programme

ENOPTEA



THEMATIC :	Energy efficiency
COMPETENCY :	Digital Platform / Digital Services;
WEBSITE :	https://www.enoptea.fr
ACTIVITIES :	<p>ENOPTEA, experts in energy budget optimisation (electricity, gas) offers a SaaS software for multi-site organisations using multi providers. It allows companies to truly own their energy contracts and pay the right price for their consumption. They can collect and manage invoices, but also optimise and renegotiate contracts in a centralised, simplified and automated way. Our solution is proven to reduce costs by up to 20% whilst maintaining continuous energy supply.</p>
REFERENCES :	Please, visit the website for updated references list

ENVIROPTIM



THEMATIC :	Sustainable transport; Energy efficiency
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Analysis / Control; Training / Awareness
WEBSITE :	www.enviroptim-rse.fr
ACTIVITIES :	ENVIROPTIM is a consulting firm specialized in Energy & Environmental Management, Quality-Safety-Environment, Sustainable Development, Greenhouse Gas Emission, Transport and Airports' Audits, Certifications, Training ISO 50001, 14001, 26000, 9001, 45001' Energy audits
REFERENCES :	Paris Airports

ENVISA



THEMATIC :	Air quality; Noise; Energy efficiency, Ecological Engineering and Biodiversity
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Digital Services; Training / Awareness
WEBSITE :	www.env-isa.com
ACTIVITIES :	The aviation sector is constantly growing with increasing environmental constraints. Created in 2004 and 100% dedicated to aviation, Envisa offers customized services and solutions to reduce environmental footprint. We offer sustainability studies, environmental audits (ACA, Noise, Emissions, Air quality, climate change impact and adaptation, community management); we develop cost-efficient GHG and air pollutant reduction plans; noise management, climate adaptation, communication strategies to engage stakeholders and public opinion etc.
REFERENCES :	Brussels Airport Noise Study (Federal Public Service, Mobility and Transport), Brest, La Rochelle, Vinci Airports (divers), ADP Airports (divers), Lyon, Bucarest, Genève, Newquay (UK), Belgrade, Liège, Osaka, Kansai (Japan); Libreville (Gabon), Bahrain (MEA), Madagascar, Seychelles, Amman (Jordanie), Riyadh

EODD INGENIEURS CONSEILS



THEMATIC :	Waste reclamation; Ecological engineering and biodiversity; Soil decontamination
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	http://www.eodd.fr
ACTIVITIES :	EODD INGENIEURS CONSEILS is an engineering and environmental consultancy firm able to assist you in your environmental regulatory studies, your remediation plan and waste management and in the environmental design of your buildings and their certification.
REFERENCES :	Marseille Provence Airport : extension of Terminal 1. Environmental design and building certifications. Environmental regulatory studies

EVOLUTION ENERGIE



THEMATIC :	Energy efficiency
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	www.evolutionenergie.com/
ACTIVITIES :	Our airport energy and environmental management software complies with ISO 50001, 14001 and the Airport Carbon Accreditation. Used by the largest airports in the world, it allows you to track all your points of energy consumption and production, your fluids (cold, heat, water...), the greenhouse gas emissions; but also to model and follow all of your action plans, optimize your contracts and manage your energy rebills for thousands of points.
REFERENCES :	Paris Airports Group has chosen our software solution as the energy and environmental digital management platform of all its airports.



THÉMATIQUE :	Air quality; Energy efficiency; Risk management
COMPÉTENCES :	Studies / Consulting / Engineering / Project Management
SITE INTERNET :	www.fluidyn.com
ACTIVITÉS :	3D modeling studies for the evaluation of the environmental impact and hazards and their reduction: <ul style="list-style-type: none">- ventilation and indoor air quality- wind studies and impact on outdoor air quality- dispersion of toxic and / or flammable gases- fires / explosions- loss of containment of hydrocarbon tanks and sizing of retention basins
RÉFÉRENCES :	<ul style="list-style-type: none">- Aeraulic and impact of gases / odors for the new building of Roland-Garros airport in Reunion island- Confinement of an oil pool in the event of a catastrophic tank rupture at O'Hare Airport in Chicago



THEMATIC :	Noise; Soil decontamination
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	www.groupeginger.com
ACTIVITIES :	In the airport: Engineering related to aeronautical pavements, diagnostics and external controls.
REFERENCES :	Marignane, Nice, Lyon, Paris Airports

GORGY TIMING SAS



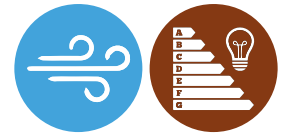
THEMATIC :	Sustainable transport;
COMPETENCY :	Manufacturer
WEBSITE :	http:// www.gorgy-timing.com
ACTIVITIES :	<p>Gorgy Timing produces high-precision synchronization systems (clocks and displays) which allow airport ground handling staff and ATC to better coordinate aircraft movements.</p> <p>The resulting reduction in aircraft wait time and unnecessary taxiing has a direct impact on the greenhouse gas emissions from less fuel being burned.</p>
REFERENCES :	Paris-CDG airport, Paris-Orly airport, Lyon airport

GREEN ON



THEMATIC :	Sustainable transport
COMPETENCY :	Manufacturer
WEBSITE :	http://www.green-on.fr
ACTIVITIES :	<p>The 100% automatic and 100% electric bike sharing solution for employee inter-site trips</p>
REFERENCES :	Lyon Airport

Green CITYZEN



THEMATIC :	Air quality; Energy efficiency
COMPETENCY :	Manufacturer; Digital Platform / Digital Services
WEBSITE :	www.greencityzen.fr
ACTIVITIES :	GreenCityZern is providing solutions for building and air quality monitoring. The autonomous solutions are connected and monitor : temperature, humidity, CO2, light and presence in buidlings.'The HummBox solution, from sensor to dashboard, enable energy savings and evaluate the building confinement
REFERENCES :	no reference in the airport sector for the moment, our solutions are deployed in public buildings, schools and commercial centers

GUINAULT



THEMATIC :	Efficacité énergétique ; Air Bruit
COMPETENCY :	Fabricant / Équipementier
WEBSITE :	www.guinault.com
ACTIVITIES :	GUINAULT propose une gamme de convertisseurs de fréquence 400Hz et de climatiseurs, particulièrement plus écologique par rapport aux conventionnels APUs. Ces produits contribuent sensiblement à la réduction des émissions polluantes, permettant ainsi de : Réduire l'empreinte carbone et la pollution générée par les aéroports Réduire fortement le niveau sonore au sol Générer de nouvelles sources de revenus pour l'aéroport Générer des économies importantes de kérosène pour les compagnies aériennes
REFERENCES :	Paris CDG France ; Aéroport de Munich, Lufthansa Technics Philippines, US Airways, American Airlines, Malaysia Airlines, Fraport Germany, Eurocopter, Air France, Manustra ...

GULPLUG



THEMATIC : Energy efficiency

COMPETENCY : Manufacturer; Digital Platform / Digital Services

WEBSITE : <http://www.gulplug.com>

ACTIVITIES : gulplug, (www.gulplug.com) markets the industry of the future, and infrastructures, an IoT offer able to measure the energy consumption of machines, industrial and tertiary islands, for energy efficiency purposes. This IoT offer consists of plug & play energy sensors without any wires, without battery and without risk of information loss. Particularly simple to implement, they communicate their measurements to a server. This server is used by gulplug customers to access online their consumption. gulplug is also predictive maintenance with specific analytics.

REFERENCES : Schneider Electric, Fenwick, JTEKT, Bonduelle etc.

IMMOBLADE



THEMATIC : Energy efficiency

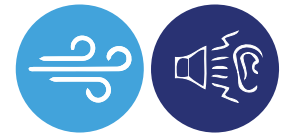
COMPETENCY : Manufacturer

WEBSITE : <https://www.immoblade.com/>

ACTIVITIES : ImmoBlade offers a seasonal and passive sun protection integrated in the glazing (Silkscreen or insert in the air space of the double glazing) It allows without maneuver and without maintenance to block the solar rays in summer when the sun is at the highest and contrary when it is low to let him go in winter to benefit from solar gains.

REFERENCES : Xavier Sembely, creator of ImmoBlade, forged it as a systems engineer at Airbus Defense & Space for 20 years. Xavier has the idea of applying Airbus methodologies and tools to the building sector and quickly files a patent.

Innov'ATM



THEMATIC :	Air quality; Noise
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Analysis / Control
WEBSITE :	www.innov-atm.com
ACTIVITIES :	Innov-ATM develops software solutions for airports to optimise critical airport resources, thereby reducing fuel burn and carbon emissions.
REFERENCES :	Nice Côte d'Azur, Genève, Jakarta

LANCEY ENERGY STORAGE



THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Manufacturer
WEBSITE :	https://www.lancey.fr/fr/
ACTIVITIES :	By integrating a battery into a highly efficient electric heater, Lancey democratizes decentralized energy storage, which is essential to smart grid and smart home development. Lancey's unique and patented solution enables a significant energy bill reduction and make the most out of renewable energy while providing ancillary services to the grid.
REFERENCES :	Please, visit the website for updated references list

VEGETALID



THEMATIC :	Water; Ecological engineering and biodiversity
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer
WEBSITE :	www.vegetalid.fr
ACTIVITIES :	After several innovations now references on the market: precultivated tray all in one, steep pitched roofs, vegetated facades gabions, connected rainwater management system, PRIEURÉ Cpy launches its OASIS multimodal hydroactive solution that integrates new functions / uses: Access / Circulation
REFERENCES :	Green Roof Building E - Roissy Charles de Gaulle Airport'OASIS Roof (Vegetal + SWM) logistic plateform SOGARIS – Rungis

LEGENDRE ENERGIE



THEMATIC :	Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Works / Construction; Operation / Maintenance
WEBSITE :	http://www.legendre-energie.com
ACTIVITIES :	Legendre Energie has developed an offer dedicated to the development of new services to make buildings energy efficient. From design to operation, through construction and financing, the company offers its customers a complete and turn-key offer. For this, Legendre Energy is organized around three businesses that are: The production of renewable energies Energy efficiency Operation and maintenance.
REFERENCES :	Aéroport Toulouse Blagnac Aéroport de Lyon

LEMON TRI



THEMATIC :	Waste reclamation
COMPETENCY :	Manufacturer; Operation / Maintenance; Training / Awareness
WEBSITE :	www.lemontri.fr
ACTIVITIES :	<p>We propose reverse vending machines (RVM) able to collect plastic bottles, and specially adapted to the needs of airport security points, by separating liquids from bottles. Moreover, these machines can deliver “rewards” to incentivise users. This provides 3 benefits :</p> <ul style="list-style-type: none">- the bottles can be recycled- the frustration experienced by passengers is replaced by a positive experience- the removal of bottles by the cleaning staff becomes easier.
REFERENCES :	<p>This machine is a recent innovation and has not been tested in real conditions yet. We are at the disposal of any airport interested by a test.</p>

LES ALCHEMISTES



THEMATIC :	Waste reclamation
COMPETENCY :	Operation / Maintenance; Training / Awareness
WEBSITE :	https://alchimistes.co/
ACTIVITIES :	<p>The Alchemists propose an innovative and ecological solution for the collection and treatment of biowaste over short distances (5/10 km), to transform it into a compost of great agronomic quality. This compost makes it possible to enrich the soils in a natural way and thus avoid synthetic inputs. It is used for the greening of cities and for local agriculture. We install semi-industrial composting platforms, near the deposits and provide a professional service tailored to your needs.</p>
REFERENCES :	<ul style="list-style-type: none">* composting platform in the Paris suburbs (Ile Saint Denis) yielding 600 tonnes / year.* collection of household bio-waste in a town of 10,000 inhabitants.* 3 composting sites within Paris.

MACAUTO



THEMATIC :	Sustainable transport; Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Works / Construction; Operation / Maintenance; Digital Platform / Digital Services
WEBSITE :	https://www.youtube.com/watch?v=drH5cSfruMc
ACTIVITIES :	It will be essential for the number of electric vehicles to grow exponentially as society transitions to zero carbon transport; however, this will create problems to park these vehicles in the highly congested urban areas where they will be most needed. Macauto has developed an innovative concept of high-rise carpark “hives” which use 80% less space per car and charge them using wind and solar energy generated on-site.
REFERENCES :	Studies proposed to several airports (Basel, Geneva, Lyon, Milan, Toulouse)

MICREAU



THEMATIC :	Air quality; Water
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Operation / Maintenance; Analysis / Control
WEBSITE :	www.micreau.fr
ACTIVITIES :	Design and build drinking water and waste water treatment plants serving up to 20,000 inhabitants. Also perform consulting and audits with particular expertise in removing toxic metals from water.
REFERENCES :	Santiago de Chile airport (with Vinci and ADP), Moroccan airport (waste water treatment plant), Mauritania (pumping stations)

ML Distribution



THEMATIC :	Water
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	https://www.traitement-eau-hydroflow.org/
ACTIVITIES :	<p>We are world leaders in pre-treatment of water without chemicals. Hydroflow is a sustainable technology proven over 25 years that allows with a single device to eliminate problems related to calcium buildup and rust in metal networks, limit the use of chlorine, remove the biofilm and remove numerous types of bacteria (coliform ecoli, escherichia coli, etc.). This technology is non-intrusive, environmentally friendly without maintenance for a life of 35 years</p>
REFERENCES :	<p>We have already equipped Basel Mulhouse airport : https://www.traitement-eau-hydroflow.org/references-hydroflow/aeroports/ Other clients: Socomec, GE Power, Marine Nationale, Naval Group, CHU Bordeaux, Zoo de Beauval, Véolia</p>

MYTROC



THEMATIC :	Waste reclamation
COMPETENCY :	Digital Platform / Digital Services; Training / Awareness
WEBSITE :	https://grinner.pro/
ACTIVITIES :	<p>MyTroc is a Greentech Startup recognized as an ecological transition tool by the French Agency of the Environnement (ADEME). We develop digital platforms and Web apps that connect people within an organisation, allowing them to pool existing resources in order to reduce new purchases and waste production. We work for large companies and administration, providing custom made solutions (called Grinner) that reduce their purchasing budgets and optimise their resource management.</p>
REFERENCES :	<p>SNCF (French train operator) and various entities in the French public sector.</p>

NEREUS



THEMATIC :	Waste reclamation; Water
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Operation / Maintenance
WEBSITE :	https://nereus-water.com/fr/bienvenue/
ACTIVITIES :	<p>NEREUS designs and builds innovative green technologies to support its clients' transition toward circular economy and climate change adaptation.</p> <p>Our unique know-how consists of extracting high-quality water from complex effluents (waste water, industrial effluents, etc..) using as little energy as possible. Our RECYNOV solution recycles drinking-quality water and fertilizers to move towards a circular economy by making airports sustainable, self-sufficient in water and environmentally friendly.</p>
REFERENCES :	No references in the airport sector, but several references in other sectors activities (eco-districts, campsites, biogasplant units, laundries, municipalities & industrial)

NUMTECH



THEMATIC :	Air quality; Risk management
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Digital Platform / Digital Services; Training / Awareness
WEBSITE :	www.numtech.fr
ACTIVITIES :	<ul style="list-style-type: none">- air quality modelling- assessment of the impact of air quality on health- air quality management in the vicinity of airports through the system ADMS-AIRPORT (integration of emissions from numerous specific sources: aircraft take-off and landing phases, taxing, handling and maintenance machines, etc.)- operational platform for air quality monitoring and forecasting in the airport environment
REFERENCES :	Provision of ADMS-AIRPORT licenses to: AÉROPORTS DE PARIS (Charles-de-Gaulle, Orly and Le Bourget), ENVIRON FRANCE SAS and ONERA (National Office for Aerospace Studies and Research)

POWER TECH SYSTEMS



THEMATIC : Sustainable transport

COMPETENCY : Manufacturer; Operation / Maintenance

WEBSITE : www.powertechsystems.eu

ACTIVITIES : PowerTech Systems is a French company focussed on lithium-ion storage and associated technologies. We are specialized in design and manufacture of high performance lithium batteries covering a large application spectrum (EV traction, marine traction, AGV and robotics, telecom, renewable energy storage, etc). The modularity of our solutions requires the development of cutting-edge technologies, embedded in our systems. These intelligent technologies are designed to facilitate the operation of professional energy storage solutions.

REFERENCES : Electrification project for aircraft pushback tractor.
Lithium cranking batteries for light aircraft.

POWIDIAN



THEMATIC : Renewable energy

COMPETENCY : Studies / Consulting / Engineering / Project Management; Manufacturer

WEBSITE : <http://www.powidian.com>

ACTIVITIES : PowiDian develops, installs and maintains intelligent autonomous energy stations that provide electricity at all times at the best possible cost, without pollution.

REFERENCES : Please, visit the website for updated references list

QSEWAY



THEMATIC :	Water; Soil decontamination
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	www.qseway.com
ACTIVITIES :	Assisting enterprises in their Quality, Safety and Ecological initiatives by a bespoke approach.
REFERENCES :	Aéroport de Paris : Assisting with soil decontamination

QUALISTEO



THEMATIC :	Energy efficiency
COMPETENCY :	Manufacturer; Digital Platform / Digital Services; Analysis / Control
WEBSITE :	www.qualisteo.com
ACTIVITIES :	Qualisteo is an innovative company focused on electrical measurement and energy efficiency. Qualisteo offers a non-intrusive monitoring system for your electrical consumption. It is installed quickly, without power cuts, and allows the measurement of all electrical departures in the main electrical panel for a geographical mapping . It is coupled with an algorithmic package enabling a disaggregation by usage. We provide dedicated web dashboards as well as detailed reports from our energy managers so that customers can initiate concrete and targeted energy-saving.
REFERENCES :	Electricity monitoring and energy management for 13 buildings at Paris Orly and Paris Charles de Gaulle airports

QUOS



THEMATIC :	Waste reclamation; Sustainable transport
COMPETENCY :	Manufacturer; Digital Platform / Digital Services; Analysis / Control
WEBSITE :	www.quos.fr
ACTIVITIES :	IoT platform for managing urban assets (parking, green space) and improving sustainability (waste reduction, improved air quality).
REFERENCES :	Please, visit the website for updated references list

RATDOWN



THEMATIC :	Ecological engineering and biodiversity; Risk management;
COMPETENCY :	Manufacturer; Operation / Maintenance; Digital Platform / Digital Services; Analysis / Control; Training / Awareness
WEBSITE :	www.ratdown.fr
ACTIVITIES :	The ZERO group brings together 3 innovative enterprises: 1) Zero Harm: RATDOWN European Leader (technologically) in the design, manufacture and implementation of high performance electronic systems for detection and protection from pests. 2) Zero Waste: HSE OPTIMIZATION Optimization and valorization of the waste station. 3) Zero Phyto: VEGETAL SHIELD platform that brings together all the manufacturers of natural anti-pest solutions.
REFERENCES :	French Civil Aviation Authority

Réseau JDM Expert



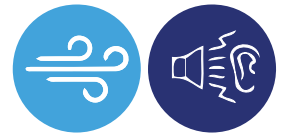
THEMATIC :	Soil decontamination
COMPETENCY :	Works / Construction
WEBSITE :	www.jdm-expert.com
ACTIVITIES :	Hydro Way® is a permeable solution for outdoor soils. It's applicable to courtyards, plazas, car parks, roof terrace, etc. This coating is an alloy of natural aggregates and a binder allowing the passage of water for a return to groundwater, helping to combat the waterproofing of soils and making it rotatable up to 26t. It's for professionals, communities and individuals.
REFERENCES :	Please, visit the website for updated references list

RINCENT AIR



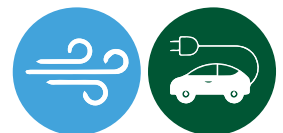
THEMATIC :	Air quality; Soil decontamination
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Analysis / Control
WEBSITE :	https://www.rincenc-air.fr/
ACTIVITIES :	Rincenc Laboratories group is a network of agencies that provide tests, measurements and analysis in the field of road infrastructures, airports and port installations, buildings and environment (water, air and soil). Rincenc Laboratories brings together 30 agencies in France and also internationally including Rincenc Air, an independent engineering firm specialised in measurement and study of air quality for 20 years, which provides specific services for airports : impact assessment, professional exposure, air quality monitoring...
REFERENCES :	Paris CDG, Le Bourget, Orléans-Bricy airfield

RUBIX S&I



THEMATIC :	Air quality; Noise
COMPETENCY :	Manufacturer; Digital Platform / Digital Services; Analysis / Control
WEBSITE :	www.rubixsi.com
ACTIVITIES :	RUBIX S&I (Senses & Instrumentation) is specialized in developing and selling connected devices that allow real-time measurement and monitoring of pollutants and nuisances of the atmosphere, both outdoor and indoor. This is due to RUBIX's unique know-how in associating miniaturized sensors with proprietary and innovative data processing algorithms. Additionally, thanks to RUBIX's existing databases, these devices help identify the sources of nuisances (odors, particles, noises).
REFERENCES :	Schiphol Airport (Amsterdam)- Monitoring of toilet odors and cleanliness Malpensa Airport (Milano) - Monitoring of toilet odors and cleanliness

SAFETY LINE



THEMATIC :	Air quality; Sustainable transport
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	www.safety-line.fr
ACTIVITIES :	AirsideWatch Analytics is a Big Data tool which allows airports to improve Airside efficiency by leveraging unprecedented analytics from ground radar data.
REFERENCES :	Paris-CDG airport Paris-Orly airport

SAFEGLASS



THEMATIC :	Sustainable design and materials; Energy efficiency
COMPETENCY :	Manufacturer
WEBSITE :	www.sageglass.com
ACTIVITIES :	<p>SageGlass products dynamically change tint in response to the sun to provide unobstructed outdoor views and enhanced occupant comfort. The products provide exceptional control of daylight, glare and energy use without the need for traditional solutions like blinds, shades or low-e glass. For this reason, airport architecture is increasingly utilizing dynamic glass to improve the experience of travelers and other airport occupants.</p>
REFERENCES :	<ul style="list-style-type: none">-Air France VIP Lounge - Orly (FRANCE)-St-Paul Airport - Minneapolis (USA)-Executive Offices IATA (Switzerland)

SAINT DIZIER ENVIRONNEMENT



THEMATIC :	Water
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Operation / Maintenance
WEBSITE :	www.saintdizierenvironnement.eu
ACTIVITIES :	<p>Saint Dizier Environnement specialises in these areas:</p> <ul style="list-style-type: none">- water pretreatment- rainwater management- rainwater treatment at the source and in the context of alternative techniques, with Stoppol[®],- rainwater treatment in urban and industrial areas as well as domestic wastewater
REFERENCES :	Paris CDG, Kuala Lumpur, Algiers

SAINT-GOBAIN PAM



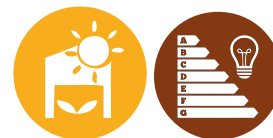
THEMATIC :	Water; Sustainable design and materials; Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer;
WEBSITE :	www.pambatiment.fr
ACTIVITIES :	We study and commercialize - Wastewater disposal systems in cast iron. - Climatic Wells (Canadian) in cast iron
REFERENCES :	Paris Orly (T3), Geneva, Paris CDG

ACQUA .eco



THEMATIC :	Water;
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer; Training / Awareness
WEBSITE :	https://acqua.eco
ACTIVITIES :	Acqua .eco is a company specialized in water treatment and is the exclusive distributor of BioMicrobics. We are both a consulting and design office and a product and innovative process chain development center . We engineer complete process chains for water treatment to give customers a total solution.
REFERENCES :	Please, visit the website for updated references list

CoolRoof-France



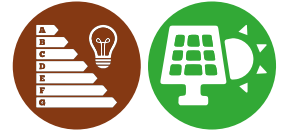
THEMATIC :	Sustainable design and materials; Energy efficiency
COMPETENCY :	Manufacturer; Works / Construction
WEBSITE :	https://www.coolroof-france.com/
ACTIVITIES :	<p>Cool Roof France applies a white thermo-reflective resin to roofs to reduce energy consumption, extend roof life and reduce the effects of urban heat islands by significantly limiting heat entry into buildings (5°C to 10°C less inside).</p> <p>Reflective resin is suitable for bituminous two-layer roofs, metal, asbestos cement or fibrocement, it combines high performance elasticity (greater than 350%) with high reflective power and emissivity greater than 90%.</p>
REFERENCES :	Cool Roof France applied its thermo-reflective resin "cool roof france" on terminal 2G of Paris-Charles de Gaulle airport for the ADP group in 2018.

SCE



THEMATIC :	Sustainable transport; Energy efficiency; Ecological engineering and biodiversity; Soil decontamination
COMPETENCY :	Studies / Consulting / Engineering / Project Management
WEBSITE :	http://www.sce.fr
ACTIVITIES :	<p>SCE offers a global range of services in consulting and engineering in land planning and environmental management. This global expertise is key to SCE success as multidisciplinary teams organized around each project combine their know-how and expertise to accompany public and private beneficiaries.</p>
REFERENCES :	<ul style="list-style-type: none">- Construction of Terminal T4 in Roissy Airport- Refurbishment of main entrance (West) and Eastern access- Renewable energy supply study for the Business park of "Orly Parc Ouest" - Environmental regulatory dossier for the airport project development

SEED-Energy



THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	www.seed-energy.fr
ACTIVITIES :	<p>SEED-Energy develops and markets the software ODYSSEY, a tool for decision-making on investment in new energy systems. With this software we build a digital “twin” of your system that we use to model technical, economic and environmental assessments of your project.</p> <p>SEED-Energy proposes to support you with a tailor-made services :</p> <ul style="list-style-type: none">• We produce a model of your energy system• You take control of the software we configure for you• We assist you on its use (training & studies) <p>With ODYSSEY, you decide upon your energy future</p>
REFERENCES :	Please, visit the website for updated references list

SETUR



THEMATIC :	Water; Sustainable design and materials; Energy efficiency; Ecological engineering and biodiversity
COMPETENCY :	Studies / Consulting / Engineering / Project Management ; Digital Platform / Digital Services
WEBSITE :	http://www.setur.fr/
ACTIVITIES :	<p>URBAN THINK® is a digital application in SAAS mode.'It analyzes the spatial, dynamic and institutional data of a community, through reference indicators, selected from national (HQE, ADEME) and international (LEED, etc.) rating systems. Users can simulate and assess the impacts of development projects relating to water, energy, and societal topics.</p>
REFERENCES :	<p>Airport layout and planning of Lorient Bretagne Sud. Airport layout and planning of Saint Jacques de la Lande.</p>

SIMONIN SAS



THEMATIC :	Sustainable design and materials
COMPETENCY :	Works / Construction
WEBSITE :	www.simonin.com
ACTIVITIES :	We are builders of wooden buildings and manufacturers of wooden components for construction. We operate all over the world. Prefabrication is done in close collaboration with other trades. On-site response times are reduced.
REFERENCES :	- Annobon and Corisco airports (Equatorial Guinea): enclosed and covered building + electricity - Jean Lesage airport (Quebec): supply structure, wood façade

SMART ENERGIES



THEMATIC :	Energy efficiency; Renewable energy;
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Works / Construction
WEBSITE :	http://www.smart-energies.eu
ACTIVITIES :	We are specialized in development, financing and operation of solar energy installations on roof or on the ground. We are also an electricity producer.
REFERENCES :	Please, visit the website for updated references list

SPYGEN



THEMATIC : Ecological engineering and biodiversity

COMPETENCY : Analysis / Auditing

WEBSITE : <http://www.spygen.com>

ACTIVITIES : Created in 2011, SPYGEN is a "Company with a Mission" whose objective is to improve the monitoring and conservation of biodiversity on a global scale through the study of environmental DNA. To carry out its mission, SPYGEN develops innovative biodiversity inventory technologies (VigiDNA®). These methods, based on the search for traces of DNA in the environment (environmental DNA or eDNA), make it possible to improve the monitoring of rare or discrete species and aim to strengthen environmental monitoring operations on a global scale.

REFERENCES : Please, visit the website for updated references list

SUNVIE



THEMATIC : Renewable energy

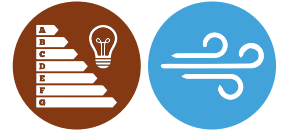
COMPETENCY : Studies / Consulting / Engineering / Project Management; Works / Construction

WEBSITE : www.sunvie.eu

ACTIVITIES : Design and build photovoltaic installations on buildings or parking lots in airport environment.

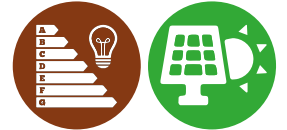
REFERENCES : Design of carport installations for the following airports:
Nice, Montpellier, Toulouse, Bordeaux

SUSTAIN'AIR



THEMATIC :	Air quality; Energy efficiency
COMPETENCY :	Manufacturer; Digital Platform / Digital Services
WEBSITE :	http://www.sustainair.fr
ACTIVITIES :	An HVAC system that reduces OPEX on energy and maintenance, cuts greenhouse gas emission, and can be powered by renewable energies. We provide air-handling units, power regulation algorithms, and web platforms for energy performance optimization.
REFERENCES :	Nice Opéra production factory Aquatic center of Villé (with Dalkia EDF) Nice Sophia Antipolis University

T.SOLARIS



THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Manufacturer
WEBSITE :	www.tsolaris.com
ACTIVITIES :	Supply of a system called “Dynamic roofing” which consists of building roofing, electricity, domestic hot water, heating and air conditioning supply
REFERENCES :	Please, visit the website for updated references list

TOMARO SAS



THEMATIC :	Energy efficiency; Renewable energy
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	http://www.tomaro.fr
ACTIVITIES :	We build software tools which allow communities served by variable, local energy sources to deliver a consistent QoS of energy infrastructure to their users. TOMARO is a young enterprise located in Ile de France near Paris. We have strong skills in deeptech (AI, Big Data) for Microgrid and Distributed EMS dedicated to RES. This point is key for communities to achieve Sustainable Development Goal No. 12.
REFERENCES :	Please, visit the website for updated references list

TRI CENTER



THEMATIC :	Waste reclamation;
COMPETENCY :	Manufacturer; Digital Platform / Digital Services; Analysis / Control
WEBSITE :	www.tri-center.com
ACTIVITIES :	Collection of recyclable packaging of cans, cups and plastic bottles in all formats via Solarcube, a secure and mobile solution. Solarcube turns waste into PET or acir / aluminum balls. Each user is rewarded for his sorting gesture. The Solarcube communicates via its giant LED screen and the distribution of paper tickets. Setting up the system is easy and does not require any civil engineering.
REFERENCES :	Solarcube completed testing in April 2019 at a Carrefour hypermarket in Chartres.

TRINOV



THEMATIC :	Waste reclamation
COMPETENCY :	Digital Platform / Digital Services
WEBSITE :	http://trinov.com/
ACTIVITIES :	<p>Trinov offers a SaaS or on-premise waste management platform with embedded IoT (sensors, tracers, mobile applications, ...), data mining algorithms and a blockchain. Our solution allows waste producers to:</p> <ul style="list-style-type: none">- Conduct analyses that will help identify waste sources (in order to become a zero waste organization);- Implement waste management systems to guarantee full downstream traceability, leading to budget optimisation, operational efficiency, CSR , regulatory compliance, etc.
REFERENCES :	The system was successfully deployed at Lima airport in 2018 with Seché (another French company)

TYSILIO DEVELOPPEMENT



THEMATIC :	Renewable energy
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Operation / Maintenance
WEBSITE :	https://tysilio.com/
ACTIVITIES :	<p>Tysilio is an Independent Power Producer (IPP) providing competitive and reliable solar energy solution to airports connected to a weak or expensive grid, or using diesel generators. Solutions can be fixed on ground, on roof and on car parks.</p>
REFERENCES :	Self-consumption studies of PV solutions for Marseille Airport

TZIC



THEMATIC :	Water;
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Manufacturer
WEBSITE :	www.tzic.fr
ACTIVITIES :	<p>T.zic designs and markets innovative water treatment systems using UV LEDs.</p> <p>Oji Safe / Oji Pure: water disinfection reactors with or without filter.</p> <p>Oji Reuse: water reuse system to size according to your projects.</p> <p>Main advantages: Compact, Robust, Low Maintenance, Low Energy Consumption, Low Voltage, Instant Treatment & On-Demand, Mercury Free .</p> <p>The company also has an R&D office able to develop products integrating UV LED for industrial clients and partners.</p>
REFERENCES :	Please, visit the website for updated references list

VERDICITÉ



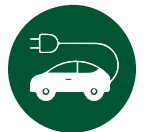
THEMATIC :	Waste reclamation
COMPETENCY :	Studies / Consulting / Engineering / Project Management; Operation / Maintenance
WEBSITE :	www.verdicite.fr
ACTIVITIES :	Consultancy specialising in tracking and managing waste in corporate and public sector environments.
REFERENCES :	Aéroport Lyon Saint Exupéry

VITIROVER



THEMATIC :	Ecological engineering and biodiversity
COMPETENCY :	Operation / Maintenance
WEBSITE :	www.vitirover.com
ACTIVITIES :	We deploy fleets of industrial robotic mowers to maintain the vegetation (mowing between 5 and 10 cm) on large and very large outdoor areas. We do not sell robots but we commit to – and deliver - well-maintained areas.
REFERENCES :	Please, visit the website for updated references list

WEVER



THEMATIC :	Sustainable transport;
COMPETENCY :	Digital Platform / Digital Services; Analysis / Control; Training / Awareness
WEBSITE :	http:// www.wever.fr
ACTIVITIES :	wever is the first mobility management platform in SaaS mode, which collects the needs of users (employees, spectators, customers, citizens ...) in order to support each individual in a highly personalized way towards existing or new co-created mobility solutions. Clients benefit from a data dashboard, an automated mobility solution recommendation tool and a planning tool for their action plan. A behavior change management algorithm makes it possible to offer each individual a highly personalized accompaniment.
REFERENCES :	Development of a program for sharing companies' mobility action plans at the Lyon Saint Exupéry airport, France. (In progress).

