June 3, 2025

BEST AVAILABLE TECHNOLOGY
EU IPCC 2008 / 1 / CE

European Commission

ITA
ITALIAN TRADE AGENCY

European Climate, Infrastructure and Environment Executive Agency

ISCLEANAIR®
BREATHE YOUR LIFE

European Innovation Council

eit Manufacturing
Core Partner

QQQ®
AIR POLLUTION ABATEMENT

UKRI Innovate UK

Raising new questions and possibilities, examining old and tremendous problems from a new angle, and solving them requires creative and imaginative thinking. This marks a real advance in science and progress for humanity.

Albert Einstein *(Physicist)*

2022 WINNER ENERGY GLOBE NATIONAL AWARD ITALY

SOLARIMPULSE LABEL 2023 EFFICIENT SOLUTION

TheClimateDrive 2024

powered by WBC

TheClimateDrive

ISCLEANAIR

We work to improve air quality in all people's living and working spheres. With this aim, we offer stakeholders the **APA** ®- Air Pollution Abatement technology and solutions, the breakthrough designed for ambient air cleaning and energy efficiency, and the related multidisciplinary integrated services in all the spaces of life and work, in the industrial, productive, and urban fields.

Arising from an experienced group's labor of research and development, **APA** is a one-of-a-kind technological solution. It can act everywhere and also downstream the pollution source, generating only rainwater-like and no special wastes.

Thanks to the experience, patents, vast know-how, and industrial properties of our group of qualified partners, we are also thinking of tomorrow's APA, its technological evolution, and its new application models.

Thanks to a new productive model, a factory integrated with a partner and shareholder, and a modern laboratory designed within an integrated value chain and in service with prominent collaboration and research entities, we work for a better tomorrow.

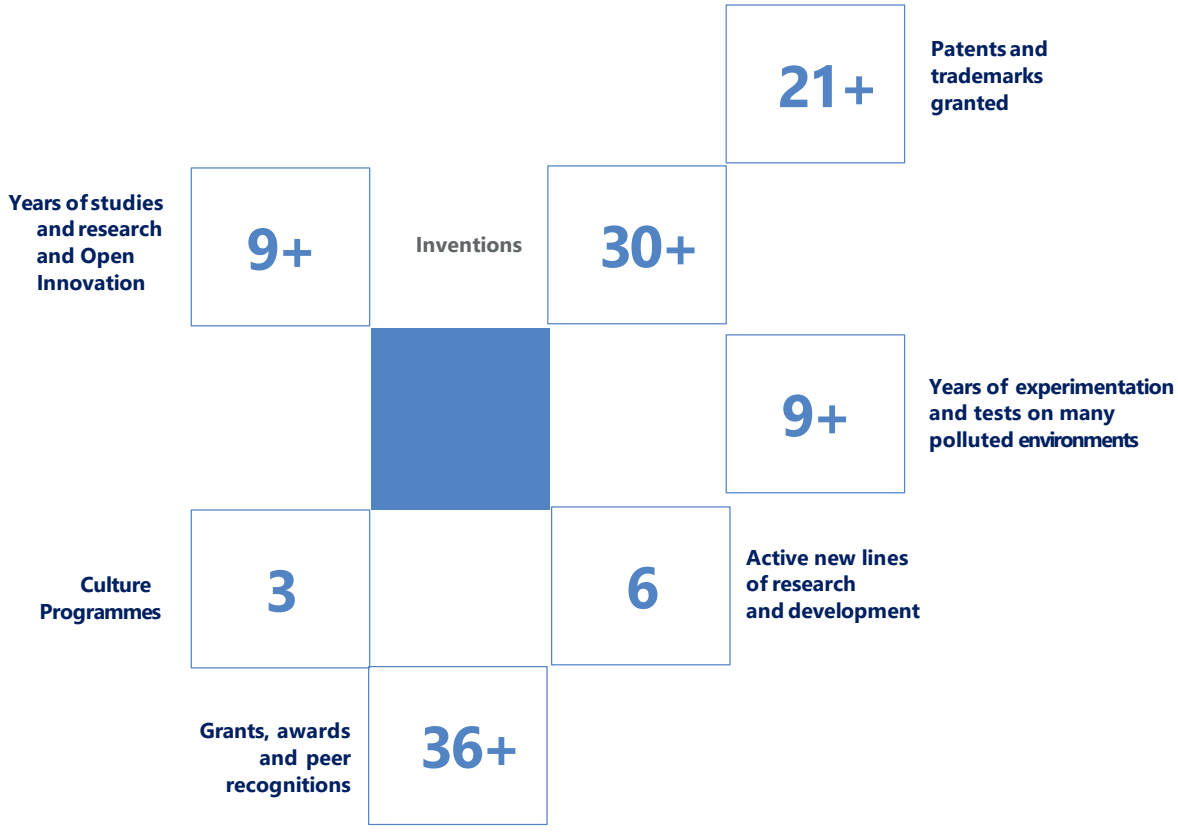
That is why we apply a different strategic approach, thinking globally and operating locally, thanks to our business models and settlements' proximity to markets and people's needs, to answer flexibly to the needs of stakeholders and, mainly, climate and environmental needs.

We are, in fact, a center of excellence for air cleaning innovations, primarily focused on eco-sustainable industries, buildings, agriculture, and urban spaces, with integrations of IoT, artificial intelligence, and energy efficiency.

This enables better management of new infrastructures and the wise use of natural resources in response to the planetary limits and new environmental and climate needs.

WE PLANNED A LIGHTING FUTURE BY DEVELOPING NEW AMBIENT AIR CLEANING SOLUTIONS, ENERGY EFFICIENCY, AND RELATED TECHNOLOGICALLY INTEGRATED SERVICES FOR PEOPLE'S HEALTH AND WELL-BEING TO PROTECT THE ENVIRONMENT, ECOSYSTEMS, AND BIODIVERSITY

OUR HERITAGE



THE MAIN GREAT AND PROMINENT VALIDATIONS AND QUALIFICATIONS

Constant and prominent qualifications and validations, achieved through many years of hard work, targeting large serviceable and obtainable markets through a unique value proposition, innovative models, and essential alliances and partnerships, enable an efficient fight against climate change.

These indisputable assets confirm the great significance of serving Institutions, Municipalities, Authorities and large corporations with APA® Air Pollution Abatement - qualified and industrialized technology, thanks to its versatile related solutions, social innovations, and cross-innovations.

We are mainly concerned with serving people and the environment everywhere.

EU BUSINESS HUB
The Republic of Korea

APA – AIR POLLUTION ABATEMENT ®

APA is a groundbreaking climate and cleantech technology designed to reduce ambient air pollutants and harmful elements everywhere substantially. It purifies spaces, solves the climate emergency, and disrupts the previous wrong approach focused only on applications limited to the points or sources of emissions rather than being implemented on the receptors' needs (people, communities, and the environment).

Thanks to simple water and integrated physical and mechanical processes, **APA** effectively and simultaneously abates the broadest range of air pollutants and harmful micro-organisms and elements present and/or released into the atmosphere. Particulate matter (PM), ozone, heavy metals, polycyclic aromatic hydrocarbons (PAH), light hydrocarbons (methane, benzene, LPG, etc.), nitrogen and sulfur oxides (NO_x, SO_x), Volatile Organic Compounds (VOC), Ammonia, CO, CO_2 alcohol and acetylene, in addition to different types of microorganisms, pollens, and spores.

APA is a "filter-less" and nature-based (water) new solution approach. It is distributed at the surface (ground) level and stands out for its versatility, easy installation and maintenance, low running costs, and adequate energy and economic savings. Another vital feature of **APA** is the capability of being integrated with simplicity and flexibility on other technologies to enable multidisciplinary, advanced, and innovative services in applications; it does not generate any waste, does not require special treatment, and allows performing in real-time, in situ, or remote data monitoring and environmental parameters management.

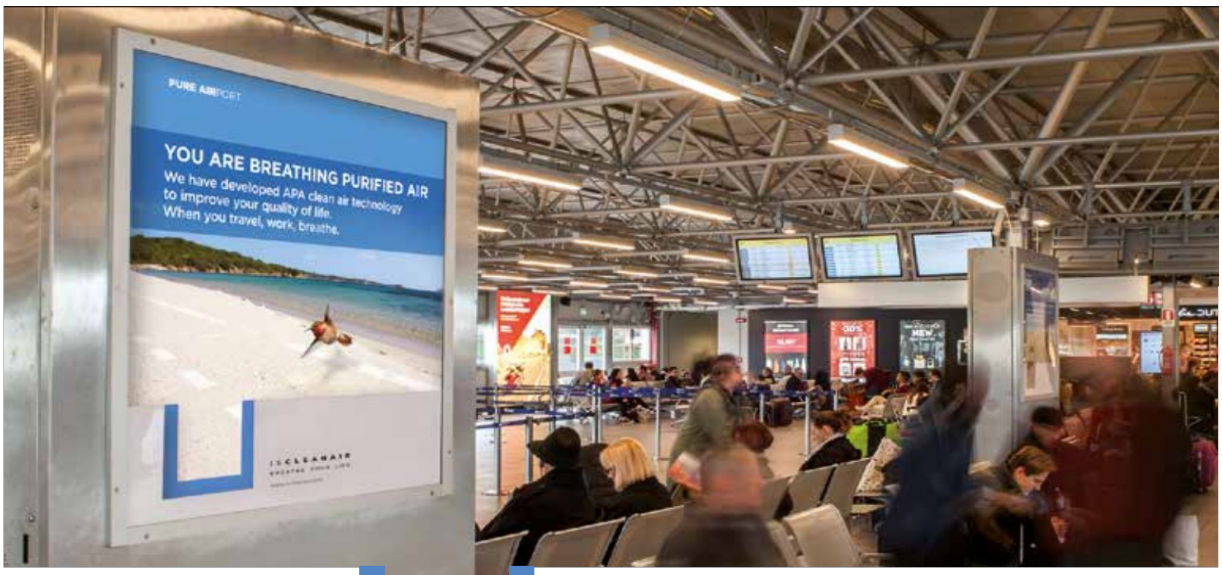
The performances and demonstrated results achieved so far regarding the drastic improvement of ambient air quality have earned **APA** recognition as one of the "BAT - Best Available Technology" (under EU IPCC Directive 2008/1/EC). This innovative solution guarantees the highest level of environmental and biodiversity protection, enabling safer and healthier living spaces and workplaces for the population.

ORDINARY OPERATIONS

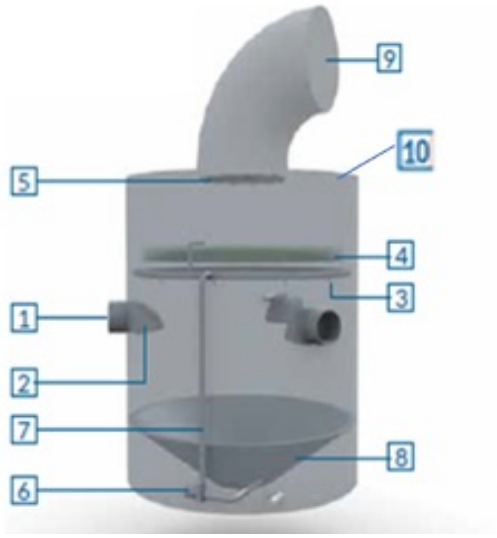
Air enters from an intake system (ordinarily positioned about 80 cm - 1 m from the surface) and is filtered inside the equipment following a process that reproduces the rain's natural cycle. Some drops of a water-based solution contact the air, catching the pollutants and depositing them into the water tank; at the end of the (cleaning) washing process, the purified air is drawn and released into the surrounding environments.

IT IS RECOGNIZED AS A "BAT - BEST AVAILABLE TECHNOLOGY" VERSATILE, STRONGLY PATENTED, AND CERTIFIED, IS SPECIFICALLY DESIGNED TO EFFICIENTLY TRAP THE AMBIENT AIRPOLLUTANTS, OTHER HARMFUL ELEMENTS, AND MICRO-ORGANISMS IN ALL PEOPLE'S LIVING AND WORKING SPHERES

BEST AVAILABLE TECHNOLOGY
EU IPCC 2008 / 1 / CE



Two APA panels were tested and validated in the International Airport of Ciampino in Rome (IT) departures area



LEGEND

1. Polluted air entrance
2. Venturi scrubber
3. Spray nozzles
4. Deposition stack
5. Fan
6. Water pump
7. Water recirculation
8. Washing water tank
9. Purified air exit
10. Electro-magnetic field UV-X

APA can be easily integrated both in indoor environments, confined or partially confined, and outdoors in cities' open spaces, as each system can have different shapes to better integrate with all the street furniture and possible application areas.
To generate maximum effectiveness in every usage environment, both strongly localized and widespread, it is possible to set up a cluster of APA pollution absorbers structured with intelligent functionalities and sized according to the specific needs and features of the area to be moved under remediation.

APA systems are connected and can be remotely managed and controlled.
The integrated technologies allow APA to be multi-service, integrated, and primarily connected to other IoT - Internet of Things and AI - Artificial Intelligence solutions.
The features include sensors for monitoring and analyzing environmental data and parameters, AI functionalities, connectivity to video surveillance, the supply of information and advertising content, and more.

POINTS OF STRENGTH

- FILTER-LESS AND NATURE-BASED TECHNOLOGY
- LOW RUNNING COSTS AND REAL ECONOMIC SAVINGS
- NO WASTE
- MODULAR AND MULTI-SHAPES
- WORKS INDOORS AND OUTDOORS
- INTERNET OF THINGS, AI AND MULTIDISCIPLINARY SERVICES
- REMOTE MONITORING AND MANAGEMENT

WORKING IN A CLEAN AIR ENVIRONMENT

We rethink and redesign all the areas where people live and work, operating as a responsible business for the people living in them and the spaces they interact with. We do that starting with the ambient air vital for people's health, well-being, and work quality.

We consider environmental quality as a distinguishing feature of every enterprise's activities, paying attention to workers and raising awareness of the culture of "clean air".

APA technology and solutions in production and manufacturing sites are a clear need. It is now necessary to reduce the impacts and emissions of fine particles and other harmful substances directly in the places where they arise and people breathe, thus decreasing the risk of exposure to personnel and surrounding areas.

APA is a new technology enabling versatile solutions for collective prevention and health protection and a valid aid to create safer and healthier spaces and more sustainable management and business.

The technology reduces air flows from outside in closed environments, keeping the internal temperature constant, improving the building's energy efficiency, and lowering running costs.

In addition, **APA** enables an outdoor decrease in the diffusion of pollutants and smells near local and distributed sources of emission.

In applications to the chimney and at the beginning of HVAC/Air Handling Unit systems, it allows the respect of the limits prescribed by law and fosters people's health and well-being with limited expenses and reduced running costs.

An enterprise that cultivates relations with its territory first protects its natural and cultural wealth. With this purpose in mind, **APA** can act in many of the different steps of the manufacturing and production process according to the conditions and needs of the industrial areas.

Working not only downstream but also directly on many of the points or sources of emissions can reduce all pollutants created in workplaces and delivered around and outside them.

Furthermore, thanks to its versatility, **APA** can be integrated with existing infrastructures, industrial/urban furniture, and preexisting antipollution plants, increasing their efficacy.

POSSIBLE SPHERES OF APPLICATION

- Wastecycle management
- Centers for handling and transportation management
- Building and Construction
- Chemical industry
- Cogeneration plants and similar sites
- Metal manufacturing and workshops and steel plants
- Manufacturing of plastic materials
- Marble working, manufacturing of ceramics and fiberglass
- Paint furnaces and Mechanical workshops
- Manufacturing of wood, paper, and cellulose
- Agriculture sectors
- Production of goods and food, pre-slaughter breeding, and farms

SOME FUNCTIONS

- Sensor control and monitoring systems of environmental data and parameters
- WIFI Hotspot
- Remote management
- Video surveillance
- Information and advertising services and contents
- IoTx Enabling features
- AI Advanced features

APA CAN BE USED BOTH IN WORKING SPACES AND INDUSTRIAL AREAS AND EVEN ON SOME POLLUTING SOURCES (POINTS OF EMISSION)

LIVING IN A CLEAN AIR ENVIRONMENT

In an urban context where every intervention must be aimed at improving everyday life, ambient air quality becomes an overriding and noteworthy element.

Starting from the concept of a Smart City, thanks to APA's versatility, we created a new sustainable urban development model named "Cities of Tomorrow (Smart Clean Air City)".

Starting from ambient air purification through **APA** features, our model aims to involve people and communities in a more engaged and collective environmental awareness. The public, private, commercial, and urban spaces are going to be redesigned and replanned to become genuinely sustainable and liveable, under the activities of improving the quality of the Cities of Tomorrow and people's lives.

In line with this vision, the integration of **APA** systems in all urban contexts occurs with full respect for the architectural and cultural characteristics of the areas. This happens thanks to the chance of including APA in the different buildings and street furniture using the typical material of those areas. Bus shelters, totems and multimedia service points, flowerpots, boxes, benches, lampposts, and lighting systems are only a few of the possible designs and examples like **APA** can be integrated and work to improve the ambient air quality at the service of people and the environment, against climate change.

Furthermore, **APA** can be equipped with intelligent systems that allow the enabling of a set of innovative and bundle services for urban spaces, such as the remote monitoring and control of systems and areas, WIFI, video surveillance, digital payments, multimedia services, digital signage, pollution sensing, etc.

FROM THE STREETS TO THE PUBLIC AND PRIVATE INFRASTRUCTURES AND BUILDINGS, APA IS DESIGNED TO BE INSTALLED EVERYWHERE AND PURIFIES THE AMBIENT AIR IN ALL URBAN SPACES

POSSIBLE PLACES FOR USAGE

- Universities, schools, and nursery schools
- Museums, libraries, theatres and theme parks
- Shopping malls and galleries, restaurant chains
- Public and private offices and workplaces
- Hospitals and healthcare structures
- Apartment blocks and residential complexes
- Parks, streets, and meeting points
- Airports and ports
- Railway and underground stations and docks
- Bus and coach stops and stations
- Underground and surface car parks
- Petrol stations and tunnels
- Toll booths and refreshment areas

SOME FUNCTIONS

- Sensor control and monitoring systems of environmental data and parameters
- WIFI Hotspot
- Remote management
- Video surveillance
- Information and advertising services and contents
- IoTx Enabling features
- AI Advanced features

NOTES

BREATHE YOUR LIFE

UNIQUE VALUE PROPOSITION

We offer sustainable and groundbreaking climate and clean tech filterless and water-based (nature-based) solutions,

that allows us to breathe healthier and safer purified air in all the spaces of life and work, save money and reduce energy consumption, fight climate change and global warming, and earn biodiversity and carbon credits

AIR POLLUTION ABATEMENT

Is CLEAN AIR S.r.l. – SOCIETÀ BENEFIT (ISCLEANAIR)

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