

AirQino Applications:

Smart Cities

- ✓ Air Quality Networks
- ✓ IOT Solutions
- ✓ Smart Governance
- ✓ Data Hosting
- ✓ Real Time Data
- ✓ Data Analysis



Services offered in collaboration
with the Italian National Research Council,
responsible for calibration and data validation.



Smart Cities

Smart Governance is a set of strategies that provides for the improvement and optimization of infrastructures and public services through to the use of new technology in the field of communications, energy efficiency, mobility and environmental protection, with the ultimate goal of improving citizens' quality of life. Many cities today use **Internet of Things** (IoT) devices to gather data and manage resources efficiently.

Smart cities incorporate environmental sensor technology into their networks in order to better understand **air pollution** and its impact on people, the environment and the cultural heritage.

The creation of a complex **network of sensors** can improve the spatial resolution of air quality data available to the population and support local administrators in the decision-making process.

AirQino ecosystem was developed to provide a sustainable, yet scalable, solution to administrators that wish to embrace Smart Governance practices and leverage on the power of the Internet of Things (IoT).

Evidence suggests that deploying environmental monitors throughout town, around schools or other critical public facilities, allows local administrators to better promote initiatives aimed at raising awareness on the importance of air quality and enforce **mitigating strategies** such as:

- Vehicle traffic reduction;
- Pedestrianization;
- Low emission zone introduction;
- Green Based Solutions;

Implementing an **urban air quality monitoring system** and collecting meaningful data is the first crucial step towards the definition of effective mitigation strategies.



AirQino Monitoring System

AirQino is a high precision environmental monitoring system. A cost-effective solution designed to detect, store and analyze data about the most important **air pollutants** and **chemical compounds** present in the atmosphere.

AirQino was developed by the **Italian National Research Council (CNR IBE)** in collaboration with TEA Group for the production and Quanta Srl for distribution.



Monitoring Stations

Indoor or outdoor, detect weather conditions and the **concentration of pollutants**.



Real Time Data

The **modular structure** of AirQino allows to establish high-precision monitoring networks.



AirQino Cloud

AirQino web platform collects data and provides reporting and **analysis tools**.



Calibration

Monitoring stations can be configured with a wide set of sensors, calibrated by CNR® using **official ARPA stations**.



Data Analysis

AirQino Web platform provides in-depth data reporting and analysis tools. **Reports** are available upon request.



AirQino Stations

AirQino stations allow to detect a wide range of pollutants such as: **NO2, O3, O3, PM2.5, PM10, CO2** and much more. Specific solutions are available for **urban areas, vehicular traffic or industries**. Select one of our standard configurations such as **Base, Industry, Traffic**, or request a custom sensors set-up.

Base



Industry



Traffic



Urban Areas

Urban areas often feature several air pollution hotspots. These are typically the result of **human activities, heating systems, and heat islands**.

Industrial Areas

AirQino can be installed on the perimeter of an **industrial plant, a refinery or a port area**. It allows to detect pollutants such **SOX (sulfur oxides)**

High Traffic Areas

Vehicular traffic of light and heavy vehicles is the main cause of many pollutants such as **NOX (nitrogen oxides)** and high levels of **PM2.5 and PM10 (fine dust)**.

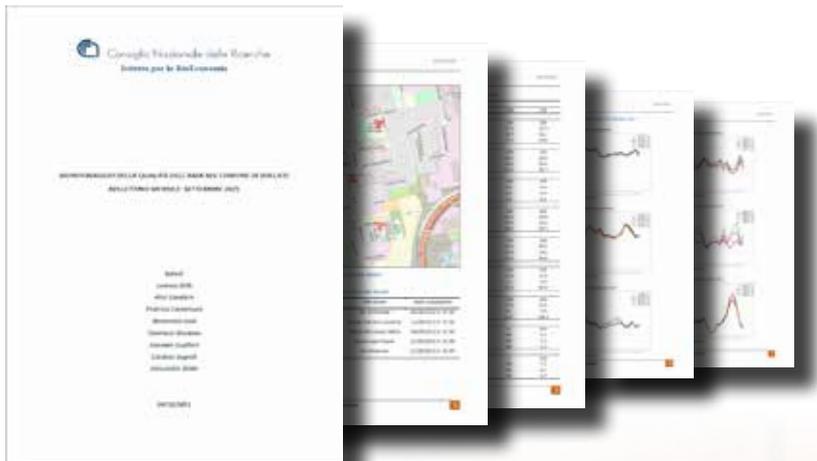
Data Hosting

Data detected by AirQino monitoring stations are transmitted to **AirQino Cloud**. Here they are adjusted with the respective calibration coefficients and **dedicated algorithms** to generate the final output data. Real Time Data are available through **AirQino Web** (your Air Quality Map) or **APIs** for the integration with other dashboards. Upon request, our team can develop a custom dashboard for your project.



Data Analysis

Upon request we are proud to offer detailed, **custom reporting** services. **Bulletins and detailed reports**, studies and environmental assessments elaborated on the base of the data collected by AirQino systems. The documentation is officially produced by the **Italian National Research Council** (Bioeconomia Firenze) thanks to the official collaboration with Tea Group.



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