Ensuring better air quality for a research campus - Dayalbagh Educational Institute, Agra, India

Our Client

Dayalbagh Educational Institution is located in Dayalbagh, a few kilometers from Agra. It was founded in 1915 by Huzur Sahabji Maharaj and later expanded into a chain of schools and higher educational institutions across the country. The residents of the colony including the students and the scientists at the Research facility have worked towards converting the deserted land of 1200 acres into a lush green campus.

The Challenge

Agra's air quality is currently 5.5 times above the WHO annual air quality guideline value in terms of $PM_{2.5}$(Particulate Matter 2.5 μm). With the campus being situated so close to the city, it has become a necessity for the residents to ascertain the levels of pollution, dust, and other seasonal and spatial variations in the air. The University research facility wanted to study the meteorological parameters of the concentrations of these particles.

Additionally, the University research facility wanted to study the meteorological parameters of the concentrations of these particles. They wanted to have data on their air quality that would help them forecast the seasonal variants.
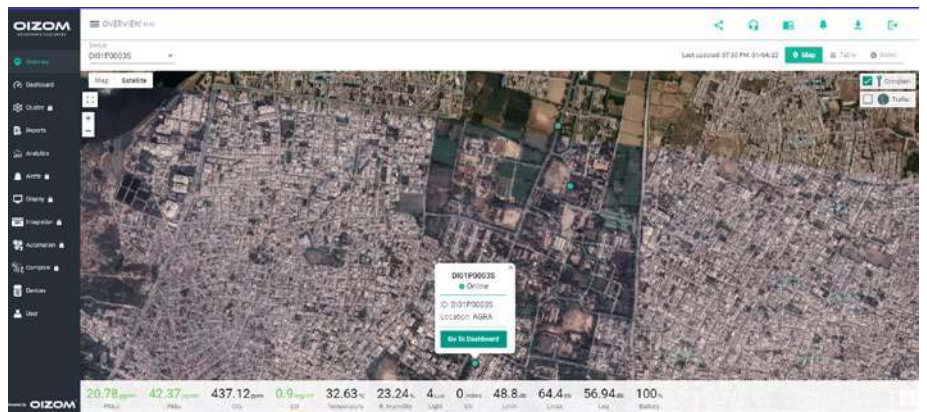
Installation Details

2 units of Polludrone Lite was installed within the vicinity of the Dayalbagh Educational Institute.

1 unit of Polludrone Smart was installed within the campus to help give an accurate reading on the pollution levels.

" *Diurnal, seasonal and annual trends along with relationship between meteorological parameters and the different pollutants have been established which will also be helpful in forecasting.*"
Dr.Anita Lakhani, Professor, Dayalbagh Education Institution "

The Solution

In order to ensure safe breathing air for the residents of the campus, continuous readings of $PM_{2.5}$, PM_{10}, NO, NO_2, CO_2, Ozone, and CO were necessary. Oizom offered its ambient air quality monitoring system, Polludrone, which can monitor such levels of pollution, dust, and meteorological parameter concentrations of these species in the air. Polludrone is equipped with a Visual Messaging Display that helps the residents and authorities access ambient air quality data reports on a real-time basis with impeccable accuracy. Additionally, Polludrone offers data backup as an internal storage in case there is a loss of network connectivity.

The Result

The residents and the authorities are now able to access a real-time reading of $PM_{2.5}$, PM_{10}, and other various key pollutants in the air. The authorities can now easily access the data on meteorological parameters concentrations in relation to different pollutants. This helps them make decisions or adopt appropriate measures that best suit their needs without compromising the environment. Forecasting the seasonal variations with an accurate reading is now possible because Polludrone has been helpful in establishing the diurnal, seasonal, and annual trends of these variables.

Oizom is an environmental IoT company offering data-driven environmental solutions for better decision making. With our sensor-based hardware, we monitor various environmental parameters like air quality, noise, odour, radiation, weather conditions, etc. Our data analytics platform derives many actionable insights for authorities, communities, and industries. Oizom strives to play an essential role in a sustainable future through smart environmental solutions and data science.