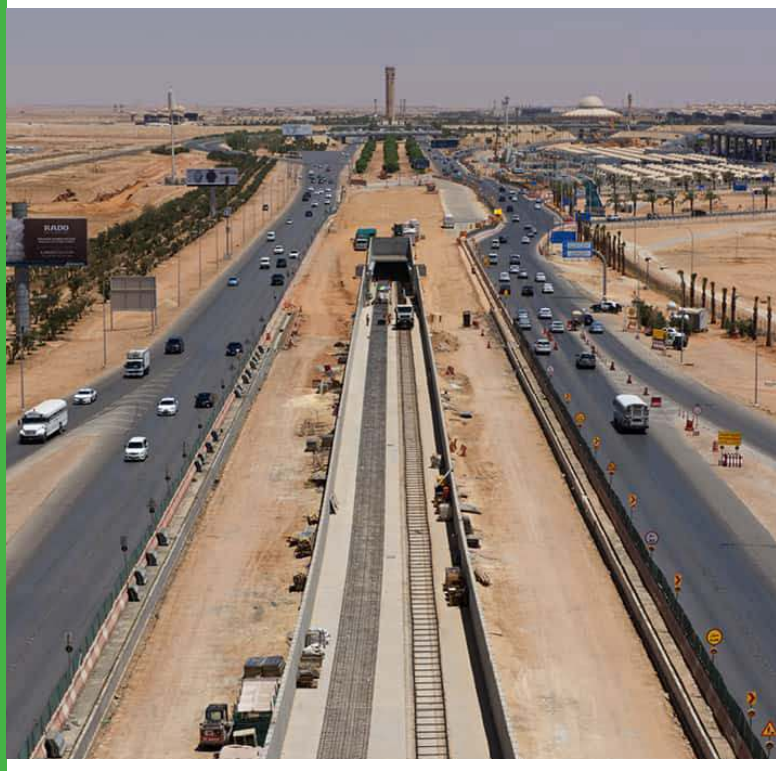
Construction site Air Quality monitoring in Riyadh, Saudi Arabia

Our Client

Freyssinet Saudi Arabia Co. Ltd.(FSAC) is one of the leading general contracting and engineering companies in Saudi Arabia. It was founded in 1978 with Its headquarters situated in Riyadh, has been covering the construction of various buildings and projects like hospitals, complexes, industrial projects, bridges, and civil projects amounting itself to a multi-billion dollar company. The company commenced operations in the highly specialized field of pre-fabricated and pre-stressed concrete. The company has thousands of employees who work around the clock to plant, build and execute various private and public projects.



The Challenge

A construction site often has a lot of emissions in terms of dust, and other air pollutants. An Urban construction site in Riyadh was situated near a high traffic concentrated area where there was an increase in air pollutants like CO, $PM_{2.5}$, PM_{10}, SO_2, NO_2, and O_3. Safeguarding the health and security of the workers' was paramount to the company's principles. The FSAC needed an Air Quality Monitoring System that could detect and notify the authorities whenever such Pollutant levels exceed a particular safety threshold. They also needed an Air Quality Monitoring System that could be portable so that the authorities could move it to different places or construction sites whenever required.

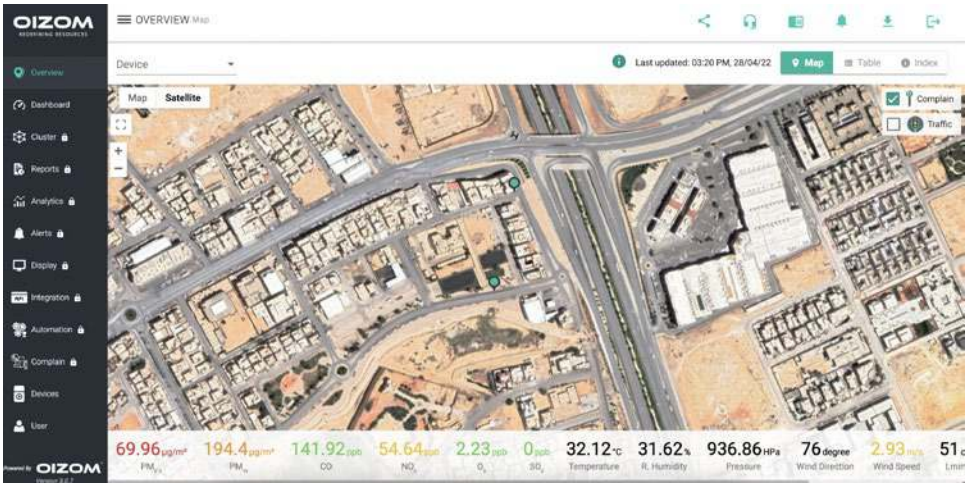
Installation Details

2 units of Polludrone have been installed on the premises of the Urban construction site of Freyssinet Saudi Arabia Co. Ltd in Riyadh, Saudi Arabia.

> *"We liked how the instrument is portable and included all our required parameters like SOx, Nox, Noise & PM. The IoT platform- Envizom is fast and easy to use for our data analysis."*
> *Mohammed Imad*
> *-Environmental Engineer at Etlco*

The Solution

Oizom with ETCLO offered 2 units of Polludrone customised to fit all the requirements of the FSAC. Polludrone is capable of monitoring air pollutants on a real-time basis like CO, PM2.5, PM10, SO2, NO2, and O3 along with temperature, humidity, and noise levels. Polludrone is smart, compact and lightweight, which can be moved easily to different locations as per the client's requirements. In order to detect the direction of the pollution, wind direction and wind speed detection are also considered in monitoring the source of pollution. In addition to this, Oizom's cloud computing software, Envizom can analyse data, create historical trend reports and show a comprehensive report on such air pollutant levels. Through the Alerts module, the authorities can be notified of any potential threat to workers' health so that appropriate measures can be adopted.



The Result

FSAC is now able to retrieve a continuous reading of the wind direction and wind speed to understand the origin of the pollution levels. Using Oizom's smart, accurate and robust Air quality monitoring system, FSAC is able to access a historical trend in terms of pollution, traffic and wind direction. This has helped the authorities to understand the cause and make appropriate decisions that best suit safeguarding their workers' health.

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.