Alerting Authorities of Sandstorms and hazardous gaseous emissions in a Saudi Arabian mining site

Our Client

Saudi Comedat Mining Co. Ltd (SCM) Is one of the leading mining corporations in the Arabian peninsula. It was established in 2007, with its headquarters in Saudi Arabia, and termed itself as a contractor of choice for Open Pit Mining in Saudi Arabia. They offer complete mining services including design, planning the mine operations, construction of the mine infrastructure and environmental mitigation measures in remote and challenging locations. The company has hundreds of workers that are involved in excavating limestone waste in order to extract a record of 39 cubic meters of phosphate within 8 years.

The Challenge

A mining site often has a lot of emissions in terms of dust, and other air pollutants. The mining projects being established in areas that are prone to sandstorms and high levels of humidity and harsh weather conditions, it was important to safeguard the workers from such environmental hazards. This is why the Saudi Comedat Company wanted an Air Quality Monitoring system that can also have the ability to warn or alert the authorities in case of a sandstorm, or high levels of hazardous gases in the air. Since the mining sites often work on a limited energy capacity, it was important for such an air monitoring system to be self-reliant in power.
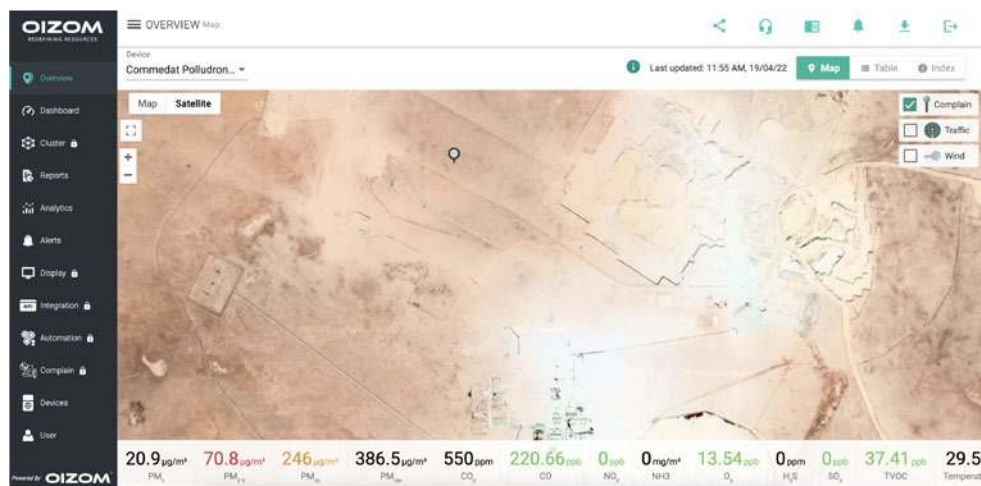
Installation Details

1 unit of Polludrone have been installed on the premises of the mining site of Saudi Comedat Co. Ltd., Saudi Arabia.

" *"Oizom's Data Analytics software has been extremely useful in getting a continuous read on the air quality. Polludrone has been functioning 24/7 without any hassle and timely notifications are under process." Khaled Alshammari Mining Engineer-Comedat Mining Site* "

The Solution

Oizom with Saudi Envirozone offered a customised Polludrone to fit all the necessary requirements of Saudi Comedat Mining Co. Ltd. Polludrone is capable of monitoring hazardous gases emitting from the mining sites like SO_2, NO_2, O_3, CO, CO_2, NH_3, and H_2S. Polludrone can also monitor other air pollutants and environmental parameters responsible for sandstorms like $PM_{2.5}$, PM_{10}, wind speed, wind direction, temperature and humidity. It also comes equipped with a Data Analytics & Visualization software that can project analysed data statistics, historical trends, and real-time reading of the air quality. Accordingly, alerts and notifications on the same can be sent to a third-party device.

The Result

Oizom's smart, robust and accurate air quality monitoring system, Polludrone has been guiding the company in understanding the patterns of dust and pollution emissions to safeguard their workers from overexposure to the same. The Alert module of Envizom has been helpful to the authorities in getting alerts via SMS and email during environmental emergencies. This has helped the SCM optimise the time and energy of their workers by planning in advance. Additionally, securing their high-precision equipments from sandstorms is now possible.

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.