

Client



Location

Kakinada City

Application

Smart City Monitoring.

Problem / Purpose

Kakinada being part of a Special Economic Zone (SEZ) and a proposed Petroleum, Chemical and Petrochemical Investment Region (PCPIR), has seen gradual increase in the merger of surrounding villages.

This increased urbanization and development has caused more motorized vehicles on road, lack of proper sanitation drive and inefficient data on Environmental Conditions. With sufficient Environmental Data authorities can take policy level changes to build a sustainable smart city.

Being a part of Smart Cities mission, Kakinada Municipal authorities wanted a City that has Smart Infrastructure to uphold and drive better urban & industrial growth planning, efficient transportation, data-driven city expansion.

Oizom Solution

To address the Environmental Condition of the Kakinada city and aware the citizens about the environmental conditions, Kakinada Smart City Corporation set out to build the infrastructure to support smart pole equipped with Environmental Sensors.



Oizom engaged in identifying the pain points for Kakinada City's environment. After an extensive research it was concluded that one comprehensive Environmental Monitoring solution will be best suitable for Kakinada which includes 3 key Environmental monitoring parameters i.e Air Quality, Noise and Disaster Monitoring. Sterlite Tech, the MSI for the Kakinada Smart City sought to bring together the LoRa city-wide wireless sensor network.

Both Sterlite Tech and Oizom team devised a blueprint for the Network of the Smart Sensors. To reduce the infrastructure hurdle, data from Polludrone is communicated using Kerlink LoRaWAN gateways. This enables low power and long range data communication making it energy-efficient and the most advanced IoT Environmental Sensor.

Seeing the benefits of LoRaWAN pan-city private network, it was decided to use the LoRa communication network for the Polludrone. In addition, Oizom team having a competency in Data Integration, successfully developed an architecture to directly send the Environmental Data in the CCC. The modular design transcends the ease of maintenance and commissioning for the environment sensor.



Impact

Oizom's IoT based Polludrone Environmental Sensors connected on the Smart Poles enables Authorities to streamline the operation of acquiring real-time environmental data. By deploying Smart Environmental Sensors on Smart Poles the city was able to reduce its total cost of ownership Environmental Monitoring cost by 50% and create a dense network of environmental data. This will enable them to take data-driven decisions for developing Policy and Infrastructure level changes of Kakinada. It will transform the existing areas into better planned ones, therefore increasing the livability of the whole city and provide better quality of life for the citizens of Kakinada.