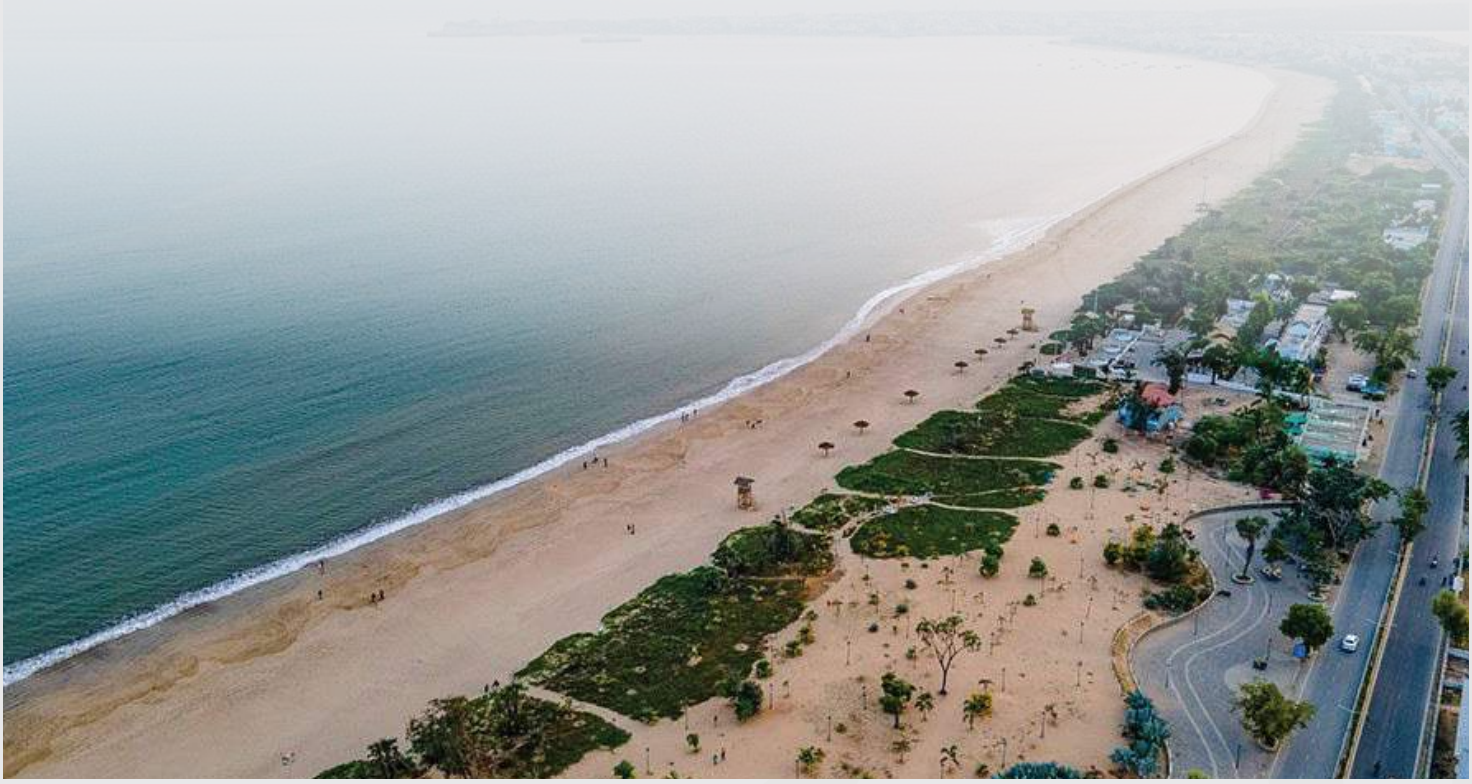
OIZOM
REDEFINING RESOURCES

CASE STUDY
Smart City

DIU SMART CITY WORKING FOR A SUSTAINABLE FUTURE WITH OIZOM'S ENVIRONMENTAL MONITORS



INTRODUCTION: Coastal Serenity Meets Smart Innovation

Diu is a picturesque coastal town located in the union territory of Dadra and Nagar Haveli and Daman and Diu, India. Situated off the southern coast of Gujarat's Kathiawar peninsula, Diu Island covers an area of approximately 38.8 square kilometers. The climate of Diu is generally pleasant throughout the year, with temperatures ranging from 15°C to 38°C and the monsoon season lasting from June to September. The Union Territory is focusing on developing smart city initiatives to improve urban living standards while promoting sustainable development. In collaboration with Oizom and Synergy Telematics Pvt Ltd, Diu Smart City adopted advanced environmental monitoring technologies to transform its urban development strategy.

SYNERGY TELEMATICS

THE CHALLENGE: Managing Environmental Health in a Coastal City

Diu Smart City faced several challenges related to environmental monitoring due to its coastal location. The city required continuous, real-time data on air quality, weather conditions, and environmental factors to ensure regulatory compliance, public health safety, and efficient urban planning.

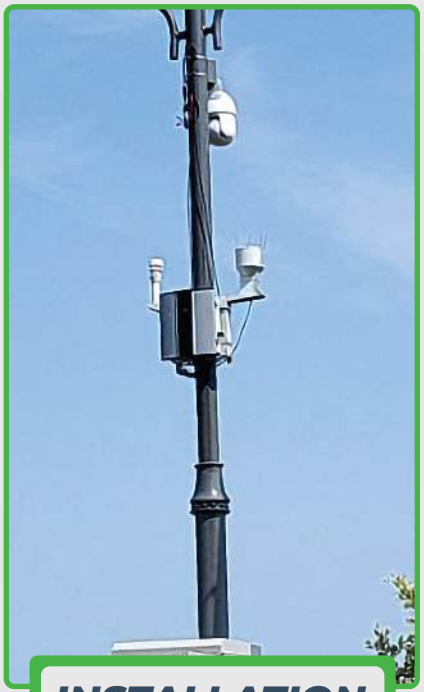
1. **Air Quality Concerns:** Monitoring key pollutants such as PM_1, $PM_{2.5}$, PM_{10}, PM_{100}, CO, CO_2, NO_2, SO_2, and O_3 was critical to maintaining healthy air quality and ensuring compliance with environmental regulations set by authorities.
2. **Unpredictable Weather Patterns:** The coastal environment demanded precise data on temperature, humidity, pressure, rainfall, wind speed, and direction for accurate weather forecasting and disaster preparedness.
3. **Disaster Preparedness:** Coastal weather risks made it essential to have reliable environmental data to support emergency response strategies.
4. **Tourism and Public Health:** Diu's popularity among tourists necessitated proactive air quality management to enhance visitor experiences and safeguard residents' health.

Without real-time monitoring and data-driven insights, taking timely corrective actions and implementing effective environmental policies was difficult.

THE SOLUTION: Polludrone for Holistic Environmental Monitoring

Diu Smart City opted for Oizom's Polludrone solution to address these challenges, which was deployed by Synergy Telematics Pvt Ltd. The system provides real-time data across multiple environmental parameters, enabling the city to make informed decisions regarding air quality and weather conditions.

1. **Comprehensive Monitoring Capabilities:** Monitored real-time data on particulate matter (PM_1, $PM_{2.5}$, PM_{10}, PM_{100}) and gases (CO, CO_2, NO_2, SO_2, O_3). Environmental monitoring of light intensity, UV radiation, visible light, and noise levels.
2. **Meteorological Data Collection:** Measurement of temperature, humidity, pressure, rainfall, wind speed, and wind direction for enhanced disaster readiness and climate analysis.
3. **Real-Time Data Access:** Continuous monitoring via the Envizom platform enables city officials to take proactive measures.
4. **Threshold-Based Alerts:** Automatic notifications and alerts for pollution spikes allow immediate corrective action to minimize environmental impact.
5. **Customizable Data Visualization and Analysis:** Easy-to-understand widgets, wind, and pollution rose charts for tracking pollutant dispersion and identifying key pollution sources.
6. **Coastal Adaptability:** The Polludrone's robust design and flexible communication modes ensured reliable performance, even in challenging coastal conditions.



INSTALLATION DETAILS

2 UNITS of **POLLUDRONE**

With these features of Polludrone, Diu Smart City is gaining actionable insights into environmental trends and pollution sources, allowing authorities to make informed decisions.

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THE TRANSFORMATION: Data-Driven Urban Environmental Management

The installation of Oizom's Polludrone system brought significant improvements to Diu Smart City, benefiting the local administration and community with actionable insights into air quality, weather, and environmental conditions. The collected data enables better planning and regulatory compliance while enhancing sustainability efforts.

Key Outcomes:

- **Improved Air Quality:** Real-time data enabled authorities to take corrective actions, resulting in measurable reductions in pollution levels. Compliance with air quality standards ensured a healthier environment for residents and tourists.
- **Enhanced Disaster Preparedness:** Polludrone's Accurate weather data facilitated better planning for extreme weather conditions and natural disasters. Authorities could predict wind-driven pollutant dispersion patterns and act accordingly.
- **Tourism Enhancement:** Tourists benefited from accessible air quality insights, allowing them to plan their visits based on pollution levels.
- **Data-Driven Governance:** The authority regularly does comparative analysis across locations to identify and address environmental concerns.

BROADER IMPACT: A Model for Coastal Smart Cities

With Oizom's real-time monitoring solutions, Diu Smart City is setting an example for other coastal cities in adopting data-driven approaches to environmental management. The technology helps in regulatory compliance and fosters sustainability and tourism growth.

Key Impacts:

- Strengthened environmental compliance, ensuring long-term sustainability.
- Boosts eco-friendly tourism and public health initiatives.
- Enables proactive disaster management with accurate weather data.
- Positions Diu as a benchmark in smart city development using technology.

CONCLUSION: Charting a Sustainable Future for Diu

The deployment of Oizom's Polludrone has revolutionized environmental monitoring in Diu Smart City. With continuous real-time data, the city is better equipped to address air pollution challenges, forecast weather conditions, and promote sustainability. This data-driven approach supports urban planning and public health while making Diu a model smart city focused on environmental well-being and sustainable growth.

Oizom is a company specializing in environmental monitoring solutions. They offer products to monitor air quality, weather conditions, and other environmental factors. Utilizing advanced sensor technology and data analytics, Oizom aims to provide actionable insights for construction, industrial compliance, and community awareness. Their solutions can be applied in various sectors including government, industries, and community initiatives.