Wetland Park

Located in Western Australia, the wetland is a tranquil haven, adorned with expansive greenery and a lively man-made lake. Yet, it faces occasional challenges, including the risk of botulism from nearby industrial runoff. To address this, the park authorities have collaborated with CCR, employing cutting-edge wireless smart technology. This technology enables real-time monitoring of the lake's water quality, helping to mitigate potential hazards and maintain a healthy environment

Aim:

To deploy the essential hardware infrastructure, connectivity setup, and data analysis tools needed to effectively monitor and maintain the overall health of the lake and its surrounding environment

Challenges:

- Designing a solution that adapts to the area's environmental and weather conditions.
- Establishing a robust network with reliable data transmission capabilities.
- Developing a cost-effective system to efficiently monitor and maintain the health of the water body and its surrounding region.

Solution:

- CCR installed a smart water quality monitoring network, integrating over 6 stations with 4 to 6 probes each.
- Smart alert systems were integrated to identify any unintended changes to water quality levels.
- Integrated CCR's advanced monitoring software for real-time remote access and centralized control over all devices.
- CCR installed NPK sensors for soil fertilization monitoring and set up drainage monitoring systems to analyze pollutant levels in inflow.
- CCR utilized smart cameras for wildlife tracking, providing valuable insights on locations, statistics, and species present.

Network:

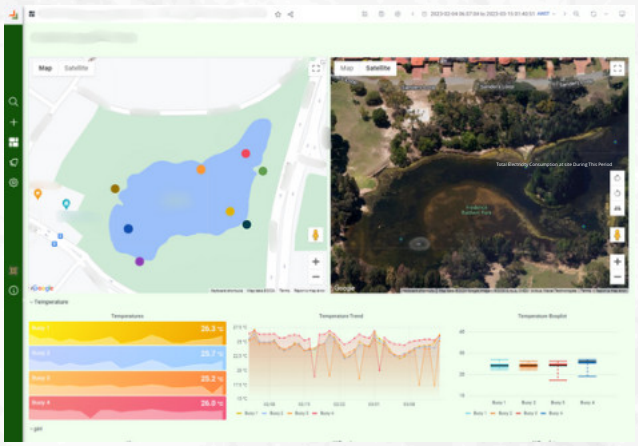
Modbus, 4GLte, LoRa, LoRaWAN, Ble

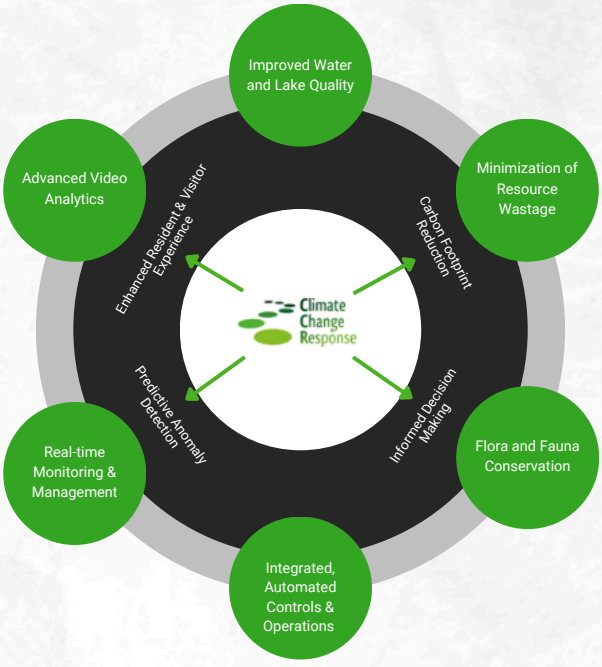
Scope of Expansion:

- Application of smart light poles for energy-efficient lighting solutions across wetland area.
- Better video analytics for identification, counting and monitoring of bird species and other wildlife within the area
- Improved waste management systems for a cleaner environment.
- Smart irrigation systems enabling optimized water utilization for green space maintenance.
- Smart park solutions for enhanced park management and visitor comfort.

Success Criteria:

- Effective monitoring and management of lake and its surrounding.
- Improved flora and fauna monitoring and management
- Improved Lake water quality monitoring
- Minimized resource wastage





Key Outcomes

Real Time Monitoring and Management of Water Quality	**Enhanced Wildlife Monitoring and Management**
A Cleaner And Healthier Environment	**Identification of Pollution Sources and Hotspots**