

Suburban Hub



A suburban area in Perth, Western Australia, boasts over 90,000 residents and is one of the fastest-growing communities in the region. It offers a mix of retail and business districts nestled in a scenic natural landscape. As a key economic center in southeastern Perth, the suburb prioritizes sustainability, community engagement, strategic planning, and diverse service offerings.

Aim:

- Establish essential hardware, connectivity, and analytical foundation.
- Ensure scalability for connectivity, monitoring, analytics, and automation.
- Initially enhance energy efficiency of city assets and public areas.
- Provide insights into city's Scope 1, 2, and 3 emissions.
- Expand into real-time water and environmental monitoring, asset health, space optimization, remote control, and automation.
- Analytical layer delivers insights, incorporating advanced analytics, customized reporting, automated billing, AI, and seamless third-party integration.

Challenges:

- Improving weak monitoring, reporting, and verification System.
- Developing an integrated network
- Addressing agility and scalability concerns.
- Strengthening community engagement
- Enhancing partnership establishment

Solution:

- The project is aimed to improve efficiency, cut utility costs, decrease emissions, maximize renewable energy generation, and offer educational opportunities for the local community.
- Develop a network of 100 electrical meters at 11 sites, providing real-time data on 30 parameters, including 10 power quality indicators, with a LoRa network for water metering and sensor monitoring.
- The city's local government facilities are central to community engagement in Smart City initiatives, with data displayed on web-based platforms and on-site screens.
- CCR's system has initiated a Smart City movement, with increased data transparency and immediate benefits beyond utility management, the infrastructure now extends to various data points, simplifying environmental and asset management.

Network:

Modbus, Bacnet, 4GLte, LoRa, LoRaWAN, Ble

Scope of Expansion:

- Comprehensive data analysis across various parameters.
- Overseeing parks, open spaces, and irrigation/pumping systems.
- Advancing towards Net Zero Infrastructure with DER integration.
- Analyzing natural ecosystems and monitoring air quality.
- Leveraging AI and ML for data analysis and insights.

Success Criteria:

- Significant reductions in electricity expenses.
- Achieve the project objectives within specified time and budget constraints.
- Implemented a complete system with smart monitoring, control, and analytics.
- Provided value in alignment with project goals.



Key Outcomes	
> AU \$3,000,000 over 10yrs*	Reduced Complexity, Increased Visibility.
Automated Controls & Operations	Energy Efficiency

* Figures based on opportunities identified & captured to date

