

# Innovation and Testing Centre



Located 40 km north of Perth CBD in Western Australia, the 51-hectare facility innovation and testing centre specializes in testing, R&D, and training for autonomous, remote operations, and robotic systems. It features three significant test beds utilized by various industries to develop and showcase products and services in practical environments.

## Aim:

- Providing essential hardware, connectivity, and analytical foundation
- Ensuring scalability across connectivity, monitoring, analytics, and automation.
- Initial focus on enhancing energy efficiency.
- Analytical layer offers facility insights through advanced analytics, customized reporting, AI, and seamless integration with third-party applications.

## Challenges:

- Improving weak monitoring, reporting, and verification system
- Developing an integrated network
- Addressing agility and scalability concerns

## Solution:

- CCR's solution uses fifteen electrical meters to provide real-time data on 65 parameters per minute at five sites, enhancing monitoring capabilities.
- CCR has implemented an efficient smart network infrastructure for real-time management and monitoring across the 10-hectare facility.
- The system ensures seamless data and analytics display through a web-based, no-code dashboard, in compliance with ISO standards.
- The dashboard provides energy status insights, predictive maintenance algorithms, and smart alerts for proactive management.

## Network:

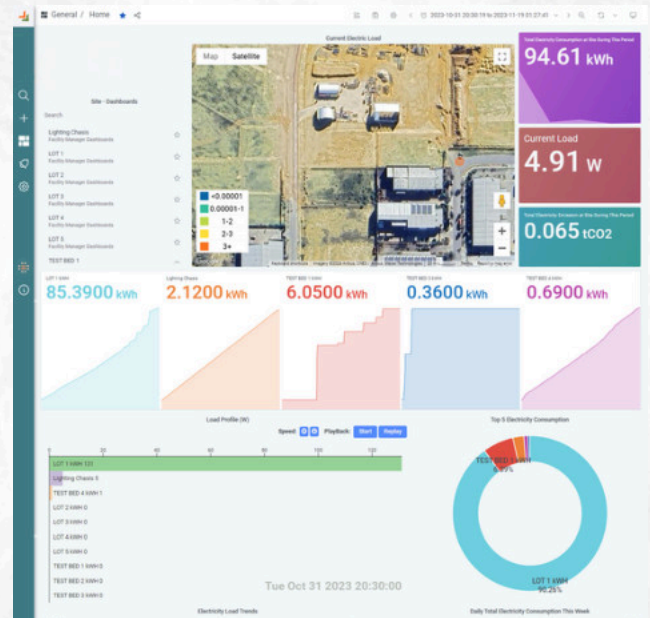
Modbus, Bacnet, 4GLte, LoRa, LoRaWAN, Ble

## Scope of Expansion:

- Tracking and monitoring individuals' activities.
- Controlling environmental conditions.
- Implementing comprehensive environmental monitoring and management.
- Creating a digital twin for enhanced visualization and analysis.
- Managing open spaces and resources.
- Developing Net Zero Infrastructure with DER integration.
- Leveraging AI and ML for insights and data analysis.

## 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 \$800,000 Saved Over 10yrs* | Agile & Scalable  |
| Streamlined Maintenance          | Energy Efficiency |

\* Figures based on opportunities identified & captured to date

