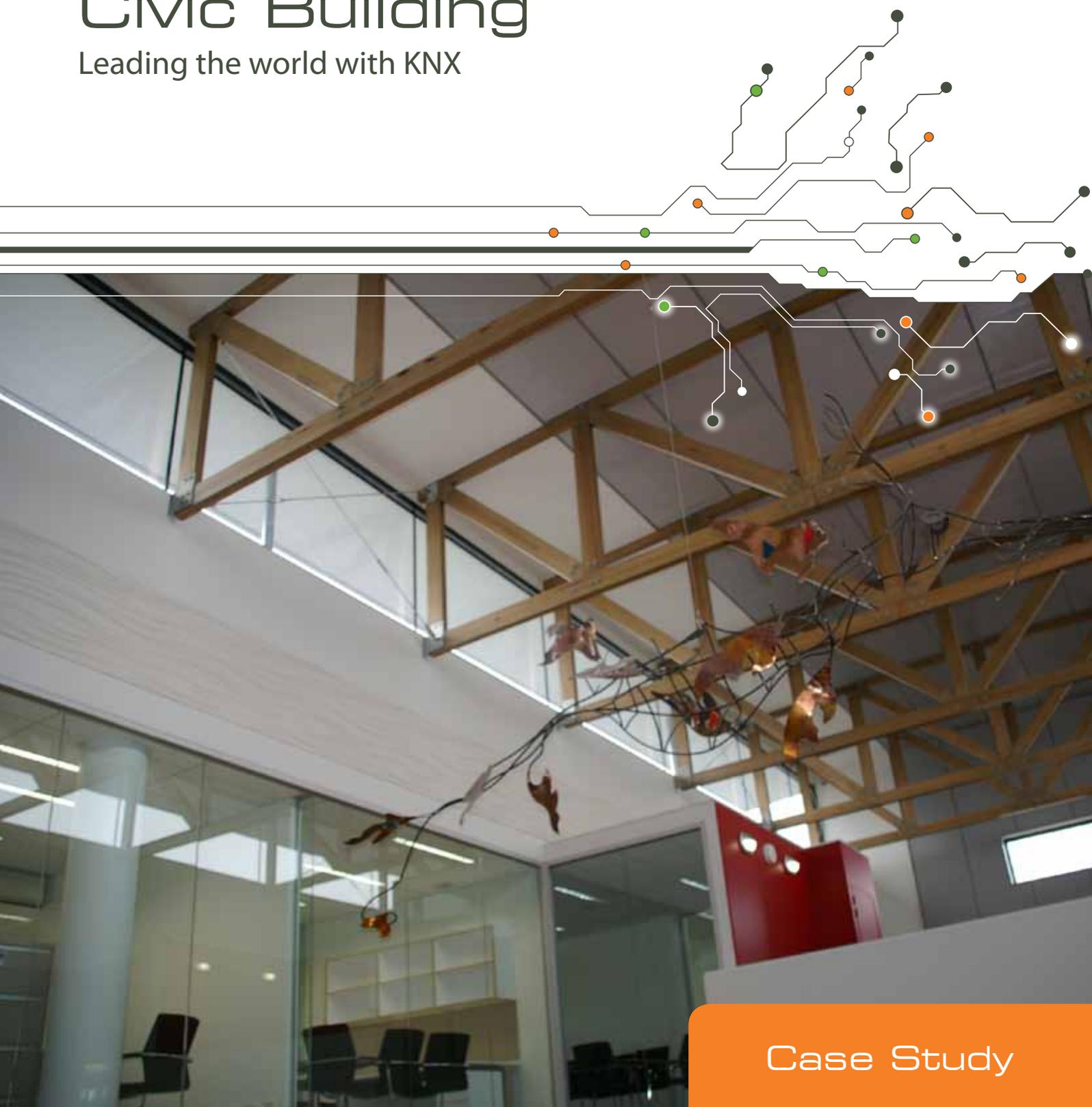


mySmartCTI™

# Surf Coast Shire Civic Building

Leading the world with KNX



Case Study

# Surf Coast Shire Civic Building

Leading the world with KNX



## Project Details:

|                       |                              |
|-----------------------|------------------------------|
| Location              | Torquay, Victoria, Australia |
| Type of Building      | Civic Centre                 |
| Developer             | Surf Coast Shire Council     |
| Architect             | Perrott Lyon Mathieson       |
| Builder               | Cockram Constructions        |
| Electrical Consultant | Irwinconsult                 |
| Electrical Contractor | ADJ Contracting              |

Design » Deliver »  
Optimise » Guarantee

An iconic destination known by surfers the world over as the home of Bell's Beach, Torquay is now also setting the standard around the world for green buildings with the Surf Coast Shire Civic Building.

Born out of desire to reflect the Surf Coast community's environmental conscience the building has been awarded a 5 Star Green Star – Office Design V3 rating by the Green Building Council of Australia as well as gaining international acclaim from the KNX Association, receiving an International Best Project Award at the 2012 KNX Awards held in Frankfurt, Germany.



The building places a focus on energy efficiency and water conservation resulting in reduced running costs for the council and setting a standard for the local community to be proud of. Says Surf Coast Shire Mayor, Cr. Brian McKitterick, "Council has always been determined that this community's civic building should be a regional flagship in ESD that reflects our community's efforts to protect our local environment and live more sustainably."

**mySmartCTI** is extremely proud to have been involved in the Surf Coast Shire Civic Building. The performance of this project shows that communities can benefit from the sustainable vision of their leaders. Not only has this been recognised in regional Victoria but also on the global stage. What is unique about this project is that whilst each sub-system was designed to operate independently they all operate seamlessly as one system. This proves the power and flexibility of KNX; the ability to deliver a truly converged energy and resource efficient building, one that is simple to manage and easy to operate.



# Surf Coast Shire Civic Building

## Leading the world with KNX

### A Truly Converged Building

At the heart of this building is a **mySmartCTI** KNX solution bringing Lighting Control, Energy and Resource Monitoring, Hydraulic Services Monitoring and Management and a Building Performance interface all onto the one converged operating system.

KNX is a worldwide standard for home and building control with over 70% market share of the smart-building market in Europe alone and is rapidly gaining ground in Australia due to its open-source and vendor-neutral platform.

The key ESD components of the project include;

- › Energy Efficient Lighting Control
- › Sports Flood Lighting
- › Pressurised Under-Floor Air Conditioning
- › Renewable Energy
  - » Photovoltaic System
  - » Wind Turbine System
- › Energy Monitoring
- › Energy Display and Tracking

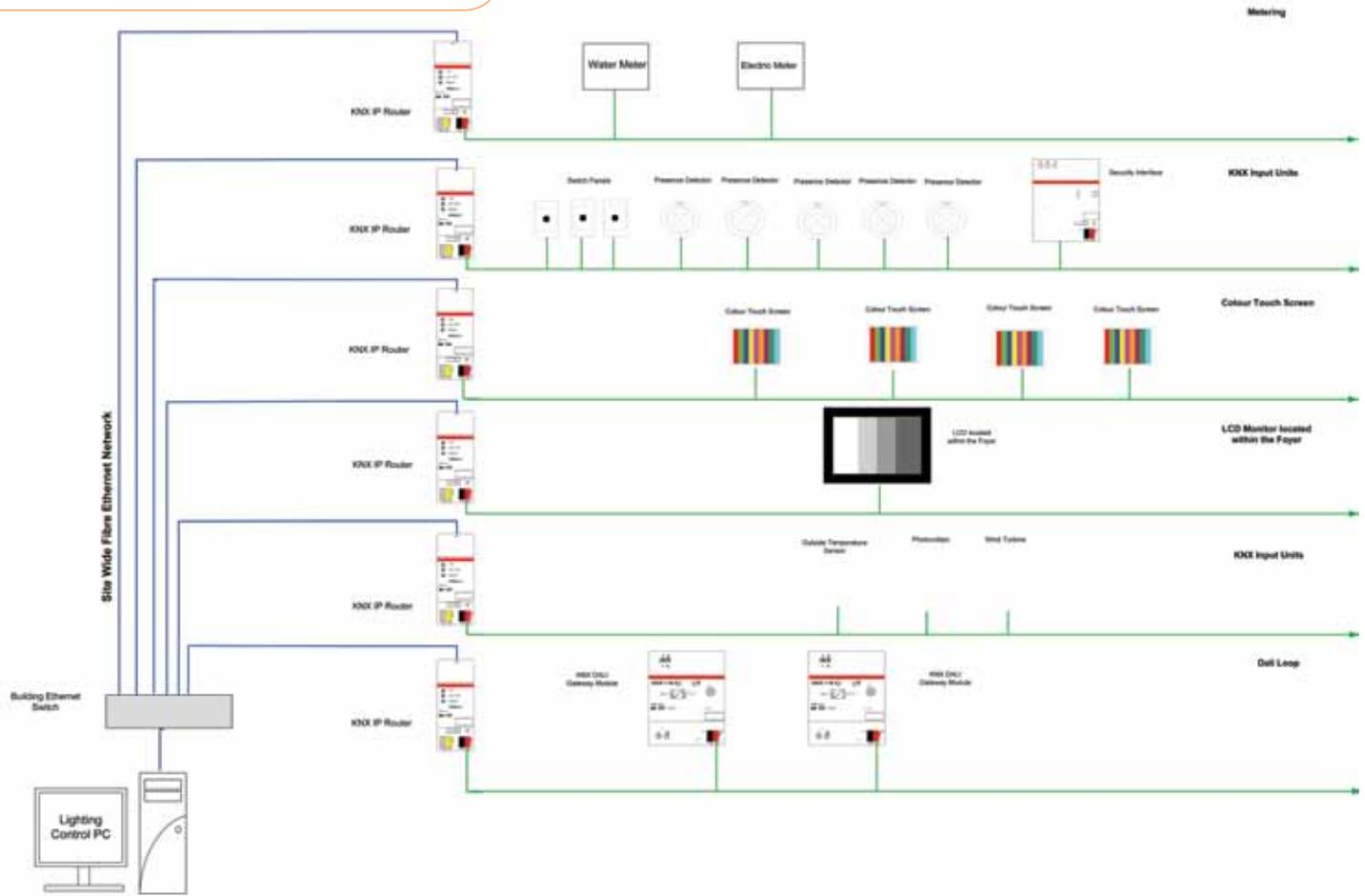


### Lighting Control

The KNX lighting control solution operates across the Civic Building and the adjacent Sports Ground's flood lighting. The Civic Building utilises a combination of Hager KNX wall switches and KNX 360° occupancy sensors, and ABB KNX colour touchscreens and KNX-DALI gateways. All of the lighting controls and building monitoring functions are available via the NETxLAB Voyager Server Professional software including an interface to the building's security system which allows for complete shutdown once the building security is armed.



The Sports Ground flood lighting operates from a dedicated KNX colour touch screen allowing each floodlight luminaire, on each of the floodlighting poles to be switched separately and selectively. The flood lighting control system is also able to be operated in automatic mode where ambient light sensors are used to instantly adjust the flood light output.



### Services Monitoring and Control

In addition to controlling the lighting throughout the civic precinct the KNX network is used to monitor and control many of the services. These include monitoring and control of the hydraulics systems as follows;

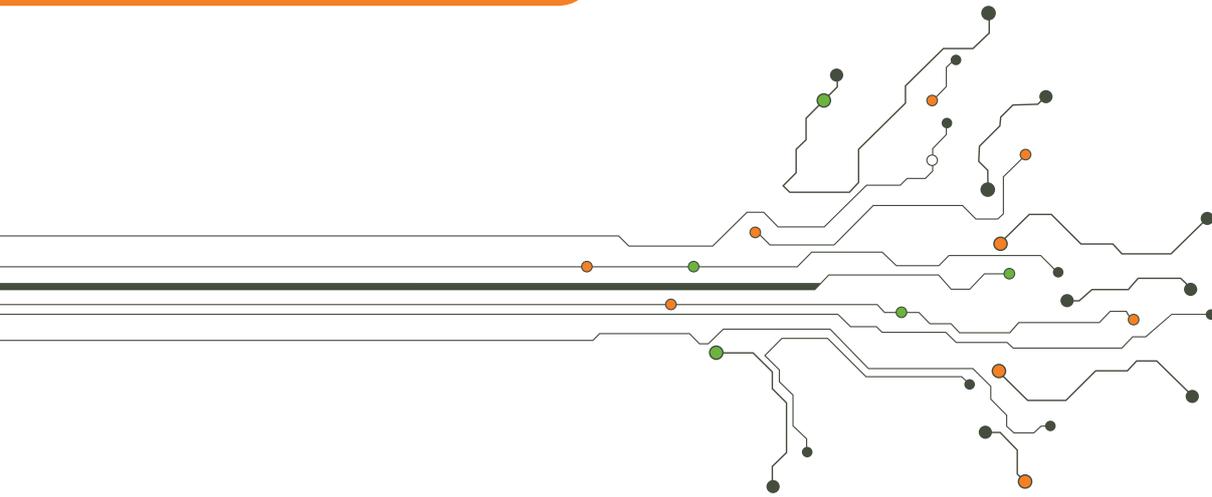
- › Fire and Rainwater Pump House: domestic cold water and rainwater flow rates, pump and UV Disinfection status and solenoid valve operation
- › Rainwater tank volume
- › Solar Hot Water Plant pump status, flow rates and water temperature at a number of points

A number of mechanical services are also monitored and controlled via KNX. These include;

- › Ground floor toilet exhaust fans
- › Communications closet ventilation fans operated by temperature sensors
- › Electric panel heaters at Customer Service counters with dedicated control panels

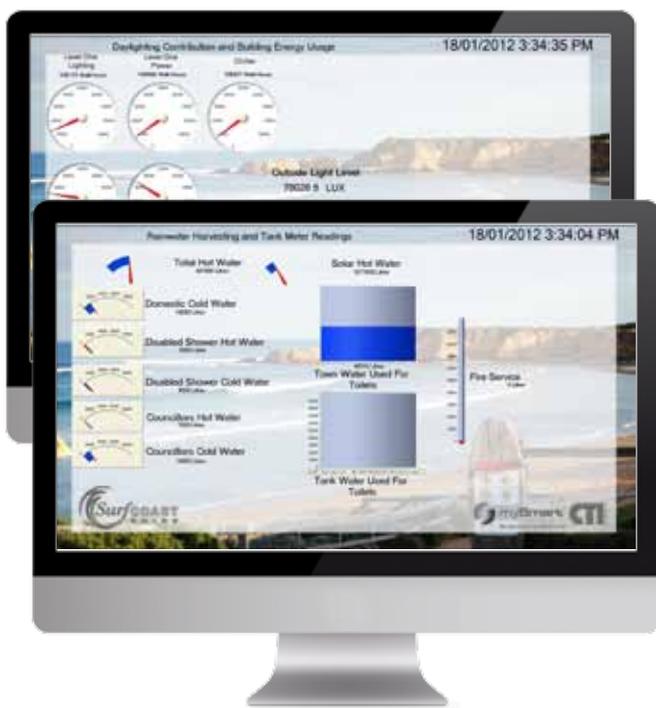
### Renewable Energy

Central to the energy efficiency of the building is the use of renewable energy. A vertical axis wind turbine rated up to 1kW is supplemented with a 2.5Kw photovoltaic system. Both systems have been fitted with high-level output modules which feed data on the renewable energy systems into the KNX network in real time.



## KNX Weather Station

An ABB KNX weather station is used to monitor the ambient weather conditions and feed this information into the KNX system where the input data is utilised by a number of the building's systems. This data includes ambient external light levels, outdoor temperature, wind speed and direction and precipitation status.



## Interactive Performance Display Panel

mySmartCTI has long believed in the power of sharing a building's energy and resource performance with occupants as a way of facilitating awareness and behavioural change. At the Surf Coast Civic Building a 42" LCD panel connected to the KNX network is located in the foyer and provides a real-time graphical display of building performance data and statistics. Multiple pages detail;

- › Renewable energy system input data
- › Rainwater harvesting and tank levels
- › Mains water usage
- › Architectural design information such as shading
- › Contribution of daylight to interior lighting and the corresponding energy savings
- › Building energy usage
- › Ambient weather conditions

A KNX/IP gateway also allows information to be sourced from the internet for display on the panel.

# About mySmartCTI

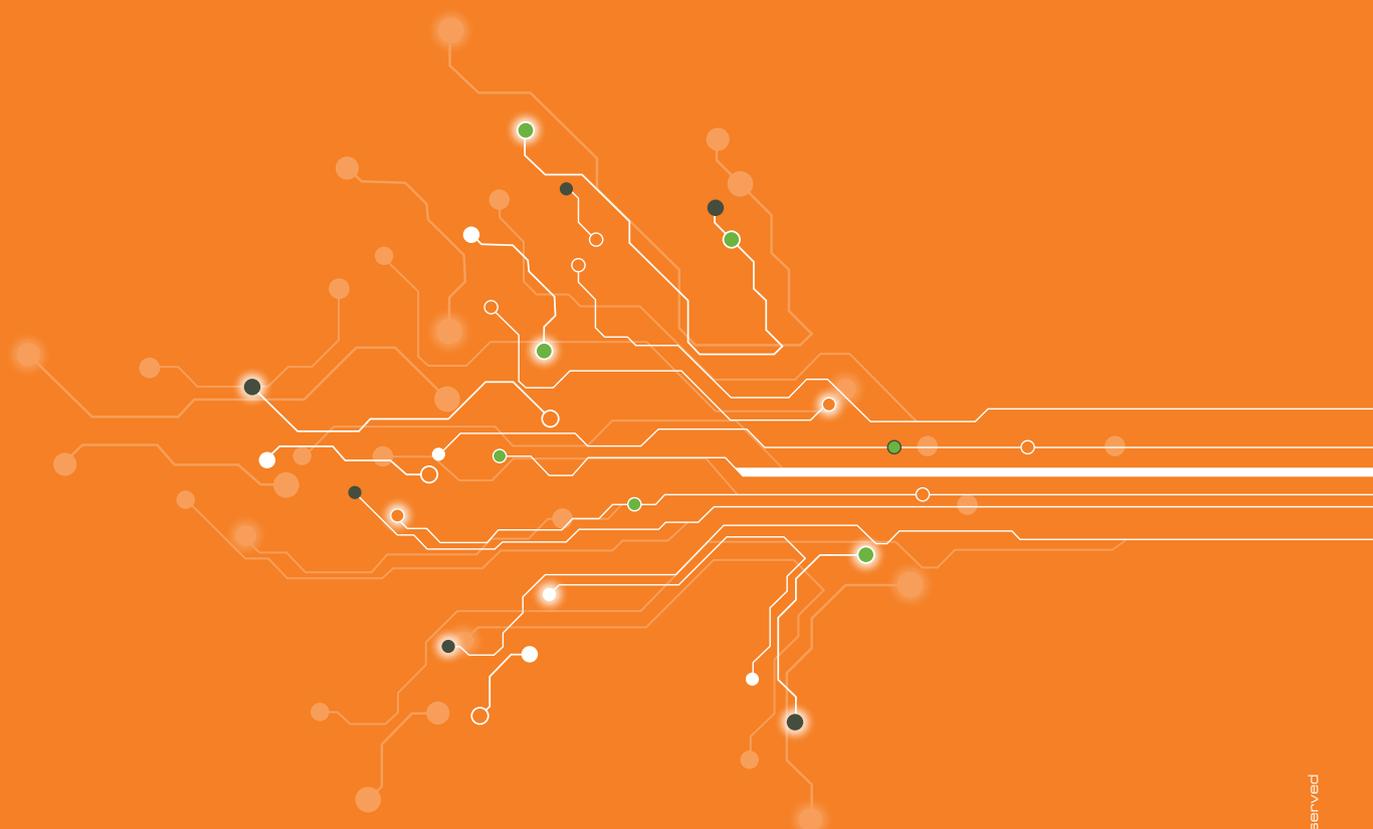
**mySmartCTI** is an Australian company that prides itself on making a positive difference for its customers, their employees and the environment. **mySmartCTI** helps to create the most energy and resource-efficient environments possible.

Using the latest technologies with highly trained consultants and service technicians, **mySmartCTI** is able to optimize buildings and outdoor built environments so they are more comfortable and use less energy and resources with a resulting reduction in ongoing operational costs.

Established, originally as Complete Technology Integrations (CTI), in Sydney in 2001 before being rebranded in 2011, **mySmartCTI** remains wholly Australian owned. With almost 50 staff it has offices in Sydney, Melbourne, Brisbane, Canberra and Perth. The company operates across a range of markets, including hospitality, education, health services, aged care, retail, residential, defence and Industrial.

## **mySmartCTI's** solutions include:

- › Lighting control solutions which provide daylight harvesting and timed control
- › Basic and high performance metering and reporting solutions for energy, solar, water and gas usage
- › enGauge behavioural change displays for showing energy usage and savings
- › Fully integrated building automation systems providing lighting and façade management control, audio-visual interfacing, HVAC control, reporting and central control.
- › Hotel room control systems for controlling lighting, HVAC and blinds with full integration to the hotel check-in system
- › Stand-alone intelligent motion sensors
- › Unique custom solutions



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