

# Pioneering building system technology on Australia's famous Surf Coast

KNX integrates all the functions for efficient control and central energy management

Winner  
KNX Award 2012  
Category  
International Africa,  
America, Australia



Environmental protection and sustainability are valued highly on the Surf Coast. The efficient building system technology with KNX meets this requirement

With its spectacular scenery and ideal surfing conditions, the Surf Coast in Victoria, Australia attracts tourists from all over the world with its nature reserves. The "Surf Coast Civic Building" began operations in 2011 in the small township of Torquay at the gateway to the Great Ocean Road. It is a modern community centre for sport, culture and communication. During the implementation, the builder Surf Coast Shire Council placed great importance on environmental protection and energy efficiency. This is also shown in the building system technology which is controlled efficiently via KNX. The integration of a wide variety of functions in a central system is a new

and innovative idea for Australia – this was one of the reasons that the system integrator Peter Garrett of mySmart CTI decided on the versatile global standard. It is not only possible to control all the lighting and monitoring functions, as well as, the energy and water consumption via a 40" LCD display in the building foyer but also to visualise the energy gains of the wind power and photovoltaic systems which belong to the complex. This presentation has public appeal and emphasises the environmentally friendly building concept. The impressive KNX installation was presented with the International Award for Africa, America and Australia.

## Building blocks for the Green Building certificate

mySmart CTI integrated all the features of KNX in order to implement the efficient lighting control system including: lighting sensors and dimmers which ensure a consistent level of brightness with optimum use of daylight, presence detectors provide lighting according to demand. The floodlights on the playing field are switched on and off via brightness sensors depending on the time that they are used. Unnecessary burn times are thereby avoided.

KNX push buttons and controllers also ensure that convenient manual operation can be carried out.

Ventilation systems and individual heating devices can also be controlled via KNX, partly automatically and partly manually. They can thus be included in the central control system. The following functions are integrated in the energy management system: lighting control, shutters and blinds control, energy monitoring, consumption display and smart metering for renewable energy. To achieve the highest possible level of efficiency, hydraulic systems such as rain water pumps and solar hot water pumps are monitored, flow rates are measured and temperatures are controlled via KNX.

The interface to the AMX media technology is one of the highlights of the installation. By coupling the audio and video system with the KNX lighting control, relevant lightscenes can be called up during events. These scenes can be created individually by the user via the visualisation system. A 42" LCD display has been installed in the foyer for the public display of the energy currents and

## Benefits provided by KNX in this project

- Energy-efficient control of the building technology
- Integration of all functions for central management
- Smart metering for energy loads, water consumption and regenerative energy sources
- Presentation of loads and energy gain via a 40" LCD display
- Monitoring and fault signals
- Remote access for service and maintenance

## Technical refinements

- Merging of different functions for central management
- Coupling of the media control with retrieval of lightscenes
- Arming of the security technology triggers lighting functions

## Companies involved

### Building owner:

Surf Coast Shire Council, Torquay, Australia

### KNX System Integrator:

Peter Garrett, mySmartCTI, North Ryde, Australia

### Area of application:

Public building

### Functions:

- Lighting
- Heating, ventilation
- Technical monitoring
- Energy management
- Audio/video
- Visualisation
- Interfaces to other systems
- Remote monitoring/control

### Scope

Number of KNX devices: 279, ABB, Hager etc.

### Costs:

130,000 Australian dollars



analysis. The central management is based on the NETxAutomation Voyager software which also enables remote servicing on the PC. Last and by no means least, is the KNX technology which controls the building efficiently and has contributed to its certification as a 5-star Green Building. At mySmart CTI, they are proud to have been instrumental in building this world class facility.