SPECIFICALLY DESIGNED

Easy to use

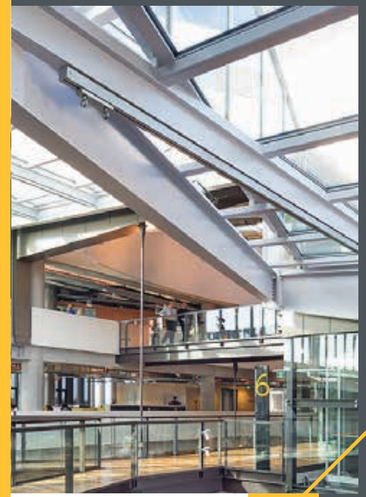
The entire system is orchestrated with Schedule Plus software – part of the C-Bus suite. To obtain the full benefit of the C-Bus technology, says Harris, a client needs to be able to use it easily.

"We created a customised GUI so that the ASB team could monitor current light readings throughout the building as well as make adjustments to different zones to reflect changes in work hours. Holiday schedules as well as various exterior and feature lights – are all adjustable by ASB personnel. The system also has remote access capability, so our company is able to offer the client full support with minimal disruption in the workplace."

One of the key factors in the project success, Harris believes, was Intelligent Environment's early interaction with the client. "With many commercial projects the specification contains only limited information about the end user's requirements. The lighting control system is designed and priced to meet the specification, but it may be a long way from meeting the client's actual needs.

"To avoid this issue Intelligent Environments offers consultation services at planning stage at no charge. We believed C-Bus was the best solution for ASB's needs and took the team to Schneider Electric's headquarters in Highbrook. This building not only uses the technology but is also specifically designed to demonstrate how it works and the potential benefits."

Intelligent Environments continues to work with the ASB team in the new building, assisting to identify energy-saving opportunities.



Schneider Electric (NZ) Ltd.

38 Business Parade South, Highbrook,
East Tamaki, Manukau 2013
PO Box 259370, Botany,
Manukau 2163
Tel: +64 9 829 0490
Fax: +64 9 829 0491
Customer Care: 0800 652 999
Email: sales@nz.schneider-electric.com

www.schneider-electric.com

Intelligent Environments Limited

438a Rosebank Road
Avondale, Auckland
Tel: +64 9 281 3727
Fax: +64 9 281 3729
Email: service@i-e.co.nz

www.intelligentenvironments.co.nz
www.i-e.co.nz

Project Partners

Automation integration and design:
Intelligent Environments Ltd

Automation provider (C-Bus):
Schneider Electric New Zealand

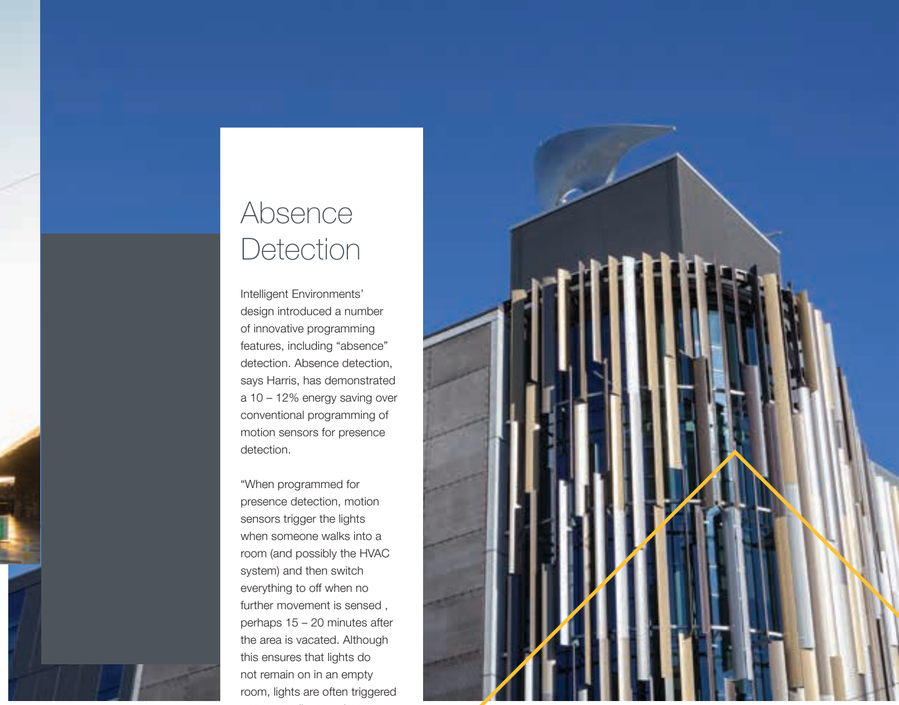
Electrical contractor:
Bishman Limited

Technical Specifications:
Control and dimming of DALI fittings
Relay 10 and 20 amp control of exterior + feature lighting
Adjustable schedules
Occupancy controls
Auditorium triggers and scenes
Work hours functionality
After hours navigation
Energy saving optimisation
Daylight harvesting
Schedule Plus software
Customised UI with provision for client control
Remote support
Full TCP/IP network
HVAC fully integrated with Schneider Electric BMS
Occupancy control for HVAC
Security - integration with third party system
Fire - integration with third party system
Audio Video - integration with third party system

HARVEST ENERGY & SAVE

ASB NORTH WHARF
C Bus Commercial

Schneider Electric



C-Bus control promotes sustainability

ASB North Wharf – the banking group's new head office in Auckland's Wynyard Quarter – is equipped with a state-of-the-art lighting control system that's helped the building earn numerous energy efficiency and sustainability awards.

SUSTAINABLE DESIGN ELEMENTS

"…we incorporated daylight harvesting into our programming. This means lights automatically dim – or switch off altogether – in areas where lux levels are high."

"The technology also communicates directly with the structure's Building Management System (BMS), allowing the lighting to interface with components such as security and HVAC"

Boasting some 18,000m2 of modern, airy office space, the iconic building incorporates significant sustainable design elements, including a giant reflector on the roof to disperse natural light throughout the structure, thereby reducing its dependence on artificial light.

To optimise the abundance of natural light, a C-Bus lighting control system – supplied by Schneider Electric – provides artificial lighting only when and where necessary. The modest use of artificial lighting has assisted in earning the building a "five green star rating" from the New Zealand Green Building Council.

Auckland systems integrator Intelligent Environments programmed and commissioned the C-Bus system, and general manager Paul Harris says the installation is not only one of the biggest the company has tackled, but also one of the biggest in the country. "It required the programming of more than 2000 DALI ballasts, 500 intelligent sensors and some 160 intelligent light switches."

Intelligent Environments is one of Schneider Electric's Premium Partner, and having used C-Bus many times, says Harris, "we knew its capabilities. We wanted a robust, flexible lighting control system and we were confident about recommending it as the perfect solution for the building's unique energy requirements.

"Because of the amount of natural light being reflected and directed into the building, we incorporated daylight harvesting into our programming. This means lights automatically dim – or switch off altogether – in areas where lux levels are high. Conversely, they only burn at full strength when there is insufficient daylight, such as on heavily overcast days."

C-Bus, he points out, not only provides precision lighting control but also integrates seamlessly with the entire building's energy systems.

"The technology also communicates directly with the structure's Building Management System (BMS), allowing the lighting to interface with components such as security and HVAC. The HVAC system, for example, takes its lead from the lighting and motion detection technology. The heating or air-conditioning is automatically disabled in meeting rooms where there is no activity."

Absence Detection

Intelligent Environments' design introduced a number of innovative programming features, including "absence" detection. Absence detection, says Harris, has demonstrated a 10 – 12% energy saving over conventional programming of motion sensors for presence detection.

"When programmed for presence detection, motion sensors trigger the lights when someone walks into a room (and possibly the HVAC system) and then switch everything to off when no further movement is sensed , perhaps 15 – 20 minutes after the area is vacated. Although this ensures that lights do not remain on in an empty room, lights are often triggered unnecessarily, say when someone enters briefly to pick up something from their desk.

"With absence detection, upon entering the room the user switches on the light as normal, but on leaving the detector switches off the lighting automatically after a pre-set period. Lights can also be switched off manually. It's a different programming approach which consistently saves more energy, and which C-Bus' flexibility accommodates easily."

INTELLIGENT ENVIRONMENT

"When programmed for absence detection, lights do not need to be switched on when entering a room for a short period of time"