

Energy Demand Management | Solar Installations in Southern California | Australian Energy Efficiency |
Recycling Initiative in New Zealand | Dock Consolidation

Case Study

Australian Energy Efficiency

In Australia Westfield conducted a full review of energy management opportunities as part of its effort to continue operating the business more efficiently, reduce waste and ultimately to build better shopping centres that make the most of the latest technology to minimise environmental impact.

Westfield embarked on a substantial building services integration project focussed on reducing ongoing energy costs in its retail portfolio with the progressive installation of IELVS – an integrated low energy voltage system. The implementation of such an enterprise management system helps the centres become ‘smart buildings’ allowing Westfield to receive more accurate, real time data about systems.

IELVS is a system for managing building services and represents the various elements of building management, life safety, security, metering and lighting systems. These various systems are brought together in a single user interface which allows monitoring and control of the building systems locally or remotely through the web. Volumes of data are captured by the IELVS servers allowing constant tuning and performance optimisation along with accurate forecasting of future utilities consumption.

IELVS represents the lead project for the Australian portfolio to address energy efficiency and meet compliance and reporting obligations required under the National Greenhouse Gas & Energy Reporting Scheme (NGERS), Energy Efficiency Opportunities (EEO), and other state government compliance and reporting requirements such as the Environment and Resource Efficiency Plan, Victoria (EREP).

The objective of the new system was to provide a common web-based interface system that would allow data from a number of different technology platforms to be collated into an integrated low voltage system (IELVS) that could consolidate alarms, trends, reports, times scheduling and energy displays. Westfield’s Australian portfolio contains technology platforms ranging from the most basic through to the latest leading edge monitoring systems, including

- building automation systems;
- access control systems;
- utility metering (electricity, gas and water);
- security & CCTV cameras;
- lighting controls;
- fire and life safety;
- lifts & travelators;
- power generation and electrical switching;

These platforms were each integrated into the system with the express aim of creating a completed product that would look and feel the same for each user, while also being able to feed key data into the internal Westfield business intelligence systems.

Westfield initially selected two pilot sites to at which to implement IELVS with the objective of demonstrating the technology and testing the ability of the internal and external delivery teams to deploy a project of this scale in a fully operational shopping centre environment, and to gain empirical data.

The integrated platform has the functionality of collecting, exchanging and archiving energy data from each shopping centre into a central open protocol system. The two pilot projects have proven a success with electricity and water savings exceeding internal projections, and network demand reductions (kVa) as high as 17% along with year-on-year electricity savings exceeding 10%.

Following the successful pilot program, projects at a further three centres have been implemented with clear benefits being identified as follows:

- Effective and real-time energy data management, allowing for practical decision-making through clear dashboards and

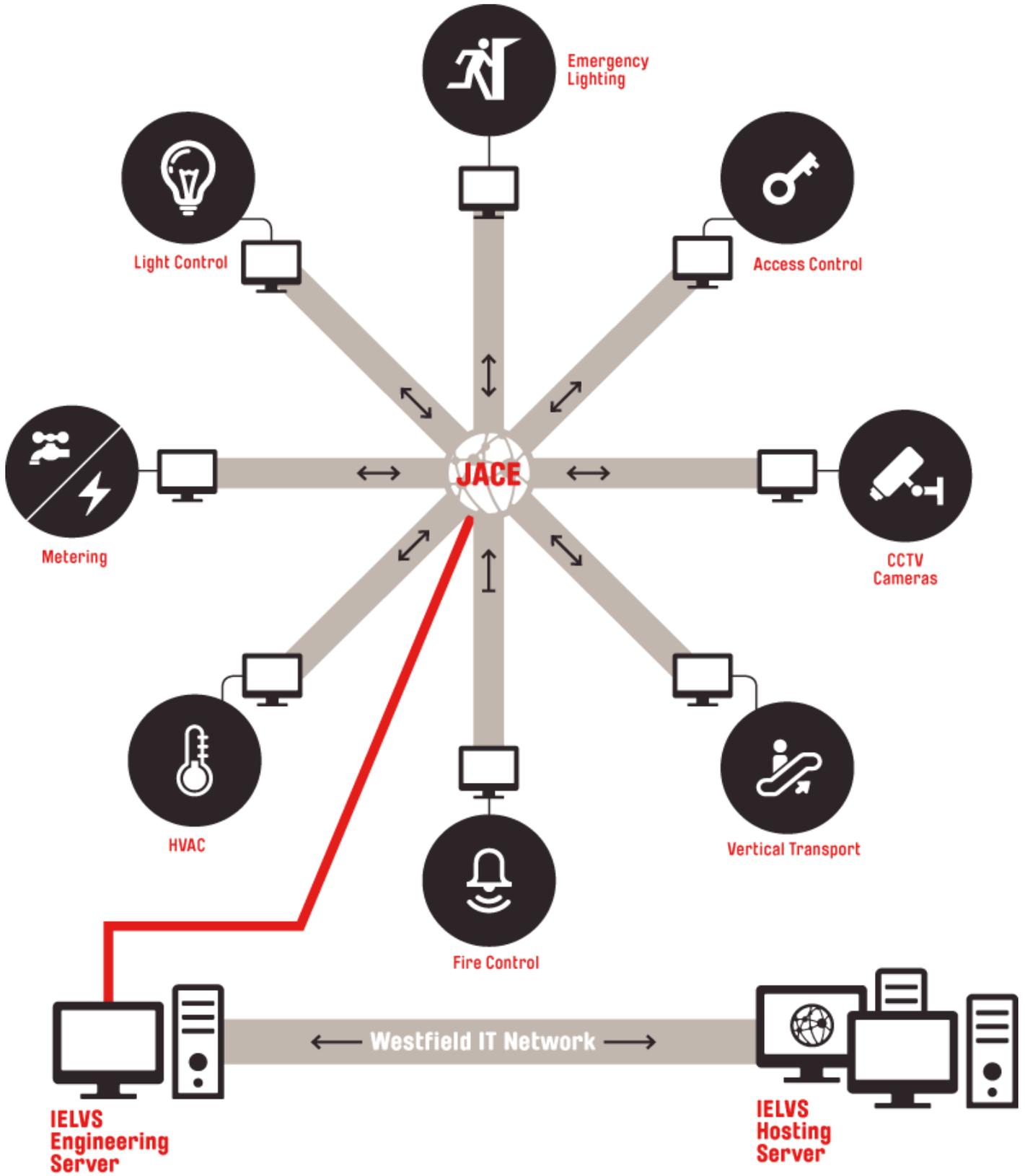
intuitive concise graphical displays

- ‘cascadable’ information allowing for more detailed reporting and assessment
- operational, financial and sustainability objective alignment
- optimised building performance with improved staff access to real-time data

A further innovative aspect of IELVS has been the IT security it can deliver. While remote access to building management systems is now commonplace, hosting building services on secure corporate IT networks – as in the case of IELVS – is a less common attribute, but one which improves the integrated system’s defence against the threat of cyber-attack.

The implementation of IELVS has resulted in Westfield teams being able to use real-time data to make informed operating and strategic decisions and provide tangible benefits to the Group’s efforts at reducing its environmental impact.

IELVS: Integrating existing sites



JACE: JAVA Application Control Engine