Executive Summary
The Victorian Department of Education and Early Childhood Development (DEECD) unveiled their prototype relocatable classroom in late 2011. Known as "envi", the classroom is designed to showcase innovative energy efficient design and technology to inspire the next generation of government school buildings.

The Switch Platform aggregates data from all the classroom's systems, then publishes this within a standard web browser format. The platform's intuitive user interface presents data in an easily understood dashboard display that is used by the Department to monitor the building's performance and as an in-class tool to teach students about energy conservation and sustainability.

Client Overview
DEECD is responsible for more than 1,500 schools in Victoria, Australia. The Department oversees all tiers of education, providing funding and managing regulatory compliance.

DEECD is committed to reducing energy consumption in schools and raising awareness amongst students and teachers about sustainable design and use of buildings.

Business Drivers
DEECD is committed to reducing the environmental impact of its operations and promoting the importance of environmental sustainability as a permanent and accountable part of working life across corporate offices and Victorian government schools.

DEECD aims to:
- Reduce the environmental impact of the Department's operations by improving energy, water and waste efficiency.
- Raise awareness of whole-of-government targets, requirements and standards around environmental performance.
- Improve connections between environmentally sustainable infrastructure programs and student learning to encourage behavioural change.
- Increase energy efficiency in Victorian government schools.
- Raise awareness of sustainability and demonstrate practical examples of energy conservation for students and stakeholders.
- Meet whole-of-government targets.

"The Switch platform allows our students, staff and visitors to view energy and environmental data from our classrooms in a friendly and accessible format."

Jarrod Pantehis, Project Manager
DEECD

Location: Victoria, Australia
Industry: Education
Founded: 1872
Over 1,500 Schools
Case Study

envi

Requirements
A transformational change in reporting and displaying real-time metrics was required for the envi Sustainable Education Space project.

Access to real-time data was required by the Department to monitor the building’s day-to-day performance and compare data with previous generations of relocatable buildings co-located on site.

- Consolidate disparate sensor data into a single intuitive and visually engaging display usable in a teaching environment
- Publish data online ensuring information is accessible to DEECD and the classroom’s teachers and students
- Compare building performance with previous generations of relocatable classrooms.

The Solution
The Switch Automation Platform collects sensor, energy and environmental data, then publishes this data online making the information accessible from any browser enabled device. For the first time, energy utilisation data can be displayed in real-time, irrespective of device or location. The system was built on open standards and protocols to ensure wide connectivity and extensive web portal customisation was performed to meet DEECD’s requirements.

- Energy utilisation data is presented in a large screen “Green Dashboard” display showing real-time usage statistics
- Fans and Lighting – energy consumption data is collected
- Aggregates data collected from environmental sensors
- Provides comparative data highlighting improvements in efficiency over previous generations of classroom design

Technical Overview
The system comprises a Switch Automation Platform and aggregates data collected from sensors and presents this in an intuitive web display accessible from any browser. Extensive archival data is recorded and stored in the Cloud providing granular reporting of operating parameters. Data is collected over standard network cabling infrastructure.

Summary
The envi Sustainable Education Space project is at the forefront of sustainability programs in Victoria’s education system.

With the need to reduce energy consumption in schools, the envi Sustainable Education Space project aims to inspire the next generation of energy efficient Government school buildings in Victoria as well as stimulate interest and discussion amongst schools, architects, academics and the sustainable design sector.

- Increase awareness of energy conservation and sustainable design
- Inspire the next generation of energy efficient Government school buildings
- Support whole-of-government energy targets

About Switch Automation
Switch Automation (Switch) is a market leading provider of automation solutions for commercial, industrial and residential property. We lead the industry delivering our service platform through flexible and scalable cloud-based global framework powered by Microsoft’s “Azure” infrastructure. Switch provides energy management for commercial and residential property with a combined value of more than $3Bn in Australia, Asia and New Zealand. The company is headquartered in Sydney, Australia and is actively supported by the Australian Government.