

# Case Study >

## PROJECT OVERVIEW

- Powercat 6 UTP solution
- Total project involves over 300 schools
- NZ\$11 million government upgrade to schools network infrastructure
- INSIGHT used to deploy and manage entire upgrade

## Molex specified Category 6 and fibre solutions installed in hundreds of small schools across New Zealand on behalf of the Ministry of Education

**Molex Premise Networks completes the network infrastructure upgrade of hundreds of small schools throughout New Zealand, on behalf of the Ministry of Education's (MoE) ICT Unit. The pilot project involving 23 schools in the Tamaki and Paeroa clusters has already been successfully completed, with the first phase consisting of 300+ schools commencing in November 2005.**

Back in 2004, New Zealand's MoE conducted a School Network Survey across the country, the findings of which resulted in the issuing of new MoE standards for computer networking in schools. The initiative was developed primarily to reduce the wide variation between schools and bring school networks up to the Ministry of Education network standards, so that all schools could benefit from information and communication technologies. The survey revealed that small schools were in fact more likely to have no network infrastructures in place, due to the disproportionate costs they faced in building computer networks.

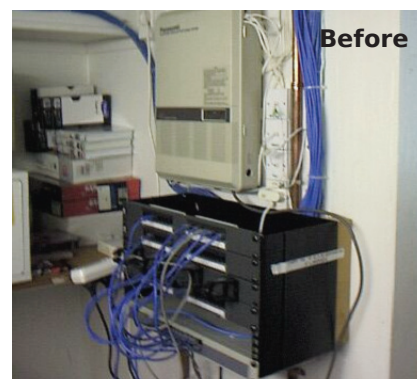
It was therefore realised that the disparity in technologies between certain schools in New Zealand was to the detriment of many students within the country, a problem the Minister of Education was determined to resolve: "Our vision for New Zealand is that all schools can benefit from information and communication technologies wherever they are located" said Trevor Mallard (MoE). "This initiative will help teachers and students in small schools access to a wider range of resources, such as digital learning and other rich multi-media materials that help students to learn".

The primary aim of the project was to bring the selected schools' computer networks into the 21st century, hence, NZ\$11 million of government funding granted to help build new computer networks and upgrade existing infrastructures within the schools. Molex's involvement was principally to supply the Structured Cabling System (SCS), which accounted for 80% of the total costs budgeted for the project. The upgrade was carried out in two phases spanning over a total period of 20 months.

### CSL Appointed as Prime Contractor

Connector Systems Ltd (CSL), Molex's business partner in New Zealand, was awarded the position of prime contractor for the Network Upgrade project – successfully fighting off intense competition from major Systems Integrator organisations in the region. Not only did the company's 25 years of specialist expertise help them achieve this, but the use of the Molex web based on line project and asset management system was also an influential factor in their tender win.

Tony Noble, General Manager - Molex Incorporated, Premise Networks Division, commented "It was found during the schools trials that our project management package introduced significant efficiencies resulting in major cost savings, and



# Case Study ›

## PROJECT OVERVIEW

- Powercat 6 UTP solution
- Total project involves over 300 schools
- NZ\$11 million government upgrade to schools network infrastructure
- INSIGHT used to deploy and manage entire upgrade

## Molex specified Category 6 and fibre solutions installed in hundreds of small schools across New Zealand on behalf of the Ministry of Education

produced data that could be mined down to precisely forecast budget prices for other schools to within 2% accuracy". He also added that: "This product is now used by our distributor to win other business".

### INSIGHT

INSIGHT is the on-line project and asset management tool provided by Molex for the deployment and management of the New Zealand schools upgrade project. Douglas Harre, Senior ICT Consultant, eLearning Unit, Ministry of Education National Office writes: "As part of the contract the Ministry and its project management firm utilised an on-line project management system (INSIGHT). INSIGHT was modified to accommodate the Ministry's requirements and challenges, which included:

- Repeatable processes to ensure consistent performance at each school
- Ability to manage remotely and report the progress of each school project
- Increased speed of document communication and approval between the Ministry and its contractors versus our traditional manual and printed processes
- Automation of communication among our many stakeholders
- Providing visibility and transparency of project status and financials
- Manage Ministry approvals efficiently and with an audit trail
- Ability for stakeholders to directly enter information via a central, web based system

INSIGHT assisted the Ministry of Education to successfully complete both the SNUP's on time and under budget. These projects were amongst the largest government ICT projects undertaken in New Zealand and have been regarded as some of the most successful

### Why Molex?

The Ministry had gone through extensive evaluation process for product selection and Molex met all the criteria outlined in the Ministry's standards. Molex structured cabling solutions were therefore proposed by the prime contractor (CSL) to be implemented throughout all of the 300 small schools outlined in the project. Tony Noble states "We were delighted that Molex was specified as the supplier for this project – during the pilot programme our products proved to be the best value for money with consistently good performance in the New Zealand education sector for over 20 years".

Another rationale as to why Molex products were the preferred choice lies in the firm relationship the organisation has created with Connector Systems Ltd over the past two decades. Mak Kalkarni, General Manager of CSL's Networks Division highlights "The Ministry holds Molex in very high regard because of their strong commitment to carry out 100% site inspections at all certified installations in New Zealand and the desire to maintain a very high quality of Molex Certified Installer base".



# Case Study >

## PROJECT OVERVIEW

- Powercat 6 UTP solution
- Total project involves over 300 schools
- NZ\$11 million government upgrade to schools network infrastructure
- INSIGHT used to deploy and manage entire upgrade

## Molex specified Category 6 and fibre solutions installed in hundreds of small schools across New Zealand on behalf of the Ministry of Education

Furthermore, the Policy and Guidelines for Schools, released by the MoE, states that warranty provisions should include a minimum defects liability period of 20 years, therefore favouring Molex's comprehensive 25 Year Product and System Performance Warranty. This also covered site inspections and equipment testing – another of the Ministry's minimum requirements, based on the recognised Australian/New Zealand 3080 Cabling Standards.

### The Installation

Prior to any installation work commencing, CSL conducted a detailed audit of the schools to produce a design and upgrade proposal. This was not a straightforward task, as the upgrades needed to take into account the functional and operational requirements of each school, due to the varying conditions of the existing networks, if there were any in place at all.

The MoE specified Gigabit Ethernet over the backbone and 100Mbps to the desktop. Molex Category 6 UTP cabling in the horizontal and a combination of OS1 and OM3 fibre cables in the vertical. In instances where two or more campus buildings, OM3 fibre cables would also be used to link the buildings together, given its enhanced protective properties. For the pilot project alone, over 2500 termination points were installed - with a staggering 18,000 Cat6 outlets and an estimated 672 miles of cabling used throughout the project.

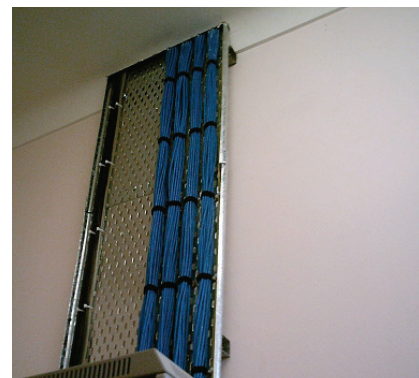
### Meeting current and future needs

Although the implementation of faster and more efficient networks plays a vital role in this project, the current and future cost impacts on the schools taking part and the reliability of the equipment are key to its overall success. Prior to the MoE issuing the new standards document, many schools had approached cabling in an ad-hoc fashion often choosing the cabling supplier that submitted the lowest quotation. They later discovered that the cabling, or the installation had been poorly implemented, presenting problems in terms of reliability and maintenance – resulting ironically in costs escalating higher than the most expensive quotation they had originally received.

Phil Earl, Torque IP (a specialist division of CSL) explains: "Many schools have spent thousands on cabling and at the end achieved a result that has left them wondering why they started. The new standards however create a benchmark for reliability and usability to ensure that money is spent once and wisely, add to this minimising the risk using companies that offer 25 year systems warranties and it is a far better prospect for the future development of digital opportunities."

Douglas Harre, on behalf of the Ministry, "recommends INSIGHT as a project tool for organisations with large ICT projects seeking to reduce their risks and improve their process efficiency with total transparency and profitability".

The entire upgrade was completed in 2008.



**molex**<sup>®</sup>  
one company > a world of innovation

#### Americas

2222 Wellington Court, Lisle, IL 60532-1682, USA  
Tel: +1 630 969 4550  
[www.molexpn.com](http://www.molexpn.com)

#### EMEA

1000 Lakeside, North Harbour, Western Road, Portsmouth  
England, PO6 3EN Tel: +44 2392 205800  
[www.molexpn.co.uk](http://www.molexpn.co.uk)

#### APAC

60-78 Abbey Rd, Melton, VIC 3337, Australia  
Tel: +61 3 9971 7111  
[www.molexpn.com.au](http://www.molexpn.com.au)