Powering electronic student records for the country of New Zealand

Unison is the core of the New Zealand Ministry of Education's national learner repository and data exchange

The country of New Zealand is remarkable for many reasons. Among them: the unique structure of its education system.

New Zealand has 2,536 schools in its 13-year primary, intermediate and secondary systems. And while they're a mix of state (public), integrated (faith-based or specialist education, e.g. Montessori) and private schools, each school operates autonomously. There are few regional governing bodies. Each school chooses its own technology infrastructure, including its databases and learning applications.

And while empowering local educators, this level of independence creates challenges.

Far-flung data wasn't available when needed

It's been difficult for the New Zealand Ministry of Education to support consistent data sharing between schools to enable the best learning outcomes across the country when they're all using different systems. But a bigger problem was even more pronounced.

Educators and government agencies in the country found it hard to access valuable information about learners when they moved between schools. Information stayed locked in their previous school's systems or took a long time to obtain. Sometimes children didn't get the right support when they needed it.

"We heard needless stories of kids missing out on learning support like reading recovery, because by the time it was identified that they'd already been assessed for it, they were too old," said Lisa Cheney, Business Design Lead in a Ministry of Education Te Rito video.

The New Zealand Ministry of Education marked the beginning of its journey with Unison with a pōwhiri, a Māori welcoming ceremony, at the Pipitea marae, sacred ground to the Māori in Wellington

"We also surveyed a number of teachers across New Zealand to find out what was going wrong with learner information, and were horrified to find that on average people were spending about 25 minutes a day on what I would call no value-add stuff."

If relevant information could be made available, safely and securely and at the right times, children could receive the support they needed to achieve better learning and well-being outcomes, the Ministry believed. It began exploring how to enable richer information flows so learners could be supported to succeed at every stage of their education journey.

Indigenous leaders like Dr. Wayne Ngata, New Zealand Ministry of Education Raukura: Chief Advisor Te Ao Māori, are helping shape the Ministry's electronic student records project

Massive ambition and project scope

The Ministry initiated a project it originally named the Student Information Sharing Initiative. In 2015, it embarked on a three-year procurement process to determine if commercial technology existed that could allow it to obtain latest information from each of its schools nationwide, centralize it and make it available safely to stakeholders across the country who need it, when they need it.

The project's technical scope was staggering: synchronize information on more than 800,000 learners at 2,536 schools every day, using open standards where possible and proprietary connections where necessary.

In 2018, the Ministry selected the Unison™ education data switch and managed service and began to work with the company to customize the solution for its needs. Unison technology, developed by Edsby, had been proven at scale, safely managing the data of millions of students as underlying technology powering the Edsby® social learning platform for K-12 from its introduction in 2010.

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- Lisa Cheney, Business Architect, New Zealand Ministry of Education

The flax plant and the learner: Te Rito

The Ministry's high profile project was renamed Te Rito, after the inner leaves of the indigenous harakeke (flax) plant. With the underlying purpose of the project being to enhance student information sharing for the well-being and educational success of the learner, the name references the child at the very core of the initiative, requiring constant care, support and consideration. It also evokes the national data storage facility in which all the learner's information is stored, where it requires input and protection from vendors, schools, the Ministry and other stakeholders.

Keeping information safe and maintaining privacy has been paramount from the start of the project. The New Zealand Ministry of Education characterizes itself as a steward and protector of student information. It notes the perspective of educators and others involved in education contribute to decisions about the collection and use of student data, and with the exception of a few pieces of data specified in legislation and historically collected through other systems, does not even have access to the data itself. The Ministry provides Te Rito as a service to the wider education sector.

"Me tiaki te mana o te tamaiti me tōna whanau. This is our guiding principle – a whakataukī, which means to protect the mana [the Māori people's word for a combination of presence, charisma, prestige, honor, and more] of the learner and their family. We check everything we do against this principle to make sure that we are actually doing it with the learners' best interests in mind. It's been a critical factor into looking at the security and privacy of our system," said the Ministry's Cheney.

The Ministry has invested heavily in the underlying security of Unison's communication with its systems. There have been significant expansions in the underlying local SIF standard that powers many of the interactions, and rigorous penetration testing of the other unique ways Unison receives and transmits information to and from schools, Ministry of Education and other government systems.

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First steps now available

The full vision of Te Rito is of a national electronic student records system providing a lifelong record of learning encompassing pre-school, compulsory, tertiary and on-going adult learning. Elements are beginning to be deployed to prove the technology and receive stakeholder feedback and buy-in.

In March 2020, the Pūtauaki ki Rangitaiki Kāhui Ako in New Zealand's Bay of Plenty were the first schools and kura—Māori-language immersion schools—in the country to have access to Te Rito in an

early-stage rollout of the platform. The pilot is helping the Ministry investigate shared concerns and trends and give local principals and school leaders the ability to help shape the service.

Part of this early rollout was first deployment of what the Ministry calls its standardized Learning Support Register (sLSR), a web-accessible database of individual students' special learning needs. In August 2020, the sLSR was extended to the Ōtūmoetai Kāhui Ako, and is now being progressively extended across the country to additional kura, schools and early learning services.

Edsby Co-Founder & VP Special Projects Scott Welch, Co-Founder & VP Design Jon Asbury and New Zealand Associate Minister of Education, Hon. Tracey Martin

Positive impact

In advance of the full Te Rito vision, even the early sLSR system is being welcomed by educators as way to better support students when they transfer. "When a student starts at your school you need the information about their learning and about them as a person so that you can set them up for success," said Graeme Barber, Principal, Woodend Primary School, Canterbury, New Zealand in a Ministry video.

Parents are also pleased about the initiative. "As a busy mum of three, transitioning Ethan is a huge, tremendous amount of work. Having to re-tell that story is hard work and things get missed when you tell things over and over," said Alex Forbes, a parent involved in the pilot, to the Ministry. "I struggled that schools' systems don't talk in any way. I just assumed that that happened."

Collaborative development

The Ministry continues to work closely with sector representatives, including its Data for Well-being Sector Advisory Group which includes representatives from bodies across the country's education sector, and English and Māori working groups, as preparations for the full rollout of Te Rito continue.

"We don't know exactly what the future will look like. But we know that making information available to those who need it is key," the Ministry acknowledges. But with Unison and Te Rito, "the education environment becomes richer and educators and government agencies can start to shape investment and decisions, including about policy and practice, based on information that's accurately, timely and trusted."