

# Information Brief

## **Te Mana Tūhono**

### *The Power of Connection*

Te Mana Tūhono is the joint vision of the Ministry of Education (the Ministry) and Network for Learning (N4L) to connect schools to a reliable internet that is resilient, safe and secure. Te Mana Tūhono will also provide a long-term programme of support that removes the burden on schools to monitor, maintain and manage their ICT networks.

### **Purpose**

The purpose of this document is to provide all schools with a clear understanding of the Te Mana Tūhono programme.

### **Background**

The Ministry has recently completed a 15 year project to upgrade schools' ICT network hardware and infrastructure which connects 35,000 classrooms with reliable and safe ICT infrastructure. More than 825,000 students and teachers use N4L's Managed Network every day, consuming more than 5.2 million gigabytes of data every month.

Technology is always evolving, with new features and capability making most network hardware obsolete within five to seven years. Schools need a robust network infrastructure to make full use of ultrafast broadband and to support teaching and learning opportunities.

Under current Ministry policy, schools are responsible for the upgrade and maintenance of their ICT infrastructure and receive funding for this through their Operations Grant and Furniture and Equipment (F&E) funding. N4L's internet services are fully funded for schools and their connection runs to the school server cabinet, with schools responsible for managing the internet throughout their classrooms.

### **Findings**

The Ministry has had regular engagement with schools throughout previous programmes of work namely the School Network Upgrade Project (SNUP) and its spinoff, the Wireless School Network Upgrade Project (WSNUP).

In 2015 we engaged 544 state and state-integrated schools across New Zealand, with a survey that covered a range of areas including the SNUP, ICT expenditure, procurement of ICT products and services, and ICT strategy.

It was clear that increasing ICT costs were putting significant financial pressure on schools. Schools believe SNUP was a major influence for their increased ICT expenditure, whilst also recognising the Ministry's investment in this area and in response heavily investing themselves.

Between 2016 and 2019, our partners N4L have engaged extensively with a cross section of schools and applied Design Thinking methods to understand what schools struggle with the most in the technology and learning space.

This approach required a number of interviews and workshops with principals and the schools ICT community to understand their different needs. Drawing on feedback from these engagements, N4L's Customer, Product and Marketing teams are able to hone in what really matters.

In 2017, a SNUP Helpdesk was put in place which ran for two years and has since been replaced with N4L's Extended Helpdesk.

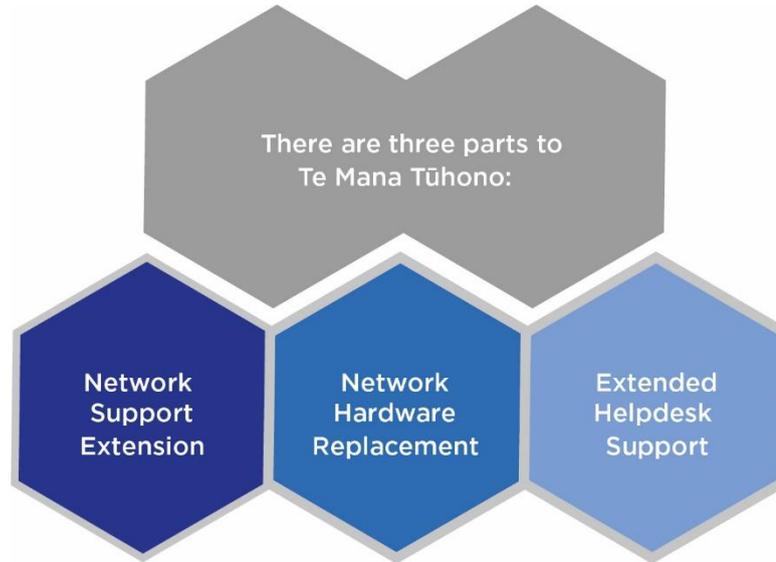
The supporting data obtained provided real world context and understanding in regards to the performance and reliability issues schools were experiencing with their ICT networks. Schools without a dedicated ICT staff member or maintenance contract in place were found to be significantly reliant on this free service. Some ICT providers also found value in the expertise offered by the service and partnered with our third party engineers to assist them in troubleshooting and resolving complex problems and issues.

By pooling the knowledge, understanding and expertise of both agencies we were able to understand schools requirements.

- Reliable fast and functional internet / connectivity and coverage inside the classrooms (Network Hardware Replacements)
- Access to quality ICT support on internal infrastructure (N4L's Extended Helpdesk)
- Equitable solution applied across the NZ school market
- Improvement in safety and security of schools online environment with individualised access and filtering policies (Secure Network Access)
- Access to online insights and user behavior so interventions and education can take place (N4L's Reporting App)
- Digital citizenship promotion via Reporting App and education around safety and security measures during device onboarding.

## The future

Now that all schools are connected, the Ministry and N4L are focused on providing a long- term programme of support that removes the burden on schools to monitor, maintain and manage their ICT networks.





Network  
Support  
Extension

**Network Support Extension** - *If it is broken, we will either fix or replace it*  
Extending warranty support on your network hardware and replacing aging equipment where required. This means if your schools equipment fails, we will either fix or replace it. We will be in touch closer to the expiration date of the warranty.



Network  
Hardware  
Replacement

**Network Hardware Replacement** - *Replacing schools aging hardware*

Replacing ICT hardware including network switches and wireless starting with a Pilot of 50 schools.



Extended  
Helpdesk  
Support

**Extended Helpdesk Support** – *One point of contact*

The N4L Managed Network is a fully funded service that connects schools with fast, reliable and safe internet. This includes robust internet filtering, threat protection and firewall, plus a dedicated Helpdesk team. Up until now, the Managed Network has been working outside the school only I.e. across the WAN (Wider Area Network).

Under Te Mana Tūhono, the N4L Helpdesk will be extended to operate inside the school. This will enable N4L to resolve issues impacting the performance of a school's internal ICT network I.e. the LAN (Local Area Network).

## The Three Parts further explained



This is the first stage of Te Mana Tūhono. We are aware that schools network switches and wireless hardware are beginning to expire. The Ministry and N4L introduced the Network Extension Support project in 2018 to support schools with expiring warranties. In the event of hardware failure, we will either fix or replace it.

This service will continue for as long as it is required. In the meantime we will start replacing schools network switches and wireless hardware beginning with 50 Pilot schools in 2020.

### What is included in a Network Support Extension?

- Extended support for Allied Telesis network switches until your switches have been replaced
- Extended support of your Ruckus or Aerohive wireless hardware until your wireless has been replaced
- A backup of each switch configuration, so they can be restored should a fault occur
- Ruckus schools will be migrated to an N4L hosted controller that meets industry security and privacy requirements, verified by third party security consultants
- A single point of contact for assistance with network switch and wireless hardware failures provided by N4L's Helpdesk. In the event of a hardware failure, we will either fix or replace it:
  - Remote diagnosis and fault finding
  - Where found to be faulty, a new switch or wireless access point will be configured and upgraded to the latest Firmware
  - New switch or wireless access points will be dispatched and delivered to site by the next business day.

### What is excluded?

- Additional configuration tasks such as Virtual LANs (VLANs) Network Support Extension
- Installation and integration costs incurred as a result of fitting warranty replaced hardware back into the school network. Note, we will be able to do some integration work remotely but not in every instance
- We will notify you if there are likely to be any extra costs incurred
- Damaged hardware originating from misuse, improper installation or outside of recommended environmental operating conditions
- Force Majeure events and any other events that are outside the vendor's control

- Hardware purchased on the second hand market
- Switch and wireless product not installed under SNUP/ WSNUP, or other Ministry programmes of work.

We will be replacing aging school network hardware including switches and wireless over the next few years, beginning with the replacement of hardware in smaller schools first that have limited access to ICT support.



If you are not contacted by N4L about participating in the Pilot replacements and are not a small school and your network switches and wireless warranties are expiring, we will extend your warranties to ensure you receive support for any hardware failures.

In the event your equipment fails, we will either fix or replace it.

## **What is included as part of the Network Hardware Replacement?**

We are not just removing and replacing network hardware like we did under SNUP. The network landscape keeps evolving and we have to evolve with it. We know that poorly maintained network infrastructure is a barrier to teaching and learning and also increases the risk of security breaches and cyber-attacks.

Each school is unique and possesses varying degrees of capacity and capability to dedicate towards network maintenance and upkeep. Therefore, it is our job to ensure that any service, product or solution we provide to schools meets a recognised level of compliance in line with industry security requirements.

This will be achieved through the Ministry Certification & Accreditation (C&A) process, which is a series of assurance activities that reviews the business processes and information systems that underpin the Te Mana Tūhono programme.

Ministry security consultants with expertise in industry best practice and security standards, including the New Zealand Information Security Manual (NZISM) conduct the process and oversee compliance. Any solution we provide to schools needs to be compliant with these finalised security requirements.

### **Updated scope**

To that end, NHR can only be offered as an 'All or Nothing' service, meaning schools cannot choose some components of the service and decline the others.

The Ministry C&A process mandates all activities be executed by the NHR project as this makes the Ministry and N4L responsible and accountable for installing, configuring and maintaining network hardware in schools.

The next section describes what you will receive if you sign up to the programme and what a schools responsibilities are should they wish to pursue their own ICT strategy.

### **Opt-in schools**

Schools who Opt-In to the programme will receive a:

- Desktop audit of current network makeup
- Replacement of network switch hardware (Ministry C&A process)
- Replacement of wireless network hardware (Ministry C&A process)
- Installation of hardware (N4L Installer Panel)
- Configuration of Secure Network Access:
  - Separation and segregation of Staff, Student and Guest traffic
  - Use of the Cloudpath onboarding system to simplify the enrolment of Staff and Student devices onto the school network
  - Provision of an Identity Aware network where staff and students log in as themselves (no shared passwords).

Enabling:

- Staff and student identities to be passed to the firewall so that the N4L reporting platform can be more useful to schools
- Ability to identify devices and users on the network that have been compromised with Malware (N4L Security Services)

- Systems testing and commissioning
- Copies of commissioned network design documentation
- Minimum five year warranty across all replaced network hardware
- A backup of each switch configuration, so they can be easily restored should a fault occur
- A single point of contact for schools via the N4L Extended Helpdesk setup to resolve issues impacting the performance of schools internal ICT networks.

### **What is excluded from the Network Hardware Replacement?**

Installation and integration costs incurred as a result of fitting warranty replaced hardware back into the school network. Note, we will be able to do some integration work remotely but not in every instance.

### **Opt-out schools**

Schools who wish to pursue their own ICT strategy and choose to decline any aspect of the 'All or Nothing' service will be classified as an 'Opt-out' school.

This limits the Ministry and N4L's involvement to provide schools with access to buy network hardware and warranties at the significantly discounted volume pricing negotiated by the Ministry.

The Ministry and N4L will not:

- Provide a contribution to hardware only purchases, schools must fund the purchase 100%
- Provide a reference design or advisory services for network configuration
- Be held accountable for the security and assurance of network upgrades, configurations and changes undertaken independently by a school or by its appointed ICT representative.



**All schools have access to N4L's Helpdesk support service. However, N4L has limited access to a school's internal networks until a school:**

- 1) Has been part of the Network Support Extension Programme and;
- 2) Has approved their 'Order Form' to participate in the Network Hardware Replacement programme.

### **What is included under the Extended Helpdesk Support service?**

- While the N4L Helpdesk is not a new service for schools, we are expanding the services offered
- The objective is to resolve issues remotely, and we expect the majority of issues will be resolved this way
- When an enquiry is received by N4L, the first priority is to check if the fault is with the school's internet connection (Managed Network)
- If the fault is not with the Managed Network, it will be assumed the fault is within the school's internal network. N4L will work with the school ICT to resolve the issue remotely, where possible.

### **What is excluded from the Extended Managed Network Service?**

- The service does not include sending an ICT provider to site. If N4L cannot resolve the issue remotely and an ICT provider has to be deployed, all associated costs are the responsibility of the school
- If a school has an ICT Provider, N4L will work with them to resolve the issue
- If the school does not have an ICT Provider, N4L will work with the school to find one, however all costs are the responsibility of the school
- Schools must make every effort to resolve on site issues themselves before contacting the N4L Managed Network service.

### **Costs**

All three parts of Te Mana Tūhono will continue to be heavily subsidised by the Ministry of Education. However, schools will still be required to make a small contribution. We recommend that schools allow \$2.50 per student per year. This is payable to the Ministry of Education (not N4L). Shifting to an annualised funding model will make it easier for schools to budget. This will provide schools with an assurance that their ICT networks will continue to run seamlessly, remain fit-for-purpose and are reliable, resilient, safe and secure.

### **Who will manage the work?**

The Ministry has partnered with the N4L to deliver Te Mana Tūhono. N4L will oversee the warranty extension or hardware upgrades for your school and will be your first point of contact for support -they will be in contact to begin the process.

### **Process**

Pilot schools will be notified by phone and email as soon as possible and will be upgraded by 31 August 2020. If you are not one of these schools, then N4L will get in touch with your school as the rollout schedule unfolds. We intend to contact your school two to three months before your hardware expires to set up your extended support options. Contact N4L at [support@n4l.co.nz](mailto:support@n4l.co.nz)

## Next Steps

N4L will send schools an “Agreement to Proceed” – this is an online process where the school will agree to participate in the project. It is not a contractual agreement, and allows N4L to move to the next phase of the upgrade programme.



Discovery – N4L requires the schools permission to access its network to gather relevant information on switches and wireless. If the school has an IT provider N4L will work with them.



Order Form – The Order Form is between N4L and your school. Once the discovery is complete an Order Form will be sent by N4L to the school for approval. The Order Form explains what is included and excluded from the service, the responsibilities of each party, including the school’s annual contribution amount.

For further information contact: [provision@n4l.co.nz](mailto:provision@n4l.co.nz)