N4L

Briefing to the Incoming Minister

NOVEMBER 2020

Welcome

This Briefing to the Incoming Minister is a short introduction to the Network for Learning (N4L). We are looking forward to meeting with you to discuss the contents of the BIM and how we can support the Government to deliver its priorities in education and the COVID-19 recovery plan.

Introduction

Funded by the Crown, N4L delivers the largest Managed Network in Aotearoa New Zealand to 2,450 state and state-integrated schools, serving 800,000 learners and 60,000 education staff.

The network and its 860,000 users are the largest consumers of day-time internet traffic in Aotearoa. Our mission is to help all ākonga learn safely online regardless of where they live or their parents ability to pay.

We are experts in the design and development of cyber safe information communication and technology (ICT) infrastructure and the delivery of large scale technology programs. In 2018/19, we successfully deployed a refreshed and upgraded Managed Network to all state and state-integrated schools, whilst maintaining a customer satisfaction rating of above 90%.

In July 2020, we started on the rollout and management of new classroom networks, set up data centres in Auckland and Christchurch, and started the delivery of a security operations centre to monitor, analyse and maintain schools' security posture on an ongoing basis.

Digital challenges facing schools, teachers and parents

Covid-19 has made clear that equity and safety do not persist beyond the school gate, and this inequity disproportionately affects Māori and Pasifika.

Going into the nationwide lockdown, the number of ākonga believed to be without access to devices or connections was estimated to be between 90,000 and 150,000. In response to the nationwide lockdown, the Ministry of Education took steps towards closing the digital divide through the purchase of devices for some learners and providing free connectivity for others for a limited time.

Learnings from that work were that while the intent, purpose and objectives were right, the outcomes were mixed, with significant challenges in understanding who and where the students are, how to distribute devices and connectivity to them, and how to provide ongoing services to those learners. This solution was partial and temporary, meaning that a number of learners will become digitally disadvantaged again in early 2021 as their connectivity packages expire.

The majority of schools and kura do not have the time or expertise to procure and manage their end-to-end ICT and device infrastructure, meaning an inconsistent, inefficient and inequitable learner experience.

There is significant variation across schools' ICT infrastructure and systems, alongside significant diseconomies of scale caused by schools undertaking procurement individually. Schools also have greatly varying degrees of technical and procurement expertise. This means that there is an inequitable student and teacher learning experience from school to school.

N4L's work on the Managed Network is now extending into the classroom and network security, as part of the Ministry of Education's Te Mana Tūhono program, but inequity still exists within schools around the procurement and management of telecommunications, devices and device security.

Opportunities to for N4L to deliver against these challenges

N4L is already a hub for ICT innovation and infrastructure to increase digital equity in schools and kura. There is an opportunity to leverage N4L's balance sheet and ownership model to offer a broader set of curated services to schools and learners within current education spending and a tight fiscal environment in future.

As a schedule 4a Crown company, N4L has a number of commercial options that are not available to government departments or Crown agencies. This means there are funding options other than shareholder capital to make provision of technology for learners affordable and sustainable. Further, alongside our financial resources, N4L can provide the opportunity to make current spending by the Crown, schools and parents more efficient through leveraging innovation, long standing local and international partnerships and economies of scale. In doing so, N4L can ensure equity of the end-to-end (internet to the device) experience for all learners.

Digital learning at school and beyond is becoming an essential prerequisite for a contemporary education system, and N4L can affordably and equitably deliver the technology programs needed for all ākonga to learn safely online outside school. This education-specific approach can be rapidly delivered and the technology is compatible with broader Government efforts to address the issue of digital disadvantage.

N4L has already been leveraged to expand the Managed Network service into the classroom and deliver a program to monitor, manage and maintain schools' networks from the centre. This gives N4L control of the quality of the network from the global internet to the wireless access point, but schools are still left to procure and manage their own device fleets, introducing a level of inequity in learner experience.

There is further opportunity to use N4L's technology expertise and balance sheet to deliver two interconnected programs of work: one to deliver an N4L-accredited learning device and unlimited safe mobile internet connectivity to disadvantaged learners nationwide; and another where N4L delivers a channel through which we accredit and sell education-specific devices to parents, simplifying device purchase decisions and enabling packages of curated services to be pre-installed on devices.

Margin on the sale of devices and any value-add services (insurance for example) could be used to help fund an equity program. There are several broader options that could be assessed, further leveraging N4L's balance sheet and ability to raise capital. This may require review of N4L's constitution.

Delivering a digital education infrastructure where every learner has access to an education-appropriate device and connection has a number of very significant advantages.

- The system becomes more resilient, allowing education to continue through future lockdowns, and more equitable, as all learners can take advantage of online connectivity to form educationally powerful connections with employers, communities, family and whānau.

- An equitable digital education infrastructure also enhances the ability to collect data across all learners, which, when added to the data N4L's systems already collect, can add to and strengthen the evidence needed to measure progress and achievement.

- Supporting schools and kura to make available access to devices and connectivity also opens up possibilities for international students to learn while quarantined in NZ, noting that international students are, at minimum, going to need to acquire a safe connection on arrival in New Zealand.

Appendix A: Our current work program for the education system

Connecting all state, state-integrated schools and kura to the Managed Network.

More than 2,450 state and state-integrated schools and 860,000 students and teachers access safer internet for learning via our Managed Network, the largest managed network in Aotearoa New Zealand. The network is centrally managed and supported during school hours, and enjoys a hard-earned reputation amongst educators for 'just working', allowing teachers to focus on learning rather than worry about managing and maintaining their school's internet connection.

Partnering with the Ministry of Education, Education Review Office, NZ School Trustees Association, CERT NZ, and Netsafe to support schools and kura to remain safe and secure.

N4L has also developed a standards-based program to ensure all schools and kura meet a minimum set of safety and security requirements, and we continue to maintain the standards and work with schools to implement updates as needed. Our face-to-face networks and relationship of trust with schools and kura supports our work to lift awareness and capability in this area, alongside key partners like CERT NZ and Netsafe.

We provide schools with a Security Operations Service (SOC), a single point of contact for the response and handling of cyber security incidents in schools and kura, and a source of coordination between key stakeholders like the DIA (in the event of a Online Domestic Crisis), Ministry of Education, NZ Police, CERT NZ, Netsafe and insurance providers.

Partnering with NZQA to support the digital delivery of NCEA exams online.

In October 2020, N4L completed network readiness assessments for 207 schools participating in NCEA online to ensure they are ready to offer online exams, an increase of around 70 schools over 2019. As more schools offer NCEA exams online they need to be confident that the networks inside the schools are fit for purpose and provide all students with an equitable experience.

In July 2020, as part of the Ministry-led Te Mana Tūhono program, we began work to upgrade networks inside schools.

The upgrade will see the replacement of a number of pieces of hardware and the introduction of new services that will identify the user and automatically allow access to all or part of the internet based on the schools cyber policy.

Appendix B: Governance, Management & Leadership Advisory Group

N4L is governed by a Board of Directors, appointed by its shareholding Ministers.

Director		First appointed	Term expires
Colin MacDonald, QSO	Chair	1 March 2019	28 February 2022
Dame Karen Poutasi, DNZM	Deputy Chair	1 July 2014	30 June 2021
Jeremy Banks	Director	1 July 2017	30 June 2021
Anthony Briscoe	Director	1 August 2019	31 July 2022
Sharon Cresswell	Director	1 August 2019	31 July 2022

N4L management is an experienced group of executives, with backgrounds in business leadership, technology and government, across private and public sectors, in New Zealand and overseas.

Larrie Moore
Chief Executive Officer

Alexander (Sandy) Brown
Deputy Chief Executive, Government

Gavin Costello
Chief Information & Security Officer

Gill Mahony
Head of Finance

Susannah Winger
Chief Marketing Officer

The N4L board and management team is ably supported by our leadership advisory group, composed of principals and education leaders. The membership of this group is:

Sose Annandale	Principal, Russell School; Executive member, NZ Pasifika Principals Association
Bruce Jepsen	Principal, Te Akau ki Papamoa School; Vice President Māori Principals Executive; NZPF Executive Lead School Principal
Sarah Martin	Principal, Stonefields School; Ministerial Advisory Group member, Curriculum and Achievement; Kāhui Ako Lead, Te Roopu Pourewa
Jen Rodgers	Principal, St Clair School; Executive member, Otago Primary Principals Association, previous NZPF executive, previous NZ Area Schools Assoc executive
Claire Amos	Principal, Albany Senior High School; Board member, Netsafe
Nicola Ngarewa	Principal, Spotswood College; Board Chair, Teaching Council of Aotearoa
Mike Williams	Principal, Pakuranga College; Immediate Past President Secondary Principals Association of NZ
Dorothy Burt	Professional Learning Programme Lead, Manaiakalani Education Trust
Charles Newton	Education Consultant; Board Member, The Nelson Marlborough Institute of Technology (NMIT) Ltd.