



## TUANZ Submission to the Ministry of Economic Development

### Consultation on the Draft Digital Strategy 2.0

#### Introduction

TUANZ is fully supportive of the concept of a national Digital Strategy (as in 'owned by New Zealand, not just the government'); we believe it has the potential to be influential, inspirational and innovative. However we believe the Draft Digital Strategy 2.0, on which we have been invited to prepare this submission, is not the document that will chart a way forward to ubiquitous, high-speed internet for all New Zealanders.

Strategy is essentially the means of getting from an identifiable point A (a current state) to a desirable point B, in the context of an aspirational vision. To be useful as an anchor point, Digital Strategy 2.0 needs to clearly set out the medium-long term vision for New Zealand's economy, set out the manner in which a digital future underpins the achievement of that vision, and plot the path to get us there. As it stands, the draft shows glimpses of all three, but falls short of the cohesion required to make it the rallying cry so sorely needed.

Inclusion of case studies is a useful means to inject substance into the Strategy. However, confining these to domestic case studies could almost be seen as self-serving – presenting evidence of progress made on New Zealand's digital evolution. Given New Zealand is a poor performer compared to other OECD nations in broadband speeds, infrastructure and uptake, and a raft of other measures related to digitally enabled economic transformation, we would suggest that inspirational international case studies might lend more weight to the planks of the strategy.

The core goals - e.g. 80 per cent of all users experiencing broadband speeds of up to 20Mbps and 90 per cent in excess of 10Mbps etc – are listed on page 17 and 18 of this document. We suggest these undertakings be brought to the front of the Strategy rather than be buried in the middle of the document.

Business needs and challenges are not discussed in any depth until page 31 – about two-thirds into the 52-page document. Given New Zealand's poor productivity ranking and the international research which demonstrates the positive correlation between robust broadband networks and economic gain,

TUANZ believes that business interests deserve greater priority in the Strategy. The reality is that it is the demand side that will drive both the digital strategy implementation and the realization of the enabled benefits that represent economic transformation for the country. We support the social and cultural goals, but the achievement of these is dependent first on realizing the economic outcomes.

On page 42 of this draft the Economist Intelligence Unit is quoted as surmising New Zealand could boost its GDP by \$13.1 billion by 2030 (10 per cent of current GDP) if it could move into the top quartile for broadband performance in the OECD by 2015. With New Zealand's currently ranking of 19 out of 30 countries for broadband penetration, there is plenty of work to be done. This could be usefully highlighted as part of the call to arms on which Digital Strategy can achieve a national goal of a digitally based economy that punches above its weight on the world stage, underpinned by ubiquitous, high-speed connectivity and the means to exploit and leverage that capability.

In line with the format of this draft, we have divided our submission into the four topic headings – Connection, Confidence, Content and Collaboration. We have highlighted the specific points on which TUANZ has a recognised mandate to contribute a point of view.

### Connection

*"The right regulatory settings, the right investment environment, a healthy competitive landscape and demand for connectivity will help us achieve high connection levels."*

**Page 16, para 4**

*The government's long-term vision is for fibre-to-the-home. However, the economics for this to occur in the short term are simply too challenging. As an intermediate step, four key infrastructure gaps have been identified where significant levels of new investment are required:*

- *Fibre-to-the-node infrastructure (FTTN).*
- *Urban fibre loops.*
- *Rural broadband infrastructure.*
- *New Zealand' international connections.*

**Page 17, para 2**

TUANZ believes that fibre to every premise (FTTx) in which New Zealanders live, work, study and gather should be the overarching goal of an ambitious Digital Strategy.

*New Zealand's progress towards filling these gaps will be measured by: the widespread deployment of FTTN, as an intermediate step towards fibre-to-*

*the-home, so that by 2012, 80 per cent of users can access broadband connections of at least 20Mbps and 90 per cent have access to broadband connections of at least 10Mbps.*

*Page 18, paras 1 and 2*

TUANZ questions the assertion that FTTN is an appropriate intermediate step towards a nation wide fibre network. FTTN is primarily a technology roadmap put in place by Telecom, the current owner of the copper network, to increase the reach of ADSL technology. As part of its cabinetisation programme Chorus<sup>1</sup> is building 3600 cabinets. Each of these will each serve 300 customers, and in each cabinet there is provision for 30-40 fibre feeds, but it is not clear whether these cabinets can be fully geared up for a nationwide FTTx network deployment that would provide equal access to all service providers.

*Accelerating broadband investment: Develop and implement mechanisms designed to accelerate investment in broadband infrastructure.*

*Page 19, action point*

Independent estimates from the New Zealand Institute<sup>2</sup> and international expert David Isenberg<sup>3</sup> (who based his calculations on roll outs in the rural American state of Vermont<sup>4</sup>) suggest it would cost \$4 – \$5 billion to build a nationwide FTTx network, with an additional \$2 billion for a second international cable connection.

A nationwide FTTx network is an intergenerational asset and is estimated to have a ROI of around 20 -30 years. An Australian study suggests that an expected yearly return to shareholders for comparable infrastructure is around 8-10 per cent<sup>5</sup>.

Investment in an FTTx network is likely to come from a variety of both public and private organisations rather than just the traditional source – telecommunication companies whose first duty is to their shareholders.

When considering who will build an FTTx network the government - as the driver for this major infrastructural build - needs to look wider than current investors involved in telecommunications. For example, utilities, banks and backers of major international concerns that are occurring locally (e.g., oil exploration in the Southland) may wish to invest in fibre infrastructure. Another source financial backing is international pension funds looking for a secure investment.

Also, consider the possibility of issuing public bonds around an infrastructure build that has a long 20-year ROI, but which will provide a modest but steady 8–10 per cent annual return to 'Mum and Dad' investors.

*Progressing competition in the telecommunications sector: remove barriers to market entry and promote competition in service provision to end users.*

***Page 19, action point***

Telecom Chief Executive Paul Reynolds' announcement that the company is prepared to use infrastructure that is not owned by Telecom was a major break through at the Digital Future Summit. It's a promise that has already been realised - for example, Telecom is working with WorldxChange to install its VoIP services on fibre roll-outs to new subdivisions and Gen-i<sup>6</sup> has announced it will use FX Networks fibre routes in a deal with a major customer.

TUANZ believes the Commerce Commission is the best government agency to create the necessary regulatory settings that will encourage competition in both the fixed and mobile markets.

*Revising the Telecommunications Service Obligations (TSO): Improve incentives to invest in rural New Zealand by revising the TSO.*

***Page 19, Action point***

Serious consideration needs to be given as to how to encourage network builds outside of metropolitan areas and how the TSO can be used to encourage – not stifle - investment. As stated in the TUANZ Manifesto<sup>7</sup>, the rural sector is critical to New Zealand's economy and should not be neglected:

"The relative economic contribution of rural communities in New Zealand is far greater than it is in most countries, adding weight to the need for universal connectivity. The provision of fibre-enabled broadband to farms may sound expensive, but the economic return over the lifetime of the investment will be massive."

TUANZ would like to see serious analysis in the Digital Strategy about how companies and organisations can be encouraged to build fibre networks to the rural sector.

*Encouraging competition in the wireless market: Allocated spectrum 2.3GHz and 2.5GHz for innovative shared access arrangements (including provisions to protect Maori language and culture); and 70/80GHz for high-speed broadband.*

***Page 19, Action point***

TUANZ was surprised to see there is no mention of the importance of Mobile technology in this draft. In a country of over 100% mobile penetration, mobile handsets are clearly the most ubiquitous communication device and mobile will increasingly become the dominant mode of delivery for entertainment and information services.

While there has been significant progress in this area of late, such as the sale of spectrum in the 800Mhz and 900Mhz bands, there is still some way to go. Of pressing urgency is a solution to Co-Location, New Zealand should look to the Crown Castle model in Australia whereby the towers are owned by an independent company as a model.

*Improving access to the transport corridor: Pass the Utilities Amendment Bill to improve access to the transport corridor and develop a National Code of practice.*

**Page 19, Action point**

*Adopting national environmental standards for telecommunications services: Adopt national standards for a range of telecommunication services to remove regional inconsistencies under the Resource Management Act and facilitate faster roll-out of services.*

**Page 19, Action point**

TUANZ supports both these Action Points and would like to add two further points with regards to existing and future infrastructure builds:

Open access to networks for all providers will ensure a robust competitive environment on service layer of the network. TUANZ wants to see a clear definition of Open Access as it applies to existing – and future – networks.

TUANZ would also like to see the government investigate the recent law change in France, which has made all ducts open access.

*Promoting 'broadband friendly councils': Work with local authorities to develop, 1. a 'know-how guide for local government and community groups that are developing business cases for improving broadband connectivity in their local areas, 2. a 'broadband friendly protocol' for local authorities and industry.*

**Page 19, Action point**

TUANZ supports this Action Point as we believe that local government will be the primary instigator of broadband investment in their individual areas. Many local authorities already consider that delivering broadband connectivity to their citizens is as essential as maintaining water and sewage systems.

There is a huge variance in the skills, financial resources and expertise within or available to each council and TUANZ endorses the view in this draft that it is the role of central government to ensure that all territorial local authorities have access to robust knowledge and support.

*Aggregating public sector demand: Work on adopting a common framework for public sector broadband demand aggregation, including health and education.*

**Page 19, Action point**

TUANZ supports the Common Framework for State Sector Broadband Demand Aggregation, but requires assurance that pooling the government's massive telecommunications buying power will not result in anti-competitive outcomes.

*Using the National Broadband Map: Use the National Broadband Map effectively to support regional broadband planning and business case preparation.*

***Page 19, Action point***

Not only do Carriers and ISPs need to be encouraged to be transparent in respect of what network assets they control, it's also important to encourage other organisations to reveal their fibre assets, for example utilities and large companies based in provincial areas that have built their own communication networks. TUANZ believes that the National Broadband Map is an excellent start.

However resources are required to ensure that the National Broadband Map is an accurate, up-to-date inventory of all telecommunication infrastructure assets that currently exist in New Zealand. The Map is a cornerstone to ensuring smart investment whether from the public or private sectors or a combination of both.

Many councils that are being asked to provide information about the infrastructure that exists in their communities require better guidance to carry out these audits than they currently receive.

## **Confidence**

*Our businesses, communities and public institutions need access to competent and relevant ICT practitioners. The gap between demand and supply is increasing. Highly skilled ICT practitioners are globally mobile, and New Zealand needs to have an urgent emphasis on both developing the required skills and creating the environment to attract skilled people.*

***Page 20, Section 4.2, para 4***

TUANZ notes the concern expressed by many of our members about the skills crisis which is threatening to seriously impact on the nation's ability to build new network infrastructure. In particular we note comments made by three carrier Chief Executives from Vodafone, TelstraClear and Telecom Wholesale, at the recent TUANZ Telecommunications Day<sup>8</sup>, who all claimed this is a serious issue facing their businesses.

*Developing a unified Skills Strategy*

*Implementing the National ICT Skills Collaboration (NISC) initiative*

*Sourcing talent for New Zealand's ICT sector*

*Developing well qualified ICT professionals*  
**Page 22, action points**

TUANZ believes the Department of Labour and Ministry of Economic Development are failing to take ownership of this issue. Government needs to work more closely with the ICT industry and professional users to ascertain their needs and to understand how it can effectively assist in developing/acquiring and retaining qualified people to support New Zealand's transformation into a digital economy.

*Reforming tertiary education: Ensure a tertiary education system that provides quality, relevant education and training that contributes to the government's economic developmental goals.*

*Work with a selection of key organisations and businesses in the ICT sector to understand the sector's training and education requirements. This will help ensure that tertiary education investment decisions align with the needs of the ICT sector.*

**Page 22, Action point**

TUANZ wholeheartedly supports this view. But we would like to see the Tertiary Education Commission encouraged to also look internationally. An investigation of leading ICT nations such as Finland<sup>9</sup> will enable the Commission to learn more about how alternative and innovative education systems have fostered a highly skilled workforce that works in harmony with academic institutions.

TUANZ would also like to add that there needs to be substantial investment in life-long learning. And that the skills of those already participating in the workforce at all levels should be increased through incentives for their workplaces, as well as enabling appropriate community opportunities.

*Implementing the Digital Technologies Framework: Deliver specialized and in-depth digital skills to students in years 11 to 13.*

**Page 23, Action point**

In the long term TUANZ believes the Ministry of Education needs to give serious and immediate attention to its educational offering in ICT. In particular it needs to address why secondary students don't view ICT as a dynamic career option and what can be done to raise its professional status. TUANZ would therefore like to see an emphasis in career guidance on these skills which are demonstrably in short supply.

## **Content**

*"We now understand more clearly how digital technologies can raise economic productivity by improving business processes. Digital technologies have driven growth in many OECD countries and will be a powerful tool in New Zealand's economic transformation. At the same time, these technologies can help capture commercial opportunities arising from the strong and ongoing pressure for environmental sustainability."*

***Page 13, para 4***

TUANZ is pleased to see it mentioned in this draft that digital technologies are a "powerful tool in New Zealand's economic transformation" however we are concerned that insufficient weight is being given to the business community in the Digital Strategy. Business applications will be a key driver of broadband uptake and mechanisms to support and encourage greater demand among both the business and farming communities are essential.

*Engaging with industry to identify areas where more targeted government investment could support the establishment and growth of internationally competitive digital businesses.*

*Implementing proposals to enhance engagement with internationalizing firms*

*Reducing barriers to local firms in supplying to government*

*Using technology to transform the provision of government services for New Zealanders*

*Delivering the New Zealand Scientific and Research Programme of Action*

***Page 33, Action points***

TUANZ supports these action points in principle, however notes that there are three distinct agencies involved in delivering these benefits to business users. We would urge all scientific, academic and government agencies to work in close collaboration with the ICT industry.

Alignment of publicly funded research with private sector goals as a means to grow the knowledge economy based on ICT expertise should be a central plank of Digital Strategy 2.0.

## **Collaboration**

*The Overarching Sector Forum*

*For partnerships to succeed, collaboration must be driven by participants. The government has consulted with ICT sector representatives and broader interest groups, community organisations and individuals and agreed to support the establishment of an 'overarching forum' for members to work with each other and collectively with the government on digital strategy related initiatives.*

***Page 37, Section 6.6***

The Board of TUANZ, as with many other organisations, is looking at the government's proposal for the ongoing administration of the Digital Strategy. The proposal on the table involves three new organisations – a Digital Development Council, Digital Development Board, Digital Development Forum, and potentially a new grouping of supply side industry vendors.

TUANZ has consistently supported the concept of a strong digital strategy for New Zealand, including in concept the establishment of a group of stakeholders to oversee this. But there is serious concern that the private sector is being asked to sign off on a complex administrative structure with neither clearly stated objectives, nor a sense of scale about the extent to which government is planning to entrust key decisions to the proposed new bodies.

TUANZ remains committed to actively supporting the progress of the Digital Strategy in the context of clearly stated purposes and missions, and will participate in oversight bodies that have clear mandates.

### **Achieving Our Digital Potential**

*Digital Strategy 2.0 is about taking the next step into our digital future and, in doing so, achieving our digital potential. We are a small nation with some unique opportunities and advantages when it comes to digital technologies. Digital Strategy 2.0 is challenging us all to identify those opportunities and advantages, and to collaborate to be digital. We all need to rise to the challenges.*

***Page 46, Section 7.5***

Given the investment and far-reaching implications for the national economy, TUANZ concludes its submission with the proposal that a distinct agency of government should be set up to implement the Digital Strategy and work towards a national broadband network.

It could be usefully modeled on Singapore's Infocomm Development Authority and be charged with achieving measurable targets that will lift New Zealand's relative ICT performance over a five-year period.

A focused central government agency such as this will provide an essential link between the coalition of industry bodies being established a Digital Development New Zealand and the vision for New Zealand that is held by the government of the day.

Ernie Newman  
Chief Executive  
23 May 2008

## ENDNOTES

1. [www.chorus.co.nz](http://www.chorus.co.nz)
2. Delivering on a Broadband Aspiration: A recommended pathway to fibre for New Zealand, The New Zealand Institute, April 2008
3. TUANZ Telecommunications Day, May 2008, speech available [www.tuanz.org.nz](http://www.tuanz.org.nz)
4. [www.valleyfibre.net](http://www.valleyfibre.net)
5. A Competitive Model for National Broadband Upgrade, page 60, The Allen Consulting Group, July 2006
  
6. ComputerWorld, 19 May 2008, page 3
7. Towards leading-edge connectivity: A Manifesto for the 2008 general election, TUANZ, March 2008
  
8. TUANZ Telecommunications Day May 2008, panel discussion downloadable at [www.r2.co.nz](http://www.r2.co.nz)
  
9. Lessons From Finland, case study presented by Dr Stuart Corson at TUANZ Telecommunications Day 2008, available [www.tuanz.org.nz](http://www.tuanz.org.nz)