

Submission on The Draft Digital Strategy 2.0

Waitakere City Council welcomes the opportunity to provide a submission to the government's call for feedback on the draft Digital Strategy 2.0. Our submissions are presented with regard to the four enablers of Connection, Content, Confidence and Collaboration and on Achieving our Digital Potential.

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CONNECTION

Since the development of the initial strategy in 2005 there have been some significant changes in the broadband market and an update is warranted. However, the Connection strategy outlined in the version 2 draft does not, in the opinion of Waitakere City Council, address the transformational change required to propel us into the international digital community.

We have concerns across a range of issues as detailed below.

FTTN

Fibre to the Node infrastructure has been identified as an area where significant new investment is required. However, it is important to note that FTTN does not provide anyone with a high speed, symmetrical, fibre service. It only offers an improved copper service, and this is a disappointingly low aspiration.

There is an assumption that FTTN provides a natural stepping-stone to FTTH, but there is no guarantee of this, and an incremental change may not provide the same versatility and functionality of a “green-field” FTTH strategy. The strategy does not place a timeframe on the FTTN-FTTH upgrade and it would be in the incumbent’s interest to delay this as long as possible or withhold until such time as a competitive response is required.

Dominant Player

We are concerned that an FTTN strategy plays to any dominant incumbent and creates an opportunity for that player to retain their dominance, at the expense of competition. For instance, the Telecom cabinetisation programme, which is significant, could be seen as delivering to the FTTN goal and there is no further “stretch” required. In our view, this is disappointing and fails to address the long term vision of competitive FTTH.

Furthermore, if we assume that access to the Telecom backhaul fibre (via the cabinets) will become a regulated service, we see little incentive for third party network development¹. This would then retain Telecom as the dominant network provider in the distribution and access networks, and this scenario does not fulfil the criticality of competition. Even though the Telecom service could be regulated and non-discriminatory, the charge to users would incorporate, reasonably, a Telecom margin. There is no assurance however that this margin will be as low as that acceptable to other potential operators. Furthermore, dark fibre or wavelengths are unlikely to become regulated services, resulting in service levels and technologies that would be per-determined for all users.

Symmetry

An FTTN strategy is an understandable response by a vertically integrated provider, where incremental change and the “sweating” of the existing asset make the most economical sense. But FTTN implies a continuing reliance on the copper network and its inherent distance and symmetry constraints.

Symmetry has received little attention, but with the development of increasingly interactive and social networking applications, a developing market for two-way video applications and a need for business to be able to exchange information, symmetry is becoming more of an imperative. 128kb/s upload speed is a major impediment to new applications and

¹ If the Telecom fibre backhaul is not to become a regulated service then the dominance of Telecom is likely to become even more entrenched

should no longer be considered a broadband service. The new ADSL2+ upload speeds, whilst an improvement, are still considered to be too low to realise a number of the benefits envisaged for broadband.

Some newer technologies, such as VDSL, may improve the symmetry, but we see the economics of installing this equipment at the end of the street, to be very challenging and it is more likely that these technologies would only be deployed to customers in the immediate vicinity of an exchange.

The asymmetrical nature of a copper based xDSL service should preclude it from further consideration in broadband design. A more challenging goal would be for 80% of users to have access to upload connections of at least 20MB/s.

Cabinets

Some Telecom cabinets will have space for third party equipment, but we foresee a number of situations where additional cabinetry will be required. These cabinets will only be required until such time as an FTTH network is deployed and equipment is moved back to larger and more central hubs (because fibre will allow greater distances between hubs). FTTN therefore introduces an expensive and environmentally challenging interim step that would be unnecessary in a more transformational strategy of encouraging a move directly to FTTH. Moreover, this assumes that there is in fact a naturally progressive step from FTTN to FTTH as, in many circumstances, the required architectures and capacities are very different.

MUSH

The new strategy continues to promote MUSH networks but we believe these to be problematical for the following reasons:

Municipalities: Aside from the main council office and the nearby library, most council facilities are relatively remote and serviced through bundled packages with an incumbent service provider. Delivery of fibre to these remote locations could not be justified solely on council lease expectations and additional, more commercial targets in the immediate vicinity would also be required.

Universities: These are typically well served with data networks and have, or will be expected to have, connections through to the KAREN network. We do not see a strong value-add from local government in this area.

Schools: A lot of focus has been placed on deploying high speed fibre services to schools. The North Shore / Vector project is a good example. However, delivering to schools will also require additional commercial lessees in order to establish a sustainable economic business case. Students will also become significant advocates for broadband and will help drive demand through the neighbouring communities. Significant effort will therefore be required to ensure these new fibre networks are within the reach, physically, economically and intellectually, of the communities they are designed to support. Schools cannot be considered in isolation of this.

Hospitals: Medical facilities will already have high speed data services available, typically through a bundled service package. Incumbent providers are likely to strongly resist attempts to separate the infrastructure from the services, and without this, new entrants would struggle to make headway. We do not see a strong value-add from local government in this area.

We welcome the inclusion of “large businesses” into the fibre loop definition, as we see these customers as the only way of supporting and sustaining networks to MUSH entities. Consequently we see the need for strong collaboration between central and local government and with core network providers, to ensure optimal design and route planning of new fibre networks.

Speed Aspirations

A large number of customers will be limited to an ADSL2+ copper service and, for a number of these customers 20MB/s will be a theoretical, rather than achievable service. House wiring, cable condition, distance and modem type will all take their toll on the attainable speed. Realising the target of 80% of the population achieving greater than 20MB/s is therefore considered unlikely in an FTTN scenario². We also consider that talk of 20MB/s targets is misleading, given that this is a download speed only and fails to acknowledge the inferior upload speeds, which may be less than 1MB/s.

The target figure of 20MB/s is also important. How might the strategies change if the target were 30MB/s (which is greater than ADSL2+ can deliver)? Further, given the much published graph of “Moore’s law” growth in average broadband speeds, what is the time difference between averages of 20MB/s and 30MB/s? From the graph, we would suggest it is around 18 months - much less than our vision and strategies should be delivering to. In other words, the copper network has a finite life, and it is in the very foreseeable future.

Of course, once we push through the 24MB/s barrier (ADSL2+ maximum speed), and we are in the realm of fibre, the numbers then cease to matter³. There is therefore considerable importance to be placed on when the average speed demand will reach this 24MB/s level. Research commissioned by the MED and the Auckland Regional Broadband Advisory suggests that high speed services are very important to users, with 46% willing to pay over \$150 per month for a high speed package, against only 3.6% for an ADSL2+ service⁴. In addition, 66% were frustrated with download speeds and 58.4% stated that long delays in uploading files was a major frustration. This research supports the view that the speed limit has already been reached for a large number of users.

International Rating

In terms of our international ranking, we note that the 2005 strategy incorporated the OECD broadband penetration figure, and that this measurement is no longer a specific target in the new strategy.

The OECD figure is a coarse measurement that compares the number of broadband connections against the population base. Consequently it is influenced by both the relative size of businesses and by the average household numbers (assuming that each household requires only one connection). The relative ranking of New Zealand, whether qualified or not, is of little consequence. If we were to climb 2 more places, would this

² The target of 20MB/s does not state whether this is the theoretical service or whether, more importantly, it is the typical speed achieved by the users. The former measurement will assist our OECD rating but may do little to improve the broadband experience for a number of users.

³ We recognise that VDSL is an option but this will simply compound the issue by requiring considerably more cabinets (to within 300m of each property). Within a short time frame the same fibre upgrade debate will need to reoccur. It is also relevant to note that 100MB/s is an extreme upper limit of copper because of radiation and cross-talk issues. It would also demand very high quality copper cables which may not exist in a number of New Zealand neighbourhoods. Broadband on copper must be regarded as a finite service.

⁴ Household telephone survey conducted on a sample of 299 Auckland, Manukau and Waitakere TLA residents in April 2008 by Phoenix Research.

necessarily make us more competitive or lift our GDP? In fact, if every country in the OECD had 100 per cent broadband penetration into homes and businesses, New Zealand would still rate in the bottom half of the OECD⁵. It is also interesting to note that some alternative measurement methodologies, based on economic and demographic endowments, place New Zealand on an even lower rating at 25 out of 30⁶.

The goal is now stated as “the widespread availability of fast and affordable broadband meeting the needs of New Zealanders”. This goal is independent of international ranking and we welcome the change.

Recommendation

The digital strategy suggests that phase one is an accelerated and widespread deployment of FTTN, followed at some later date, by widespread FTTH. We would argue that FTTH rolled out to a smaller number of premises, over a longer time span, would not only establish a more competitive environment but accelerate deployment to those that need high speed, symmetrical broadband right now.

Waitakere City sees a strong case for supporting last-mile, or access networks. These networks would be open-access and back-hauled by existing (or new) fibre network providers. They would be operated as long term passive infrastructure and, as such, should offer improved economic opportunities for service providers.

Access networks are a more achievable option for local councils through normal maintenance and upgrade works and streetscape projects. Typically these works are undertaken in numerous, but small areas, and provide little opportunity for trunk, or core deployment.

A case in point would be our recent deployment of air-blown fibre duct to every premise in the Henderson main street, as part of the footpath upgrade and streetscape programme. There is an expectation that the physical aggregation of these premises onto a passive infrastructure will provide a great opportunity for backhaul providers to extend their networks and offer competitive services. We are applying this philosophy to all new town-centre and streetscape projects.

We are also supporting greenfield projects in Massey and Hobsonville that will deliver world class fibre infrastructure, including cat-6 cabled homes. With appropriate funding, partnerships and new deployment methods, we believe we can deliver a sustainable FTTH network of some significance over the next ten years. Our plans do not include FTTN, nor use of the existing copper network.

Conclusion

There is considerable momentum in the broadband market at present and an opportunity to initiate a transformational change in the broadband supply market. We are 3 years on from Digital Strategy 1 but the new Strategy fails to provide the transformational spark, relying rather disappointingly, on incremental infrastructure improvement over time. New Zealand can do a lot better.

⁵ As reported to the United States House of Representatives Energy and Commerce Committee in April 2007 and précised in the Dominion Post newspaper (<http://www.stuff.co.nz/thepress/4461623a19735.html>) in April 2008

⁶ Phoenix Centre Policy paper Number 29: The broadband performance Index. July 2007.

CONTENT

What do you think of the new content goal – is it ambitious enough?

- The new content goal is ambitious enough. Waitakere City Council considers that its focus is appropriate and would like the opportunity to work together with government to deliver the objectives and goals outlined in this Strategy.

What other key priorities in this focus area (if any) would you like to see considered?

- More of a focus on “useful” content, e.g. provision of online services.
- More focus on how to implement the strategy, e.g. dissemination on how to achieve metadata and e-govt standards

How well do the identified challenges and actions contribute to achieving the priorities?

- There is little in the Challenges and Actions section that is relevant from a Local Government perspective, just a brief comment in section 5.3 about public records, one at the end of section 5.4 that mentions licence applications and geospatial data and the SSC action in 5.5 to transform the provision of government services. While these are all good aims, there is not enough detail in these sections to suggest the strategy will have any impact in furthering Local Government content. Therefore Waitakere City Council considers the challenges and actions do not contribute enough to the priorities.
- Waitakere City Council considers that a barrier to implementing the strategy will be the time and costs to this organisation. Therefore Waitakere City Council supports the inclusion of initiatives in this strategy to save costs and time through the provision of national advice, recommended systems or (people) resources to assist, e.g. via the Community Partnership Fund.

What other specific challenges and actions (if any) do you think should be considered? By whom and by when?

- Despite covering all kinds of content, there appears to be a heavy emphasis on formal “static” content, particularly content with aesthetic value as opposed to commercial or practical value. Waitakere City Council supports further emphasis in the framework on support for a broad range of content sources and for service-oriented, informal and live content to be supported in a similar manner to archived and historical content. An example of this would be local government throughout New Zealand delivering and managing information about land use and development in a consistent manner.
- Waitakere City Council supports the focus on getting the significant body of New Zealand information into a digitised format but wishes to ensure that tools are readily available to manage and access this content once it is digitally available. Waitakere City Council considers that adopting these tools across all government would be more successful as it would enable shared experiences, testing, and national consistency in the use and purchase of software.

- In order to achieve the desired outcomes, local authorities, businesses and community organisations will require tools for checking whether standards are being met and for maintaining content. We would like Central Government to develop these tools and make them readily available at no or low cost.
- The Digital Content Strategy Discussion Document talks about setting standards without any mention of how these standards will be maintained. Waitakere City Council notes that in developing standards it will be critical that there is guidance around how to achieve these standards and support from advisors on whether you are meeting those standards. Waitakere City Council also notes that the Community Partnerships Fund is not linked to content standards. Funding criteria for the CPF should include achieving an appropriate standard.
- Waitakere City Council considers that there should be a greater emphasis on the visibility of informal content, e.g. blogs, minutes of community organisations, informal fora etc., and recommended tools to support the digitisation and promotion of this type of data.

CONFIDENCE

- It is unclear from the introduction whether this version is to supplement or to supplant the original version of the Digital Strategy. If the intent is that the new document is to replace the previous version, then the new emphasis of the confidence stream as expressed with the new goal, shows a narrowing of focus with outcomes being economic productivity focussed. The 2005 Digital Strategy had a much more community inclusive, whole of life focus that is missing from this latest version.
- Develop digital literacy in schools and the community through the voluntary sector. Acknowledgement should be given to the role that local government is already playing through Library based ICT suites/Learning Centres especially in the larger urban areas which are already undertaking the upskilling of community members of all ages in ICT skills and digital citizenship.
- Waitakere City Council overall supports the Confidence section of the Digital Strategy 2.0.

COLLABORATION

How important do you think collaboration across sectors is to achieving our digital potential?

- Waitakere City Council considers that collaboration across sectors is vital to achieving our digital potential. Any one sector working on its own will not achieve as much as the combined effort will produce. However, Central Government must take the lead in many instances, e.g. delivery of Broadband services.
- The scope of the “Collaboration” section of the Digital Strategy should be widened to include looking at online collaboration and participation using Web 2.0 technologies and principles. People wish to be engaged and the Strategy needs to focus on what is desirable in this area and how to achieve it.

Apart from the ones already identified, what other collaboration partners or sectors (if any) are vital to achieving our digital potential?

- Experts and practitioners from other countries who may have progressed further than New Zealand. It makes sense to learn from what others have already done.

What unique contribution do you see for Māori, for communities, for business groups, for local government, for researchers or for other contributors you identify as having a key role?

- It is good to see that Local Government New Zealand is developing a framework for a *Digital Communities Action Plan*. This is an area local government has some expertise in since we work closely with the community.
- Local Government can provide expertise in the provision of property-based information, including geospatial data.
- Local government can provide input into how to progress e-democracy and public consultation.

What would you like to see the overarching sector forum focus its work programme on?

- Waitakere City Council considers the overarching sector forum needs to take into account all streams of the Digital Strategy: Content, Confidence, Content and Collaboration.
- Waitakere City Council agrees with the forum's purposes as stated in the Strategy for this forum.
- The forum could focus in addition on helping translate the Digital Strategy into meaningful actions.
- The forum could act as a body to oversee the implementation of digital standards.

ACHIEVING OUR DIGITAL POTENTIAL

Using digital technology, what contribution will you make to improving our productivity (achieving a creative, knowledge-based, high-income economy)?

- Waitakere City Council will progressively roll out more online services.
- Waitakere City Council will provide online data such as property-based and geospatial data.

Using digital technology, what contribution will you make to enriching and valuing New Zealand communities and cultures, and promoting our unique national identity?

- Waitakere City Council will continue to provide community and business participation via our community web site, Waitakere Online.
- Waitakere City Council will look to provide e-democracy.

Using digital technology, what contribution will you make to achieving sustainable growth as a nation?

Waitakere City Council is committed to encouraging citizens to achieving sustainable growth. Examples of how we might do this include:

- Email internet update subscriptions that encourage knowledge sharing.
- Online applications to encourage water consumption savings
- Waitakere City Council's online services and delivery of information will reduce travel time, paper and energy consumption

What contribution do you think others need to make to achieve our digital potential?

- Collaboration is needed across all sectors as per the Digital Strategy.
- In particular, central government must provide digital strategies, guidelines and standards, and ways to implement all these.