

Submission on the Post-2020 Telco Framework

Telecommunications Act Review: Post-2020 Framework for Fixed Line Services

3 March 2017



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1. Introduction

1.1 InternetNZ welcomes the opportunity to submit on the Telecommunications Act Review: Post-2020 Framework for Fixed Line Services. Overall, we strongly support the proposals presented.

1.1 We would welcome the opportunity to discuss this submission. Please contact James Ting-Edwards by email on james@internetcz.nz.

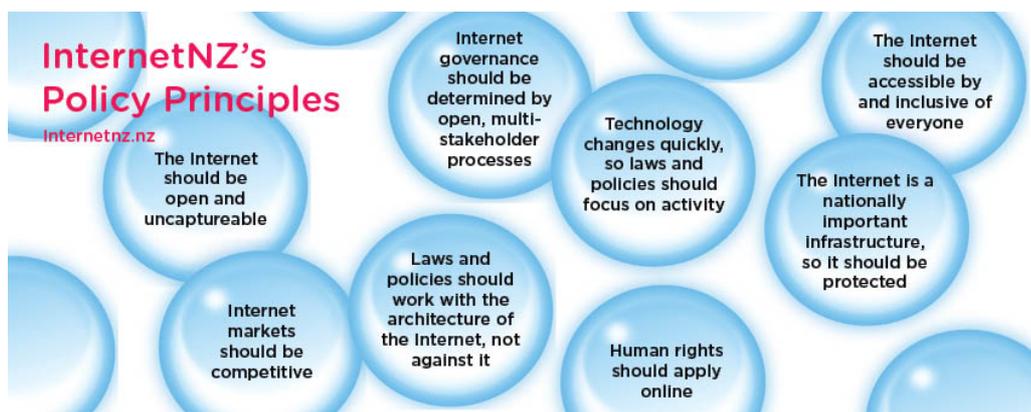
InternetNZ’s vision is “A better world through a better Internet”

1.2 Our mission is to promote the Internet’s benefits and uses and protect its potential. We do that with a cause in mind, that being the Open Internet. In doing this, we act as part of the New Zealand Internet community.

Our policy principles

1.3 InternetNZ’s policy work is guided by principles. Of particular relevance to this submission are the principles that:

- a) Internet markets should be competitive
- b) The Internet should be accessible by and inclusive of everyone
- c) Technology changes quickly, so laws and policies should focus on activity.



2. Summary of Submission

We welcome the clear shift towards fast, modern networks

- 2.1 Our previous submission called for two things:
- a) A clear direction and coherent framework for telecommunications regulation in New Zealand;
 - b) Ambitious targets from the Government to drive the rollout and use of faster services on our modern networks.
- 2.2 The present proposals deliver the clear direction we and others sought, signalling a shift from old to new fixed-line networks. By guiding present investments in future services, that clear signal has immediate benefits.

Fibre-focused regulation is simple and efficient

- 2.3 By treating copper and fibre separately, the proposals simplify the implementation and operation of the post-2020 framework. They avoid the complications of valuing the old copper network, and difficulties of putting different copper and fibre modes in the same regulatory basket.
- 2.4 We welcome the option of a regulated fibre product at layer 1, based on the Commission's assessment of the fibre market from 2024.

Users are protected during the transition from copper

- 2.5 Reasonable measures are included to protect users during the transition away from copper. Copper service will become a purely competitive mode in some areas, but only where fibre is available.

Users want better networks, not the same old service

- 2.6 InternetNZ commissioned UMR Research to ask a range of questions of ordinary New Zealanders, to ensure that we were fairly representing their views in this process. Appendix B includes full survey results.
- 2.7 Our research revealed increasing use of home Internet, and strong predictions that people will want faster home Internet. Among those surveyed:
- a) **65% said their household was using the Internet more than three years ago.** This was mostly the 44% using the Internet "a lot more".
 - b) **75% thought it was "likely" or "very likely" they would want a faster connection in three years' time.**
 - c) **Few agreed that "copper services are generally good enough for rural users".** Asked to choose between preferred statements, 61% said it was not fair that many rural users have to put up with slower and less reliable copper Internet connections.

"61% said it was not fair that many rural users have to put up with slower and less reliable copper Internet connections"

A good framework, which could be even better

- 2.8 Over time, we think the proposed framework can enable better Internet access for all New Zealanders. We think some small changes, and the right set of companion measures would make this framework even better.
- 2.9 To ensure fair treatment of user interests over time, we would like to see:
- a) Ongoing public investment to improve services for remote users, modeled on the efficient and contestable RBI2 approach;
 - b) A review of resourcing for the Commerce Commission, to ensure it can effectively guard user interests under this simple, flexible framework.
 - c) A consistent process for setting attractive anchor products, with the Commission setting speeds, prices, and improvement paths based on market data in advance of each regulatory period (including the first).

Overall, the proposals meet expectations

- 2.10 In our previous submission, we asked what various stakeholders could reasonably expect from this process:

Users

In UFB areas (80%)	<u>Ambitious goals to unlock the potential of NZ's fibre network</u> : a baseline of gigabit symmetrical speeds by 2025.
Beyond UFB (19%)	<u>Better fixed and wireless services</u> , with innovation delivering better options, and competition between modes driving great service and prices.
The most remote (1%)	<u>Better services delivered efficiently</u> , with wise public investment programmes like the RBI to reach users who'd otherwise miss out.
Those stuck on copper	<u>Better alternatives to copper</u> , and no big price increases.

Network Providers

Regulatory stability to support efficient investments.

Retail ISPs

A predictable path for service quality and prices.

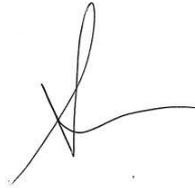
Everyone

An efficient, transparent, and fair telecommunications industry, delivering good services and price stability.

- 2.11 We think the present proposals establish a solid framework, which should meet most of these expectations. With the companion measures and changes we suggest above, we think outcomes could be even better.

We would be pleased to discuss this further

- 2.12 We support this review of the Post-2020 Framework for Fixed Line Services, and welcome the present proposals.
- 2.13 We would be pleased to discuss those proposals further. Please contact James Ting-Edwards on james@internetcz.nz.



Andrew Cushen

Deputy Chief Executive, InternetNZ

3. A clearly signalled shift to modern networks

- 3.1 Following the previous consultation on this process, our key concern – shared with other stakeholders – was the need for clear direction from the Government.
- 3.2 The present proposals deliver the clarity we and others sought. There is a clear move to focus regulation on fast and modern networks for New Zealand.

A focus on fibre simplifies fixed-line regulation

- 3.3 We welcome the present proposals, establishing a family of measures which together will enable efficient, ongoing investment. Indeed, our previous submission put forward some key elements of these proposals:

InternetNZ proposal	Now adopted or recommended?
Overall framework	
The key priority is enabling efficient, ongoing investment in better services	Yes
Government must provide clear direction to enable efficient investment	Yes - it is now clear that fibre is the fixed network of the future
Approach to fibre	
Utility-style regulation should apply to fibre, but not to copper	Yes
Anchor products must evolve to remain attractive and balance provider incentives	Yes - though we favour a more consistent process for setting anchors over time and initial 100/20 anchor insufficient
Approach to copper	
Copper can be deregulated where overbuilt by more modern networks	Yes - with fibre as the replacement network of choice
Copper prices should be rolled-over to avoid protracted pricing disputes	Yes
Remote and rural users	
Most users beyond fibre will be best served by competing modern networks	Yes - removing copper lock-in will enable other network types
The most remote areas are best served via contestable, RBI2-style investment support	Unclear - without this investment, some may miss out

4. We agree that copper is nearing end-of-life

Consumers want better modern networks

- 4.1 We welcome the clear signal that copper is nearing the end of its useful life. That signal enables everyone – users, retailers, operators, and investors – to prepare for a future based on modern networks.
- 4.2 Our research through UMR revealed a continuing trend of increasing home Internet use. 75% thought they would want a faster home connection in three years' time. Few agreed that “copper services are generally good enough for rural users”.
- 4.3 Users currently limited to copper services will want to know that alternatives are coming, particularly where current copper services are relatively slow or unreliable.
- 4.4 With commercial investments, and wise public programmes in remote areas, we think all New Zealanders can benefit from modern connectivity options.
- 4.5 We favour the contestable RBI2 model as an approach for public investment to serve remote and rural users who would otherwise miss out.

Few agreed that “copper services are generally good enough for rural users”

Avoiding copper complications

- 4.6 In our previous submission, we proposed that the old copper network be excluded from the scheme of price-quality regulation. Our concern was that including copper:
 - a) Would complicate initial and ongoing valuations of the relevant regulated asset base (RAB);
 - b) Would create a risk of inefficient and opaque cross-subsidies between fibre in urban areas, and copper services elsewhere.
- 4.7 The present proposals avoid those concerns, by confining utility-style regulation to fibre.

We support measures to protect users during the transition

- 4.8 The proposals offer strong measures to protect users during a transition from copper to fibre and other modes.
- 4.9 We welcome the clear statement that fibre must be accessible in an area before copper regulation is removed in that area. Even within deregulated areas, we understand that no individual users will lose copper service until they switch to a fibre alternative.
- 4.10 We welcome the proposal to keep regulated copper prices at 2019 levels, with no inflation increase. This is part of sending a clear signal that copper is at end-of-life, and enabling competitive investment in alternatives, particularly beyond the UFB footprint.
- 4.11 The remaining risk to users on copper, particularly those with no other option, is that service quality will degrade over time. We think it is likely that competition among copper, wireless, and mobile modes will drive acceptable service offerings to most users. For the most remote, we propose “RBIX” – ongoing public investment funding on the contestable RBI2 model.
- 4.12 We think the Commission should take a key role in monitoring the availability and quality of regulated copper services. Users limited to copper are the

disadvantaged of the connectivity world - it is important in this time of transition that they be protected from further degradation of service quality.

Navigating new models for accessing the Internet

- 4.13 Navigating the change from fixed-line copper to fibre or other options will present challenges to some users. We expect retail service providers, as well as mobile operators to advertise their own products.
- 4.14 Commercial promotions along may not be enough to help everyone navigate the new landscape – there may be a role for public information resources, as there was in the analogue switch-off for over-the-air television service.

5. We support the option for layer 1 unbundling

- 5.1 We welcome the clear signal that operators must unbundle Layer 1 from 2020. Unbundling is an existing requirement on UFB providers, and could allow competition down the stack in a way that serves user interests.
- 5.2 We welcome the signal that the Commission will be able to review unbundling, with the option of specifying a layer 1 anchor product, from 2024. As our last submission said, unbundling on commercial terms will not put meaningful pressure on wholesale fibre speeds or pricing. We proposed a backstop option for regulated unbundling as one model with useful incentive effects.
- 5.3 The decision to retain unbundling on a commercial-only basis in the meantime is a pragmatic one. We recognise that there is a desire for predictability during the first phase of the new framework. There is also value in allowing the framework to operate on its own terms for the first, shorter regulatory period, without the complications of introducing a regulated product at layer 1. As a temporary position to be reviewed by 2024, retaining layer 1 as a commercial service is a decision we can live with for now.
- 5.4 In the event that layer 1 fibre is unbundled on regulated terms, we agree that cost-oriented pricing is the best approach under this framework. As long as costs fall where they lie, and there is no attempt to generate non-cost-based “ladder of investment” prices, Chorus and the LFCs should be able to manage with such an approach.
- 5.5 At a very high level, we are shifting our approach to fixed-line regulation, following the rollout of UFB fibre to most homes and businesses in New Zealand. Rather than continue the historical drive for infrastructure-level competition, there was a choice to build UFB fibre as a single Government-led program, delivering exactly one connection for each premise passed. This model is distinct from that in, for example, ultra-densely-populated Singapore, where users may have multiple ONTs in a single apartment.
- 5.6 UFB fibre establishes a clear base of infrastructure, and a clear set of risks: the risk that monopoly suppliers in each area will gain super-profits at the expense of users. That clarity allows the Commission to focus its attention in the right place, ensuring UFB fibre services are fast, reliable, and fairly priced.

6. We support a consistent process for setting anchors

- 6.1 Anchor products are a key component of price-quality regulation. They are meant to balance a wholesaler’s incentives under a revenue cap, by offering “a set product at a set price”.

- 6.2 Slow, unattractive anchors will not “bite” - they will fail to balance incentives for monopoly fibre operators. To do their job, anchors **must** appeal to a sufficient number of users.
- 6.3 Our previous submission called for ambitious anchor product speeds. By cracking the whip on faster services, the Government could catalyse the benefits of UFB fibre - the faster speeds which are our return on investment.
- 6.4 Anchor products will be the default, setting not just operator incentives, but broader expectations of “normal Internet” in New Zealand. We think there’s an opportunity for faster anchors to drive broader progress here.
- 6.5 Regardless of the specific speed chosen, we think it’s best to set anchors using a consistent process through the Commission. We address the specific 100/20 speed below. We then propose a more consistent approach to setting anchors based on market data, which will deliver a fairer, more effective set of anchor products.

100/20 is not an “ultrafast broadband” anchor for 2020

- 6.6 Speeds of 100Mb/s down were first announced in 2011, alongside UFB. By last September, when we filed our last submission, users could already buy services at Gigabit level - ten times faster. In February 2017, Northpower fibre successfully tested a 10 Gigabit connection on UFB, between a home and a business in Whangarei - another ten times faster.¹ That is 100 times the 100/20 service proposed as an anchor for 2020-2023.
- 6.7 Taking another lens, this review started in 2015, five years out from the 2020 start date on the new framework. When this process began, 100/20 fibre was well-established in the market.²
- 6.8 Nielsen’s law confirms a bandwidth growth rate of 50% per year over the past three decades.^{3,4} This is the same figure used by Chorus for demand growth on UBA.⁵ Applied over the 5 years to 2020, that 50% annual growth rate turns a 100/20 service into a baseline of 750/150 Mb/s by 2020.⁶
- 6.9 100/20 is now the slowest fibre product offered by many RSPs – a mere 1% of the fastest speed tested on residential UFB connections. New Zealanders deserve faster anchors that remain relevant at 2020 and beyond. 100/20 is no longer “ultrafast” broadband – it is not the product we need for 2020.

¹ Northpower, “Northpower Fibre and Calix showcase NG-PON2”, (15 Feb 2017), at <<http://northpower.com/news/2017/northpower-fibre-and-calix-showcase-ng-pon2>>, accessed 28 Feb 2017.

² By June 2016, 90% of new fibre connections were 100Mb/s or faster. See Network Strategies report 36016, “Selection of broadband anchor products”, (2 September 2016), attached to Vodafone’s submission on the Options paper, at p 5.

³ Critchley T, *High-Performance IT Services* (CRC Press, 2016), pp 144-5.

⁴ Nielsen J. “Nielsen’s Law of Internet Bandwidth”, (April 5, 1998 - updated for 2016) at <<https://www.nngroup.com/articles/law-of-bandwidth/>>, accessed 28 Feb 2017.

⁵ Commerce Commission, “Final-pricing-review-determination-for-Chorus-unbundled-bitstream-access-service (2015-NZCC-38, 15-December-2015), at B55 & B58 <<http://www.comcom.govt.nz/dmsdocument/13935>>

⁶ 100Mb/s increasing by 50% per year gives $100 \times (1.5)^5 = 759.375\text{Mb/s}$.

7. Challenges of setting anchors

- 7.1 We recognise that it is hard to set anchors correctly. Anchor products are specified in advance, before the regulatory period in which they apply. In effect, they make a prediction about changes in technology and market dynamics up to and during that regulatory period. The earlier anchor speeds are set, and the harder they are to change, the worse this prediction problem becomes. Instead, we propose two alternative ways of setting market-relevant anchor products.

The conservative option: start as you mean to continue

- 7.2 It is hard to say in 2017 what will be a reasonable anchor for the period from 2020 - 2023. Fortunately, there is an easy way to solve this, using the same process by which anchors are to be updated. On the present proposals, anchors will be updated as below:

Before each regulatory period (except the first), the Commission will be required to review and update the anchor product set against statutory criteria. The anchor product set must:

- a) provide an upper limit on pricing for a product that is attractive to a large number of end-users; and
- b) provide a price and quality ‘anchor’ for the other ‘non-anchor’ products provided by regulated suppliers.

- 7.3 We think the initial anchors could be treated in exactly the same way. The Commission can review products in the market, and specify a fibre broadband product “attractive to a large number of users” during the first regulatory period.
- 7.4 For subsequent regulatory periods, this could become almost automatic. All fibre providers are subject to information disclosure. The Commission will therefore have time-series information on common products, allowing a straightforward assessment of which product will be “attractive to a large number of users” in the upcoming regulatory period.

The ambitious approach: specify a formula for progress over time

- 7.5 Even an attractive anchor may fall behind within a single regulatory period. With exponential growth in speeds, five years is a long time in technology. It seems there is a tradeoff between delivering predictability, and allowing that progress. That tradeoff may be an illusion.
- 7.6 We think it’s possible to deliver both predictability and ambitious progress. The Government could invite the Commerce Commission to specify a formula for improving the speed and price of anchor services over time. This may sound overly prescriptive, but in effect the Commission will be doing this anyway, by implication from its pre-regulatory-period reviews.
- 7.7 Enforcing a published progress path has two significant benefits. Firstly, it allows improvements in anchor products within each regulatory period. Secondly, it fully informs everyone and avoids nasty surprises in any direction.
- 7.8 Tuning the formula annually, based on market data and submissions, will ensure that progress paths for the next few years are “just right” - not too fast, not too slow, not too expensive, not too cheap. We hope that a more frequent, smaller exercise in setting expectations, will be relatively easy and efficient for everyone.

8. Consultation Questions

8.1 We address the specific consultation questions below.

Copper services	
1	<p>What are your views on the proposal to deregulate copper services in areas where UFB or other fibre services are available? What do you see as the benefits and risks?</p>
	<p>We expect users to shift from copper to fibre, where available.</p> <ul style="list-style-type: none"> • By 2024, UFB will reach 85% of New Zealanders at home and at work. • The key question is how to serve the rest. • Maintaining regulation of copper with nationwide pricing would limit the upside of both fibre and other modern networks. • The proposal for deregulation offers a fair balance: <ul style="list-style-type: none"> ○ Deregulation will allow Chorus to focus its long-term investments in fibre, ultimately delivering better fixed-line services to nearly all New Zealanders; ○ Consumers in UFB and other fibre areas will only pay for copper if they choose to use it – those who choose fibre or alternatives will not have a double burden; ○ Over time, deregulation largely removes risks of an opaque cross-subsidy from fibre users, which might otherwise prop up inefficient copper services; ○ With no cross-subsidy, modern alternatives such as wireless and mobile networks will compete with copper on equal terms; ○ In summary, deregulation where fibre exists allows smart investment and consumer choice, in a world of competing mobile, wireless, and fixed-line networks.
2	<p>What are your views on the proposal to continue regulation of copper services outside areas where UFB or other fibre services are available?</p>
	<ul style="list-style-type: none"> • As below, the most significant risk in deregulation is that some users would be left without any network service, or would face large and sudden price increases. • Continuing regulation of copper, where fibre is unavailable, largely mitigates these risks. • The rationale for removing regulation, including TSO obligations, is that UFB and other fibre provide better options for consumers. This rationale does not hold in areas without fibre access.

3

What risks do you see in these proposals? Please comment on any ways you think these risks could be mitigated

- Prior to these proposals, the most important risk was a lack of clarity, which would have undermined efforts to invest for future networks.
- The proposals deliver clear signals on the future of fibre and copper, enabling efficient investment decisions in these and other modes from now on.
- The key remaining risks relate to operation of fibre regulation, and delivering services to users beyond UFB and other fibre.
- We propose:
 - A review of Commerce Commission resourcing to ensure fair and efficient operation of regulated fibre and remaining regulated copper;
 - A commitment to ongoing public investment in remote and rural services on the contestable, RBI2 model.

TSO changes

4

Please comment on the proposal to remove the TSO obligations on Chorus and Spark New Zealand inside areas with UFB or other fibre available.

- The TSO served an important purpose in the era where copper landlines were the only, or main connectivity option. In places where that is still the case, it remains relevant.
- Elsewhere, the rollout of new services has overtaken many of the concerns originally addressed by the TSO.
- Requiring a “voice” anchor product on fibre addresses residual concern about those who still rely on fixed-line voice services.

5

What risks do you see in this proposal? Please comment on any ways you think these risks could be mitigated.

- Users remaining on regulated copper may face degrading service quality over time, as maintenance and investment are reduced.
- We think the Commerce Commission is best placed to monitor and manage the provision of acceptable services to these copper users with no other network available.

- Remote and rural users will want reassurance that better options will replace copper in the foreseeable future. Providing that reassurance will help with concerns that copper might be retired without replacement.
- We look forward to hearing from Chorus on possible risks of under-investment in the copper network beyond the UFB footprint. We think infrastructure or intermodal competition will drive suitable investment, except perhaps in the most remote areas.
- We think ongoing, contestable public investment on the RBI2 model is the best way to deliver improvements in those remote areas. This approach is fair, tech-neutral, and efficient.

Copper withdrawal requirements

6

Please comment on the proposal to remove the TSO obligations on Chorus and Spark New Zealand inside areas with UFB or other fibre available.

- It would be unfair for Chorus to bear the burden of operating copper indefinitely, when consumers in many areas will take up fibre as the better connectivity option. We support the proposal that Chorus would be able to withdraw copper.
- We welcome the clear statement of measures to protect consumers in the transition from copper to fibre.
- In our previous submission, we raised the possibility of wireless and other modes overtaking copper. We now recognise the benefits of using the fibre footprint as a boundary:
 - Fibre availability provides a clear demarcation between regulated and deregulated copper services;
 - Deregulating copper within fibre areas delivers substantial benefits in terms of opening copper to competition with other modes;
 - In future, it might be feasible to deregulate remaining copper based on access to wireless or other modes, but the parameters for this would be hard to determine before 2020.

Impacts on consumers

7

Does the ability for end-users to switch to fibre services offer sufficient protection for consumers, in areas where copper is deregulated?

Yes, in general.

- Consumers will have the best outcomes when they have a choice of efficient, competing services.
- Requiring fibre availability before copper could be deregulated is a conservative approach, which minimises risks to consumers.
- This conservative approach may be reasonable in a transition period, which will involve both real and perceived complications.
- In practice, we expect that implementing these proposals would result in a range of technologies being offered to consumers. The key here is that a cross-subsidy to copper would deter investment in alternatives. By avoiding that cross-subsidy, the present proposals should enable more investment in new networks.
- Some consumers may prefer to move to mobile-only connectivity. Rather than pay for a landline, some may pay for more mobile data, or retain any price difference as consumer surplus.
- Within and beyond the fibre footprint, we expect wireless and mobile options to be increasingly fast and efficient. These services are likely to surpass copper, and the proposed model will enable that shift to be driven by consumer choices.

Appendix A: Meeting expectations?

In our previous submission, we identified the interests of users, network operators, and retail ISPs. Below we rate the present proposals against these:

Who?		Grade	Why?
Users			
In UFB areas (80%)	<u>Ambitious goals to unlock the potential of NZ's fibre network</u> ; a baseline of gigabit symmetrical speeds by 2025.	D	100/20 is normal now, not ambitious for 2020-2023. Anchors must set the pace of faster future services.
Beyond UFB (19%)	<u>Better fixed and wireless services</u> , with innovation delivering better options, and competition between modes driving great service and prices.	A	Removing the copper lock-in will enable investment in other better options for users.
The most remote (1%)	<u>Better services delivered efficiently</u> , with wise public investment programmes like the RBI to reach users who'd otherwise miss out.	B-	We want commitment to further contestable, RBI2-style investments for rural & remote users.
Those stuck on copper	<u>Better alternatives to copper</u> , and no big price increases.	A+	Robust protections for users, which maintain copper service at 2019 prices until fibre becomes available.
Network Providers			
	<u>Regulatory stability</u> to support efficient investments.	A+	Proposals clearly signal a move to modern networks, allowing copper to retire.
Retail ISPs			
	<u>A predictable path for service quality and prices</u> .	A	Fibre has a relatively clear path, with some details to work out.
Everyone			
	<u>An efficient, transparent, and fair telecommunications industry</u> , delivering good services and price stability.	B	This framework can enable ongoing, efficient investment in better services. Could be more ambitious.



Appendix B: UMR - Broadband use and future needs

Please see the attached document.

About InternetNZ

A better world through a better Internet

InternetNZ is a voice, a helping hand and a guide to the Internet for all New Zealanders. It provides a voice for the Internet, to the government and the public; it gives a helping hand to the Internet community; and it provides a guide to those who seek knowledge, support or any other method of benefiting the Internet and its users.

InternetNZ's vision is for a better world through a better Internet. To achieve that, we promote the Internet's benefits and uses and protect its potential. We are founded on the principle of advancing an open and uncaptureable Internet.

The growing importance of the Internet in people's everyday lives means that over the last twelve months we have significantly reoriented our strategic direction. The Internet is everywhere. We are a voice for the Internet's users and its potential to make life better.

InternetNZ helps foster an Internet where New Zealanders can freely express themselves online – where they can feel secure in their use of the Internet. We foster an Internet where a start-up can use the web to develop a presence and customer base for a new product, and we foster an Internet where gamers can get online and battle it out.

We work to ensure this Internet is safe, accessible and open.

The work we do is as varied as what you can find on the Internet.

We enable partner organisations to work in line with our objects – for example, supporting Internet access for groups who may miss out. We provide community funding to promote research and the discovery of ways to improve the Internet. We inform people about the Internet and explain it, to ensure it is well understood by those making decisions that help shape it.

We provide technical knowledge that you may not find in many places, and every year we bring the Internet community together at NetHui to share wisdom, talk about ideas and have discussions on the state of the Internet.

InternetNZ is the designated manager for the .nz country code top-level domain and represents New Zealand at a global level through that role.

InternetNZ is a non-profit open membership incorporated society, overseen by a council elected by members. We have two wholly owned subsidiaries that ensure that .nz is run effectively and fairly – the Domain Name Commission (DNC) develops and enforces policies for the .nz domain name space, and .nz Registry Services (NZRS) maintains and publishes the register of .nz names and operates the Domain Name System for .nz