30 October 2015

Submission for Chorus in response to

The Ministry of Business Innovation and Employment's Discussion Paper

Regulating communications for the future – Review of the Telecommunications Act 2001 (8 September 2015)

Chorus

CONTENTS

ATTACHMENTS:

- **Plum Consulting**, New Zealand's telecommunications policy – a way forward, October 2015;
- **Incenta Economic Consulting**, Post 2020: TSLRIC vs the Building Block Approach, October 2015;
- **Professor Stephen Littlechild**, Regulating communications for the future: some options for customer engagement within a building block approach, 16 October 2015;
- **Houston Kemp Economists**, Regulatory Framework Options for Chorus Post 2020, 22 October 2015.

OVERVIEW

Broadband is a critical enabler of economic growth and social wellbeing. New Zealander's reliance on being online is ever increasing, and broadband has become an essential facility much like water, electricity and gas.

The telecommunications market structure fundamentally changed in 2011 to support large long term upgrades to the underlying wholesale communications infrastructure and wholesale services – which in turn has supported competition at retail. Those infrastructure upgrades need to continue if New Zealand is going to anticipate and keep pace with the dynamic broadband market.

As an essential utility, we support the Ministry's proposal to move to a utility-style regulatory framework that allows a fair return on efficient broadband infrastructure investment and fair pricing – which in turn supports ongoing infrastructure upgrades. As a nationwide communications infrastructure provider investing over $3 billion on the ultra-fast broadband programme, our submission focuses on the regulatory framework that relates to fixed network operators and the need for stable regulation through time – we propose a 10 year period.

In this submission, we set out why we agree with the Ministry's proposal to change the regulatory framework. The TCF supports a utility-style model for fibre and more scope for commercial solutions where possible. Building on that alignment we provide proposals for how to transition to utility-style regulation, taking into account the policy objectives outlined in the discussion document, including the aspirations for further investment and the need for competition and innovation at the retail level. Our proposal, which is consistent with the Government's initial views, is that:

- both fibre and copper access services are regulated under a single building block model (**BBM**), at least as a regulatory backstop. The BBM design parameters would be set out in legislation and include the relevant features set out below;
- the legislation allows for fixed network operators to put forward a special access undertaking (**SAU**) to implement the BBM in lieu of a (likely slower) regulator-led process (above). The SAU would have the following key features:
    - a RAB, which could, for example, be based on, and moves forward from, today's prices and revenues – known as a "line in the sand" approach and used in Australia when moving from TSLRIC to a BBM regulatory model. This mitigates price and revenue shocks; and
    - anchor bitstream products and prices for entry level and other core products. Effectively product and price differentiation could enable the TSO concept to be expanded to cover both broadband and voice. Nationally averaged prices and an appropriate price relativity between copper and fibre will support migration to fibre as well as fair prices for rural consumers; and/or
    - a simple revenue cap, which is derived from a RAB and other building blocks; and
    - efficiency mechanisms built in; and
    - a copper-to-fibre migration plan in Chorus' UFB areas.

If there is a desire for a transitional arrangement at 2020, current product and price paths could be moved forward from today and a "line in the sand" approach could be used to move to an SAU/BBM at the end of the transitional period (e.g. 2030).

Today's regulatory processes are dominated by isolated (but fundamental) debates about wholesale access prices and the framework doesn't acknowledge or enable migration to fibre. A holistic transitional or BBM framework has the benefit of being able to lift the conversation up for the benefit of all parties. In line with the TCF submission, Chorus will lead on product discussions with customers and copper-to-fibre migration in parallel to, and in the context of, this review.

At the end of the Executive Summary there are illustrative outlines of an SAU and a transitional arrangement/undertaking.

We offer comments on policy choices to be made that then inform other potential options and the next level of design detail. This includes the policy choice of whether to regulate and enable open access and a level playing field at the bitstream or the unbundled layer.

EXECUTIVE SUMMARY

Better broadband ambition for all New Zealanders

New Zealand is leading the world with its aspirations for bringing better broadband to all New Zealanders. While other countries are still debating where to start with a fibre to the home roll out, we're on track to have fibre to 75% of homes by 2020 - with further fibre roll out planned beyond 2020.

As well as rolling out fibre to more homes, schools and businesses, the Government has announced a bold ambition for the rest of New Zealand – to bring broadband capability of 50Mbps to 99% of New Zealand, with the remaining 1% receiving 10Mbps, by 2025. The Government has recognised the ever-increasing demand for bandwidth and the economic and social benefits that broadband will bring for New Zealand – not just in the main urban centres, but right across the rural areas, which are so critical to our economy.

Even once the initial infrastructure has been built, it will take time for New Zealanders to transition to the better broadband that is available. However, early uptake of fibre is far exceeding the rate of adoption we saw for services like DSL broadband and Sky Television. We are leading an industry dialogue on the installation of fibre to homes to support increasing uptake.

Consumer and investor interests are aligned to the ambition

Expectations around the connectivity and quality of broadband for social and economic purposes will continue to develop from now until 2020, and beyond. It is critical that fixed-line providers continue to focus on investing, innovating and improving the quality of infrastructure and services that consumers demand, ahead of demand.

For example, while we have helped Dunedin become the first city in the Southern Hemisphere with gigabit services, the strong global growth in fixed broadband means that people are already turning their minds to building for 10 gigabit services. Internationally we are seeing cities define their competitiveness through their connectivity capability – a critical way of attracting talent and investment. Singapore, Dubai, New York, South Korea and Barcelona for example all have multi-billion dollar "Smart City" initiatives and marketing campaigns founded on connectivity.

Importantly, with this connectivity we can expect more disruptive business models that fundamentally change the economics of business growth – all of which will rely and capitalise on better broadband.

Locally, the pace of change that we're experiencing is unprecedented. For example:

- Internet usage continues to surge with bandwidth growing 68% between January and September 2015, up from an average annual growth of 50% in previous years.

- TV and video via the internet is knocking on the door of becoming mainstream. Over 9 new video on-demand services have been launched in New Zealand and 20-year-olds now watch 12 hours of video content a week.

- Digital inclusion is also becoming a necessity for consumers. For example, the Government's target is for an average of 70% of New Zealanders' transactions with the Government to be completed online by 2017. This will only continue to grow as consumers are increasingly meeting their social, educational, health and economic needs online.

- At a household level, the penetration of connected devices has grown significantly - over 75% of New Zealand homes have smart phones, just under half have tablets, and one in four have smart TVs.

If there was any doubt that broadband is becoming a 21st century essential utility service for New Zealanders akin to electricity and water, the pace of change serves as a reminder of the value consumers place on broadband and the importance of the fixed-line communications infrastructure that enables it.

While the digital world is fast-paced and ever-changing, the infrastructure and services that enable access are utility-like ultra-fast communications transmission networks. The underlying networks involve substantial long-term investment programmes and proactive upgrades and maintenance. Such upgrades and maintenance will not only keep pace with ever-increasing consumer demands for connectivity, but will ensure the resilience, speed and capacity of the network to allow the online world to flourish.

A framework that allows a fair return on efficient broadband infrastructure investment made will attract the capital that's needed to pay for upgrading infrastructure to meet current and future demand.

Market structure and contestable build is aligned to the ambition

Chorus is very different to the former vertically integrated Telecom New Zealand. Our core business is wholesaling broadband access – as it is for local fibre companies (LFCs) who won the fibre to the home competitive tenders in certain areas in New Zealand. Chorus has also made IT and electronics investment alongside build investment in order to offer quality and delivery improvements that are open access to all RSPs.

The contestable regional processes have helped ensure that the upgrade of communications infrastructure is efficient. Chorus is additionally subject to market disciplines that support efficiency and the promotion of uptake on better broadband. Our trans-Tasman neighbours have even described New Zealand as setting the standard for the timely and cost-effective rollout of fibre. The billions of dollars of committed investment has not been duplicated, which would be grossly inefficient, but is supported by the wholesale-only market structure that ensures the infrastructure services are "open access".

The issues of retail service providers (**RSPs**) trying to get wholesale access from the vertically integrated Telecom are gone. Now all RSPs can access the same wholesale broadband services from which competition and innovative retail offerings can thrive and grow.

But while the current market structure provides an ideal starting point for advancing the Government's broadband objectives, the regulatory framework needs a full review for the next phase, as identified in s157AA of the Telecommunications Act (the **Act**).

The Act, as it relates to wholesale broadband infrastructure services, requires a fundamental overhaul to recognise the dynamic nature of the downstream retail and over-the-top digital environment which is enabled by high quality and resilient broadband infrastructure. No amount of tinkering with the Act will simplify or significantly improve a regime designed for yesterday's environment – fundamental change is needed.

Important drivers which need to be acknowledged within new regulation

New Zealand's broadband ambitions are supported by a number of key drivers that should inform the appropriate regulatory framework. These include:

- copper/fibre product and price relativity to support an efficient migration from copper to fibre;
- no price shocks – this is important to consumers, RSPs, infrastructure providers and investors;
- wholesale-only network operators providing services on an open-access basis;
- RSPs being able to focus on competing from a level playing field to deliver innovative offerings to end-users;
- simplicity and certainty in the policy environment and one that enables price, quality and investment to be considered in a single coherent conversation;
- a transition from the TSO/USO focus on affordable basic voice to a TSO/USO focused on basic broadband (either delivered within the framework without funding or consideration of a more traditional USO type arrangement); and
- an efficient retiring of duplicate and legacy networks, including an ability to provide notice of copper network withdrawal when tipping points in the transition to fibre are met in our fibred areas.

As we illustrate in **Appendix One**, today's framework does not meet regulatory best practice principles and as a consequence does not provide any of these supporting features. The shortcomings of the current TSLRIC framework are also discussed in reports from Incenta Economic Consulting and Professor Stephen Littlechild attached to this submission.

A fit-for-purpose future focused policy environment to support the ambition

With complete structural separation at the wholesale level, development of the regulatory framework can be more targeted.

We agree with the Government that the right regulatory settings for the future:

- will support economic growth for New Zealanders by encouraging innovation, investment in high quality networks, and competitive and efficient services;
- should only be implemented where it is necessary; and

- must be clear, stable and predictable to support growth and innovation in the future, rather than a regime dealing with yesterday's problems.

New Zealand is leading the world in its fibre roll out and broadband ambitions. To this end, while we can be informed by overseas approaches to regulation, ensuring the regime is fit for purpose for New Zealand's ambitions and environment is essential.

What is important now is improved broadband infrastructure and coverage (including rural), efficient investment, continually improving quality (speeds and capacity), and open access to such investment. This promotes access and strong retail competition, which in turn allows for dynamic offerings and over-the-top applications to flourish.

Whether and how to regulate

Options for whether and how to regulate range from regulation that is set out in legislation, but not implemented - with the market tasked with meeting New Zealand's broadband ambitions - through to regulating network operators such that decisions over price, quality and investment are considered together.

Any regulatory framework needs to take into account the fact that duplication of open access fixed line broadband infrastructure is inefficient in New Zealand. So the goals for regulation should generally be to support efficient investment and innovation at the network level to meet consumer demand while also ensuring fair prices and a fair return.

We believe that a utility-style regulatory model (such as a building block model (**BBM**)) for copper and fibre access is the right form of regulation, with the option of implementing regulation via a standard access undertaking (**SAU**) (with anchor products and/or a simple revenue cap). An SAU is a tool used in Australia's telecommunications framework. It transfers the onus from the regulator to the regulated entity to come up with the first regulatory proposal - contributing to a more timely set up. As discussed below, operational separation was implemented this way.

We recognise that there are a number of other choices, each with their own trade-offs. We discuss these choices below.

Types of regulation

If the decision is to regulate at the outset, there are a number of choices to be made as to how to achieve fair prices and a fair return – none of which can be achieved under the current Act.

The submission of the Telecommunications Carrier Forum (TCF) supports a utility-style model for fibre and that commercial solutions be explored in tandem with the regulatory review.

Product sets, or anchor products have been used in the United Kingdom and the European Union, as discussed in the report by Plum Consulting, which is attached to our submission. While today around 85% of Chorus' revenues are price-controlled, under an "anchor product" approach only the anchor products and prices are regulated, with more product/pricing flexibility on products offered over and above the anchor products. This mitigates some of the high risks of regulatory decision making and error which arise when a significant proportion of

a business' revenues are regulated. Reducing those risks enables more investment and responsiveness to market demand.

The anchor product concept can also be coupled with a simple revenue cap for all products and prices – providing clarity around the maximum allowable revenue that the network operator can earn. This recognises the importance of revenue sufficiency and fair prices overall.

Utility-style regulation – namely a BBM approach – is also a well-known regulatory approach in New Zealand and internationally.

Utility-style regulation

We agree with the Government that a utility-style regulatory framework is better suited to the current fixed telecommunications environment, which is characterised by high investment in generational upgrades and structural separation. Duplication of fibre to the home infrastructure isn't efficient, but ongoing investment and open access to the upgraded infrastructure and wholesale services is. A utility-style model recognises this and ensures regulatory commitment, fair pricing, and a fair return – all of which are in the long-term interests of consumers. It also ensures price, quality and investment are tightly linked. In turn, this supports further investment and innovation in open access wholesale services.

Considering copper and fibre in the same model recognises that Chorus is one business, the significant copper-to-fibre migration still ahead for the industry and consumers, that more investment in rural is desirable and that many of our shared assets support both copper and fibre.

Several of the expert reports attached to this submission highlight how the existing TSLRIC approach may be harmful to the kinds of incentives a new regime ought to promote. Professor Littlechild advises that TSLRIC increases the risk of under-investment by regulated businesses because it introduces uncertainty as to what the regulator will decide would have been built from scratch in a hypothetical scenario.

Utility-style regulation addresses revenue sufficiency and the incentives on the network provider as a whole, in turn promoting investment and innovation. At the same time it protects consumers from excessive profit taking.

A utility-style model, such as a BBM, has many advantages, including:

- being grounded in real world actual costs which avoids the highly contentious and subjective search for a hypothetical network build and efficiency and supports sufficiency of revenue and return on and of capital;
- once the initial asset base is set, it is not subject to unpredictable revaluation. The asset base can be rolled forward, providing predictability and commitment that investors will receive a reasonable return over a reasonable period;
- design choices in a BBM are sufficiently flexible to enable anchor products and certain price paths, enable more industry and customer engagement and solutions and can

avoid contentious and lengthy cost allocation debates recognising the copper-to-fibre migration period; and

- product prices within the model can be smoothed while still ensuring a reasonable return.

These features in turn support investment and innovation. These characteristics are absent in today's regime.

The international expert reports attached to this submission point towards utility-style regulation being the appropriate choice.

Point of regulation

There is a policy choice as to whether to regulate at the unbundled (GPON) layer or the bitstream layer or both. In our view, before fibre unbundling is introduced, the benefits need to outweigh the costs given the different outcomes that may arise. If there is a clear case for unbundling, then regulation should be limited to that point in the network.

We already provide UFB point-to-point unbundling under the UFB contract and that is assumed to continue as designed for the enterprise market.

The historical motivation for copper unbundling of the vertically integrated operator was to promote infrastructure competition, which assumed third party innovation would occur in competition with the vertically integrated operator. At the time unbundling of copper was introduced, there was often dissatisfaction with the levels of investment and innovation at the wholesale level by the vertically integrated incumbent. The policy (including operational separation) was also driven by concerns that the incumbent's own retail arm was being favoured.

In New Zealand, copper unbundling occurred on around 7% of lines. While it provided a cost advantage to those RSPs who had sufficient scale (as compared to retailers who did not), and that in turn may have altered the dynamics in the retail market with the incumbent, no bitstream offerings were made. Since copper unbundling was introduced, fibre to the cabinet and fibre to the home initiatives have come into play alongside wholesale only network providers. Technology has also advanced such that copper enhancement technologies are incompatible with unbundling.

Both structural separation and a move to fibre drive different unbundling considerations. We agree with the Discussion Paper that it is not appropriate to assume yesterday's theories should apply today and that policy choices (such as the ladder of investment) may have been more appropriate in an environment where duplicated investment was considered effective.

There are currently a range of differentiated fibre bitstream products in the market and the early signs of migration to fibre are encouraging. A shift to an unbundled regime would be a major change and likely fundamentally alter the product and pricing structure because the avoided costs are likely to be small compared to the wholesale bitstream service. The questions of if and when a shift to unbundling occurs lend themselves to careful policy consideration because it may require a step change in products and prices for the industry and consumers.

Plum Consulting advises that mandating access to unbundled fibre will undermine product differentiation at both the wholesale and retail levels of the industry. Product differentiation at the bitstream layer supports the alignment of consumer and investor interests including by:

- enabling lower (and below cost) entry level products - supporting digital inclusion and social objectives;
- increasing demand, revenue and investment at wholesale and retail levels in the industry;
- copper-to-fibre migration; and
- simplicity and certainty.

Plum Consulting says these benefits are undermined if there is unbundling and with much higher speeds on fibre, there are likely to be diminishing returns on the benefits perceived for copper unbundling. There are other likely costs and benefits of having unbundling compared with no unbundling, which we expand on in this submission. These include, for example,

- the potential switching costs involved for the industry and end-users which we understand is a major issue in Singapore exacerbated by highly disaggregated separation of layers 0 to 2 and subsequent changes to reintegrate some layers;
- the impact on copper-to-fibre migration;
- the pricing implications because the avoided costs are likely to be small given that the majority of costs are at the network layer and additional costs in implementation or experimentation (as in Singapore) will ultimately be borne by consumers;
- the implications for averaged pricing and the potential need to consider regional pricing; and
- the impacts on the simplicity or complexity of the regime required to support it.

RSP innovation and investment at the bitstream layer is unlikely to be open access and/or risks duplicating investment.

A further alternative is for the Government or the regulator to expressly retain an unbundling option which can later be exercised if, after a review and cost benefit analysis, bitstream was ever found to not be improving over time or meeting demand. For example, the restriction on the potential introduction of GPON unbundling could be extended for a longer period than 2020 (or 2025 as announced for UFB2 areas) to enable:

- and incentivise, wholesale providers to continuously improve quality and be responsive to customers;
- the industry to focus on the transition to fibre that will continue beyond 2020; and

- subsequent monitoring of the market to better inform a cost benefit analysis (if considered necessary) on whether unbundling should be introduced in the future.

Transition to a fit-for-purpose framework

Implementation of a BBM

Our preferred approach is to work towards regulation based on a BBM. However we are cognisant that the immediate introduction of a BBM could place a significant regulatory burden on both the regulator and the industry. A full regulator-led BBM will also not deliver early pricing certainty to the industry. Detailed bottom-up processes will mean post-2020 prices are unknown for years to come.

Other options that would reduce the regulatory burden, allowing the industry to focus its resources promoting a customer/consumer-led migration, include:

- long term contracts that are supported by a change to the regulatory framework. However, such contracts may be challenging in an open access reference-offer environment, with potentially differing views amongst RSPs; or

- a regulatory undertaking proposed by those subject to the regulation, including the potential for customer input and feedback on product proposals. This is akin to NBN's SAU, which is a vehicle enabled in the Australian legislation.

We see particular value in putting the onus on the regulated party to detail a BBM-based regulatory commitment, rather than the regulator. The advantage of such a "propose/respond" model from the Government's perspective is confidence that any undertaking ultimately accepted not only delivers the key regulatory objectives of utility-style regulation and avoids price shocks at a critical time, but also satisfies the commercial needs of the regulated entity and its investors. This approach also better enables the regulated entity to involve and work with its customers, supporting enhanced flexibility, responsiveness to the market and end users requirements and with mechanisms that also support timely completion of the model even in the absence of full agreement.

A regulatory undertaking proposal is a simple but extremely powerful mechanism. Undertakings are permitted against the backdrop of a Schedule 3 investigation in today's regime (but not wider) and, an undertaking was used to implement operational separation of Telecom. We think this flexible and timely tool is long overdue in the New Zealand toolkit.

With the lack of flexible solutions in the regulatory toolkit, combined with the significant risks of getting it wrong, we see strong merit in the network operator being tasked with submitting an SAU as an alternative means of applying a BBM in a way that meets both key commercial and policy objectives. A regulator-led BBM remains a backstop in the event an SAU is not forthcoming or not approved.

In his report, Professor Littlechild explains some of the advantages of a propose/respond model, and highlights some examples of where they have been implemented successfully.

Choices around the features of an SAU

Within any SAU, there are a number of choices around the features that are included. The

scope of an SAU could range from a narrower pragmatic transitional arrangement to incorporating the full features of a BBM.

Key features of any SAU in lieu of a regulator-led BBM implementation might include:

- anchor product and price paths for entry level and other core products. Within this:
    - a differentiated range of copper and fibre anchor products could enable the TSO concept to effectively be expanded to cover both broadband and voice. For example, the entry level price might be below cost to meet social objectives, but with the full cost of the network recovered across differentiated products;
    - nationally averaged prices will support fair prices for rural consumers;
    - an appropriate price relativity between copper and fibre will support migration to fibre as well as fair prices for those customers who remain on copper (even though those copper prices might otherwise increase as people migrate to fibre); and/or
- a simple revenue cap, which could be based on, and move forward from, today's prices and revenues. This mitigates price and revenue shocks. This is known as a "line in the sand" approach, which was used in Australia when the regulator moved from TSLRIC to BBM for regulation Telstra's copper network; and
- a copper-to-fibre migration plan in our UFB areas.

If there was a desire for a more pragmatic transitional arrangement, this is also an option. We will make product proposals and consult with customers and/or we could provide a regulatory undertaking that provides forward price-paths and product specifications covering an initial period which customers can input and provide feedback on if the framework allowed. This could increase certainty, timeliness and still respect a transition that ensures no price shocks. Principles could also be set out upfront that mitigate price shocks and ease a full transition to a BBM for a "second period" thereafter.

The options of implementing a BBM by way of an SAU or allowing for a pragmatic transitional arrangement for a specified "first period" from 2020 (with a BBM/SAU in a "second period") promote certainty more quickly and mitigate the heavy burden placed on a regulator to second guess and start from scratch.

An illustration of: (1) an SAU or (2) a transitional arrangement for a first period before an SAU, appears at the end of this Executive Summary. Full design details would need to be considered at the next stage of this review once key policy choices were indicated.

Simplification, rationalisation and more commercial solutions incentivised

This approach is also an opportunity to bring together the many regulatory instruments into one place (e.g. multiple open access deeds and the TSO) and ensure they are up to date and fit for purpose. Many open access matters will carry forward. But some need policy consideration – such as whether Chorus should be required to continue to act as agent

reselling Spark's legacy PSTN resale service and whether that legacy position should be inflexibly entrenched in primary legislation as well as in a deed.

Further, there is an opportunity to transfer both the Commission's copper standard terms determinations and UFB fibre wholesale agreements approved by Crown Fibre Holdings to industry. By this we mean enabling and incentivising the industry to own and evolve those reference offers with appropriate arbitration and/or dispute resolution mechanisms. The industry could, for example, then work through any barriers to the migration to fibre as a commercial matter rather than a regulatory submission matter as a priority focus (with a backstop resolution process to be discussed).

The legal framework should be updated to provide a coherent foundation

Under today's framework, copper price paths and product requirements can be changed at any time (including separately) and the post-2020 fibre price and product paths and regime are uncertain. A fundamental feature of refreshed legislation is that it would allow price, product and investment to be considered collectively. Our proposals, including how to transition to a new model, are made bearing in mind New Zealand's world leading broadband infrastructure investment and aspirations, that copper-to-fibre migration is happening in our UFB areas and will continue for the next decade or so, and that price shocks and lack of predictability do not serve anyone.

We think detailed legislative design needs to follow the key policy choices, once made. We do not consider the current Act can easily be retro-fitted to accommodate a BBM approach. The entire schema of the Act in relation to fixed-line was designed for a vertically-integrated operator that no longer exists. More recent additions require rework, such as the information disclosure regime which drives annual compliance costs without purpose. We acknowledge that parts of the Act may still be relevant for mobile and other matters.

While we recognise that change can drive uncertainty or loss of precedent, these issues are already significant in the Act. Determinations are issued case-by-case on a fresh basis and cannot be easily predicted against previous decisions. Backdating is the obvious example – even where there is Court precedent and more than one decision supporting backdating - there's no consistency. This lack of predictability fuels contention and, in regulatory economic speak, concerns about regulatory commitment and opportunism.

However, noting some of the questions in the discussion document, we comment at this time that:

- we agree that the purpose statement needs to be amended. The Act contains multiple purpose statements. There has been substantial uncertainty on how section 18, and more recently section 18(2A) is considered. As regulatory processes and conference transcripts show, the ambiguity as to how objectives should be weighed needs to be removed to improve understanding, regulatory commitment and regulatory predictability. A purpose statement needs to reflect the fact that there is unlikely to be fixed network overbuild, include appropriate investment incentives, and acknowledge the increasing social obligation element inherent in telecommunications. There are many elements to consider and we believe a reset of the purpose statement beyond the Government's proposal is required;

- high quality decision-making and clear frameworks with requisite accountability are critical. We refer to our submission to the Productivity Commission[1] on these fundamental topics – the changes proposed are vital if there is to be regulatory implementation working for outcomes that policy makers set. Policy should allow for merits reviews of all substantial decisions by the regulator where there is high discretion and a high risk of errors. Our industry is the only utility sector that has no form of merits review – against regulatory decisions implying a billion dollar funding gap at a time of generational investment;

- heavily prescribed regulated products evolve too slowly to meet dynamic market needs and deter commercial solutions. We need to move back to incentivising commercial solutions wherever possible and focusing on anchor products with appropriate flexibility for other products. We think that industry-led engagement processes are generally better than models that place an over-reliance on direct regulatory supervision. Regulator-driven processes place a high burden on the regulator to make decisions without the benefit of market participants' information or perspective; and

- copper unbundling should be grandfathered for coherency and clarity. Copper unbundling is inconsistent with promoting migration to fibre and achieving better broadband outside UFB areas. Investments already made will have been recovered. Ultra-fast broadband was first announced over seven years ago, and together with other economic investment to improve rural connectivity, it is the future.

Expert Reports

Our submission is supported by a number of expert reports, which are attached to this submission:

- **Plum Consulting**, *New Zealand's telecommunications policy – a way forward,* October 2015 (**Plum Consulting Report**) – The report outlines alternative options for copper and fibre pricing post 2020; the costs and benefits of fibre unbundling; and considers how best to ensure an efficient copper-to-fibre transition. The report finds that copper prices should be aligned as closely as possible to the price of the basic fibre price and indexed to (at least) the consumer price index to support fibre investment and copper-to-fibre migration. Service price differentiation is found to have an important role in driving investment and innovation, and in helping to achieve digital inclusion and an efficient copper-to-fibre transition. The report concludes that applying cost orientation to fibre is likely to prove contentious and complex and may undermine differentiation. Further to this, it concludes that layer 1 fibre unbundling is not in the public interest to the extent that it is likely to collapse service differentiation. Anchor products are identified as a potential option that could be used to support migration as could a permissive copper retirement approach.

- **Incenta Economic Consulting,** *Post 2020: TSLRIC vs the Building Block Approach,* October 2015 (**Incenta Report**) – The report assesses the relative merits of various options for the transition to a BBM, including assessing the differences between TSLRIC

[1] Chorus' 11 November 2013 submission in response to the Productivity Commission's Regulatory Institutions and Practices Issues Paper: http://www.productivity.govt.nz/sites/default/files/Sub%20051%20-%20Chorus%20PDF-%20292Kb.pdf

and BBM approaches. The report finds that a BBM framework would be more appropriate in the current environment as it can be expected to provide more stability and predictability in prices, can result in fewer disputes in its implementation and can be made consistent with creating an orderly transition of customers from copper to fibre networks. Incenta conclude that there is merit in implementing a BBM with a combined single copper and fibre RAB, and a revenue cap form of control.

- **Professor Stephen Littlechild,** *Regulating communications for the future: some options for customer engagement within a building block approach,* 16 October 2015 (**Professor Littlechild Report**) – Professor Littlechild's report highlights some of the difficulties with the TSLRIC approach, including the negative incentives for investing in network facilities that customers want. He also explains the opportunities for greater customer engagement under a BBM; and the potential for customer engagement processes to provide greater customer responsiveness and legitimacy. The report describes examples of customer engagement processes in the UK which have sought to involve customers more substantively – rather than regulators making detailed decisions, there has been a shift in focus to providing clarity on a high level framework and allowing interested parties to agree specific arrangements which meet their needs.

- **Houston Kemp Economists,** *Regulatory Framework Options for Chorus Post 2020,* 22 October 2015 (**Houston Kemp Report**) – The report concludes that a revenue cap, with accompanying principles for the prices to be established for each product is the appropriate form of establishing product prices under a BBM. The report concludes that neither price caps for each individual product, nor a weighted average price cap (WAPC) is likely to be suitable in the New Zealand telecommunications market.

ILLUSTRATIVE EXAMPLE

SAU TO IMPLEMENT A BUILDING BLOCK MODEL FROM 2020 TO 2030

KEY FEATURES

Building blocks and efficiency mechanisms

- Ex-ante BBM for 10 years, based on a single combined copper and fibre Regulated Asset Base (**RAB**).
    - The initial RAB could be valued based on an approach that establishes the initial valuation from today's prices, as discussed in the Incenta Report. This "line in the sand" valuation has regulatory precedent, mitigates price shocks, avoids significant complex regulatory debate and enables a smooth transition to a RAB model that can be rolled forward over time.
    - The combined copper and fibre RAB would include all of Chorus' copper and fibre assets up to the first data switch (which provide today's regulated UBA, UCLL, UCLFS, SLU and UFB services), excluding areas where there are LFC networks.
    - Once the initial RAB is established, the RAB would be rolled forward (less depreciation). Additional, actual prudently incurred capex would be incorporated into the RAB on an ongoing basis.
- The BBM could comprise a revenue cap with a maximum allowable revenue (**MAR**) calculated using forecast building block costs of opex, depreciation, a return on capital and tax for the relevant regulatory period. The revenue cap should be combined with a long term cost recovery account. This will return revenues to customers in the case of over recoveries, or recover revenues in the case of under recoveries to ensure that the regulated entity only receives its maximum allowable revenue, no more or less. This long term cost recovery account will lower the cost of capital for infrastructure providers and therefore RSPs and consumers.
- WACC calculated over a ten year time horizon.
- Incentive mechanisms would be developed that share efficiency savings in opex and capex for an agreed period of time until the next reset when savings are passed onto customers

Products and prices supporting certainty, migration and digital inclusion

- The MAR would be translated into one product and pricing book containing a range of differentiated bitstream products to meet a range of consumer choices. For example:
    - "Anchor" product and price paths* and service levels appropriate for a post 2020 environment that could include:

- A number of key copper and fibre bitstream products for broadband and technology neutral baseband for voice to continue to support the voice TSO requirements;
- Affordable entry level copper/fibre products in order to assist copper-to-fibre migration and avoid the risk of copper prices increasing in rural areas as urban customers migrate to fibre;
- Commitments to consider moves to higher speed products over time; and

- Additional products: Ability to introduce new products and services and remove obsolete products and services following industry consultation.

*The balance of anchor and non-anchor products requires further discussion and high level pricing principles might support how forward price paths are set. Averaged prices in Chorus' network areas can be met based on the model outlined. As is usual in utility regulation, price paths should be designed to reflect incremental increases in Chorus' costs. An overarching revenue cap will provide a constraint on cost recovery overall. The regulated entity will be able to earn a fair return on efficient investment – no more and no less. With no detailed cost allocation methodology required, the risk of price shocks can be mitigated, affordable entry level products can be retained to support digital inclusion, and the industry can avoid being tied up in long, complex regulatory process and debates.

- Service level commitments would start by being aligned with today's commitments. Moving forwards, any changes would occur at the agreed periods of reset to ensure price, quality and investment are considered together.

Fit for purpose regulatory mechanisms

- Current standard terms determinations (STDs) and UFB wholesale service agreements (WSA) could become commercial wholesale reference offers. This could empower industry-led change processes (to be designed) wherever possible (with appropriate arbitration/backstop mechanisms for example). This could aid speed to market and support a market led copper-to-fibre migration such that barriers in the STD regime can be removed.
- TSO and rationalisation of open access deeds could be captured in one place.
- A copper-to-fibre migration plan in Chorus UFB areas. For example, notice periods and uptake thresholds.

Investment

- Any relevant investment could be clearly included – for example, on UBA services.
- New investment is added to the RAB.

Other

- The SAU RAB will be the basis of regulation in future regulatory periods. Once expenditure is included in the RAB, it will not be revalued.

ILLUSTRATIVE EXAMPLE

A TRANSITIONAL ARRANGEMENT/UNDERTAKING FOR 2020 TO 2030

(AND A BBM IMPLEMENTED BY SAU THEREAFTER)

KEY FEATURES

- Alternatively, a transitional undertaking could be put in place for a transitional period to 2030.

- This undertaking would cover Chorus' copper and fibre assets up to the first data switch (which provides today's regulated UBA, UCLL, UCLFS, SLU and UFB services), excluding areas where there are LFC networks.

Products and prices supporting certainty, migration and digital inclusion

- One product and pricing book containing a range of differentiated bitstream products to meet a range of consumer choices. For example:

    - "Anchor" product and price paths* and service levels appropriate for a post 2020 environment that could include:

        - A number of key copper and fibre bitstream products for broadband and technology neutral baseband for voice to continue to support the voice TSO requirements;

        - Affordable entry level copper/fibre products in order to assist copper-to-fibre migration and avoid the risk of copper prices increasing in rural areas as urban customers migrate to fibre;

        - Commitments to consider moves to higher speed products over time; and

    - Additional products: Ability to introduce new products and services and remove obsolete products and services following industry consultation.

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Fit for purpose regulatory mechanisms

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- TSO and rationalisation of open access deeds can be captured in one place.

- A copper-to-fibre migration plan in Chorus UFB areas. For example, notice periods and uptake thresholds.

Investment

- Any relevant or anticipated investment could be clearly included – for example, on UBA services.

- A process will be needed to ensure costs recovery on new investment which is not anticipated at the outset of the transitional period.

End of transitional period (SAU/BBM)

- At this time, a "line in the sand" valuation approach could be applied which uses existing prices for its products and services to determine the value of the assets. This would enable a smooth transition, avoiding price shocks, from transitional price paths.

- The balance of the SAU would have the features described in the above section, *'Illustrative example – SAU to implement a Building Block Model'*.

INTRODUCTION

1 This is Chorus' submission in response to the Ministry of Business, Innovation and Employment's (**MBIE**) 8 September 2015 discussion paper Regulating communications for the future – Review of the Telecommunications Act 2001 (**Discussion Paper**).

2 In the Discussion Paper, the Government outlines the objectives needed for the future regulatory regime to meet its broadband vision:

2.1 it should be predictable and provide network operators with clear incentives to innovate and invest;

2.2 network operators should be limited in their ability to extract excessive profits;

2.3 there will be a need for continued investment in service quality;

2.4 geographically-averaged pricing continues to be desirable;

2.5 the relative price of copper services should not inefficiently provide incentives to RSPs or network operators to delay migration to UFB services;

2.6 price stability for all users is a key concern; and

2.7 the regime should be simple and minimise disruption to the industry.

3 We agree with these objectives and much of the analysis in the Discussion Paper. The Government's policy ambition aligns with the desires of the industry to deliver better broadband following the fundamental market changes of UFB and structural separation. The vision requires all parties to now be focused on consumers, on investing to meet their needs (both now and into the future), and achieving migration onto the fibre network.

4 Achieving these outcomes will require a carefully realigned legal framework. Current legal structures do not anticipate the changing needs of RSPs or consumers, and change is needed to support the development and implementation of a new, fit-for-purpose regulatory regime that drives utilisation of New Zealand's world-leading broadband infrastructure. More can also be done to achieve the Minister's goals for the sector of regulation that is predictable, proportional and flexible.

The structure of our submission

5 Our submission is structured under the following headings:

5.1 **Objectives and background**. New Zealand's communications markets are undergoing a step-change, with massive increases in demand following an evolution of the services that consumers use. The existing regulatory

framework is not suited to address these changes, and New Zealand is at risk of losing or delaying the benefits of dramatically increased access and speeds if the existing regulatory framework is maintained. The statutory review is well timed to take advantage of the window of opportunity presented by changing market dynamics to address the pressing need for regulatory reform.

5.2 **A fit-for-purpose regulatory regime for 2020**. Where structural separation of monopoly infrastructure ensures equal treatment of access seekers and network duplication is unlikely, utility-style regulation is the obvious solution to address any outstanding regulatory concerns. Those concerns relate to addressing the standard incentives on an incumbent to over price, under deliver on quality and under invest on innovation. Utility-style regulation is consistent with best practice regulatory guidance, and is most likely to deliver a stable environment that promotes incentives to invest and innovate, and recognises legitimate commercial interests. It achieves these ends in a principled and effective way.

5.3 **Implementation**. A BBM approach to regulation represents a principled way of delivering utility-style regulation for the sector. We strongly support this approach, at least as a regulatory backstop. It has the advantage of being flexible enough to account for the government and industry's shared goals for the sector. BBM can also be tailored to address migration incentives, incorporate a single RAB for copper and fibre networks and implement a flexible revenue cap underpinned by specific anchor products and pricing. However, there may also be significant advantages in allowing an industry-led regulatory solution in the first instance – either by way of a commercial solution or a regulatory undertaking developed by the regulated party, especially during the transition to a new regulatory framework.

5.4 Coming off the back of extensive regulatory proceedings, an industry-led approach (with an appropriate degree of oversight) could alleviate significant regulatory burden, remove industry contention, and allow network operators and RSPs to focus directly on those aspects of service provision that matter most to their interests without shocks. Legislative change is still essential, but a regulatory undertaking (similar to the SAU regime used in Australia) could be used to address each of these points in a timely, proportional and responsive way.

5.5 **Legal framework**. The legislative framework for the new regulatory regime needs to be carefully structured. A predictable and sustainable framework cannot be achieved by tinkering with the existing Act – a first principles, ground up review is needed. Prolonged regulatory debates can be avoided if sufficient detail and guidance is incorporated upfront into the statutory scheme. Essential to achieving this is a well-crafted purpose statement, but the availability of appropriate accountability mechanisms, the composition of the regulator and the form of amending legislation will also be influential.

OBJECTIVES AND BACKGROUND

6 The review is being undertaken against the background of significant changes in the telecommunications market. New Zealand is partway through the government's UFB initiative to ensure that by 2020, 75% of New Zealanders in metropolitan areas will be able to choose to connect to ultra-fast broadband. In parallel with UFB, the rural broadband initiative (**RBI**) aims to improve broadband services in rural areas by providing for around 85% of rural consumers initial peak speeds of at least 5 Mbps over wireless technology.

7 Our ambition as a nation now goes even further. As well as extending the UFB and RBI initiatives, the government has recently announced a bold target for New Zealand – to bring broadband capable of peak speeds of 50Mbps to 99% of New Zealand, with the remaining 1% receiving 10 Mbps, by 2025. The government recognises the ever-increasing demand for bandwidth and the economic and social benefits that broadband will bring for New Zealand – not just in the main urban centres, but right across the rural areas that are so critical to our economy.

8 This extended vision follows a period of unprecedented increase in the demand for bandwidth in New Zealand. The first quarter of 2015 saw an historic milestone in New Zealand telecommunications. For the first time, copper broadband connections have peaked and begun to decline. Fibre is now in ascendency: New Zealand now leads the OECD in fibre connections growth, even accounting for our comparatively low base for current levels of fibre penetration.[2]

9 Demand for better broadband has driven New Zealand's average connection speed to increase 5Mbps in just one year, to 20Mbps last month, which is 28% higher than in January of this year.

10 This demand is only increasing – fibre and VDSL services increased by 21,000 connections in the March 2015 quarter alone. And in September, more than half of those moving to fibre were taking a 100Mbps or 200Mbps plan. Rather than a bubble, Chorus sees a number of reasons that the recent trajectory is a step-change in the market:

10.1 the average broadband speed in New Zealand has doubled, climbing from 10Mbps in June 2011 to 20Mbps in September 2015. The growth in speed is accelerating with average speeds increasing 28% in 2015 compared to 5% in 2012;

10.2 internet usage continues to surge, with bandwidth (average throughput per user) growing 68% between January to September 2015, up from an average annual growth of 50% in previous years;

[2] OECD Broadband Portal (http://www.oecd.org/sti/broadband/oecdbroadbandportal.htm).

10.3 online TV is driving unprecedented data growth in NZ, with the launch of Netflix, Spark's free Lightbox promotion and Neon;

10.4 video on demand use will accelerate: both Sky and Freeview are introducing set-top-boxes that support internet-based video on demand. This will encourage traditional TV viewers to try on demand;

10.5 ultra-high definition television sets are becoming mainstream with Netflix and others providing UHD TV shows. User tests show that 100Mbps is required to support a good ultra-high definition experience where multiple devices are in use;

10.6 in the United States, content providers are trialling virtual reality viewing, providing users with control of multi-dimensional viewing and a 'ringside seat' experience;

10.7 homes are being automated with high-definition security cameras and appliances remotely controlled by the homeowner's mobile; and

10.8 high definition gaming is becoming an interactive viewer sport: Twitch and YouTube gaming allows audiences to watch their favourite gamers compete in real time. 144 billion minutes of recorded gaming videos and live streams are now viewed on YouTube per month globally, while gaming platform Twitch has 100 million monthly viewers watching its live and archived gaming video streams.

11 The pace of change and disruption in just the last five years has been exponential, and we expect this will only accelerate over the next ten years. More appliances and wearable devices are being connected to the internet; cities are embedding connectivity into bus shelters, lighting and street furniture; low cost telepresence will drive teleworking; small business will reduce operating costs by using cloud-based services. Speed and bandwidth will be essential to support the computational power needed to capture and analyse big data sets.

12 But New Zealand's broadband appetite will only grow – as consumers use more they realise that they want more. If traffic growth continues on its current path, there will be both challenges and opportunities.

13 New Zealand is just beginning to see the benefits of government programmes to expand and develop broadband services. These benefits are significant, and will grow over time. Greater speed, capacity and reliability from the fixed-line network allows for richer digital experiences. Greater connectivity delivers social benefits and enhanced productivity offers economic benefits. It also increases New Zealand's interconnectedness with the rest of the world. But direct legislative support through reform of the Telecommunications Act is needed to ensure that the further benefits promised by this trajectory are actually realised.

The industry framework is not suited to the changed environment

14 The Government has made or promoted a number of important network investment decisions through the UFB and RBI programmes, and associated structural and technology choices have been made. However the current regulatory regime is scheduled for review and needs to catch up – it was designed for a different set of circumstances. In the current environment, TSLRIC pricing and service specific regulation risks disincentivising needed investment. Professor Littlechild argues that the current regulatory regime creates:

> uncertainty as to what the regulator will decide would have been built from scratch in a hypothetical world if no one had built what they actually have built. A more uncertain context means a higher cost of capital and hence a higher cost for customers.[3]

15 He goes on to explain a key limitation of the current approach:

> The TSLRIC approach does not seem to address the question what should be built in the future, and how this can best be tailored to the preferences of final customers and the business plans of the users of the telecommunications network. Decisions about price are divorced from decisions about future investment and desired quality of service.[4]

16 With the substantial investment, change in market structure and a clear vision for better broadband for all New Zealanders to support the social and economic benefits of the digital environment, this is the time and opportunity for a sustainable framework to be set up for the industry to deliver to consumers. To that end, a fundamental review will support clear outcomes, including a regulatory policy and purpose that is tailored to ensuring those outcomes are achieved.

17 In this reset, and against the principles in the Discussion Paper, the role of policy makers and regulators, legislation and secondary instruments and the level of accountability can be designed. A holistic view will ensure clarity on where there is discretion and where there is not. An example of significant uncertainty that has been left in regulatory processes has been the role of copper unbundling when looking to the future – when it is a potential deterrent to the transition to fibre and incompatible with copper enhancement technologies that are now available.

18 If the industry is to genuinely build on the progress made to date and get on with the investment and innovation that benefits consumers and the economy, a new regulatory philosophy is needed to correct for the various shortcomings in the current regime and better align it with the Government's stated policy objectives. These shortcomings include:

[3] Professor Stephen Littlechild "Regulating communications for the future: some options for customer engagement within a building block approach" (October 2015); page 19.

[4] Professor Stephen Littlechild "Regulating communications for the future: some options for customer engagement within a building block approach" (October 2015); page 19.

18.1 copper and fibre services are priced differently, and are regulated under different frameworks. This prevents a consistent approach being applied to entry level services;

18.2 a high level of complexity, with multiple instruments controlling different aspects of the sector as illustrated in **Appendix Three**. These instruments fall under the purview of different decision-makers, including the Commerce Commission, government and CFH, and mandates are not always aligned;

18.3 pricing principles have been controversial and challenging to implement in practice, with inconsistent results inevitably arising. They have also been applied on a service-by-service basis, and no regard has been had to the need for total network recovery, as illustrated in **Appendix Two**. As noted in the Incenta Report, the TSLRIC approach to pricing was developed in an environment where there was an expectation of direct competition to supply regulated services, possibly at the infrastructure level. That context is very different to the circumstances New Zealand is likely to face in the future:

> there is little merit in maintaining price regulation settings that were aimed at encouraging entry, and instead the important objectives for the regime are to ensure that the scope for excessive profits is minimised while also maintaining the incentives for continued, and efficient, investment in both the copper network and fibre networks. In short, the landscape for regulation will look much more like the energy networks than the telecommunications fixed line sector of years past.[5]

18.4 periodic revaluations have resulted in price shocks and outcomes that are difficult to predict. Regulatory determinations released one at a time and looking at issues fresh each time, fuel contention and debates about windfall gains or losses as between wholesalers and RSPs. Today, this is exacerbated by the fact that price, quality and investment decisions are considered separately, there are a range of very detailed regulatory instruments and industry focus on commercial solutioning wherever possible is desired but challenging until we have a coherent and holistic framework. The alternative of a stable, rolled forward environment would instead refocus the industry towards delivering for consumers;

18.5 the current regulatory framework has also been characterised by constant change and uncertainty. **Appendix Four** highlights that copper regulatory processes have been constant since the UBA and UCLL services were first regulated, with no let up for the industry to adjust to changes and focus on commercial delivery of services. By way of further example, as soon as the current copper pricing processes are scheduled to finish, the Commission is due to open a review that looks at the quality of the services that have just been priced. More certainty and stability in the regulatory regime is sorely needed:

[5] Incenta Economic Consulting "Post 2020: TSLRIC vs the Building Block Approach" (October 2015); page 26.

18.6 information disclosure regulation has been poorly targeted, meaning it is costly to implement and serves no real purpose; and

18.7 despite the constant regulatory processes, standard terms determinations have tended to lock in technology and service standards, creating a barrier to innovation and migration to superior services and haven't kept pace with change.

19 In **Appendix One** we set out in more detail some of the key shortcomings of the current regime. A new approach, consistent with orthodox practice in other regulated infrastructure sectors, is needed.

20 The development of a fit-for-purpose regulatory regime is the vital next step to ensure the market continues to develop in the best interests of users of telecommunications services without ongoing need for government support.

21 Given the recent and expected changes in the sector, the review is not the time for a mere tweaking of the regulatory settings of yesterday. It is a review targeted at allowing all parties, the Government and the industry alike, the space to reflect on the important changes that have occurred and to establish a regulatory design for the next phase of delivering better broadband.

22 This is the sector's opportunity to harness aligned incentives between fibre network operators and RSPs and overhaul the regime to ensure a clear focus on the changing needs of the consumer.

23 The regulatory settings are critical to the wider policy objective and will shape where the sector focuses its energy and resources. We see the chance for advancing the Government's objective in refocusing attention on competition at the downstream level. The alternative is continued regulatory debates at the wholesale level, which constantly reopen key aspects of the regime. These debates, no matter how detailed or protracted, will do nothing to advance the ambition of delivering better broadband for New Zealanders.

Chorus' role in bringing New Zealand better broadband

24 Our primary interest is to secure a regulatory framework that supports the efficient and timely delivery of innovative telecommunications services that consumers are demanding, at fair prices and for a fair return. To achieve this, we need to ensure that the regulatory environment:

24.1 can deliver to the expectations of consumers, including where those expectations change over time;

24.2 promotes the development of the telecommunications sector in a way that incentivises infrastructure upgrades and service innovation;

24.3 provides the opportunity of a fair return for investment in infrastructure and service provision;

24.4 removes barriers that might prevent consumers from migrating to superior services over time, including from copper-based services to services delivered over fibre infrastructure;

24.5 facilitates the timely delivery of the Government's policy objectives for the industry; and

24.6 ensures regulatory intervention is fit-for-purpose and undertaken against a framework that promotes transparency, predictability and accountability.

25 The Government's initial views on an updated regulatory framework (as set out in the Discussion Paper) are consistent with these objectives. In fact, we can't see how there could be any credible objection that these are the objectives to which the industry is, and should be, committed. Other objectives with a clear social focus – geographic price averaging, for instance – can be easily accommodated within a framework that achieves these objectives.

Now is the right time for reform

26 We believe that there is both an urgent need for reform in the current market environment, and also a clear opportunity to realign the regulatory framework to allow it to be more future focussed.

The need for reform

27 Investment is being undertaken now against the backdrop of a regulatory regime that has not kept pace with the changes in the industry and does not support the ongoing investment that is needed to meet New Zealand's broadband ambitions.

28 As a result of the current copper pricing processes, investors have described New Zealand as "*politically risky as Pakistan*"[6] and that proposed prices provide implied returns that are "*below the level required by any reasonable investor*".[7] In a recent survey, in response to a question on whether the Chorus regulatory experience has affected investors' views of other New Zealand regulated stocks, one investor said "*I wouldn't invest in any other regulated utility in New Zealand*". Others investors made similar comments about increased concern and caution in relation to regulated companies in New Zealand.

29 Much of the recent investment that we have made is effectively sunk, representing a significant commitment from investors. How the Government responds to this commitment from the sector in terms of addressing the current shortcomings in the regulatory regime now will strongly influence important incentives for investment and innovation post-2020, as well as other investment in New Zealand.

[6] http://citywire.co.uk/money/new-zealand-as-risky-as-pakistan-says-newtons-pidcock/a722914

[7] *Submission to UCLL and UBA FPP further draft determination,* Allan Gray, 12 August 2015 http://comcom.govt.nz/dmsdocument/13547

30 Future investment decisions to support New Zealand's broadband ambitions are being shaped now, including the second phase of both the UFB and RBI initiatives. However, the incentives to invest will be contingent on whether the regulatory regime provides sufficient certainty to support investment. Given the current loss of investor confidence, the current review provides an opportunity for a first principles review of the current framework to remove the current uncertainty. The sooner this occurs the sooner the benefits from the Government's ambitions for the sector can be realised.

31 Because fibre investment is occurring ahead of demand, there is a commercial risk for Chorus and other network operators that revenues may not be sufficient to cover costs. This level of commercial risk needs to be balanced by a regulatory regime that is stable and predictable, to keep overall levels of risk within acceptable bounds. The traditional approach to regulation in the sector based on the promotion of competition through mandated access arrangements for individual wholesale services only increases the lack of predictability that network operators face. There is also additional risk such as fixed-to-mobile substitution.

32 The shortcomings of the current regime have been highlighted by the ongoing copper pricing processes. Regardless of the merits of the Commission's final determination, the process has been protracted, controversial and uncertain. This process is not conducive to an environment that promotes the industry focus and investment and innovation necessary to deliver on New Zealand's wider broadband ambitions. A new approach is needed.

The opportunity for reform

33 The current market and policy context also provides a window of opportunity for meaningful changes to the regulatory framework with minimal disruption and delay.

34 The following key factors underscore the opportunity for reform:

34.1 **the significant change to the industry's fixed-line market structure.** Structural separation has addressed many of the previous concerns that the current regulatory regime was designed to address. We are now a wholesale only open access network operator. Unlike a vertically integrated operator with a retail arm, we have every incentive to deliver and drive uptake of wholesale services. This wholesale-only environment allows natural monopoly concerns to be isolated and addressed directly. The more efficient, effective and targeted means of protecting competitive forces in the sector was simply not available while the sector was vertically integrated. There is also opportunity for greater RSP and consumer involvement in regulatory processes which is not present or possible in the current framework;

34.2 **as infrastructure-based competition is unlikely, the focus should be on consumer outcomes.** The Discussion Paper acknowledges that the underlying assumption of the 'ladder of investment' theory of regulation – network duplication – no longer holds in respect of fixed-line infrastructure and services. This has been confirmed in the expert report we have received

from Plum Consulting.[8] Putting the idea of network-based competition to one side provides a useful starting point to design a regulatory regime that is targeted more directly towards consumer outcomes than wholesale arrangements; and

34.3 **the industry is still far enough out from 2020 for changes in regulatory settings to make a difference**. So long as key regulatory parameters are locked down now to avoid inefficient and protracted regulatory processes, there are real benefits to be had in determining key elements of the regime early. This would allow the industry to move forward with certainty to provide the services that will underpin New Zealand's future economic growth. This is the medium-to-long term certainty that would give network operators and RSPs the confidence to deliver the investment that support innovation and that will provide New Zealand with a competitive advantage internationally.

35 What is needed is a legislative commitment to regulatory recalibration. By this we mean that any new framework needs to carry the support of a fit-for-purpose statutory instrument that minimises the prospect of controversy developing during implementation.

36 With structural separation at the wholesale level complete, the focus of regulation can now shift to follow through on this scheduled review to ensure frameworks are sustainable and support New Zealand's digital future.

[8] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); page 9.

A FIT FOR PURPOSE REGULATORY REGIME FROM 2020

A new approach to recognise that network overbuild is unlikely

37 The Government recognises in the Discussion Paper that there is no expectation of network duplication for fixed-line infrastructure.[9] In that context, economic regulation takes on different dimensions than it would under the previous, vertically integrated, copper access environment.

38 We agree. A new approach to the regulation of both fibre and copper networks needs to:

38.1 promote incentives for investment and innovation, which come from stability and predictability of the regime on the one hand, and the opportunity to earn a fair return on committed capital on the other; and

38.2 ensure that sufficient and proportional protections are in place so that consumers are protected from network providers earning greater than a fair (that is, an excessive) return on their investment.

39 Transparently promoting these objectives is essential for providing confidence to investors that they will receive a return on prudent investment, and confidence to consumers that they will pay a fair price for access to a high-quality network even though it may face little or no prospect of competition. These are the traditional objectives of utility regulation as applied both in New Zealand and overseas. With structural separation, Chorus and the other LFCs are more like utility companies, and broadband has become an essential utility service. This provides an opportunity to align the structural and industry changes with a utility-style regulatory framework which is a credible alternative to the existing, outdated regulatory structure.

40 As we explain below and in **Appendix Five**, a BBM approach provides the core of a principled approach to regulation that is well placed to achieve these objectives. In particular, as pointed out by Incenta Economic Consulting:

> A key challenge for price regulation is to ensure that incentives remain for regulated firms to undertake new investment. This is so that customers can continue to obtain the level of service that they desire. The most important criterion for encouraging new investment – and for creating a regime that is sustainable over time – is providing confidence that efficient costs will be recovered, but not materially more than this. This is the central design feature of the Building Block Approach.[10]

41 The new regulatory regime also needs to incentivise investment and innovation at the retail level within and outside of UFB areas. We expect this will occur primarily through competitive market forces (supported by open access at the wholesale level). Structural separation, open access and utility-style regulation create the level playing

[9] MBIE "Regulating communications for the future: Review of the Telecommunications Act 2001" (September, 2015); page 42.

[10] Incenta Economic Consulting "Post 2020: TSLRIC vs the Building Block Approach" (October 2015); page 2.

field on which RSPs can compete and innovate vigorously but fairly. Consumers of telecommunications services will be the ultimate beneficiaries.

Principles for fit-for-purpose regulatory design

42 Any new regulatory regime will need to satisfy a number of principles if it is to be fit for purpose. In line with Treasury's principles for best practice regulation, the regulatory regime will need to be:

42.1 **proportional.** This requires a regulatory framework that is as simple as possible, low cost, procedurally efficient and timely;

42.2 **flexible.** This can be achieved by ensuring that the regulatory regime is responsive to consumer demand. This can be balanced with predictability from a framework that allows RSPs and consumers to play a role in any trade-off between investment, quality and price;

42.3 **predictable.** At the design stage this will concern articulating clear policy outcomes and calibrating the tools and incentives acting on the regulator to deliver on those outcomes;

42.4 **durable.** Key for the telecommunications sector will be to de-politicise the regulatory regime as much as possible going forward so that the regime is politically durable;

42.5 **accountable.** This will need to include the ability to have recourse to appropriate review powers; and

42.6 **overseen by a capable regulator.** As well as institutional questions such as the role of a specialist telecommunications commissioner, this will require apportioning responsibility for industry settings between the regulator and sector participants in a clearly defined and rational way.

43 Treasury's best practice guidance also expressly recognises the need for regulation to be growth enhancing. Promoting economic growth is, of course, a key element of the Government's broadband policy. In the Discussion Paper, the Government outlines a number of objectives that need to be met by the future regime that can be understood as contributing to the growth-enhancing objective. We support the Government's objectives:[11]

43.1 **the regime should be predictable and provide network operators with clear incentives to innovate and invest**. We strongly support these principles, and would also highlight the value in predictability to RSPs and consumers. Based on our observations of the Australian market where strong forward-looking price visibility has been delivered, this has permitted

[11] MBIE "Regulating communications for the future: Review of the Telecommunications Act 2001" (September, 2015); discussion starting page 64.

RSPs to invest, consolidate and build clear business cases around known variables;

43.2 **network operators should be limited in their ability to extract excessive profits**. This could be secured through a revenue cap with appropriate selection of a limited range of anchor products to address any affordability concerns;

43.3 **there will be a need for continued investment in service quality**. This will require network operators and RSPs to create commercially led solutions without the need to rely on formal regulatory intervention. With structural separation in place, network operators have every incentive to grow wholesale demand, which was not the case in a vertically integrated structure. If structural separation is coupled with a coherent regulatory framework that considers investment, quality and price together, this affords the opportunity for a step change in the way industry participants approach their relationships with each other and consumers;

43.4 **geographically-averaged pricing continues to be desirable**. A single regulatory framework that deals with both copper and fibre together at the bitstream layer would support geographically averaged prices. If copper and fibre are regulated separately, prices in rural areas are at risk of sharply rising as consumers in urban areas migrate off the copper network onto fibre;

43.5 **the relative price of copper services should not inefficiently provide incentives to RSPs or network operators to delay migration to UFB services**. We agree that effective migration is critical to realising the government's ultimate objective in initiating the UFB and RBI build processes. Proactive steps need to be taken to identify and address regulatory or market barriers that might unnecessarily impede migration to enhanced services, coupled with a clear consumer-led plan for migration;

43.6 **price stability for all affected parties is a key concern as it is essential for avoiding price shocks through allowing for recovery over longer timeframes**. Short-term profit-taking at any layer of the market and changing regulatory approaches to pricing are the two principal causes of price instability. There may be transitional mechanisms that can be put in place to mitigate the risk of price shocks in the transition from the current regulatory framework to a utility-style framework; and

43.7 **the regime should be simple and minimise disruption to the industry**. These design features are critical to promoting nationwide growth in the fixed-line market and take-up of better broadband products and services. Ultimately, this objective requires a pragmatic, commercial approach and may mean a preference for industry rather than regulator-led solutions.

44 We think that stating these objectives is important as it underscores what is at stake in the reform process.

BBM provides the framework for fit-for-purpose regulation

45 Given the current industry structure and the objectives that would underpin any fit-for-purpose regime, we believe a utility-style BBM is the most appropriate framework for principled, effective regulation of fixed access wholesale telecommunications in New Zealand. The Discussion Paper identifies a BBM approach as an option for reform, with the Government's preliminary view that it is the most appropriate methodology for UFB networks and an option for the copper network.

46 We support a BBM approach for the regulation of both the UFB and copper access networks, even if it is only as a regulatory backstop. We also believe there is benefit in introducing special access undertakings into the regulatory toolkit – with the option for fixed network operators putting in an undertaking in lieu of a regulator-led BBM. We outline some of the specific benefits of the BBM approach in **Appendix Five**. The principles that underpin the BBM approach provide the necessary confidence that efficient costs incurred in the supply of network services can be recovered. As the Incenta Report explains:

> The central design feature of the building block regime is to provide some certainty to investors that costs efficiently incurred will be recoverable – which is directed to the central problem of regulation of encouraging sufficient investment – but with financial incentives then overlaid to encourage efficiency in service provision for the benefit of consumers.[12]

47 This view is supported by the Professor Littlechild Report, which emphasises the orthodox nature of the BBM approach:

> Some kind of BBM approach has been found appropriate in most countries and in most sectors for over a century. It has been relatively simple to understand and operate. It has facilitated substantial investment at broadly acceptable prices and quality of service. [13]

48 A BBM framework also has the benefit of lifting the regulatory conversation for the benefit of all parties. Currently, the regulatory process is dominated by ongoing lobbying from all sides over the isolated (but fundamental) issues of wholesale access prices. While this was the regulatory focus of the regime as designed in 2001, it ought not to be the focus going forward. We now have a real choice to move beyond the lengthy, multi-year debates that have characterised the status quo to a place where regulatory parameters can be locked down quickly and commercial innovation can start.

49 The Government's vision of better broadband will not be achieved through a regime that continues to promote protracted regulatory debates about welfare transfers and where pricing conversations occur in isolation to related matters of quality and

[12] Incenta Economic Consulting "Post 2020: TSLRIC vs the Building Block Approach" (October 2015); page 27.

[13] Professor Stephen Littlechild "Regulating communications for the future: some options for customer engagement within a building block approach" (October 2015); page 19.

investment. An ambition of delivering better broadband requires all parties to be focused on consumer needs rather than prices alone. This requires a focus on meeting consumer needs (both now and into the future) and achieving migration onto the fibre network. This can best be achieved through the principles that underpin a BBM, which acts as a catalyst for complete conversations about how price, quality and investment are tied together in the delivery of regulated services.

Pragmatic transition to a fit-for-purpose framework

50 Our preferred approach is to work towards regulation based on a BBM. However we are mindful that the immediate introduction of a BBM could place a significant regulatory burden on both the regulator and the industry. A BBM will also not serve to deliver early pricing certainty to the industry. Detailed bottom-up processes will potentially see post-2020 prices left unknown by the industry for years to come.

51 Other options that would reduce the regulatory burden, allowing the industry to focus its resources on promoting a customer/consumer-led migration (rather than regulator-led) include:

51.1 long-term contracts that are supported by a change to the regulatory framework. However, such contracts may be challenging in a reference offer environment, with potentially differing views amongst RSPs; or

51.2 a regulatory undertaking proposed by those subject to the regulation, including the potential for RSP input on product proposals. This is akin to NBN's "special access undertaking" – a vehicle enabled in Australian legislation.

52 We would welcome the opportunity to pursue such alternatives. In particular, we can see value in initially placing the onus of detailing a BBM-based regulatory commitment on the regulated rather than the regulator. The advantage is confidence that any undertaking ultimately accepted not only delivers the key regulatory objectives of utility-style regulation and avoids price shocks at a critical time, but also satisfies the commercial needs of Chorus (or LFCs) and investors. A regulatory undertaking proposal is a simple but extremely powerful additional mechanism that we think is long overdue in the New Zealand regulator's toolkit.

53 While we believe a regulatory undertaking option would lead to a resolution earlier than any regulator-led process, there are further alternatives that could deliver certainty sooner. For example, a pragmatic transitional arrangement could simply defer the complexity of applying a BBM until a later point in time.

54 Of course any transitional arrangement would only have the effect of deferring the detail of a BBM for a certain period. But greater certainty of the shape of any subsequent application of BBM would be provided through specifying fixed principles within any transitional undertaking up front. This would lock in the key elements of how a BBM would be applied upon expiry of the transitional undertaking – ensuring a smooth transition at 2020 or at the end of the transitional period.

IMPLEMENTATION

55 For the reasons explained in the previous section, we believe that a utility-style BBM is the right framework for fixed telecommunications regulation in New Zealand. However, as the Discussion Paper signals, there are a number of design choices that need to be worked-through before a BBM is implemented. These design choices include:

55.1 the form of control - we consider that the benefits of a BBM approach to pricing could be secured by employing a revenue cap as the form of control. A wash-up account will also ensure no over-recovery and smooth recovery of investment into the future;

55.2 the vehicle for implementing a BBM – we think that an SAU is the best solution for implementing a BBM, with a legislative fall back to a regulator-led bespoke BBM;

55.3 the methodology for determining the initial RAB – we think that a line in the sand approach – where prices and revenues are used to determine the initial RAB – could be employed to mitigate the risk of price shocks and reduce regulatory debate;

55.4 managing the migration from copper to fibre – we think that the migration should continue to be consumer-led. For example, a percentage of uptake in an area could indicate general consumer acceptance of fibre and could act as a trigger for notice of withdrawal;

55.5 the scope of the RAB – we believe that both copper and fibre should be covered by the same RAB as it allows copper/fibre price relativity to be managed in a way that supports migration and also avoids copper prices increasing as customers migrate off copper;

55.6 anchor products – are an option to provide price certainty, enable product differentiation and implement TSO solutions which could be within a simple revenue cap;

55.7 transition to a BBM – there may be some value in a transitional arrangement which could include product and price paths for a transitional period to 2030. These arrangements could form the starting point for the introduction of a BBM at the end of the transitional period; and

55.8 the point of regulation – the choice is to either have regulation at the layer 2 bitstream level, layer 1 unbundled GPON level or both.

56 A revenue cap (with appropriately defined anchor products) could marry the stability of the RAB-based approach with the flexibility to allow the market to respond to technological developments and changing consumer preferences. We also see that reduced complexity and support for social goals (such as geographically averaged

pricing) can be achieved by combining copper and fibre network elements into a single RAB.

57 We expand on each of these choices below.

BBM with a revenue cap

58 We see real benefits in the BBM/revenue cap model. It promotes an environment that is stable and predictable, supports investment and innovation, and recognises commercial interests in a way that is not possible under TSLRIC pricing regulation. This carries with it a number of immediate advantages over the current regime:

58.1 it offers more stable and predictable regulation, which lowers the cost of capital for investment and allows RSPs to commit to retail offerings with appropriate lead times;

58.2 it recognises the sector's commercial interests, including a fair return on efficient investment without the prospect of windfall gains or losses;

58.3 it provides an appropriate degree of regulatory control over monopoly infrastructure and services, offering effective protection for consumers from excessive prices or sudden price movements; and

58.4 It allows for wholesale prices, service quality and a fair return on efficient investment to be considered holistically, providing targeted incentives to invest and to innovate across the sector.

59 We describe the benefits of a BBM in more detail in **Appendix Five**

BBM vehicle

60 We are also attracted to the BBM approach because its implementation can be tailored to the particular context in which it is required to apply.[14] While BBM approaches are becoming more prominent in respect of telecommunications services internationally, any regulatory regime will need to deal with sector-specific issues such as the retention of parallel copper and fibre networks.

61 An initial RAB could be based on, and move forward from, today's prices and revenues. This is known as a "line in the sand" approach, and was used in Australia when moving from TSLRIC to a BBM in order to mitigate the risk of price shocks. A simple revenue cap can then be derived from the RAB and other building blocks.

62 With a lack of flexible solutions in an academic regulatory toolkit, and the significant risks of getting it wrong, we see strong merit in the network operator being tasked to submit a regulatory undertaking (known as a Special Access Undertaking in Australia) as an alternative means to apply BBM in a way that meets both key commercial regulatory objectives in the absence of a full regulator-led approach.

[14] Incenta Economic Consulting "Post 2020: TSLRIC vs the Building Block Approach" (October 2015); page 23.

63 This new flexibility would also allow for the full range of government policy objectives to be incorporated into the regulatory regime in a balanced way.

64 The Discussion Paper specifically draws attention to implementation complexity as an issue that warrants further consideration and discussion. We acknowledge that there are questions over the most appropriate means of implementation, but make the following comments:

64.1 the experience with TSLRIC demonstrates that alternative regulatory frameworks do not avoid the need to address a wider range of policy outcomes. Rather, these associated issues are left to be dealt with through the exercise of regulatory discretion. TSLRIC simply doesn't address wider policy considerations, which has inevitably resulted in suboptimal outcomes;

64.2 as a consequence, any regulatory regime needs to deal with the complexity upfront in a measured and transparent fashion. A BBM approach does not add to the complexity of the regulatory scheme, but provides a means of addressing that complexity without compromising the core goals of sector regulation (e.g. efficient investment, protection for consumers); and

64.3 while addressing this complexity can be challenging, it is perfectly manageable as long as the focus is on clearly articulating the desired policy outcomes for the sector and carefully constructing a fit-for-purpose framework around those objectives. The Discussion Paper is a very useful first step in this regard, and we are confident the Government can develop a regime that benefits all participants.

65 In any case, we consider that a single RAB for copper and fibre which is based on, and moves forward from, current prices could significantly reduce the potential complexity of any implementation of BBM.

A special access undertaking should be used for implementation

66 We think SAU should be enabled as an option. This would involve the regulated entity developing an undertaking to implement a BBM which meets the design parameters set by Government/the Minister and is verified by the Commerce Commission (using its economic regulatory expertise).

67 RSPs and consumers would still be able to contribute to addressing the product design and network access issues that matter most to protecting and promoting their interests, which makes sense when it is considered that it is the sector participants themselves who are directly affected by these elements of the regime and have the best understanding of their impact.

68 The benefits could be significant and we outline some of the key benefits and considerations for an SAU implementation mechanism in **Appendix Six**. The essence of an SAU-based approach is to provide a greater role for sector participants to determine the regulatory and commercial parameters of the sector. It provides for a

"propose/respond" approach to regulatory settings that allows the sector to front-foot established and emerging issues by addressing them in a comprehensive way.

69 Because SAU proposals will consider the full range of drivers influencing the sector and not isolated questions of regulatory detail, commercially sustainable outcomes are more likely to result for all parties. The role of the regulator in this scenario is still important to ensure policy objectives are met. This is appropriate and proportionate where we and RSPs have the most direct and relevant knowledge of how regulatory outcomes impact our commercial operations, with consumers supporting on trade-off decisions between investment, quality and price.

70 In order to provide a high degree of certainty and predictability in the regulatory consideration of access undertakings, some regimes have incorporated the use of 'fixed principles'. This is the approach used in Australia, and it appears to have been a successful initiative. Fixed principles permit particular regulatory concepts to be committed to within an undertaking but in a way which survives the undertaking itself. This serves to provide even greater certainty over key principles and signals to all parties a degree of stability in future regulatory decision making.

71 An SAU is also likely to be the most effective mechanism for delivering on the Government's goals for the sector. It allows for an appropriate degree of flexibility in implementation that it can adjust to the changing market environment, even where this change occurs rapidly. This is important as it enables a simple, flexible framework for consideration of investment, profit levels, maintenance of service quality, and the level and stability of prices within pre-established legislative parameters.

72 Finally, while there are some factual differences to consider (such as the fibre only network), the Australian experience with developing an SAU for NBN is instructive. An undertaking that satisfies both the ACCC's regulatory requirements and NBN's commercial drivers has been lodged and accepted, and this has provided the certainty and commercial pragmatism to allow the sector to invest in bringing fibre broadband services to consumers.

***A bespoke 'IPP' type* BBM mechanism is a second-best option**

73 Some kind of regulatory backstop will still be needed to provide network operators with appropriate incentives to reach a commercially sustainable position that maximises the benefits to consumers. The more clarity around the backstop, the greater the probability of consensus around the SAU and associated industry processes.

74 While an SAU approach remains our preferred implementation mechanism for the reasons outlined above, a bespoke, legislatively based "individual price path" (**IPP**) type mechanism may be able to be tailored to secure many of the outcomes the government is seeking in the event that a regulatory undertaking cannot be agreed.

75 Were an IPP mechanism adopted, we consider that efforts should be made to secure the simplicity and flexibility that are key benefits of the SAU approach. As with the

SAU approach, this will require that key elements of the regulatory regime are directly incorporated into the governing legislative framework. The Minister is in a strong position to assess the available evidence and determine the appropriate setting.

76 Initial regulatory valuations, anchor product selection and similar issues ought to be addressed upfront without recourse to long-winded regulatory dialogue so that the sector can get on with developing products and services that New Zealanders value. For example, a "line in the sand" approach, where prices and revenues are used to determine an initial RAB, could be used to avoid price shocks and lengthy regulatory debates.

77 Once key regulatory parameters are established in legislation, a "Part 4-like" framework could begin operation quickly without initial teething issues.

Migrating from copper to fibre

78 We support the policy for a consumer and market-led transition away from copper services towards fibre. Government investment was intended to bring forward deployment of next generation networks, and the advanced services associated with those networks. Investment alone, however, cannot achieve those goals. That investment risks languishing without returning the necessary social and economic dividend for New Zealand in a timely fashion unless the regulatory regime promotes a sensible migration strategy.

79 A migration policy should enable a consumer-led transition to fibre, avoid inefficiently retaining legacy technology, enable efficient investment and provide sufficient support and flexibility for RSPs to be migration-ready.

Potential barriers to migration

80 A number of barriers are still in place which prevent timely migration. These include standard terms determinations (**STD**s), required by the existing legislation, which require us to supply copper-based wholesale services on RSP request. These determinations are a feature of the historical access regime that does not take into account the UFB and RBI investments. The STDs do not account for migration and it is unclear whether or how the Commission has a role in assisting migration.

81 A further potential barrier is our commercial TSO arrangements with Spark, which require us to continue providing copper baseband if Spark is unable to offer fibre-based voice services that enable it to meet its retail level TSO commitments. This commercial compromise has resulted because, while the TSO is technology-neutral, in reality, a wholesale product that is designed to meet a particular social need will not be withdrawn until the RSP has access to an appropriate alternative. This contractual commitment may therefore interfere with migration to fibre-based services.

82 These barriers are driving costs to consumers. They risk costing the sector and delaying the economic benefits that motivated the Government's initial investment in the UFB network.

Policy to promote migration

83 As such, we think there is an important role for good regulatory policy which will encourage consumers to consider the benefits of improved quality and services and enable removal of barriers to migration.

84 The legislative framework should support removal of any barriers to migration, including current determinations and legislative requirements underpinning those barriers - which should be identified and removed. The detail of any migration might be included in an SAU, including:

84.1 a migration process should be enabled which ensures that consumer acceptance of fibre is the trigger for any withdrawal or switch-off of copper. For example, a threshold of uptake of fibre-based products in a designated area could be used as an indicator of sufficient end-user acceptance of the new network services;

84.2 efficient investment decisions should be promoted, such as enabling investment into fibre transition in cases of ageing copper or overhead-underground conversions;

84.3 RSPs and other third parties should be encouraged to be migration-ready by setting up a process for us to provide sufficient notice once consumer-related triggers are reached; and

84.4 RSPs providing copper-dependent services should be required to test solutions for migrating to fibre. We are happy to provide suitable testing environments and assistance.

Simplicity over complexity

85 There are several choices available to the government within the review that could add considerable complexity to the new regime. We encourage the Government, when assessing options, to reflect on the likely value in opting for simplicity over complexity (or, where available, deferring additional complexity) particularly given the value of the sector focusing on consumers and migration over lengthy regulatory proceedings.

86 We see a number of opportunities to simplify the design of the BBM revenue cap regime in a manner that results in pragmatic outcomes for the Government, the industry and consumers. In particular:

86.1 copper and fibre should be covered by the same RAB;

86.2 a revenue cap with a wash-up account could be applied;

86.3 price certainty could be given on select anchor products; and

86.4 an industry-led process for adding new products and making new investment should be developed.

Copper and fibre should be covered by the same RAB

87 The Discussion Paper floats the idea of a single RAB for our copper and fibre network assets in its discussion of BBM implementation issues. We think the single RAB approach has a number of advantages. The first is that it avoids the complexity associated with establishing separate RABs for separate classes of assets and removes the need for methodologically challenging regulatory process, such as cost allocation. This gets the new regime up and running sooner. For example, a single RAB allows for a more flexible approach to be taken to depreciation profiles. This can better reflect the transitional phase of development that the market is currently undergoing.

88 As Houston Kemp[15] and Incenta Economic Consulting[16] advise, a single RAB also allows copper/fibre price relativity to be managed in a way that supports migration. Separating copper and fibre assets into separate RABs, (or keeping copper outside of the BBM regime altogether) would create a risk of price relativities moving in a way that discourages migration, since there is no obvious mechanism for bringing prices into line with revenues from services that are being set according to individual revenue caps for separate copper and fibre networks. A combined RAB builds in the flexibility to send the right price signals to maximise fibre uptake.

89 If there is no cost-allocation, this also allows for nationally averaged prices across our network – even though the cost of rural copper lines could increase as urban consumers move to fibre.

A revenue cap with a wash-up account

90 A key benefit of a revenue cap is that it allows us the opportunity to earn a fair return, but does not permit over-recoveries above that level of fair return. If there is no complex cost allocation, copper and fibre price relativities can be managed (even if copper costs increase as people migrate to fibre) and complexity for the industry is reduced. A revenue cap appears to be the best approach in innovative environments such as telecommunications – as new products can be added easily.

91 A dynamic environment requires market responsiveness and appears better suited to a revenue cap approach. This is because both a weighted average price cap and individual product price caps require demand forecasts. Every time a new product or service is added, the underlying calculations would need to be revisited and regulatory approval sought. This would involve complex judgements about the forecast take-up of new products, and significant administrative difficulty and cost. It would also involve constant price adjustments for RSPs.

92 The electricity sector is facing challenges with WAPC under Part 4 of the Commerce Act, where emerging technologies mean changes in demand and service types. The problems associated with implementing a WAPC under these conditions – which may be more pronounced in the communications sector – stem from its inability to handle

[15] Houston Kemp "Regulatory Framework Options for Chorus Post-2020" (October 2015); page 2

[16] Incenta Economic Consulting "Post 2020: TSLRIC vs the Building Block Approach" (October 2015); page 24.

changes in the service offerings or significant, unpredictable, fluctuations in the product mix. [17]

93 The appropriateness of a revenue cap approach has been confirmed in expert advice that we have received from Houston Kemp:

> Given the rapidly evolving nature of the telecommunications sector, in our opinion a revenue cap framework is likely to offer the best opportunity to meet MBIE's, and wider government's, objectives for the sector. Under such a framework, Chorus (and other entities to which it applies) would have the flexibility to change its product and pricing mix to accommodate innovations and changes in customer demand. At the same time, a revenue cap provides assurance to customers that Chorus will not be able to exploit any market power it may have. [18]

94 Under a revenue cap model, new products can be added simply and quickly in response to consumer needs. The product pricing flexibility offered by a revenue cap would enable us to work with RSPs to provide a price/quality/product offering that is more likely to satisfy consumers.

95 The revenue cap should be combined with a 'wash-up' account that returns revenues to consumers (in the case of over recoveries) or recovers revenues (in the case of under-recoveries). This provides price stability for RSPs as we could smooth recovery of investment into the future, which is particularly important in the early years of the regime where UFB2 build will be continuing apace.

96 As outlined in the Incenta Report, incentive mechanisms could also be developed that share efficiency savings in opex and capex for an agreed period of time, when savings are then passed onto consumers.[19]

Price path certainty on anchor products

97 As previously outlined, a simple revenue cap will provide a constraint on cost recovery overall. This, coupled with the fact that structural separation removes concerns over discrimination, means that a detailed and contentious cost allocation methodology is not required.

98 Our proposed framework ensures that customers have protection against over-recovery and discrimination whilst also avoiding many of the risks associated with detailed cost allocation. The Plum Consulting Report points to several of those risks when applied to fibre, concluding that cost orientation adds complexity, is open to dispute, can blunt incentives for efficient investment and is likely to collapse service-price differentiation for fibre products.[20]

[17] Houston Kemp "Regulatory Framework Options for Chorus Post-2020" (October 2015); page 4.

[18] Houston Kemp "Regulatory Framework Options for Chorus Post-2020" (October 2015); page 6.

[19] Incenta Economic Consulting "Post 2020: TSLRIC vs the Building Block Approach" (October 2015); page 33.

[20] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); pages 4-7.

99 Maintaining service-price differentiation supports policy outcomes. In particular, it enables an efficient migration from copper to fibre and supports digital social inclusion by enabling consumers to transition to affordable entry-level fibre services. The Plum Consulting Report shares this view, explaining that:

> A degree of pricing flexibility and scope for service-price differentiation helps ensure appropriate incentives for innovation and investment, but also helps achieve digital inclusion and efficient network transition and rationalisation.[21]

100 We believe that the establishment of anchor products could best provide price certainty for customers, while also addressing concerns around consumer affordability and copper-to-fibre transition. An anchor product approach could involve the following:

100.1 the establishment of anchor products, together with price paths and service levels appropriate for a post 2020 environment. Anchor products could include:

(a) a number of key copper and fibre bitstream products for broadband and technology neutral baseband for voice to continue to support the voice TSO requirements; and

(b) affordable entry level copper/fibre products in order to assist copper-to-fibre migration and avoiding the risk of copper prices increasing in rural areas as urban customers migrate to fibre;

100.2 prices could be set for anchor products by making product offers to RSPs. This would be supported by a consultation process which enables a holistic conversation on price, quality and investment. While the process is industry-led, we also envisage a role for representative consumer groups to ensure that the product specification is appropriate for the market;

100.3 both the prices for anchor products and the specifications of the products themselves would change over time. In terms of price, this should only change according to a pre-determined price path to ensure price certainty for RSPs and for consumers. As is usual in utility regulation, price paths should be designed to reflect increases in our costs over time;

100.4 the specification of the anchor products should evolve to reflect the market. This means that the framework will have the flexibility to keep pace with technological change and respond to ever-increasing consumer demand for speed; and

100.5 we should also be able to offer and respond to market needs with additional, differentiated, non-anchor products, to introduce new products and services and to remove obsolete products and services following industry consultation. The balance of anchor and non-anchor products requires

[21] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); page 4.

further discussion and high level pricing principles might support how forward price paths are set.

101 Importantly, within this framework, anchor and non-anchor products would be subject to an overarching revenue cap to protect customers from over-recovery; whilst also providing the flexibility to differentiate prices to encourage New Zealanders to get economic benefit from faster broadband. Anchor products will also act as a constraint on the ability to price non-anchor products at excessive levels.

A process for adding new products and making new investment

102 We see a place in any new regulatory regime for an RSP and consumer engagement process that places responsibility on the network operator to manage the engagement process, and is clear about the respective roles of RSPs, consumers and the regulator. RSP and consumer engagement is essential to the operation of many elements of an effective services/change model. It includes processes that enable products to be developed that consumers want, that have sufficient demand to be commercially viable and from which both consumers and the RSPs will gain value. These models work well when all affected parties, including RSPs and consumers, are encouraged to participate in the design of products and to come up with their own product ideas.

103 RSP and consumer engagement processes can reduce the burden on market participants of expensive, time consuming and uncertain regulatory procedures. For this reason, we consider that industry-led engagement processes are generally better than competing models that place an over-reliance on direct regulatory supervision. Regulator-driven processes place a high burden on the regulator to make decisions without the benefit of market participants' information or perspective. In the RSP engagement model, the regulator is not treated as a decision maker. If the regulator has a formal role at all, it is usually as a facilitator assisting market participants to achieve a result that is acceptable to each of them and in the public interest.

104 The RSP engagement approach also has the potential to satisfy the interests of government in wholesale service provision. The model addresses many of the key concerns with a monopoly wholesale service provider and asset owner by effectively mandating a fair, reasonable and non-discriminatory process.

105 In his paper, Professor Littlechild outlines recent regulatory developments in the UK and US that have sought to improve on traditional regulatory approaches by incorporating RSP engagement processes. He concludes that:

> regulation with an emphasis on customer engagement can be a means to encourage commercial flexibility, to enable companies and customers to work together to identify and provide preferred new products, services, prices and quality levels within a high-level framework specified by the regulatory body.[22]

[22] Professor Stephen Littlechild "Regulating communications for the future: some options for customer engagement within a building block approach" (October 2015); page 21.

A transitional arrangement to 2030

106 Aligned with the TCF submission, our preferred approach is to work towards regulation based on a BBM. Building on the TCF's views, we have offered further proposals in this submission. Acknowledging general alignment in the industry of the need for more commercial solutioning and the need to avoid price shocks, we are cognisant that the immediate introduction of a BBM could place a significant regulatory burden on both the regulator and the industry. Depending upon design details and requirements put on a regulator, it could take years before any certainty shows up. This would not meet either a smooth transition without the risk of price shock or a line of sight to certainty quickly – and at a time when the industry is already engaging in a substantial transition from copper to fibre and a fast paced and changing consumer environment.

107 The option of allowing for a pragmatic transitional arrangement for a specified "first period" from 2020 to 2030 may be appropriate.

108 In line with the TCF submission, Chorus will lead on product discussions with customers and copper-to-fibre migration principles in parallel to, and in the context of, this review.

109 A transitional arrangement is not a substitute for significant legislative reform. The current legislative framework is now well out of date and an overhaul to bring in a BBM approach should be incorporated into legislation upfront, to make it clear what will apply either as a backstop to commercial solutions if they were possible, or at the end of the transitional period. This foundation would also inform a transitional arrangement so that no price shocks occur at 2020 or at the end of the transitional period. In other words, the transitional arrangement is formed against the backdrop of utility-style regulation.

110 Consistent with a BBM model, product and price paths in a transitional model could be based on, and move forward from, today's products and prices with some product and price paths defined as "anchor" products and flexibility for additional products. We explain above that this would ensure consumers have price certainty and access to affordable services, avoid price shocks and maintain an appropriate copper/fibre relativity.

111 Product and price paths at the end of the transitional period could then be combined with demand and expenditure forecasts as a starting point in creating a "line in the sand" initial valuation for the combined copper and fibre RAB to move forward.

112 In addition to price stability, this approach would:

112.1 ensure we and RSPs have certainty, so that we can make investment decisions during the transition period;

112.2 result in a simpler and more pragmatic approach that removes contention. It can be implemented quickly – avoiding lengthy regulatory processes and reducing industry disruption; and

112.3 bring benefits in achieving an efficient copper-to-fibre migration. The calculation of price paths would make an implicit assumption about copper transition, which could be followed forward into a BBM framework through the calculation of a "line in the sand" initial valuation. This would ensure that we are not over-compensated for copper assets that are no longer in use.

POINT OF REGULATION

Bitstream product differentiation

113 We think that the availability of a differentiated range of bitstream products enables a good balance to be struck between optimal consumer outcomes and enabling incentives for further investment. It also enables an efficient migration from fibre to copper by enabling consumers to transition to affordable entry-level fibre services.

114 The current UFB model favours product differentiation, offering a portfolio of fibre bitstream products which vary by speed. Bitstream product differentiation offers a menu of different price and quality options to RSPs which can in turn be used to offer a range of products to consumers. This allows consumers to have access to fibre products that meet a wide range of different needs – from high speed products accessed at higher prices to low speed, entry-level products that meet social objectives of digital inclusion.

115 The main benefits of bitstream product differentiation support the following policy outcomes:

115.1 **digital social inclusion**. With differentiation, consumers with a low willingness to pay for fibre products can have access to an entry level fibre product, priced affordably and at an attractive level relative to their current copper-based products;

115.2 **creates incentives for investment**. Differentiation can boost uptake and revenue as consumers are better able to access bitstream products that are aligned with their willingness to pay. As Plum Consulting highlights, this leads to a greater level of efficient investment at wholesale and retail levels in the industry;[23] and

115.3 **efficient copper to fibre migration**. Differentiation offers access to entry-level fibre products, priced at an attractive level relative to copper which encourages and enables efficient migration.

116 As such, we see bitstream product differentiation as a useful tool for enabling a range of positive policy outcomes. Plum Consulting has explored how layer 1 fibre unbundling might impact bitstream product differentiation and concluded that fibre unbundling is incompatible with differentiated prices at the wholesale and retail level, as set out in their report:

> if an unbundled product is available which offers the full capability of fibre at a single wholesale price, then any retailer who attempts to charge a premium for the highest possible

[23] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); page 8.

> speed will be undercut and one who charges less for a lower speed value package will not find it viable.[24]
>
> Speed-price differentiation must exist at the wholesale level to be sustainable at the retail level[25]

117 This has important implications on investment incentives and digital inclusion. This is because differentiation of prices (based on consumer valuation of high and low quality products) is critical for the promotion of high utilisation of the network and, in turn, in achieving low unit costs and low average prices. This is especially important for the newly constructed UFB network given very high fixed costs and low marginal costs – requiring the recovery of fixed costs to occur in the least distortionary way.

118 We have also considered whether the above concerns raised in relation to fibre unbundling are different to copper unbundling issues. There are some fundamental differences, including:

118.1 differentiation looks different for fibre bitstream products. As Plum Consulting notes, copper products are largely differentiated on the basis of data caps, technology, contention and customer service. However for fibre, bitstream products are differentiated on the basis of speed; and

118.2 the network operator cannot differentiate the quality of the service provided over layer 1 unbundled fibre - this is largely determined within the electronics segment of the network. This means that a single unbundled fibre product would be available, which would offer the full speed capability of fibre for a single price, undermining efficient price differentiation (and geographically averaged bundled prices).[26]

119 The Plum Consulting Report summarises the issues as follows:

> To sum up, the trade-off involved in layer 1 unbundling differs between copper and fibre. With fibre the foregone opportunity for service-price differentiation reduces investment incentives and undermines scope for entry level packages, whilst the benefit of third party innovation in terminating equipment may be smaller than for copper, may involve an efficiency cost given

[24] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); page 7.

[25] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); page 8.

[26] For example, without controlling the electronics, Chorus could not sell the layer 1 at two different prices – one for faster downloads and another for slower downloads. Consequently, Chorus could not sustain a high priced fast download bundled product (with an implicit high price for use of the dark fibre) because any access seeker using that bundled product to supply end-users could be undercut by another access provider taking unbundled GPON (at a lower price) and supplying fast downloads over that using its own electronics. This will drive out the high price/quality bundled offerings and, ultimately the lower priced/quality bundled offerings (given the former fund the latter). The same logic applied to geographically averaged bundled access prices. By definition, geographically averaged bundled prices do not reflect differences in electronics costs between geographies. Consequently, access seekers buying bundled access in low electronics costs regions will have an incentive to unbundle because their cost will be lower than the (geographically averaged) price that is implicit in the bundled access price. This will mean that the bundled access price must rise as the service becomes more heavily concentrated in high cost areas.

> that third parties have a smaller set of options for innovation than the network operator and may also impact negatively on retail competition.[27]

Point of regulation

120 In light of the above, there is a policy choice to be made as to whether the point of regulation should be at the unbundled layer or the bitstream layer for network operators.

Fibre unbundling and incentives for innovation

121 There may be benefits in RSP innovation for unbundled GPON. This needs to be carefully weighed against New Zealand's experiences with copper unbundling, the market structure and potential costs which consumers will bear.

122 We recognise that theories point to unbundling as being an important incentive to third party innovation on the copper network. However Plum Consulting advises that these theories do not necessarily apply in equal measure in a fibre context, that they may produce diminishing returns, and suggest that network operators have a larger set of options to innovate for the benefit of consumers than third parties.

123 We note also that there is no successful example of fibre unbundling anywhere in the world on which to draw. Singapore, which is often held up as an example, turns on very different circumstances. It is an experiment in developing a highly disaggregated sector, where separation at layers 0, 1 and 2 were initially contemplated. However, this unique network structure has not survived.

124 The Singapore multi-layered model has also only resulted in relatively modest benefits (if any) with significant costs. There have been many challenges in service provisioning times due to the multiple levels of co-ordination required between RSP, Layer 2, Layer 1 and, until the merger, the Layer 0 operator. To order a single end user service or repair a fault, there are potentially 4 layers of operators to navigate from the RSP down.

125 In contrast, in 2011, New Zealand chose wholesale only operators by competitive tender at the layer 2 bitstream level.

126 Chorus also understands that the management of churn between the multiple layers has been a very significant problem and hence a cost to the model. The inability to manage churn has resulted in additional unnecessary fibre build, additional truck rolls and significant delays. We address these points relating to the Singapore experience further in **Appendix Seven**.

127 In the United Kingdom, Ofcom has also pointed to the different considerations in fibre:

> the net benefit of passive input based competition over the active alternative may reduce under next generation access. This is partly because the relative static costs of passive

[27] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); page 9.

based competition may be higher than today, and partly because the relative benefits in terms of scope for innovation it offers over active competition may be lower as the prospects for innovation from competition based on active inputs improves.[28]

128 In New Zealand, fibre bitstream products offer the opportunity for RSPs to innovate as if RSPs owned the network. It is in the wholesalers interests to allow this innovation to occur because innovation drives uptake of fibre services, which in turn drives revenue and which in turn drives further investment. Fibre unbundling therefore needs to be considered in the context of the significant existing benefits offered by layer 2.

129 Fibre unbundling does in some circumstances have the potential to promote dynamic efficiency in the provision of electronic services. This is most likely to be the case if:

129.1 there are no material economies of scale in providing electronics or economies of scope in providing both fibre and electronics;

129.2 there is the potential for material cost savings (quality improvements) in the supply of electronics;

129.3 competition in the retail market can be relied on to pass through average industry cost savings in lower average prices paid by end-users; and

129.4 direct administration/implementation costs are small.

130 If these conditions are satisfied then competition between providers of electronics are likely to promote investment in the most efficient type of electronics. In which case, both static and dynamic efficiency could be promoted if competition forces all providers to innovate in the supply of electronics. The potential costs of unbundling exist in circumstances where the above conditions do not hold. We discuss the costs and benefits of layer 1 unbundling in more detail in **Appendix Seven**.

131 Economies of scale exist if the unit costs of providing electronics decline the larger the number of end-users (in a specific geography) that are being served. Economies of scope exist if there are coordination benefits from providing both electronics and GPON. For example, if investments in one are substitutable for the other then it can be efficient for a single provider to jointly determine the optimal mix of both. If economies of scale are sufficiently strong then the most efficient outcome will be for there to be a single regulated provider of electronics. If economies of scope are sufficient then that provider will most efficiently be integrated with the GPON provider.

132 If there are, in reality, significant economies of scale and/or scope in the provision of electronics then attempting to create competition in this sector is likely to create more harm than benefits to end-users. The Plum Consulting Report points out that

[28] *Future broadband. Policy approach to next general access,* Ofcom, 26 September 2007.

layer 1 unbundling would involve significant trade-offs in terms of weakened investment incentives because it is more difficult to create meaningful speed-price differentiation.[29] Any RSP that attempts to charge a premium for the highest possible speed will be undercut, while an RSP that charges less for a slower speed may not find this offering viable.

133 The Discussion Paper does not provide an assessment of whether there are material economies of scale or scope in the provision of electronics on the UFB network. We consider that the existence, or not, of these economies is a threshold question that needs to be addressed before unbundling is presumed to create benefits. In this context, an important question will be how many electronics suppliers the market can support. For the reasons described below, if some geographies can support 1 or 2 additional suppliers of electronics at minimum efficient scale, their entry may still raise prices to end-users.

Choosing the point of regulation

134 The Government recognises in the Discussion Paper the challenges presented by fibre unbundling. There is considerable complexity in ensuring the viability of unbundling fibre networks. Any fibre unbundling proposal would also need to be considered in the context of the particular industry structure of the fixed-line sector in New Zealand, in particular structural separation, and policy decisions that have been made in New Zealand around that form of separation.

135 Consideration should be given to the following:

Table 1: Considerations in choosing the point of regulation

	Fibre bitstream	Fibre unbundling
Innovation	Innovation by open access network operator	RSP innovation - scale may be unclear[30]
Differentiation	Enables differentiation which can boost demand, support digital inclusion and enable efficient copper-to-fibre migration	Single unbundled product could collapse differentiation at the retail level
Pricing	A range of price points across differentiated products – entry level products may be below cost	Prices based on network providers' avoided costs adding complexity; likely to lead to a higher entry level retail price as majority of costs are at network layer

[29] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); pages 7-10.

[30] Plum Consulting "New Zealand's telecommunications policy – a way forward" (October 2015); page 8.

	Fibre bitstream	Fibre unbundling
Nationally averaged prices	Consistent with nationally averaged prices	May be inconsistent with nationally averaged prices due to avoided cost concept with unbundling likely to be concentrated in urban areas
Competition	No unbundling, however bitstream services would offer a level and open playing field for RSPs	Introduces competition at layer 2; however may impact competition at the retail level due to economies of scale in unbundling and likely switching costs for end-users where Optical Network Terminals (ONTs) in the home need to be replaced
Investment incentives	Increases incentives for investment due to heightened uptake and relative simplicity and predictability of framework	May stimulate investment by unbundled RSPs, however investment incentives may decrease overall due to falling demand and difficulty in predicting demand for unbundled access.

136 In **Appendix Seven** we describe some international approaches to fibre unbundling. We note that the use of layer 2 services to provide an end-to-end service is broadly consistent with other wholesale product designs internationally. There are no ready examples to draw on of successful layer 1 unbundling.

LEGAL FRAMEWORK

137 For a BBM approach to regulation to be effective, it needs to be underpinned by a transparent and predictable legal framework. Once the general policy settings are in place, the specific regulatory decisions that are still to be made need to be clarified, and how they will be made needs to be widely understood. This allows all interested parties (including the government) to check whether the regulator is performing its task appropriately. This point is important because it emphasises that the BBM approach to regulation is broader than simply imposing an upfront RAB. It involves a systematic approach to regulation that promotes stability and transparency over the long term. It is only through this shift in regulatory culture that the sector is likely to see significant gains, which ultimately translate into benefits for end-users.

138 Detailed legislative design needs to follow the policy choices made. We do not consider the current Telecommunications Act is fit for purpose in accordance with the approach we have outlined in this submission. The entire scheme of the Act in relation to fixed-line services has been designed for a vertically-integrated operator that no longer exists. More recent additions require rework such as the information disclosure regime which drives annual compliance costs without purpose and a high potential that the information is not relevant at a regulatory or commercial level.

139 While we recognise that change can drive uncertainty or loss of precedent, these are already significant issues in the Telecommunications Act. Determinations are issued case-by-case on a fresh basis and cannot be easily predicted against previous decisions. Backdating of regulated prices is the obvious example – where backdating has been consistently applied until the proposal not to apply backdating in the most recent draft FPP decision. That lack of useful precedent means there is little value in simply carrying over the Telecommunications Act in its current form.

Purpose statement

140 The Discussion Paper proposes an amendment to the current purpose statement in section 18 of the Act. This is an important feature of the Act and there are many elements to consider.

141 We agree that there is a need to update the current purpose statement. The Government intends to reshape communications regulation so that it is better suited to the challenges the sector is likely to face post-2020. As the purpose statement is a key means by which the government can communicate its policy intent to the independent regulator, restructuring the purpose statement is one of the most important signals of a change of approach.

142 However, we think that a reset of the purpose statement beyond the initial amendment proposed in the Discussion Paper is required. As we noted earlier, the fact that network overbuild is no longer anticipated means that the purpose statement needs to be fundamentally re-written.

143 The Act contains multiple purpose statements with little clarity on how they each interact. There has been substantial uncertainty on how section 18, and more

recently section 18(2A) is applied by the Commerce Commission and other decision makers. As regulatory processes and conference transcripts show, the ambiguity as to how objectives should be weighed needs to be removed.

144 Development of the purpose statement needs to follow clarity on the policy objectives and form of regulation. However, at this stage we do not think the proposed purpose statement goes far enough to guide the independent regulator as to the policy intent or reflect the changed environment. For example, investment in delivering better broadband, fair prices, a fair return on efficient investment and network reliability are all outcomes that the Government is seeking from an updated regulatory framework. These outcomes are relevant inputs into the purpose statement.

145 Given the extensive legal debates and ongoing uncertainty with the purpose statements in telecommunications and electricity regulation in New Zealand, there may be some benefit in looking at how other countries have captured policy objectives in their purpose statements (while noting the unique New Zealand environment). However, at a minimum, we think that any new purpose statement will need to:

145.1 clearly specify the policy objective(s) that the regulatory regime is intended to achieve. For example, we understand that take up of new services by end-users and incentives to invest in the establishment of new telecommunication service capabilities are central to the government's policy priorities for the sector;

145.2 specify how any overlapping policy requirements are to be aligned. This could be achieved through either expressly prioritising certain policy objectives over others, or providing for a transparent process where the costs and benefits of different assessments are made obvious;

145.3 be sufficiently detailed and coherent to provide an objective measure for the standard of evidence used to support individual regulatory decisions;

145.4 establish the formal standard that the regulator will be held to by any reviewing court. Whether judicial review or merits review is contemplated, the effectiveness of formal accountability mechanisms will turn on the clarity of the policy intent and the specificity of the legislative direction to the regulator; and

145.5 serve as the starting point for the development of the regulatory institutions, procedures and tools that will deliver on the government's policy objectives. These aspects of the regulatory regime need to be developed and implemented in light of the clear policy direction that the new purpose statement is intended to provide.

146 We also think that the proposed approach creates a risk of confusion because the two elements are conceptually quite different. The promotion of competition (or competition-like outcomes) is not usually taken to be an end in itself, but a means of

promoting other desirable outcomes (usually consumer or total welfare). In contrast, economic growth, including through innovation and investment, is a specific policy goal. Contrasting a means to an end with a separate policy objective reflects a degree of confusion over the purpose of regulatory intervention in the sector. This impression needs to be corrected.

147 There are also a number of specific policy considerations that the purpose statement should anticipate in order to provide a coherent and transparent framework. In particular:

147.1 the issue of migration from copper-based services to superior services offered over fibre-based infrastructure is an acute example of a broader policy issue. The regular need for technology upgrades in the telecommunications sector means that new or improved service capability will be an ongoing feature. How this is managed from a regulatory perspective is important for deriving real growth from the sector; and

147.2 developing incentives for infrastructure owners and services providers to innovate to supply these new capabilities in the first place. The aim of continuous improvement, whether through efficiency initiatives or the development of new services, is a fundamental part of the growth engine that creates new knowledge and increasing national productivity. Key to this policy issue is to incorporate incentives to share with end-users the benefits of innovation and investment.

148 These matters are so central to the achievement of the Government's policy objectives for the sector that they ought to be addressed in the purpose statement. These goals intersect with the over-arching policy goal of economic growth through investment in and use of telecommunications services, and as such can either enhance or hinder that principal objective. However, neither is dealt with under the Government's proposal.

Allowing decisions to be made at the most appropriate level

149 We think that the Government's goals of predictability, proportionality and flexibility can also be met through a careful allocation of roles against different decision–making layers. There would be real benefit in moving the details of product design, common access issues and technical matters down the chain from the Commerce Commission to Chorus and other sector participants, such as expediting industry arrangements that underpin how business cases are developed. Of course, a role for the regulator remains, but excessive regulatory oversight may simply lengthen what should essentially be a commercially-driven process.

150 We can also see advantages in moving responsibility for key regulatory design parameters up the chain from the Commerce Commission to the Minister (or even higher to legislation) if more formal regulatory structures are deemed necessary. By taking issues such as the treatment of sunk investment and pricing principles 'off the table', BBM focuses regulatory attention on questions of price, quality and future investment. This appropriately aligns the interests of investors, network operators

and RSPs to achieve outcomes in the long-term interests of end-users, such as price, quality and investment coherency. It also provides a common framework for these issues to be understood and addressed without revisiting historical investment decisions or regulatory precedent.

Merits appeals

151 We see a robust form of merits review of regulatory decisions as being essential to the credibility of any new regime. A key requirement of the regulatory regime for investors is a focus on high-quality decision-making and clear frameworks with requisite accountability. Scrutiny of the merits of a regulatory decision sharpens the incentives on the regulator to ensure that decisions are made according to best practice, all material consequences are considered, and that the decision is consistent with the governing framework. Getting these incentives right upfront is key to avoiding drawn out legal proceedings after decisions have been taken as different affected parties contest their own version of the merits.

152 A robust merits review framework need not over complicate the regulatory regime. Merits review has been a feature of the non-regulatory components of the Commerce Act for a considerable period of time. Decisions on merger clearances and authorisations under Part 5, for example, are subject to a general right of appeal to the High Court. This approach works well in terms of promoting regulatory discipline without all major decisions collapsing into contested proceedings before the courts.

Composition of regulator

153 We generally prefer the procedural rigor that comes with a multi-member panel. These issues were well traversed in Chorus' submissions on the Productivity Commission on regulatory institutions and practices.[31]

154 We also prefer to consider the issues in the context of a wider discussion about the role of regulatory decision-making under any new regime. The types of decisions required by the regulator, the standard of review to which regulatory decisions are subject and the availability of quality advice from secretariat Commission staff all need to be considered. Ultimately, the Government needs to be satisfied that the scope of regulatory discretion and the incentives on the regulator are aligned with the policy objectives for the sector, regardless of the precise composition of the regulatory decision-maker.

Form of legislation

155 While the future development of the telecommunications sector as a whole is vibrant, our fixed-line access network is increasingly taking on the characteristics of a stable utility. This is not a contradiction – a steady but responsive network layer is crucial to supporting the business case for RSPs and content businesses to build their businesses cases and invest in developing services that change the

[31] Chorus' 11 November 2013 submission in response to the Productivity Commission's Regulatory Institutions and Practices Issues Paper: http://www.productivity.govt.nz/sites/default/files/Sub%20051%20-%20Chorus%20PDF-%20292Kb.pdf

telecommunications landscape. It needs to be recognised that regulated products with heavy prescription evolve too slowly to meet dynamic market needs. This can also disincentivise commercial discussions or solutions. We need to move from the far end of the spectrum back to incentivising commercial solutions wherever possible and focusing on anchor products with appropriate flexibility for other products.

156 Because of our utility characteristics, we see benefits in incorporating fixed-line telecommunications wholesale services into Part 4 of the Commerce Act. Ultimately, however, any legislative vehicle must take into account the needs of the sector at this point of its transition to next generation technologies and business model. A prolonged inquiry to determine input methodologies at the regulatory level of the regime, for instance, is likely to be counter-productive when the need for stability and predictability to promote investment is comparatively urgent. Our focus is on ensuring that the substance of any legislative mechanism is fit-for-purpose for the sector rather than the precise legislative vehicle itself.

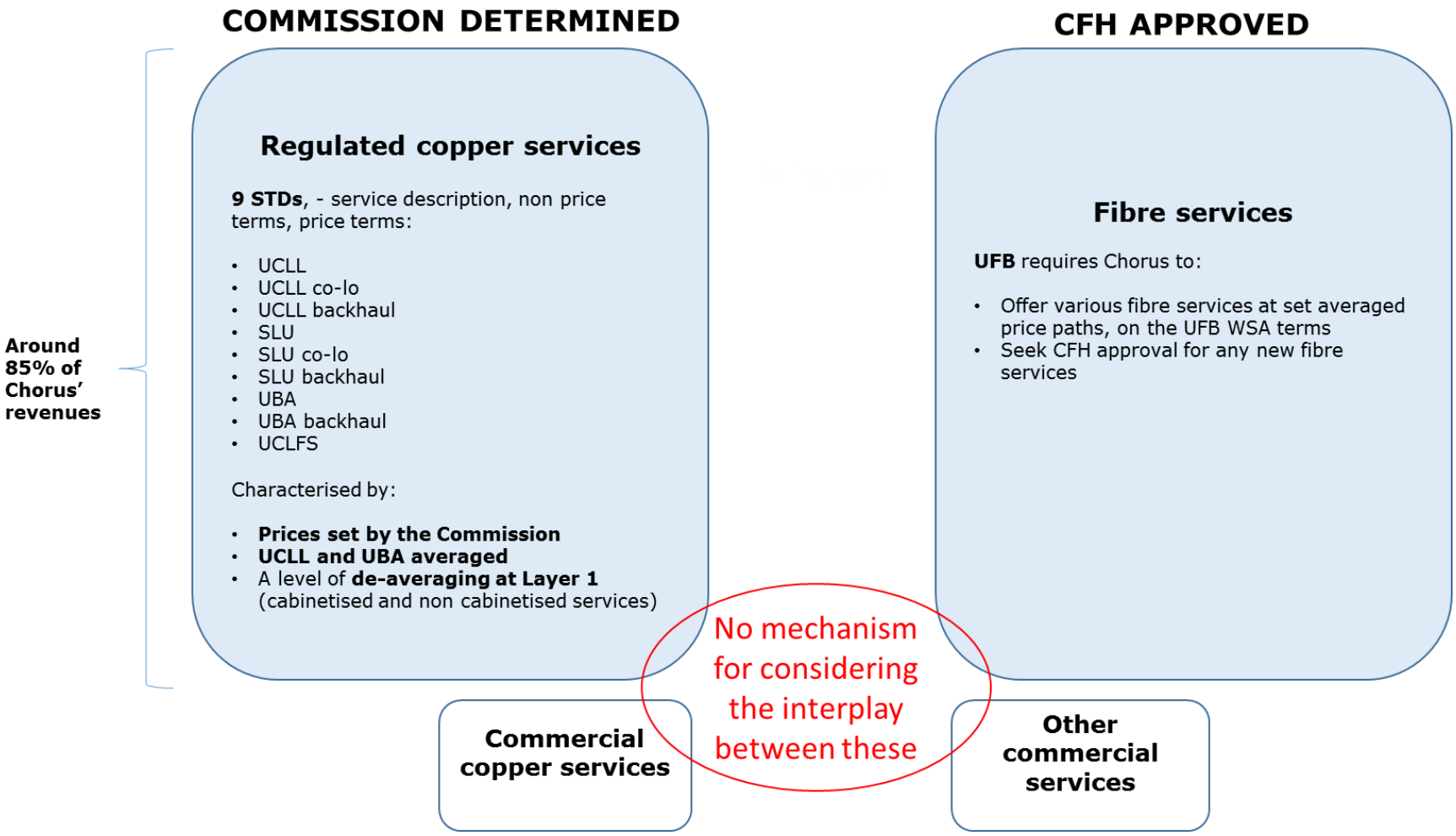
Other amendments required to the Act

157 At Appendix B of the Discussion Paper, the Government seeks views on whether other areas of the Act and regulatory framework need revisiting. In **Appendix Eight** we summarise key changes that will need to be made to the Act and other instruments, and where there is an opportunity to simplify existing provisions.

APPENDIX ONE: HIGH LEVEL ASSESSMENT OF THE CURRENT FRAMEWORK

Regulatory institution		
Board Governance		See Chorus' submissions to the Productivity Commission on regulatory institutions and practices
Merits Review		Unlike other regulated industries, such as electricity, airports and gas, there is no merits review. Substantial burden on and discretion given to regulator, but no commensurate accountability.
Judicial Review/ appeal on question of law		Judicial review and appeal on points of law available. Creates risk of heavier focus on process than substantive decision.
Best practice regulation		
Flexible (principle-based regulation)		Heavy prescription in legislation and a range of other instruments and determinations, with framework designed in 2001 and incrementally added to over time. Regulation slow to keep pace with change as legislative change required to update. Migration to fibre not considered in framework.
Predictable		Significant price shocks on regulated prices that make up 85% of Chorus' revenues. Real costs not used, so impossible to predict outcomes. Constant change process over the last 8 years (see **Appendix Four**). Risk of error is high.
Durable		TSLRIC increases the risk of under-investment due to uncertainty. Prices reviewed on a service-by-service basis, with no view of the whole (see **Appendix Two**) and price, quality and investment all considered separately. Investors have described NZ as "un-investable".
Proportionate		Current pricing process has taken almost 4 years with around 300 documents submitted. Multiple regulatory instruments managed across Commission, Government & CFH (see **Appendix Three**). Any industry-led solutions can be overridden by regulation at any time
Simplicity		See **Appendix Two – Four**.

APPENDIX TWO: FRAMEWORK WITHIN WHICH CHORUS' PRICES ARE CONTROLLED

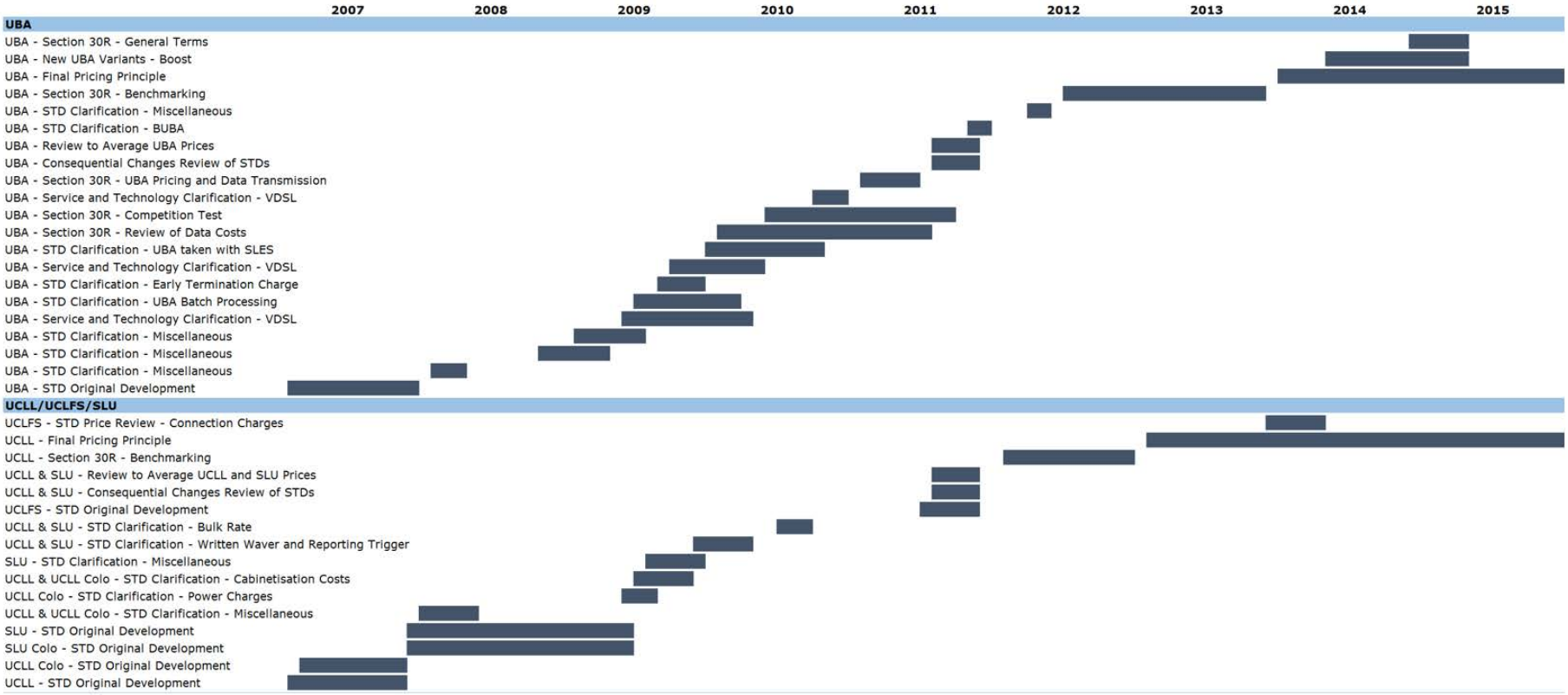


APPENDIX THREE: CURRENT REGULATION IS UNDER A RANGE OF INSTRUMENTS AND REGULATORY BODIES

	COMMERCIAL	REGULATOR ROLE		OTHER INSTRUMENTS		
	Commercial agreements with RSPs	**Commission backstop to commercial agreements**	**Commission decisions (own initiative or on request)**	**Agreed in Crown instrument**	**CFH contract**	**Commission role where Crown instrument or contract**
Key copper services, prices and terms (STDs)	x	X	**√ (STDs)**	x	x	Monitoring and enforcement
Chorus as agent to resell Spark voice	**√ (Spark)**	x	x	**√ (legislation)**		
UFB services, prices and terms (WSA)	x	x	x	x	**√ (contract)**	Future regulation?
RBI services, prices and terms	x	x	x	**√ (MBIE contract)**	x	Future regulation?
TSO	x	x	x	**√ (deed)**	x	**√**
Open Access Deeds (UFB, RBI, Copper)	x	x	x	**√ (deed)**	x	**√** Monitoring and enforcement
TDL	x	x	x	**√ (legislation)**	x	**√** Determine levy allocation across industry
Sharing arrangements	**√ (Spark)**	x	x	x	x	**√** Monitoring and enforcement
System separation plan	x	x	x	**√ (deed)**	x	X

APPENDIX FOUR - COPPER REGULATORY PROCESSES HAVE BEEN CONTINUOUS

The graph below illustrates how copper regulatory processes have been ongoing since the copper Standard Terms Determinations were made, with no respite for the industry to adjust to changes and focus on commercial delivery of services.



APPENDIX FIVE: BENEFTIS OF BBM APPROACH

1 Key to the BBM's utility as a regulatory framework is that it locks in the value of the assets used to supply regulated services. This promotes predictable revenue and price paths and minimises the prospect of windfall gains or losses (to either the network operator or RSPs). In particular, the lock-in ensures that network operators are provided the opportunity to recover their actual costs, and that RSPs and end-users only pay for the costs they incur.

2 The ability to lock in the RAB also reduces the risk that efficient expenditure will not be recovered, which will in turn promote both efficient investment in infrastructure and competitive entry and competition in the relevant markets. Setting the RAB upfront brings expectation of a fair return on investment into individual pricing decisions because, unlike the current regulatory regime, it limits the impact of future regulatory determinations on returns. Fair returns to network operators and other investors in the sector are particularly important in the current market where significant investment is occurring and more is needed.

3 Regulatory pricing decisions should respect this expectation of fair returns by focusing on market need and evidence, not hypotheticals or international benchmarking which misses the drivers for investment and service delivery in New Zealand. By locking in the RAB the BBM approach allows for this more evidence-focussed approach to regulatory determinations by providing consistency over the long term.

Stability and predictability

4 The hallmark of the BBM approach to economic regulation is price stability and regulatory predictability. A regulatory regime that promotes stability and predictability improves the operating environment for sector participants, which creates benefits that can then be passed on to end-users of telecommunications services.

5 While no regulatory regime can promise to be perfectly stable or completely predictable, a revenue cap-based BBM regime can deliver a meaningful degree of stability and predictability across the sector for a number of (related) reasons:

5.1 it aims directly at stability when dealing with regulatory assessments of cost. By locking in the value of the RAB over the long term, all parties have certainty over costs and downstream prices remain stable;

5.2 it indirectly (but strongly) incentivises the regulator to promote cost stability. There are strong incentives on the regulator not to re-open the valuation of the RAB either. These incentives can be reinforced by a fixed principles regime, which crystallises those incentives so that they are binding on the regulator. To re-open the RAB valuation would undermine incentives for future investment, as it would demonstrate the inability of the regulator to commit to a fair position with respect to sunk investment. Compromising incentives for future investment in this way would be detrimental to

end-user interests, as needed investment would be suspended or completely forgone;

5.3 it is grounded in the actual costs of service supply, not hypothetical assessments that are subject to change over time. This is a significant improvement on the current TSLRIC approach to access pricing employed by the Telecommunications Act; and

5.4 The operation of the BBM approach and the use of revenue caps is well understood and, importantly, is not controversial. For example, the treatment of new investment can be subject to reasonable tests of prudency, the application of which are reasonably predictable.

6 A revenue cap-based BBM also has the flexibility to be implemented in ways that further promote stable and predictable outcomes and smooth the pathway for migration. For example, both costs (e.g. depreciation) and prices can be smoothed over time as it is the total return over the life time of the regulated assets that is important.

Investment and innovation incentives

7 Private sector investment is essential because it supports better broadband coverage and experiences for all New Zealanders. A BBM/revenue cap approach sets up targeted and balanced incentives to invest and to innovate at the network level and the retail service level of the sector in support of better broadband growth, update and changing end-user behaviour and demands:

7.1 as described above, it is more stable and predictable than the current regulatory environment for copper. This lowers the cost of capital for the sector, making it easier to attract new investment. It also reflects the move from a 'build-buy' regulatory philosophy to an 'actual cost' approach;

7.2 it ensures that investors can receive a reasonable return on efficient investment over a reasonable period. While BBM does not guarantee returns to investors, it does provide the opportunity to earn a reasonable return consistent with the standard interpretation of workably competitive market outcomes. A revenue cap also offers the flexibility to price to the market in order to stimulate demand and improve the business case for investment in higher value services;

7.3 conventional BBM approaches incorporate a range of efficiency mechanisms to ensure efficient delivery of services across the sector. The CPI-X price path is the most prominent of these, but additional mechanisms such as rolling incentive schemes can also be used to better align efficient incentives with investment timelines; and

7.4 RSPs have sharp incentives to innovate and invest based on competitive dynamics at the retail level of the sectors. With bottleneck infrastructure isolated upstream and equal treatment for RSPs downstream, RSPs can then

focus on outperforming their competitors in an environment where they have reasonable regulatory predictability and visibility over wholesale price paths. End-users of retail telecommunications services are the ultimate beneficiaries.

8 These features are crucial for securing the government's economic growth objectives for the sector. It is ongoing investment and innovation that will spur productivity and growth, and the regulatory regime needs to account for this directly.

Recognition of legitimate commercial interests

9 A focus on pricing in the context of securing an appropriate recovery for sunk investment ensures that the commercial interests for the network provider are recognised. This includes ensuring the opportunity for a fair return on sunk investment over the long term. Similarly, the legitimate interest of RSPs in providing products and services that satisfy end-user demand can be addressed without protracted regulatory debate over the fundamentals of the regime.

Other advantages

10 In addition to these specific advantages, adopting a BBM approach is also appropriate in that it reflects that:

10.1 mechanisms for promoting competition should be focussed on those segments of the market where workable competition is viable. Monopoly regulation of the access network also provides the best incentives for competition-like outcomes where there is little prospect of genuine competition developing; and

10.2 many questions of network design have now been settled. It would be inefficient and counter-productive to re-address these decisions under the pretence of future regulatory determinations.

11 Unlike TSLRIC, it can be designed to address government policy concerns. Promotion of best available technology and timely end-user migration to higher specification services are likely to need to be dealt with expressly in the regulatory framework. BBM allows for this.

APPENDIX SIX: SPECIAL ACCESS UNDERTAKINGS

1 Central to the SAU approach is a desire to ease transition impacts as much as possible. This can occur where protracted debate at the regulator level is avoided, and all sector participants are able to get on with the business of providing the services that matter to end-users and make a difference to the New Zealand economy.

Pre-requisites for a successful SAU

2 There are a number of important pre-requisites that will be required to be met for an SAU approach to be effective in practice. At a high level, these are:

2.1 the establishment of clear, objective criteria against which any proposed SAU can be assessed. The regulator has an important role in scrutinising a proposed SAU to ensure it achieves the government's policy objectives for the sector, but it should not be empowered to reject an industry view on a mere suspicion or whim. Knowing how the SAU will be assessed will give the sector confidence when the SAU is prepared; and

2.2 a robust, open consultation process that ensures all views and perspectives are afforded appropriate weight. Genuine, meaningful participation in sector-led processes only occurs when participants are confident in their right to be heard and that their views will be respected. Legislative requirements for minimum standards can provide this necessary level of confidence.

Fixed principles

3 In providing for network operators to bring forward regulatory undertakings, a successful mechanism that has worked well in Australia is the establishment of fixed principles. Under the Competition and Consumer Act 2010, any variation to an SAU is required to be assessed as an entirely new SAU by the regulator. This can create uncertainty of pricing and non-pricing terms for stakeholders. To address this, provisions or terms and conditions under the SAU can be designated as fixed principles provisions or fixed principles terms and conditions. Once designated as such any new undertaking cannot be rejected by the regulator for reasons that concern the already accepted fixed principle. Both price and non-price terms can be designated as fixed principles.

4 Fixed principles permit particular regulatory concepts to be committed to within an undertaking but in a way which survives the undertaking itself (such as through influencing the ability of the regulator to reject any subsequent amendment or replacement undertaking). They essentially lock in key aspects of an undertaking. This creates a clear and consistent framework in which the regulator and other stakeholders can operate.

5 This also serves to provide even greater certainty over key principles and signals to all parties a degree of stability in future regulatory decision making. Fixed principles are therefore particularly useful during transitional periods when new or altered

regulatory frameworks are adopted because they orient the discussion towards a longer term framework. They enable RSPs and network operators to have certainty over the framework used to estimate access prices and may also provide greater price stability. Additionally, they simplify the future assessment of variations for the regulator by narrowing the scope of the areas which need to be considered. They could also reduce the circumstances in which public consultation regarding a proposed change is required.

Benefits of an SAU-type approach

6 We are attracted to an SAU-based approach because it has the potential to carry with it a number of benefits for the industry:

6.1 a proportionate response to the policy concerns that provide the impetus for regulation in the telecommunications sector. It is important to remember that once the RAB value is locked down and converted to a revenue cap, pricing constraints will apply in respect of services that rely on those assets. This provides sufficient and effective protection against monopoly pricing concerns. Remaining issues including future investment initiatives, the establishment of quality standards (and associated costs), the coordination of investment and timeframes for implementation can be approached from a fresh perspective;

6.2 an SAU allows greater flexibility for all sector participants to respond to technology and market changes without unduly relying on the exercise of regulatory discretion. To the extent possible, needed flexibility within the regime should not come at the cost of greater regulatory unpredictability. Those who directly understand the costs and benefits of technology choices as well as the threats and opportunities from changing market dynamics should have as great a role as possible in responding to such changes;

6.3 it provides greater scope for price path visibility over the long term. Chorus and RSPs can have meaningful conversations about the likely costs of particular products before or as those products are being developed. This represents a very high level of transparency within the sector as a whole that allows sensible scope for planning and building credible business cases;

6.4 the fact that the SAU is industry-led rather than regulator-led creates a substantial degree of buy-in regardless of the substantive regulatory outcomes achieved. This is not a feature of other implementation regimes. Generating buy-in more broadly among sector participants in this way promotes high levels of the durability for the regulatory regime (in sharp contrast to direct regulatory intervention in the sector). In this sense, we see meaningful buy-in from all parties as necessary to ensure the delivery of better, more useful services to end-users; and

6.5 It provides a proportionate response to the need to address transitional issues as the CFH contracts expire and demand for the high-value services that fibre can provide is still developing. Even if there is a perception that

more regulatory supervision is needed over time, the uncertainty associated with upcoming transitional phase is likely to be best managed with a light touch from regulatory authorities. To the extent that industry participants can address key issues in commercial terms, this should be encouraged.

7 The Australian NBN approach also offers several practical advantages:

7.1 **industry-led process.** NBN's SAU was formulated by NBN in Australia. The SAU offered a comprehensive set of products and prices together with a comprehensive economic framework under which NBN would be regulated (known as the Long Term Revenue Constraint Methodology or LTRCM). Hence, the SAU is the first "propose" step in the "propose-respond" model in Australia. The network operator is in the best position to formulate this proposal which contains the products formulated by it and which are to be offered over its network. NBN has the incentives to ensure that RSPs needs are met by the offered products and pricing. The industry-led approach to an SAU also has a longer term effect beyond the life of the decision making process. Ultimately it is NBN that owns its network and needs to focus on revenue generation opportunities. Similarly, it is in the interests of RSPs to engage with the network operator to ensure that products are developed with pricing that meets their needs to be able to offer the end-user products those end-users want, to innovate and to compete vigorously between themselves. A regulatory approach which is consistent with allowing network operator and RSPs to move forward in a consultative way is highly desirable and the SAU approach offers the long term platform for that to occur;

7.2 **onus on network operator to establish the reasonableness of its approach.** It follows from the fact that the SAU is formulated by NBN, that NBN has the onus of establishing the reasonableness of its approach embodied in the SAU. NBN is in the best position to do so as the network operator. With the SAU, NBN submitted an extensive supporting submission, several supporting economic statements as well as its own Network Design Rules to establish the reasonableness of the SAU. The role of the ACCC in Australia is then to determine whether the evidence provided by NBN is sufficient to meet the required legislative standard of "reasonableness" (which is defined by reference to a range of factors that must be considered by the ACCC). In this way, the regulator is playing an adjudicative or "respond" role where it is responding to NBN's formulated SAU. Central to this adjudicative role has been a recognition in Australia that the role of the regulator, when considering an SAU, is not to determine the most reasonable outcome and a recognition that there are potentially many reasonable approaches. The regulator's role is actually to determine whether NBN's approach is reasonable, and no more;

7.3 **negotiated outcome.** Rather than a binary "accept/reject" decision making approach where the regulator only has the ability to accept or reject the SAU in total, the Australian position is significantly enhanced by powers conferred

on the ACCC to make suggestions which would allow it to accept the SAU if certain variations were made. This allowed for the SAU to be rigorously tested by the ACCC and for NBN and the industry to be consulted about potential variations. The ACCC's suggestions were then formalised in a Notice to Vary pursuant to which there was an expectation that if NBN responded to the Notice to Vary in a compliant way that the SAU (as varied) would be accepted by the ACCC. Accordingly, we understand that the Notice to Vary process provided the opportunity for NBN to reformulate its original SAU to satisfy the ACCC that the SAU was reasonable (but no more). In this way, the Notice to Vary in Australia is similar to a negotiated outcome between NBN, RSPs and the regulator;

7.4 **improved RSP engagement:** Throughout the SAU process, NBN engaged in discussions with its customers about its products and pricing, and about the SAU itself. This customer engagement approach is embedded in the SAU in the form of the Product Development Process under which NBN commits to a process of consultative product development including considering Product Ideas required by its own customer. In this way, the SAU process follows the longer term approach of ensuring that NBN develops products that its customers want at a price that will encourage uptake and migration; and

7.5 **timeframes and requests for information:** The Australian legislation also includes timeframes for SAUs to be considered by the ACCC. The ACCC has 6 months plus a 3 month extension power to make a decision about the SAU. The ACCC also has the ability to request further information from NBN if it considers that such information is needed to further test the undertaking and the time within which the ACCC has the ability to make a decision is subject to a "stop clock" while a request for information remains outstanding. These procedural mechanisms enhance the decision making process in Australia by providing certainty around timeframes and expectations of co-operation from the network operator to enable the regulator to fully test the SAU proposed by that owner.

APPENDIX SEVEN: GPON UNDBUNDLING

Benefits of a bitstream approach for innovation

1 Key to understanding whether and how innovative outcomes will be achieved is an understanding of the benefits provided by layer 2 services. A key reason for offering layer 2 services is to provide RSPs with a selectable product construct that offers the benefits of a layer 1 passive product while lowering barriers to entry (discussed further below) to support competition higher up the value stack.

2 The supply of active products at layer 2 can reduce access costs, which lowers a key barrier to entry for RSPs. Active products do not require the same level of investment by RSPs at a localised level as is required to access passive products. Layer 2 services also support interconnection at locations that are deeper in the network (i.e., a higher degree of aggregation), which promotes more efficient investment. Accordingly, layer 2 products lower barriers to entry across the market by being higher in the technology stack, while still providing scope for product innovation and differentiation.

3 We have taken a very flexible approach in designing our fibre portfolio. Our NGA is a layer 2 Ethernet solution that provides RSPs with the ability to offer a range of options from basic voice capability to highly tailored, innovative solutions.[32] In this way, our layer 2 products are designed to provide RSPs with the building blocks where our systems and processes allow relatively easy customisation of product features by RSPs from which they can construct a service that meets their particular needs. Such an approach provides RSPs with the flexibility to configure capacity and features as if it were the RSP's own network. This then promotes innovation, product differentiation and competition by allowing RSPs to provide differentiated products as they would if they owned the networks.

4 In this way, layer 2 product design for fibre products mirrors the same low-level construct that RSPs are already familiar with in the context of the traditional UCLL, despite the fact that supply is at the active layer rather than at the passive layer.

5 One important aspect of the UCLL model is that an RSP is able to contend the UCLL lines that they individually purchase into whatever sized upload/download bandwidth they choose, to balance their cost base against user experience targets. As mentioned above, our layer 2 fibre products allow for full flexibility. RSPs can select and adjust upload/download bandwidth and other layer 2 features to provide differentiated services and can manage their service contention independent of the number and size of access lines, through management of E-NNI contention.

6 Our Accelerate service simplifies bandwidth selection options by enabling consumers to experience up to the headline speeds of the NGA offers. In these and other ways,

[32] For further information about Chorus' NGA, refer to Chorus' Next Generation Access Technical User Guide, September 2015. See also Chorus' Accelerate brochure.

our layer 2 fibre services effectively replicate many of the key features an RSP could offer over a traditional layer 1 service.

International approaches to bitstream and fibre unbundling

7 The use of layer 2 services to provide an end-to-end service is also broadly consistent with other wholesale product designs internationally. There are no ready examples to draw on of successful layer 1 unbundling.

8 In the context of the virtual unbundled local access (**VULA**) offered by BT in the United Kingdom, Ofcom noted that:

> The most effective way to support the development of downstream competition is to provide significant scope for alternative providers to innovate and differentiate in how they package and deliver services.
>
> We consider that the benefits of VULA would be greater if it was provided as a 'raw' product which provides [Communication Providers] with significant flexibility over their own networks and the services that they could deliver to End-users. This would replicate many of the features associated with LLU.[33]

9 Ofcom also identified control of access as an important characteristic of the VULA:

> Given the aim of realising competition benefits by allowing CPs maximum flexibility in their ability to offer differentiated products to consumers it is necessary for VULA to provide a high degree of access control to the interconnecting CP… CPs need freedom of control in order to provide different types of services and, potentially, also vary the QoS parameters in delivering those services to enable them to effectively compete with other providers.[34]

10 We note that since originally designating the VULA remedy in 2010, Ofcom has conducted another fixed access market review in 2014. In that review, Ofcom noted that VULA connections had risen significantly since 2010 and that this remedy was supported by many RSPs. Ofcom decided to continue to regulate VULA on the following basis:

> We consider that VULA offers the nearest equivalent to physical unbundling over both FTTC and FTTP and that, as discussed from paragraph 12.444, we do not consider that physical unbundling of FTTP is likely to be technically and/or commercially feasible over the market review period.[35]

[33] Ofcom, *Review of the wholesale local access market statement on market definition, market power determinations and remedies* (7 October 2010) at 125.

[34] Ibid at 126.

[35] Ofcom, Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies, 26 June 2014, at paragraph 12.110.

11 Similarly, in Australia, the ACCC accepted NBN's SAU under which NBN committed to provide a layer 2 service. In its Final Decision on the SAU,[36] the ACCC accepted that NBN's supply of an access service at layer 2 was reasonable and would promote the long-term interests of end-users. The ACCC did not directly consider an unbundled service in its Final Decision. Instead, the ACCC referred extensively to the minimum requirements for a layer 2 broadband service that it previously set out in the draft FANOC Decision.[37]

12 In determining whether the SAU was in the long-term interests of end-users, the ACCC provided several reasons why it believed NBN would have sufficient incentive to innovate and invest in its access network over the term of the SAU, with the key reasons being:

12.1 **Commitment to supply higher quality products.** In respect of the introduction of higher quality services, the ACCC noted that NBN "*will have an incentive to introduce these services to encourage access seekers, and in turn end-users, to take up higher quality services, as this will generate greater revenue*".[38]

12.2 **Product development obligations.** The ACCC noted that NBN's commitment to engage with access seekers and end-user advocacy groups in relation to product development and variation "*increases the extent to which, over the SAU term, [NBN] develops products that access seekers want and are willing to pay for*".[39]

13 The United Kingdom and Australian approaches differ somewhat from the Singapore fibre market. However, the market design, product design and technical design of the fibre network is very different in Singapore and, given market developments in that market since the original market design, has been subject to significant adjustment. Most particularly, Singapore is not an example of fibre unbundling but is an example of a policy approach, different to that taken in New Zealand, of structural separation at multiple layers in the fibre hierarchy.

14 In Singapore, the regulator decided to go down the path of a highly disaggregated sector, with different operators owning the network at each layer of the network stack. Originally there were different owners of the layer 0, layer 1 and layer 2 infrastructure. This highly disaggregated market experiment in Singapore has not been a success as has been evidenced by the non-viability of the separation of the layer 0 and layer 1 companies, resulting in their merger in 2013, SingTel's take-over of the layer 1 company and SingTel's vigorous participation at the layer 2 level.

[36] ACCC, *NBN Co Special Access Undertaking – Final Decision* (December 2013) at 70 – 72.

[37] ACCC, *Assessment of FANOC's Special Access Undertaking in relation to the Broadband Access Service – Draft Decision* (December 2007).

[38] ACCC, *NBN Co Special Access Undertaking – Final Decision* (December 2013) at 75.

[39] Ibid at 77.

15 Further, the network design in Singapore is not an unbundled model in any conventional sense. The layer 1 network was separately designed to support the supply of services at the layer 2 level, which means that the layer 2 companies are able to acquire layer 1 dark fibre but must do so at an aggregated point in the network. Specifically, the layer 2 companies take service at the 9 Central Office locations across Singapore which effectively aggregate connectivity from the many local exchanges that previously supported the SingTel copper access network. There is no fibre access to the local exchange equivalent.

16 Similarly, while the layer 1 products are somewhat disaggregated in Singapore, there is no way of acquiring each disaggregated element (e.g. at a local exchange equivalent) – each disaggregated layer 1 element must be acquired by the layer 2 company to form an end-to-end product to which the layer 2 company connects at the Central Office. Accordingly, it is clear that Singapore does not represent an example of fibre unbundling as a matter of market design, technical design and product design.

17 The Singapore multi-layered model has also resulted in relatively modest benefits (if any) with significant costs. There are considerable diseconomies of scope embedded in the Singapore model which has led to significant costs and inefficiencies. There have been many challenges in service provisioning times due to the multiple levels of co-ordination required between RSP, Layer 2, Layer 1 and, until the merger, the Layer 0 operator. To order a single end user service or repair a fault, there are potentially 4 layers of operators to navigate from the RSP down. Chorus also understands that the management of churn between the multiple layers has been a very significant problem and hence a cost to the model. The inability to manage churn has resulted in additional unnecessary fibre build, additional truck rolls and significant delays.

18 These inefficiencies were highlighted in the merger documents when the Layer 1 and Layer 0 companies applied to merge. These arguments applied to every layer of separation in Singapore. The merger application stated:

> The 'chain of command' is particularly complex in the current structure where a fault appears 'somewhere' in the Next Gen NBN – at the customer premises, the RSP, the OpCo, OpenNet or the NetLink Trust (through its Trustee-Manager, CityNet). The layers of communication required to ascertain precisely where the fault exists and what remedy is required is reduced when the Layer 1 dark fibre and Layer 0 ducts, manholes and COs are ultimately owned, operated and maintained by the same entity, the NetLink Trust (through its Trustee-Manager, CityNet).
>
> Currently, the planning and deployment of Layer 0 ducts and manholes and Layer 1 dark fibre are undertaken separately. Where the Layer 1 dark fibre and Layer 0 ducts and manholes are owned, operated and maintained by the NetLink Trust, co- ordination and planning for the deployment Layer 0 ducts and manholes to support the requirements for Layer 1 dark fibre deployment are more efficient. The NetLink Trust (through its Trustee-Manager, CityNet) can ensure that Layer 0 ducts and manholes are available as-and-when needed for the deployment of Layer 1 dark fibre thereby reducing the risk of delay,

> disruption or a mismatch in Layer 0 ducts and manholes and Layer 1 dark fibre deployment priorities.[40]

19 In its decision approving the merger, the IDA stated:

> The proposed Consolidation would enable efficiencies to be realised due to the increased level of integration between the passive infrastructure layer of the Next Gen NBN; and further efficiencies in service provisioning would be reaped with the transfer of SingTel's KSC personnel, competencies and expertise into the NetLink Trust.[41]

20 As mentioned, these co-ordination inefficiencies pervade every aspect of the Singapore multi-layered market and are not limited to Layer 0 and Layer 1. Even following the Layer 0 and Layer 1 merger, it is clear from the above observations that inefficiencies and problems still exist due to the remaining layering effects.

21 Furthermore, the benefits derived in Singapore from the multi-layered separation model have been very modest at best. Chorus understands that while there are 24 registered RSPs, there are only 6 active ones (most of whom are the established players). Also, service offerings are relatively homogenous between these players. There is only limited product differentiation based on network performance. Certainly, these benefits in Singapore don't seem so significant when compared with the benefits of offering a Layer 2 capability with the features described elsewhere in this submission. It appears clear that the ongoing costs of the multi-layered approach outweigh the modest (if any) benefits.

[40] Long Form Consolidation Application, NetLink Trust acquisition of 100% of the issued and paid-up capital in Opennet Pte Ltd, at paragraphs 12.126 and 12.127

[41] Explanatory Memorandum on the decision of the Info-Communications Development Authority of Singapore in relation to the Long Form Consolidation submitted by Opennet Pte Ltd, the NetLink Trust, CityNet Infrastructure Management Pte Ltd and Singapore Telecommunications Ltd, 21 November 2013 at paragraph 11

APPENDIX EIGHT: KEY AMENDMENTS TO THE TELECOMMUNICATIONS ACT

1 Alongside the implementation of a new regulatory framework for fixed access services, there are a number of consequential changes that will need to be made to the Telecommunications Act 2001 (**the Act**). There is also an opportunity to simplify a number of the existing provisions (whether they remain in the Act or are moved to another piece of legislation). We briefly summarise our initial thoughts on some of these changes below.

Key changes needed

The purpose statement

2 As explained in the Legal Framework section of our submission, we believe that the purpose statement needs to be updated to reflect the fact that network overbuild is no longer anticipated and to ensure that the purpose statement adequately captures the Government's policy objectives.

3 If the new framework is implemented in a different Act (e.g. the Commerce Act), the new purpose statement would be implemented in the new legislation.

Determinations and standard terms determinations

4 As explained in this submission, there is an opportunity to transfer both the Commission's copper standard terms determinations and UFB fibre wholesale agreements approved by Crown Fibre Holdings to industry. By this we mean enabling and incentivising industry to own and evolve those reference offers with appropriate arbitration and/or dispute resolution mechanisms.

5 The individual and standard terms determination processes (including the review and clarification provisions) would then become irrelevant for fixed access services. However, it is possible that they may be retained for resale and mobile services.

Removal of fixed access services from Schedule 1

6 As fixed access services will be regulated under a new regulatory model, they should be removed from Schedule 1 of the Act.

TSO

7 If the wholesale TSO can be resolved in a BBM (e.g. by offering entry-level voice and broadband anchor at affordable differentiated prices, with revenue sufficiency mechanisms to ensure recovery of costs), the TSO requirements (to the extent they relate to Chorus) could potentially be removed from the Act.

Opportunities for simplification

Open Access Deeds

8 The Act currently requires three separate open access deeds of undertaking (**Deeds**) – a fibre deed, a copper deed and an RBI deed. It could be simplified so as to allow for a single deed, which would reduce regulatory complexity.

9 The Act also currently requires Chorus to provide a bundle of resold POTS (under agency from Spark) and UBA and for this requirement to be separately included in

the Deeds. With the introduction of baseband IP and ATA voice services, the bundle of resold POTS will increasingly become less relevant. This requirement should be removed from the Act so that the Deeds can be amended (without the need for legislative change) at the appropriate time with government.

10 The Act also requires that some services which the Commission has consequently found to be competitive (such as backhaul) to be covered by the Deeds. Regulation of competitive services should be rolled back.

11 There may also be an opportunity to bring the Deeds within the scope of an SAU. The Act should provide the necessary flexibility to allow this.

Business line restrictions

12 There are currently three separate business line restrictions that are designed to ensure that Chorus doesn't enter the retail market. These business line restrictions could be simplified into a single requirement that Chorus only provides wholesale services.

Information disclosure needs to be withdrawn or reformed

13 A significant element of the current regulatory regime for fibre is information disclosure regulation for LFCs. This regulation is cumbersome for our business and of little value in practice.

14 We have been open with the Commerce Commission that we see the information disclosure regime as an unduly expensive and time-intensive exercise given that we are unclear on the purpose for which the Commission uses the information in our annual disclosures.

15 The Act empowers the Commission to decide what information it requires LFCs to disclose in relation to their fibre networks to inform the Commission's statutory processes and determinations.[42] The Chorus Information Disclosure Determination 2012 – made by the Commission – sets out the detailed fibre network and service information that we must disclose.

16 After three years of disclosure, we remain unclear as to whether, or how, the Commission uses, or proposes to use, the information. As we do not use the information in the form it is provided to the Commission, it is provided only for compliance purposes. The information gives a view of our business that meets the detailed rules of the Determination but does not provide an accurate view of the total cost of building either a copper or a fibre network. It is also not in a form that could be used for pricing purposes (either BBM or TSLRIC).

17 It is inefficient that we are forced to bear the substantial cost of preparing an annual disclosure that cannot be used to draw reliable conclusions in other settings, such as in establishing a BBM framework in the future.

[42] Telecommunications Act 2001, s 69ZC.

18 We recognise that information disclosure may form part of any future BBM. However, any information disclosure requirements should be designed in tandem with the broader BBM framework – to ensure a coherent approach – rather than seeking to adapt the existing legislative requirements.

Other changes

19 There are several other changes that should be investigated:

19.1 **TDL** – the TCF wrote to the Minister earlier this year proposing that the TDL be collected directly from end-users, removing the need for the current complex process for allocating TDL costs amongst the industry;

19.2 **sharing arrangements** – the sharing arrangements were implemented out of concern that Chorus and Spark (as it is now) were previously part of the same company and that this may afford Spark some benefits over and above other RSPs. Four years on from demerger, it may now be appropriate to remove those requirements, or at least simplify them (e.g. narrow them to apply only to shared systems and clarify the meaning of "material changes"); and

19.3 **demerger-specific provisions** – there are a number of other demerger-specific provisions (e.g. relating to tax and Commerce Act clearance). It may be possible to now remove these requirements.

APPENDIX NINE: RESPONSE TO DISCUSSION PAPER QUESTIONS

Chapter 1: Goals for this Review

1. Do you have any comments on the Government's:

a. long-term vision for communications markets; and

Chorus agrees with the Government's long-term vision for communications markets, including the recently announced ambition to deliver broadband services capable of peak speeds of 50Mbps to 99% of New Zealand and 10Mbps to the remaining 1% by 2025. To achieve this bold vision for New Zealand, we need a fit for purpose regulatory framework.

For more information, please refer to *Executive Summary*.

b. regulatory principles?

Chorus agrees with the regulatory principles as outlined in the Discussion Paper. In addition, any new regulatory regime will need to satisfy a number of principles to be truly fit for purpose. In line with Treasury's principles for best practice regulation, the regulatory regime will need to be:

- proportional;
- flexible;
- predictable;
- durable;
- accountable; and
- to be implemented by a capable regulator.

For more information, please refer to *A Fit for Purpose Regulatory Regime from 2020*.

Chapter 3: Is the regulatory framework fit for purpose? Six key problem areas

2. What is your view on creating an overarching 'Communications Act' to consolidate economic regulation across the communications sector?

From Chorus' perspective, the first question is how to regulate wholesale fixed line networks - which we think should be regulated under a utility-style BBM model. Any model needs to be designed in a holistic and coherent way. Once designed, the question is then which legislative vehicle should be used to implement the model.

While telecommunications infrastructure is increasingly being used to deliver content that was traditionally delivered over broadcasting networks, further work should be done to investigate the benefits or otherwise of bringing broadcasting within the scope of the Telecommunications Act.

3. Have we identified the main challenges facing communications regulation as we move beyond 2020?

Chorus agrees with the challenges identified in the Discussion Paper. While structural separation has solved many of the issues that the existing regulatory framework was designed

to resolve, the current framework does not support the investment and innovation needed to meet New Zealand's broadband ambitions.

For more information, please refer to *Executive Summary* and *Now is the Right Time for Reform*.

Chapter 4: Pricing for fixed line services

4. Do you agree with our policy objectives for the price regulation of fixed line infrastructure?

Chorus supports the policy objectives outlined in the Discussion Paper. They underscore what is at stake in the reform process. The need for careful design and implementation of any new regulatory framework is considerable.

For more information, please refer to *A Fit for Purpose Regulatory Regime from 2020*.

5. Is it feasible to move to technology neutral service descriptions? How would this work in practice?

Yes. Regulation of fixed line networks should be technology neutral, focusing on the desired outcome rather than technology. In practice this could be achieved through establishing a small number of fixed line anchor products, based on an entry-level product and the most popular product(s) based on the number of connections. This in turn would support a technology neutral universal service obligation if separate obligations are needed.

Technology neutral regulation would also be best achieved via a combined copper and fibre RAB. A number of barriers to migration to new technology would also need to be removed.

For more information, please refer to *Implementation*.

6. Do you consider utility-style regulation may now be more appropriate for fixed line communications services? If so, what elements would be most effective?

Yes, Chorus believes utility-style regulation is more appropriate for fixed line communications services. While the future development of the telecommunications sector as a whole is vibrant, our fixed line access network is increasingly taking on the characteristics of a stable utility and requires regulation that reflects that shift.

As a structurally separated telecommunications operator, BBM would be the most effective methodology for regulating revenues.

For more information, please refer to *A Fit for Purpose Regulatory Regime for 2020* and *Implementation.*

7. Would maintaining the status quo for UFB services be effective post-2020?

Chorus does not believe maintaining the status quo for UFB services would be effective. The high degree of revenue sufficiency risk, coupled with the fact that UFB network owners are not vertically integrated, fundamentally changes the incentives on fibre network owners. With the corresponding investment risk, it will be challenging to achieve the Government's broadband aspirations. To change the incentives, a redefined regulatory framework is required.

For more information, please refer to *BBM Provides the Framework for Fit-for-Purpose Regulation*; and *Now is the Right Time for Reform*.

8. If the Government was to specify the pricing methodology that would eventually apply to UFB services, what methodology would be preferable?

Chorus agrees with the Government's preliminary view that BBM is the most appropriate pricing methodology for UFB services.

For more information, please refer to *BBM Provides the Framework for Fit-for-Purpose Regulation*.

9. What is your view on UFB access services being regulated immediately from 1 January 2020, compared to a backstop regime whose application would be triggered by a Commerce Commission recommendation?

Chorus considers that there may be an opportunity for a transitional arrangement where current product and price paths could be moved forward from today and a "line in the sand" approach could be used to move to an SAU/BBM at the end of the transitional period.

Some kind of backstop by which the regulator determines a building block model will still be needed to provide Chorus and RSPs with appropriate incentives to reach a commercially sustainable position that maximises the benefits to end-users.

For more information, please refer to *Implementation*.

10. If the Government were to legislate for the price regulation of UFB services from 1 January 2020, do you have any initial thoughts on the scope of such regulation? Should a different approach be taken in LFC areas?

We think that regulation should apply to the access network up to the first data switch. In Chorus' UFB areas, regulation should apply to both copper and fibre. We think that any regulation in other LFC areas should be consistent, but there may be a question as to the timing as to when regulation applies.

11. If the Government were to introduce a backstop regime for UFB services, do you have any initial thoughts on:

a. tailoring the traditional Schedule 3 investigation into whether UFB services should be regulated?

We do not think that the Schedule 3 process has been effective to date, and therefore should not be used (or adapted) to determine regulation of UFB. At a time when New Zealand is looking to achieve a bold broadband ambition, upfront certainty as to the regulatory framework that will apply is required in order to attract investment. The Schedule 3 process does not provide that upfront certainty. We think a fundamental review is required including the range of instruments and roles of various agencies involved today.

b. the need for transitional measures that might apply prior to the possible price regulation of UFB services?

We have addressed the potential for a transitional arrangement in our submission in the section *A Transitional Arrangement to 2030*.

12. Is there a case for change to the regulated copper access services pricing methodology? If so, what pricing methodology should apply post-2020?

Yes. The current pricing methodology for regulated copper access services needs to be amended to provide a more stable and predictable regulatory environment.

Chorus supports a new approach to the regulation of both fibre and copper networks, and believes this is best achieved with BBM pricing methodology with copper and fibre being included in a single RAB. A key failing of the current regime is that price, quality and investment are not being considered collectively, as they are in a utility-style model. Focusing on pricing methodology in the absence of other relevant factors is not in the long-term interests of consumers.

For more information, please refer to *A Fit for Purpose Regulatory Regime from 2020*, and *Implementation*.

13. If a BBM pricing methodology were put in place for UFB services, how would that impact the choice of a copper pricing regime? Should consistency be an important consideration?

Bearing in mind the substantial transition for the industry from copper to fibre over the next decade or so, we think that a BBM pricing methodology is appropriate for UFB services as well as copper. Consistency is an important consideration as it will address a number of policy issues such as copper/fibre relativity and rural broadband prices.

For more information, please refer to *Implementation*.

14. If BBM were introduced for UFB and/or copper services, should this be done under Part 4 of the Commerce Act or through a similar model under the Telecommunications Act? What would be the costs and benefits of each option?

The first step is to design a coherent regulatory framework that delivers on the Government's broadband vision and broader policy objectives. The vehicle that is used to deliver the model is then a secondary question.

We prefer an SAU approach as an implementation mechanism. Whether the Telecommunications Act or the Commerce Act is chosen as the best vehicle, key regulatory parameters should be established in legislation.

If the Telecommunications Act is the preferred legislative vehicle, any implementation will require a full review of the legislation, rather than simply tinkering with the current legislation.

For more information, please refer to *Implementation*.

15. What is the right balance between providing predictability through legislated pricing requirements and ensuring the Commission has flexibility to respond to a changing environment? How might this be achieved?

A framework that provides for a predictable and fair return on investment, while also providing a mechanism for making new investment, offering new services and amending commercial terms to meet changing consumer needs strikes the right balance between predictability and flexibility. If investment, quality and price are considered together when any change is required, this will allow consumer needs to be met while allowing predictability and a fair return on investment. A BBM is that it meets these aims. This is in stark contrast to TSLRIC

which considers regulation on a service-by-service basis, and pricing decisions are considered separately from quality and investment.

16. Please comment on the implementation issues we have identified for moving to BBM for UFB and/or copper access services, including identifying any other material issues that you think would need to be addressed.

For more information, please refer to *A Transitional Arrangement to 2030* and *Implementation*.

Chapter 5: Mobile competition and radio spectrum

17. Is the current regulatory framework for mobile services effective? Will it continue to support both coverage and competition objectives in the future?

The current regulatory framework for mobile is based on a framework designed in 2001. While there haven't been the same structural changes to the mobile market as there has been in the fixed market (e.g. structural separation), it seems like a sensible time to review whether the framework is effective. The market differences (e.g. the expectation of network overbuild) may lead to the conclusion that a TSLRIC framework is still appropriate for mobile.

18. If changes are needed to regulation of mobile services, what should we consider? For example, is it worth actively promoting infrastructure sharing?

As a general principle, we think it is efficient to encourage sharing and avoid duplication.

19. What are your views on the options for reform in spectrum allocation?

a. How could the overlap between spectrum assignment by Government and consideration under the Commerce Act be managed?

Please see our response to question 17.

b. Should there be any requirements on Government to consult or establish objectives for spectrum assignments in legislation?

As with any legislative review, having clarity of objectives first supports clarity and predictability of regulatory outcomes. There are key policy choices as to roles of policy makers versus regulators.

20. Is an undertakings regime needed to set and enforce spectrum assignment terms and conditions? Where would this sit within the existing legislative framework?

Please see our response to question 19.

21. Should the Ministry of Business, Innovation and Employment or an independent agency monitor and enforce assignment conditions?

Please see our response to question 19.

Chapter 6: The regulatory toolkit

22. Is there a need to update the current purpose statement in the Telecommunications Act for the communications access regime? What are your views on the suggested changes?

Recent Commission processes highlight that there is substantial uncertainty on the application of the purpose statement and alignment of implementation with policy goals. The evidence is overwhelming.

The purpose statement should be amended to remove ambiguity, reflect the fact there is unlikely to be fixed network overbuild, include appropriate investment incentives and acknowledge the social obligation element of telecommunications.

For more information, please refer to *Purpose Statement*.

23. Are there any other barriers to withdrawal or switch-off of copper services which are not addressed here? For example, are there any services based on the legacy copper network for which a replacement product is required, and is not available in New Zealand?

A number of barriers are still in place, in the form of the current regulatory standard terms determinations (**STD**s) underpinned by legislative requirements, which prevent a market and consumer-led transition and are driving costs to consumers.

In addition, copper specific services need to be fibre-compatible before any copper withdrawal takes place. Chorus proposes making testing facilities available to the providers of these services (e.g. medical alarms, house alarms, Sky) and allow them to run pilots to test effective solutions.

For more information, please refer to *Migrating from Copper to Fibre*.

24. In your view, should Chorus have to meet any requirements to protect consumers prior to withdrawing copper services or switching off the copper network within the UFB footprint?

a. What requirements should be met?

A consumer led copper to fibre migration plan in Chorus UFB areas is preferable – for example, having the ability to give notice of switch off in an area once a particular level of uptake of fibre has been reached. Relative copper and fibre prices in Chorus UFB areas assists consumers to be indifferent to switch over when that occurs.

b. How should these requirements be given legal effect?

Requirements for the notice to RSPs should be clearly defined, allowing sufficient time for RSPs to inform their customers and migrate remain customers onto fibre. This could be industry led and included in an SAU.

For more information, please refer to *Migrating from Copper to Fibre*.

25. Is there a need for a mandatory codes system for providers of telecommunications services in New Zealand? How would this work in practice?

Chorus supports the TCF submission on this issue.

26. Do you think there are current net neutrality issues in New Zealand?

Net neutrality issues arise where parties who provide traffic over wholesale infrastructure prioritise that traffic in favour of certain content. While we do not have visibility of how or if RSPs prioritise traffic over our network, we are not aware of any net neutrality concerns in New Zealand at this time.

27. Do you think the regulatory regime is capable of addressing net neutrality issues if they arise in New Zealand? If not, what approach should we consider?

The current regulatory regime contains a number of elements which are capable of addressing any net neutrality issues. In relation to transparency, the TCF's mandatory Product Disclosure Code requires providers of broadband to disclose to customers the 'circumstances in which traffic management may apply and the effect this may have on Customers'.[43]

Transparency is also required by the Fair Trading Act which prohibits misleading or deceptive conduct, which would prevent RSPs significantly influencing the content made available to customers without disclosure. The Commerce Commission, whose ambit includes both the Fair Trading and Commerce Acts, also monitors telecommunications markets and publishes its results annually.

a. Are there elements of the rules and expectations introduced in the European Union and United States that would be useful to have in the New Zealand regime?

The rules introduced by the European Union and United States were a response to specific issues that arose in those jurisdictions. InternetNZ recently noted that an appropriate solution to network neutrality issues must be grounded in the context of the New Zealand market, and that it considers the relevant behaviours, offerings and providers that are unique to our market'[44].

A key element of the New Zealand market is structural separation, which the Discussion Paper describes as creating a fundamentally different environment.[45] In the New Zealand context there are no structural or behavioural issues which warrant the adoption of a regime based on European or US models.

In any event, the United States' transparency and non-interference requirements are arguably covered by the TCF Code disclosure rules and the provisions of the Commerce Act.

28. What do you consider is acceptable traffic management and what is not acceptable? Please provide specific and realistic examples. For example, should telecommunications providers:

a. be able to block or deprioritise lawful content, applications, or services?

b. be able to enter into commercial agreements with content providers to prioritise certain traffic?

[43] TCF Product Disclosure Code, 7.1.3.

[44] Pre-Public Discussion Document on Network Neutrality in New Zealand (December 2014), p8.

[45] MBIE Review Document, September 2015, page 94. While this comment was made in the context of the appropriate purpose statement in the Telecommunications Act, it is equally relevant in this context.

c. be able to prioritise certain types of traffic when their network is congested (such as voice traffic or emergency services calls)?

Please see our response to questions 26 and 27.

29. Are there other net neutrality matters you consider should be considered in a regulatory context (for example, peering or certain content distribution practices)?

Please see our response to questions 26 and 27.

30. Do you have any suggestions for encouraging deregulation as part of the regulatory process?

For more information, please see *Appendix Eight, Amendments to the Telecommunications Act*.

31. Do you support the Commerce Commission having the flexibility to:

a. implement price-only regulation?

Please see our response to question 12. A key failing of the current regime is that price, quality and investment are not being considered collectively, as they are in a utility-style model. Focusing on pricing methodology in the absence of other relevant factors is not in the long-term interests of consumers.

b. adopt either a one- or two-stage pricing process?

The current two stage pricing process – benching marking followed by cost modelling that takes account of New Zealand circumstances – has created price shocks and great uncertainty. We do not think that a two-stage pricing process is sensible under any regulatory framework for fixed network services.

32. Do you have any comments on the current arrangements for consumer representation?

Under a utility-style regulatory framework, we think that there is a much greater opportunity for consumer representation. Under a utility style framework, investment, quality and price decisions are made together in a coherent framework. There is a role for consumer representation in anticipating future consumer needs and being involved in cost-quality-price trade-off decisions. The current framework – where investment decisions are not discussed – is not conducive to consumer representation.

33. In your view, is there justification for the Government to make it clear in legislation whether or not backdating will occur?

Backdating is an illustration of the uncertainty in the regime, including the lack of consistency over time.

Under a utility-style regulatory framework, any backdating requirement can be built into the model itself. To the extent that the current framework remains in place, we believe that the current legislation requires backdating and agree that the legislation should make this clearer.

34. In your view, is there still a need for a separate Telecommunications Commissioner (rather than using the general Commissioners)?

The scope and role of the regulator will be dependent on the regulatory framework that is in place. A refresh on roles and responsibilities will support a sustainable environment. There is currently a very heavy burden on the regulator which increases costs and the risk of errors.

However we note that we remain open-minded about a separate Telecommunications Commissioner, and generally prefer the procedural rigor that comes with a multi-member panel, although recognise the trade off with timeliness of decisions that comes with the "Division" approach to decision-making. Were most industry-led approaches to be adopted, then timeliness may become less of a concern.

For more information, please refer to *Composition of Regulator*.

35. Would the increased accountability created by a merits review process outweigh the risk of increased uncertainty and length added into regulatory processes?

Yes. Accountability needs to be commensurate with the level of discretion and delegation given to a regulatory body. A merits review creates incentives for high quality substantive decision making upfront, meaning earlier certainty for the industry, and brings consistency across regulation for different industries. Along with ex ante protections, merits review process provides an important ex post protection by providing an additional measure of control against inappropriate or misguided use of regulatory discretion in substantial decisions.

For more information, please refer to *Legal Framework*.

36. Do you have any suggestions for the most effective way to transition to a new regulatory framework, and to ensure any updated framework remains fit for purpose over time?

For more information, please refer to *Implementation*.

37. Do you have any comments on the potential removal of the 'broadcasting exclusion' in the Telecommunications Act?

The Discussion Paper does not demonstrate any potential benefits of removing the current exclusion. Please refer to Chorus' 16 October 2015 submission on the Government's Digital Convergence green paper for our views on convergence generally.

38. Are you aware of any barriers to trans-Tasman trade in communications markets that the Government should address, or areas where closer harmonisation with Australia would be beneficial?

No.

39. Please outline any other modifications you propose should be made to the regulatory framework, explaining how these would align with section 157AA(a) of the Telecommunications Act.

Our submission supports a fundamental review and once key policy choices are indicated, design detail can follow.