



Telecommunications Act Review  
Options Paper

Submission to MBIE

1st September 2016

## ABOUT VOCUS

1. Vocus New Zealand is the third largest fixed line operator employing over 600 staff In New Zealand. Our retail operation includes a number of challenger brands - Slingshot, Orcon, Flip and 2Talk. We are also an active wholesaler of services including access, voice and broadband over both fibre and copper.
2. Vocus has made significant investments in New Zealand. We are the largest copper unbundler with a presence in over 200 exchanges throughout New Zealand. In addition we operate 4,200km fibre optic network transits between virtually all major towns and cities, and connects directly into all major peering exchanges. .
3. Our customers in New Zealand range from government agencies, integrators, large corporate, SME and residential households. We are committed to New Zealand's fibre future.
4. Vocus Group is one of the fastest growing telecommunications companies in Australasia and a major provider of voice, broadband, domestic and international connectivity and data centres throughout New Zealand and Australia.
5. If you would like any further information about the topics in this submission or have any queries about the submission, please contact:

*Graham Walmsley*  
*General Manager Commercial and Regulatory*

[graham.walmsley@vocus.co.nz](mailto:graham.walmsley@vocus.co.nz)

## SUMMARY

1. Vocus New Zealand (**Vocus**) welcomes the opportunity to make this submission to MBIE's "Telecommunications Act Review: Options paper". The paper traverses a wide range of complex issues and we appreciate the comprehensiveness of the paper and the clarity with which it articulates the thinking to date and the issue being considered.
2. We have not sought to focus on the more technical legal and economic aspects of the options paper. We have instead focussed on what we consider the practical issues that could evolve, the likely network operator's behaviour and the impact on the consumer and competitive market.
3. Vocus, through its retail brands (Slingshot, Orcon, Flip and 2talk) is well qualified to comment on those aspects as one of the most successful (and one of the few surviving) RSP's to "*tip-toe through the minefield*" created by the last regulatory framework and operational separation.
4. One of Vocus' primary concerns with the paper is the specification of low specified regulated entry level services, the 15/1 and the 100/20 anchor services. Technology innovation means that by 2020 the FTTH fibre network will be capable of significantly higher speeds, at little or no additional cost, just as occurred with ADSL to ADSL2 to VDSL. In our paper we seek to outline a number of concerns we have with this approach: -
  - (a) We consider that by 2020 the market will have moved, if allowed to, beyond the 100/20 speed service and as such the majority of services would be commercial. As such proposed regulated services will be consigned to a niche - **risk of regulating yesterday's problem!**
  - (b) The conclusion from copper experiences has to be that, **left to commercial whims of a monopoly network operator's attempts to extract artificial premiums, consumers face several years delay before they can enjoy the benefits of global technology improvements.**
  - (c) The entry 15/1 service is clearly predicated on cross-subsidisation occurring from premium commercial services to produce a low cost service – that looks like ADSL copper. However the experience of UBA is that **demand clusters on a single service** – a very tight bell curve – **and little cross subsidy opportunity exists.** Furthermore the amount that is required to achieve the policy aim of affordable broadband for say 10-20,000 consumers is small and better dealt more transparently with less risk of creating distortions.
  - (d) **Constraining consumers from moving to higher speeds constrains innovation.** If commercial premiums (not cost based) for higher speeds are set by a monopoly provider this artificially holds consumers back from faster services. This has the flow on effect that the

*'innovation ecosystem'* including OTT applications, ancillary equipment (e.g. home security) is constrained by the slow adoption of faster speeds by the majority of consumers.

5. **Vocus would like to see a single regulated service fit for the majority (80%+) of users.** Ideally this would be a full speed service as is the case with copper today, but at minimum a 1G service in 2020.
6. **The revenue cap is the 'Achilles heel'.** Central to ameliorating the risks from mixing social and economic policies is the high level of dependence the proposed framework places on the revenue cap: -
  - (a) to constrain monopoly revenue and
  - (b) by capping revenue forcing cross subsidisation
7. However the revenue cap only achieves this if demand is constant. Vocus considers that fixed wireless access will provide fringe competition and take 10-20% of the demand away; but is unlikely to be a complete substitute. LFCs will be faced with a choice of :-
  - (a) Creating a more compelling commercial competitive offer – something they are ill equipped to do with a geographically non-specific, nomadic alternative and only a speed lever to pull on.
  - (b) Pricing up commercial services to fill the gap and then be incentivised to minimise costs and investments (the complete reverse of the policy objective)
8. Vocus' view is that the rational monopolist will opt for (b) and fight a legal and economic battle with the regulator. Furthermore if that is correct it will disrupt the competitive landscape as fixed line only operators are facing artificially higher costs.
9. **GPON unbundling is like 'garlic to a vampire' to a monopoly network operator.** Commercial solutions around the world have been carefully constructed to delay and defer regulation whilst ensuring unbundling is constrained. **Vocus supports regulated unbundling from the 2020** .The shape and form of unbundling should be determined from 2018 onwards given the changes in technology and the widespread of GPON fibre networks globally.
10. **Regulated GPON Unbundling is the only robust incentive for LFC's to ensure they invest in the network refresh to ensure a modern network performing to world class standards.**
11. **It is unclear where policy priorities lie** and in mixing policies the risk is creating distortions. In Vocus' view there needs to be clarity on whether the priority is revenue certainty for LFC's or price certainty for consumers. We are not convinced that by trying to juggle these and come up with a hybrid model as proposed will work. Furthermore the Commission will need a clear understanding of the overarching priority.
12. **The industry will be going through a period of unprecedented change in 2020.** Copper services will still be critical in 2020 as the consumer led migration continues. The proposal to effectively remove the existing regulated UBA / UCLL / UCLFS services is in our view premature. Vocus is the largest unbundler and whilst we actively encourage fibre uptake within our unbundled

network we still envisage that UCLL / UCLFS and UBA will be significant services. We would like to see a 3 year freeze on these services post 2020 to either allow commercial negotiations to occur or migration to have reached a point where uses of the services is minimal. We would also suggest that the first regulatory period is a shorter 3 years given the volatility and the issues likely to arise out of the new framework.

13. Finally we have again submitted that there is a problem in the mobile market as evidenced by the lack of an active MVNO wholesale market with a range of MVNO options. We are in a catch 22 whereby MBIE insist that the Commission have the tools unyet the problem persists. Rather than repeat our views we have referenced extensively recent submissions to the Commerce Commission from other parties echoing our own assertion on the failure of the wholesale mobile market and the potential benefits that could be derived.

## **PRICE CAPS ON KEY INPUTS – REGULATED ‘LOW SPECIFIED’ ANCHOR’ PRODUCTS IS THE WRONG APPROACH**

14. Vocus has concerns with the proposed approach to only regulate low speed ‘anchor’ products which might appeal to a niche (10-15% in our estimation) of the market by 2020. The majority of services specifications and prices would then have to be commercially negotiated with the regulated monopoly suppliers, with each one potentially on different price and service specifications.
15. Vocus would like to see price caps on all key inputs for RSP’s and would suggest that regulated services should meet the needs of the majority (80 %+ ) of users at a minimum. The regulated service should be future proofed and our preference would be unconstrained in a similar manner to access today, however at a minimum a 1Gb regulated price capped service should be available to meet the needs of the majority of consumers by 2020. **To not do so risks regulating yesterday’s problem.**
16. The proposed approach is designed to allow LFC’s to artificially constrain the ‘last mile’ fibre rather than letting it perform to its full capability in order that they can extract a premium from faster services, despite there being no material cost differences – *in fact ironically it costs to deploy equipment to artificially constrain the performance.*
17. This takes NZ full circle back to 2000 where the underlying monopoly copper network operator artificially constrained the performance of the ‘last mile’ copper in order to extract a premium. This didn’t work and the consequences was delays, for many years, in consumers getting access to the latest technology at its full capability whilst the underlying monopoly network operator tried to set the market structure) in order to extract an artificial premium from the market.
18. It was not until RSP’s were able to access full speed ‘last mile’ services that the performance and affordability of NZ broadband improved dramatically!

## **ARTIFICIAL CONSTRAINTS TO ‘LAST MILE’ ACCESS RESULTS IN DELAYS TO CONSUMERS GETTING ACCESS TO THE LATEST CAPABILITIES DEPLOYED ELSEWHERE IN THE WORLD**

19. Often the best indicator of the future is the past! Experience in copper supports the view that artificially constraining access produces poor outcomes.
20. Much is made by the LFC’s of the need to “support NZ’s rocketing bandwidth demand” but the reality is that rapid demand change has existed in the past and will continue to exist. The answer to the problem has come from the global consumer goods and equipment providers who have been able to supply more output at lower cost (for example ADSL – 8M to VDSL 52MB) or more efficient use of supply to meet demand (e.g. ever more efficient codecs, changes in band plans). The investment by LFC’s to upgrade and keep the network current is largely part of ongoing network refresh, for example you can’t buy ADSL cards anymore – all cards are VDSL capable.
21. Take fibre technology developments over the last few years. The current situation is that globally most network operators have invested in GPON at the time capable of 2.5G downstream. To cope with increasing demand over the last 5 years the equipment producers have innovated with NGPON1 (10Gb), NGPON2 (40G), NGPON2 extended (80G). NGPON1 failed because it required

operators to buy new equipment. NGPON2 can co-exist with existing GPON and is able to use existing PON-capable outside plant. Operators have a clear upgrade path from where they are now.

22. **It seems clear that global technology innovation means that by 2020 NEW ZEALANDS GPON will be capable of operating at 1G+ per household with little or no additional cost to the network operator.**

23. Look what happened in the copper based access when the monopoly network provider was allowed to artificially constrain the 'last mile' access.

(a) June 1999 ADSL broadband was first introduced and it was briefly a full speed ADSL service capable of running up to 8Mb for both consumers and businesses.

(b) January 2000 Telecom, the monopoly network provider, then decided to constrain the consumer service to a 128/128kbps service (3 times dialup speed) whilst businesses could purchase full speed ADSL.

(c) Mid 2003 Constraints loosened a little. Consumer broadband speed increased to 256/128k product. Business ADSL was 8Mbps full speed service.

(d) Mid 2004 Constraints further loosened with Consumer broadband' allowed' to go at a speed of 2 Mb/128k. Business ADSL was 8Mbps full speed service

(e) April 2006 Consumer constraint further loosened to 3.5Mb/512 but Business ADSL was now also constrained to 3.5Mbps as artificial business: consumer differentiation was removed. **At this point in time there were only 7 countries in the OECD who did not have unconstrained broadband services.**

(f) IHUG and CallPlus separately applied to the Commerce Commission for a determination to remove artificial differentiation by speed, technology type (ADSL, ADSL2) and customer type. The result was access to consumers to full speed broadband with no artificial constraint of the downstream speeds full 6 years after the product was originally introduced.

(g) Effectively the monopoly network provider was able to dictate the service performance, motivated by extracting a premium from other services for as long as they were able.

**NZ Consumers had to wait 6 years before they REGAINED access to unconstrained ADSL broadband whilst the monopoly network provider sought to extract an artificial premium (not cost based).**

24. Interestingly in our view this would not have occurred to this extent if regulated unbundling had been available [see discussion on importance of viable unbundling para 63-80]

25. Is this an isolated example, no! **VDSL saw the same sort of issues:** -

(a) In April 2009 Telecom announced it would pilot a commercial VDSL2 service [Informer TW 2009-04-08] at a \$20 premium to the regulated service. On 22<sup>nd</sup> of May 2009 Kordia and CallPlus made a complaint under s156(O) to the Commission that the service was not being

made available under the regulated service. The Commission deferred any decision as this was a trial and final service specifications had not been determined.

- (b) In May 2010 CallPlus, Kordia, Vodafone and Orcon wrote a joint letter to the Commerce Commission seeking clarification on the process to review new uba variants as the monopoly network had proposed the 'new broadband variant based on VDSL2' to be launched in August with a \$40 wholesale price, a significant premium on the regulated service..
- (c) In October 2010 Telecom announced it was launching a commercial VDSL (capable of running 3 times faster than ADSL2) service at a \$20 premium (despite there being no cost differences). The majority of RSP's submitted that the VDSL service should be covered under the regulated full speed service rather than allowing the monopoly network provider **to 'bank the benefit of global technology improvements'**. As at the end of 2010 VDSL was available to 30% of ADSL users who could potentially have benefitted from the new technology.
- (d) CallPlus' wrote in a submission to Commerce Commission ["Consultation on new commercial UBA variant" November 2010] **"At a \$20 premium it is likely that the service will become a niche product in the market constraining the uptake and limiting the benefit that could be delivered at no incremental cost from the VDSL capability. This mirrors the scenario we had prior to Decision 611 when wholesale price points set by Telecom for different speeds dictated retail prices and uptake"**.
- (e) We were unsuccessful in getting the service under the regulated UBA service and as a result VDSL take-up, as we submitted, was minimal. The outcome: -

**For 3 to 4 years uptake of the benefits of VDSL technology were constrained as a result of the monopoly network provider being able to artificially set a premium on a commercial service.** However the debacle continued.

- 26. In June 2013 there was a brief sign that the latent network capability, whereby 60% of connections could benefit from VDSL2 capable line cards (up from 30% in Oct 2010 as VDSL capable cards that could also do ADSL was all you could buy), might be available on terms consumers would find attractive. Chorus announced that they considering providing a VDSL option **UNDER THE STD.** Chorus advised that for the past 4 years they had "deployed VDSL equipment as standard practice". The proposed service came with an offer of a \$5 per month premium as a full install was initially mandatory.

#### **JUST AS THE BASIC VDSL SERVICE GOT UNDERWAY CHORUS WANTED TO WITHDRAW AND REPLACE WITH COMMERCIAL BOOST VDSL**

- 27. Once RSP's got access to the service on more reasonable terms (albeit several years after most of the OECD) VDSL became the fastest growing broadband service at that time growing at a rate of around 20,000 connections per quarter.



28. In an about turn Chorus sought to withdraw the service (in much the same manner Telecom had done with full speed ADSL in 2000). In May 2014 Chorus then announced it was introducing commercial (Boost) services WITHDRAWING VDSL as a regulated UBA service AND ARTIFICIALLY CONSTRAINING the regulated service so as to make commercial services more appealing.
29. As the Commission noted in its Issues paper (7<sup>th</sup> July 2014) *“For RSP’s that have VDSL connections, Chorus is proposing they either move customers onto Boost VDSL or take regulated UBA over ADSL2+. On 30<sup>th</sup> May Chorus gave notice that from 1 December 2014 the VDSL service provided under regulated UBA will be withdrawn, subject to consultation.”*
30. At the time of announcing the Boost service Chorus did not specify the premium they proposed to apply to the BOOST service – the price was unknown. On 28<sup>th</sup> of July Chorus confirmed a wholesale price of \$44.99 (a \$10 premium per month on the regulated IPP price) for BOOST VDSL with backdating once the FPP was finalised.
31. To add ‘fuel to the fire’ additional costs would have been incurred by RSP’s for multiple handovers simply so that Chorus could apply the constraints!
32. Chorus finally backed down on degrading the regulated broadband and withdrawing the regulated Basic VDSL service however the now optional connection uplift increased from \$5 to \$10 from 1 December 2014 for new connections.

**LEAVING ACCESS TO NEW CAPABILITIES TO THE COMMERCIAL WHIMS OF MONOPOLY NETWORK OPERATORS CREATES UNCERTAINTY AND DELAYS KIWI CONSUMERS ENJOYING THE BENEFITS**

33. The conclusion from copper experiences has to be that, left to commercial whims of a monopoly network operator’s attempts to extract artificial premiums, consumers face several years delay before they can enjoy the benefits of global technology improvements. Why will fibre be any different?
34. Furthermore if price stability is a policy goal it seems unlikely that commercial services will achieve that aim.

**NZ BUILT A SINGLE NATIONAL UFB NETWORK WITH 1Gbps+ CAPABILITY BY 2018. LOW SPECIFIED ANCHOR SERVICES COULD INHIBIT INNOVATION AND PREVENT UFB REALISING ITS FULL POTENTIAL**

35. If low specified anchor fibre products are regulated whilst higher speed (or less constrained) fibre services are left as commercial there is a risk that a greater percentage of customers are on slower speed fibre services than would otherwise have been the case. Copper experience supports this conclusion.
36. Critical to realising the benefit of NZ’s investment in FTTH is the development of ‘over the top’ applications and ancillary equipment and services. However for these to business case they often have a dependency on the majority of consumers using higher speed services. So to encourage

investments in home security, video-on demand or e-health applications, for example, it may be crucial that the vast majority of consumers are using the FTTH network to its full capability. If, as we have seen with copper, consumers are held back on low specified anchor services whilst the network operator attempts to take a premium it will inhibit innovation and investment from the wider 'eco-system'.

37. NZ has invested in full fibre to the home (FTTH) within UFB areas which will provide one national footprint with 1Gbps nationally by 2018. In contrast to Australia that has opted for a mixture of technologies and upgrade paths. Australia's decision was based on, what should be, a lower cost to deploy and includes FTTH, a hybrid fibre to the node and VDSL deployment and fixed wireless access.
38. The advantage of NZ deployment is that we can achieve faster speeds across the board for 80%+ and that will encourage the development of an ecosystem that drives innovation and adds value as a result of the faster capability, in contrast to Australia where there are multiple technologies with different speed capabilities.
39. Relying on commercial services for the majority of connections and allowing artificial constraints risks creating the same situation that Australia will face with different groups of customers on different speeds.
40. It is customer facing RSP's and third party partners that are likely to do the innovation not the LFC's. Allowing LFC's to '*bank the benefits*' of global technology innovation – e.g. NGPON X to NGPON Y inhibits RSP's capability to innovate by **allowing LFC's to dictate that the market structure be differentiated by 'last mile' speed**. RSP's who create the products and services, sell to the consumers and operate in a competitive environment, and therefore do not have the opportunity to 'bank' these benefits, should be the ones who create 'premium services' (which are not as mono-dimensional as last mile speed differentiated) where there is market demand.
41. To ensure end-to-end performance:-
  - (a) RSP need to invest in content distribution networks and caches regionally to move the content nearer to the users.
  - (b) RSP's need to invest in international and domestic backhaul capacity
  - (c) RSP's need to invest in traffic management capability to ensure consistent service performance
  - (d) RSP's may partner with third parties to develop innovative solutions such as home security

#### **CONSISTENCY OF SERVICE SPECIFICATION AND PRICING FOR MAJORITY OF SERVICES TO AVOID MARKET CONFUSION AND ACHIEVE POLICY OBJECTIVES**

42. It is critical to the market (both RSP's and Consumers) that the services that are used by the bulk of consumers have a consistent specification and pricing across the different LFC's.

43. As we have already stated the current proposed anchor services are likely to be niche services by 2020. If that's the case RSP's will rely on LFC's producing commercial services that have the same core specifications and pricing. For example if LFC A and B offer a 1G service at \$x but LFC C won't offer a 1G service, or want to charge a different price point then the market confusion that will flow on is likely to be significant, with ultimately consumers being the losers: -
- (a) RSP's are unable to offer national price points on commercial services
  - (b) RSP's will not have a consistent national service specifications on commercial services
  - (c) Marketing communications will become complex and confusing for consumers and more costly for RSP's
  - (d) Order processing will be less efficient with layers of prequalification
44. For commercial services that are not regulated it is almost a given that price and non-price differences by LFC. **Wellington, Waikato, Whanganui and Waipara** (it's in Canterbury if you didn't know) **will have all have different prices and non-price attributes.**
45. It is only the regulated services that will have consistency. The regulated services need to be fit for purpose for the majority (80 %+ ) of users.

#### **MIXING POLICIES RISKS CREATING DISTORTIONS**

46. Reading the paper it is unclear where the policy priority lies.
- (a) If it is revenue certainty for LFC's then there is likely to be price volatility
  - (b) If it is price certainty then there is a risk of revenue volatility for LFC's
47. Vocus would like to see a clear statement on where the policy priority lies as this will provide clear guidance to the Commission and others in their decision making.
48. Furthermore Vocus concludes that there are two issues, that in trying to work around MBIE risks creating distortionary effects.
- (a) Digital Inclusion – the 15/1 anchor service appears to be predicated on LFC's applying a cross subsidy to ensure a low priced cross subsidised entry product. This looks like a TSO by stealth!
  - (b) To incentivise LFCs to keep their network refreshed and able to take advantage of the latest global technology development the framework allows artificial constraints and limiting regulated services to niche services.
49. Vocus considers that the wrong approach is being used and there are alternatives.

#### **DIGITAL INCLUSION**

50. The intention of the entry level 15/1 service appears to be to allow a subsidised low cost option.

51. The assumption that cross subsidy will occur of course relies on the good faith of the monopoly LFC and/or an effective revenue cap. For the reasons outlined in the paper [para 63-80] the revenue cap won't work in Vocus' opinion.
52. Historically demand in New Zealand has typically clustered around a single service. The price elasticity, or demand profile, in NZ suggests that the extent to which any cross subsidy can occur is also limited.
53. **Consumers have tended to have a very small 'price elasticity'**, not buying premium priced services until the price is within a small range then moving quickly to the new service with few consumers remaining on lower specified services.
  - (a) The experience of gradual speed upgrades in the copper world (e.g. from 256 to 2Mb) suggest a price elasticity around \$5 or less.
  - (b) VDSL also supports this. When the monopoly provider tried to charge a premium of \$20 there was no demand. When it dropped to \$5 premium demand took off.
54. There is a very tight bell curve for demand with not much of a the tail for cross subsidisation to occur
55. Mixing social and economic policy is risky and creates distortions.
  - (a) If you assume that policy concerns for affordable broadband are targeted at 10-20,000 users and the cross subsidy was \$10 per month you are talking about \$1.2 - 2.4m annually. That can be dealt with more transparently and with less distortionary effect by other means.
56. The distortion you risk is that: -
  - (a) if the gap between commercial services and lower specified regulated services is too high (**as was the case with VDSL for 4 years and ADSL for 6 years**) you risk artificially holding consumers on lower specified products preventing consumers from enjoying the full capability of the network and inhibiting innovation from third parties who may need the majority of consumers on faster speed services to enable there service (in line with comments at para 35-41)
  - (b) Furthermore copper services which have been unconstrained and allowed to run at their full capability will now be open to being subject to constraints. Reopening copper services to changes in 2020 will drive further confusion. In Vocus' opinion copper services should continue to be a full speed unconstrained service (see para 99-104 on transition).
  - (c) Vocus is concerned that one of the reasons a regulated GPON unbundled service is not included is concerns that it could cut across any cross-subsidisation (noting our view that the extent to which that could occur is minimal even if the revenue cap was effective). Vocus supports regulated unbundled services and concerns that this could disrupt a potential cross subsidy are ill founded.
57. Vocus would prefer to see a more transparent method to address policy goals if the Government is so minded and does not believe that a low specified 15/1 anchor service for fibre is required. Furthermore copper should remain as it is today – a full speed not constrained to 15/1. The current

proposal risks reopening copper services to different speed variants – something that we haven't seen since 2006!

## **INCENTIVISING MONOPOLY NETWORK OPERATORS TO INVEST IN TECHNOLOGY UPDATES**

58. A part of the intention to only regulate low end services and allowing LFC's to take a premium for the less constrained services, appears to be to incentivise the network operator to invest to ensure the network performs to international standards and encourage early investment in new capability – NGPON X.
59. Vocus agrees that LFC's should make a reasonable return on investment however if you look at copper the practical reality is that these investments occur largely as part of a natural technology refresh, for example all MSAN cards now are VDSL capable. Operators are incentivised to invest to minimise their operating costs.
60. Furthermore as detailed above the lesson from the copper world is that allowing commercial variants (from artificial constraints by the network operator) in order to act as an incentive to upgrade in practice delays the benefits of network capability being enjoyed by the majority of users.
61. **The most robust driver for a network operator to invest in the latest technology in Vocus' opinion is the unbundling.** If there is a risk that another party will purchase layer 1 services only and add their own equipment to provide a better performing service at layer 2 and above the network operator is incentivised to keep abreast of technology developments and refresh equipment.
62. The problem is that the approach being suggested is commercial unbundling with a regulatory backstop. In Vocus' view commercial unbundling will never work, **there is no incentive for a monopoly network provider to offer a commercially viable option, they will delay and defer regulation as long as they can.....**a repeat of the global copper unbundling experience.

## **UNBUNDLING INCENTIVISES INNOVATION AND INVESTMENT BUT IS LIKE 'GARLIC TO A VAMPIRE' TO A MONOPOLY NETWORK PROVIDER**

### **Questions 30-34**

63. Vocus is concerned that unbundling has not been regulated. Our expectation was that fibre unbundling would be mandated based on the deeds of undertakings. Mandating a commercial unbundling service is a 'Clayton's' unbundling, effectively its being set aside by making it commercial.
64. As noted in the paper unbundling comes in different shapes:-
  - (a) Unbundled consumer product, which could come in different forms depending on technology innovation
    - (i) GPON with RSP placing equipment in cabinets

- (ii) Developing areas such as Wavelength unbundling
  - (b) Point to point layer 1 dark fibre.
  - (c) Existing Copper unbundling
65. Generally when parties have referred to unbundling they have referred to GPON fibre unbundling.
66. Question 33 asks if the layer1 anchor product should “*include both point-to-point and point to multipoint configurations.*” Vocus would separate out point to point dark fibre access which is currently offered commercially from unbundling the GPON consumer fibre access. Vocus doesn’t consider it practical to try to create a technology neutral unbundled service if that is an option being considered.

### **GPON UNBUNDLING**

67. To assume that the threat of regulated unbundling is sufficient incentive for an LFC to offer a genuinely viable commercial unbundled GPON option ‘flies in the face of’ experience in NZ and throughout the world where incumbents delayed, deferred and denied access to unbundling services (copper access historically) for as long as they could before lengthy cumbersome processes got underway to create a regulated unbundled service.
68. In Vocus’ view commercial GPON unbundling will be a façade! Vocus is of the view that ‘cost oriented’ unbundling of GPON should be regulated from 2020.
69. However given the widespread deployment of fibre networks globally the technology around unbundling is evolving and settling on the actual form of unbundling may be premature. GPON unbundling should be the subject of a Commerce Commission assessment commencing 2018 of the most appropriate approach in the light of technology developments such as wavelength unbundling.
70. Vocus is the largest copper unbundler in New Zealand. We have demonstrated that we are prepared to invest in extensively unbundling and we are serious about unbundling fibre if the business case is viable and we see a repeat of the gaming by the monopoly network provider that we saw in copper.
71. Vocus has no doubt that by 2020 any ‘assertions’ around technical GPON unbundling issues will be resolved well ahead of that time, and would advise a healthy degree scepticism on a monopoly network operator suggesting it can’t be done.

### **POINT-TO-POINT DARK FIBRE**

72. Point to point DFAS is commercially available now. It plays a very important part in the business segment but in addition also it is important for:-
- (a) connecting locations such as data centres to RSP’s equipment in Chorus exchanges
  - (b) connecting inter exchanges to allow RSP’s to aggregate backhaul
73. If left to commercial solutions this risk in future Chorus, in particular, ‘gaming’ the system by
- (a) Removing national pricing and pricing DFAS higher in areas where they are the sole network in the area.

- (b) Charging 'inflated' commercial prices for larger handovers as demand increases. We have seen this behaviour with UBA handovers. Various parties, including Spark and Vocus, submitted on the Commission s30R review that the Chorus' price for a commercial 10G handovers point for UBA was inflated.

*"A useful benchmark is the UFB 10GigE and 1GigE handover which cost \$300 & \$100 per month respectively. In stark contrast EUBA handovers are currently priced at \$1,444 & \$152 per month despite the fact the equipment that is utilised is the same." [Vocus submission on s30R review 5th May para 64 ]*

74. Vocus would like to see the dark fibre service, including handover and co-location costs to be regulated.

#### **COPPER UCLL**

75. Question 33 also asks if the layer 1 anchor product should include UCLL and be technology neutral. This seems a stretch and an unnecessary complication.
76. Vocus would prefer to see a 'freeze' on the price and non-price terms for the existing UCLL and UCLFS services during the transition period.
77. UCLL (and UCLFS) remains an important service for Vocus given our investment in unbundling and **the high percentage of our base on the service**. Vocus is actively promoting fibre to UCLL customers and is not actively investing in further unbundling. This is evidenced by the number of UCLL lines it purchases, however it is unlikely that by 2020 this will have reduced to the point where it is the number of lines are immaterial.
78. We are therefore concerned with the suggestion to make UCLL (and UCLFS) a commercial service post 2020 leaving unbundler's in a difficult position. Chorus has no incentive to retain lines on UCLL and every incentive to force unbundlers onto higher revenue UBA or UFB. Unbundlers could face a collapse of layer 1 to layer 2 differential forcing them to either accept higher costs for UCLL or face the cost, including customer churn.
79. **Unbundlers should not face the prospect of being effectively 'force migrated' in contrast to the policy approach of consumer led migrations.**
80. Vocus would prefer to see UCLL prices frozen during the transition period whilst the number of services remain over a specified minimum amount. If consumer led migrations result in UCLL lines dropping to a small % of their base unbundlers could accept the need to migrate away if they are given sufficient notice. Vocus considers that a commercial arrangement could be agreed between Chorus and unbundlers with respect to forced migration to another service if Chorus wanted to 'speed up' the consumer led migration.

#### **THE ACHILLES HEEL: REVENUE CAP ONLY WORKS WHERE THERE IS NO FRINGE COMPETITION**

81. Revenue caps being a constraint is fundamental to supporting the thinking in the paper around: -

- (a) Allowing artificial constraints to be applied by monopoly LFC's and only regulating low end services
  - (b) Allowing monopoly LFC's to extract commercial premiums for less constrained services
  - (c) Forcing cross subsidy to occur between commercial premium services and low end entry services rather than layering of the 'allowed' monopoly premium from commercial services.
82. However the revenue cap assumes a relatively constant demand for services. If the overall demand drops as a result of a competitive product there is a significant risk that the monopoly LFC is incentivised to artificially raise the premium price of the commercial services, which could be the bulk of services if the regulated services are niche, to offset the shortfall in revenue from loss of demand to fringe competition. The monopoly's incentive then becomes to minimise costs, and investment, to maximise profit.
83. Clearly if there is a ubiquitous competitive option to fibre then it begs the question what's the problem? Where the problem occurs is if there is fringe competition, or pockets of competition which may take some of the demand but are not capable of being a substitute across the board.
84. Vocus is very concerned about Fixed Wireless Access which has the capability to be a substitute for fibre for a segment of the market. The nature of fixed wireless, at this point in time, is that it is capable of providing a substitute but given that spectrum is not infinite and the economics of mobile networks to carry large quantities of data it will meet pockets of demand.
85. Vocus anticipate that in NZ fixed wireless access could account for around 15% of connections in the by 2020. If the following press release from Spark is correct fixed wireless access will be one of the fastest growing services in the next 12 months.

***Spark ready to scale up wireless broadband network as fixed revenues decline***

*Spark New Zealand is looking to scale up its mass market wireless broadband offering, with plans to add at least 50,000 new connections in the next 12 months. Speaking at the company's full-year results announcement, Spark MD Simon Moutter said the company was excited about the potential of the new product, which would utilise the carrier's significant spectrum assets acquired over the past few years.*

*The wireless broadband service, under its Skinny low-cost brand, is currently in betamode with around 12,000 customers. However, Spark will now move to a full market launch and promote the service as a substitution for fixed broadband in both rural and urban areas, particularly in the sub-NZ\$60 segment.*

*At the same time it has announced further investment in its mobile infrastructure, with plans to move to a 4.5G service that will allow it to increase data speeds as well as improve its network economics. As previously reported in CommsDay, Spark and vendor partner Huawei switched on the first commercial 4.5G site in Christchurch in May*

*Source: Commsday 19<sup>th</sup> August 2017*

86. How will an LFC react? LFCs will be faced with a choice of :-
- (a) Creating a more compelling commercial competitive offer – something they are ill equipped to do with a geographically, nomadic non-specific alternative and only a speed lever to pull on.



- (b) Price up commercial services to fill the gap and be incentivised to minimise costs and investments (the complete reverse of the policy objective)
87. Vocus' view is that the rational monopolist will opt for (b) and fight a legal and economic battle with the regulator. The counterfactual that an LFC would drop its prices on its services to compete is unlikely.
88. An LFC's ability to compete is very limited. As we have said most of the innovation will come from RSP's and third parties. An LFC can only control speed over the 'last mile' :-
- (a) LFC's cannot control data caps or set data limits
  - (b) LFC's cannot control end-to-end performance
  - (c) LFC's cannot create a low cost pre-pay option as it doesn't bill customers
  - (d) LFC's cannot bundle with other services
  - (e) And the LFC's fibre is competing with a potentially nomadic FWA offering which does not have defined areas in which the LFC can target selectively dropping its price.
89. Fixed Wireless does not look like it would be a large scale substitute for fibre to the home but it will almost certainly gain a 10-20% share appealing to customer segments with no geographic boundaries.
90. **The LFC will look to increase its prices of commercial services to fill the revenue gap everyday broadband prices will go up**, or consumers elect to take lower speed regulated services; potentially constraining innovation for the reasons outlined in the paper.
91. FWA also risks distorting the fixed line competitive landscape. Fixed Wireless Access is a significant concern to a non-mobile operator. Given the non-existent regulation of wholesale mobile services there is no active wholesale mobile market. As such it is likely fixed line RSP's are unable to access wholesale FWA services and are competitively disadvantaged against the three mobile network operators as the monopoly network operator raise its prices.

## **BALANCE BETWEEN INFRASTRUCTURE INVESTMENT AND COMPETITION IN MOBILE MARKET**

92. Vocus has already submitted that the current regime focuses heavily on network investment and assumes 3 Mobile Network Operators (MNO's) provides competition to ensure fair price for consumers.
93. Vocus submitted in the last round of consultation in October that Vocus' view was *"that 3 MNO's are not enough to ensure a sufficiently competitive environment for the 'long term benefit of end users"*.
94. MBIE view continues to be that "the regulation of the mobile market has largely been effective" [para 9.1.1 of the Options Paper and that the Commission has adequate powers if there is a problem.
95. In Vocus' view it is self-evident that there is a problem- yet it's not even being acknowledged. Vocus is not the only RSP highlighting the issue. Trustpower, in its "Submission to the Commerce

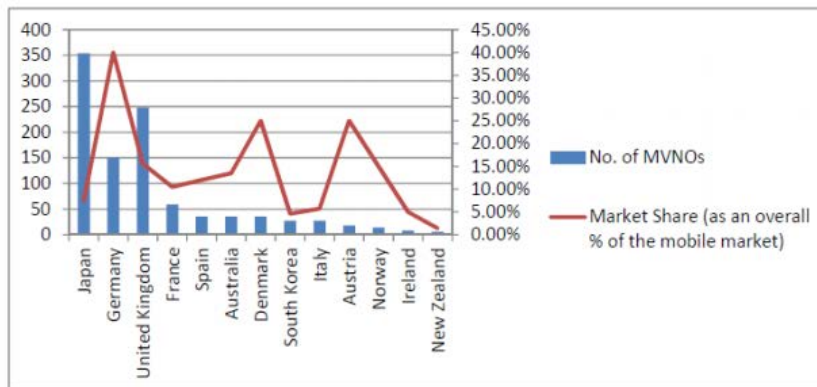
Commission in relation to clearance application by Vodafone and Sky” on 12<sup>th</sup> August 2016, highlighted the issue faced:-

**“16.1 The New Zealand MVNO market**

There is only a “handful” of MVNOs (around six) in New Zealand, with 20,000 customers as at June 2015. 26 Therefore the competitive impact of MVNOs is minimal and largely immaterial. New Zealand stands out amongst developed economies for the very low level of services-based competition in mobile markets downstream from the MNOs. Most developed countries have highly dynamic services-based competition, with dozens, and sometimes hundreds, of MVNOs competing against each other and against the retail arms of the vertically integrated MNOs.

As the graph below shows, MVNOs across a range of other developed countries can account for anywhere between 10% to 40% of retail market share. In contrast, New Zealand has around 6 MVNOs, accounting for less than 2% of the retail mobile base.

**Number of MVNOs tracked against market share**

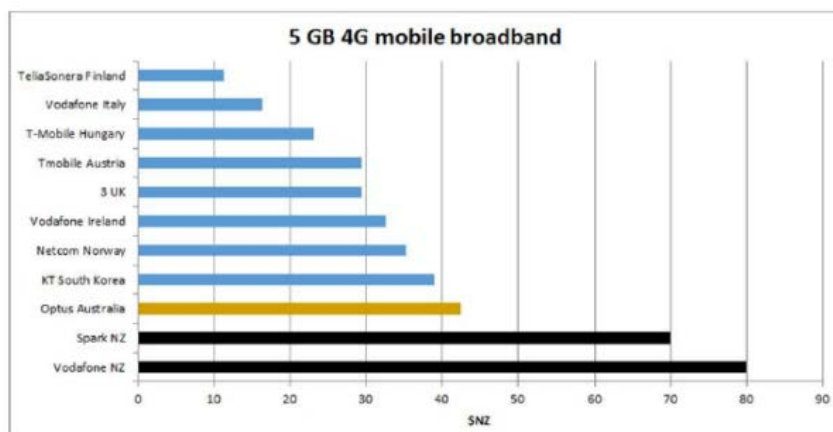


The presence of a vigorous MVNO sector is not necessarily a function of a mobile market being larger than that found in New Zealand. As the above graph shows, countries which face similar challenges of scale and which have 3 or fewer MNOs, such as Norway, Australia, Ireland and Austria, have many more MVNOs, accounting for 6 to 20 times more market share than the current pool of New Zealand MVNOs.”

- 96. Trustpower goes on to highlight [para 16.2] the issue that New Zealand has high mobile data retail pricing.

“That Commission report shows that New Zealand’s retail mobile pricing for data is higher than nearly all other OECD countries. The 1.5 Gb and 6 Gb data services referred to in the Commission’s report are around 50% and 100% higher than the OECD averages respectively. New Zealand ranks 28th and 33rd out of 34 countries, for the 1.5GB and 6Gb packages respectively). New Zealand compares poorly on mobile plans bundling higher calls and data usage compared with other countries’ mobile operators, as set out in the following graph

Comparison of New Zealand higher value monthly plans to comparable jurisdictions



Most of those countries with low price points for 5GB 4G services have a robust level of MVNO activity based on overall market share.

While the presence or absence of significant MVNO activity alone may not drive the differences between mobile pricing in New Zealand and other countries, mobile markets which are more dynamic than New Zealand's invariably have a 'critical mass' of MVNOs in the competitive mix. These MVNOs are operating at all levels of the value / quality chain, including the 'higher' end of the market. This is driving better pricing outcomes for consumers.

While price competition benefits consumers, MVNOs can be more than just resellers and in overseas markets the MVNO model is being used to deliver significant service and product innovation. “

97. Trustpower in their submission look to quantify the benefit that a thick MVNO could bring to end users:-

**“18. Competitive pressure - Thick MVNOs are similar to MNOs .**

In the European Union, a number of mergers between two MNOs have been cleared by the European Commission, which reduce the number of MNOs from four to three, on terms that the merging MNOs agree to sufficiently robust and reasonable MVNO terms with at least one third-party MVNO. Those terms are at the “thick” end of the MVNO spectrum, and involve selling airtime on a bulk basis, with pay-as-you-go as well as minimum commitment options.

The decisions reflect the conclusion that three MNOs instead of four causes competition and market failure, including non-coordinated anticompetitive effects on the retail mobile market, and tacit collusion. Effectively the thick MVNO provides the constraint that an MNO would provide.

As our preference is to have a thick MVNO, that can solve issues arising from having only three MNOs.

**19. Thick MVNO can drop prices by around 19% - Ofcom**

A March 2016 Ofcom report, 'A cross-country econometric analysis of the effect of disruptive firms on mobile pricing' analyses the position in 25 developed countries including New Zealand, It concludes that retail prices for mobile services:

"are between 17.2% and 20.5% lower on average in countries where there is one additional mobile operator [above three operators] AND a disruptive firm is in the market".

2degrees is treated by Ofcom as a disruptive firm.

Ofcom's conclusion is based on the difference between three and four mobile operators as the report was prepared in the context of the European Commission's review of the proposed merger in the UK between MNOs, H3G and O2 (Telefonica UK), which would take the number of operators from four to three. Ofcom concluded:

"Combining the two sets of confidence intervals indicates that prices could be between 17.2% and 20.5% lower on average in countries where there are four or more mobile operators AND a disruptive firm is in the market. By implication, this may suggest that removing a disruptive player from a four player market (as is proposed in the H3G/O2 merger in the UK) could increase prices by between 17.2% and 20.5% on average, all else being equal."

The European Commission has declined the H3G and O2 merger, in part because the MVNO offering to solve the three MNO problems were not acceptable. As outlined above, a thick MVNO can be effective as the added fourth mobile operator to achieve similar benefits to those identified by Ofcom. The Ofcom report notes non-price retail improvements too, as well as reduced retail pricing."

98. Vocus endorse Trustpower's view. Mobility is increasingly important to consumers and the fixed, mobile and content markets are rapidly converging. Vocus would like to see MBIE instructing the Commission to undertake a review of the NZ MVNO market and make recommendations on the extent to which regulation is required and the benefit to consumers that could be derived.

## **COPPER MIGRATION, TRANSITION PERIOD AND REGULATORY PERIOD**

99. Vocus does not agree with the proposal to leave copper UBA / UCLL / UCLFS price an non-price terms to commercial negotiation.(noting that the tech agnostic 15/1 anchor service would provide a new alternative copper service although Vocus does not support its inclusion).
100. In line with our comments [para 75-80] we suggest that copper services, both price and non-price terms are frozen for a 3 year period - which is the length we suggest for the first regulatory period.
101. Under the current proposal existing UBA copper services would be split into 15/1 constrained and commercial services for example. Changing copper service descriptions and pricing to a commercial service is a distraction and risk which RSP's do not need at a time of unprecedented change in the industry.

102. Furthermore these copper services are likely to remain critical during this period.
103. Vocus suggests that the initial regulatory period is shorter – a 3 year period. Following changes to the underlying regulatory regime many new issues and unintended effects will inevitably occur. Locking down things for a period of 5 years at a time of unprecedented changes creates risks for all parties.
104. Vocus supports the TCF's submission with respect to the creation of a TCF code with respect to ensuring some minimum standards for migrations.

## **GUIDANCE TO REGULATOR**

105. The industry will be in a phase of unprecedented change at the same time that a new regulatory framework is evolving. As a generalisation Vocus' view is that over prescriptive processes and trying to tie things down tightly is unlikely to achieve certainty, in fact the reverse. Being over-prescriptive risks creating more issues than it resolves.
106. Vocus' supports the recommendations with respect to streamlining Schedule 3 processes.
107. As seen FPP all aspect are intertwined. As a general principle Vocus would prefer to see guidance for the Commission but avoid being over prescriptive. Give the commission the tools to do its job.
108. However MBIE needs to provide clear direction on policy priorities as we have said in para 46. it is unclear where the policy priority lies.
  - (a) If it is revenue certainty for LFC's then there is likely to be price volatility
  - (b) If it is price certainty then there is a risk of revenue volatility for LFC's
109. Vocus would like to see a clear statement on where the policy priority lies as this will provide clear guidance to the Commission and others in their decision making.

