

Submission on Commission's consultation on Chorus' initial PQ RAB

28 May 2021

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Executive Summary

Context for Chorus' submission

- On 26 March 2021, Chorus submitted information relating to the initial regulatory asset base (**initial RAB**) to the Commission in response to a statutory notice requiring us to provide that information. The initial RAB model and supporting information we submitted delivered on the requirements of the Commission's notice. The Commission has characterised the information submitted in response to the notice as our "proposal", and our explanation that a \$6 billion valuation would be more in line with the requirements of s 177 of the Act as an "alternative". That mischaracterises our position.
- The information we provided was not a proposal for the initial RAB value that Chorus believes best gives effect to s 177 and the purpose of Part 6 of the Telecommunications Act (**Act**). At the time, we made it clear that the information and model provided was a conservative approach and that an appropriate application of s 177 would better reflect the full costs of structural separation we incurred to participate in the government's UFB initiative.
- We have included a model with this submission that sets out an approach that better reflects the Act, with an indicative value of approximately \$6 billion.¹ In our view, this valuation better reflects the requirements of s 177 and is consistent with the requirements of the Input Methodologies (**IMs**).
- We expect the Commission will consider Chorus' views and proposals set out in this submission and evaluate the information provided in support of our preferred initial RAB valuation against the backdrop of s 177.
- We have been concerned by the lack of a clearly articulated process for establishing Chorus' initial RAB and remain concerned that the Commission has not yet articulated a clear process for determining the initial RAB prior to the commencement of RP1.

The Commission's initial RAB determination is critical and must give effect to s 177

- The Commission's determination of the initial RAB represents both the value of undertaking and investing in a public-private partnership to deliver critical infrastructure, as well as how appropriately the Commission has set and applied its IMs – the rules that underpin the new fibre regime.
- Parliament's expectation, as set out in s 177 of the Act, was that upfront costs incurred as a direct result of carrying out the UFB initiative would be included in the value of the initial RAB and recovered through prices for fibre-fixed line access services (**FFLAS**). The Commission's task is to apply the IMs to give effect to s 177. Any approach to asset valuation or cost allocation that excludes a material

¹ This model is confidential and highly commercially sensitive to Chorus: as previously accepted by the Commission, it is not possible to produce a meaningful public version.

proportion of UFB-related costs from FFLAS prices therefore fails to achieve this statutory intent.

- Unlike other price-quality decisions, the Commission has one opportunity to make a determination that ensures that Chorus is able to recover the economic costs incurred during the pre-implementation period to build and operate the UFB network. The Act requires that Chorus has the opportunity to earn a normal return alongside incentives to continue to innovate and invest in our fibre network.²
- The cumulative effect of the Commission's decisions to date creates a real risk that Chorus' past economic costs will be underestimated. That is, the risk that we cannot expect to achieve real financial capital maintenance (**FCM**) and the regime will not provide an NPV=0 outcome³ over the life of the network.
- In particular, the Commission made no allowance for the possibility that it underestimated Chorus' cost of capital for the pre-implementation period. While we signalled that we do not wish to revisit these decisions, we are concerned that it has left little room for regulatory error when making decisions on other key judgments affecting the initial RAB such as cost allocation of shared assets.
- To best give effect to s 177, the Commission should apply a proxy allocator that allocates 100% of the relevant shared costs that were incurred as a direct result of taking on the UFB initiative. This recognises that the driver of the investment was the need to implement the UFB initiative and therefore achieve Parliament's intent of ensuring UFB investments are recovered through FFLAS prices. This approach is permitted by the IMs requirements regarding proxy allocators.

Chorus response to issues related to the initial RAB model

- **'Connections' must only be used for allocation where justified** – Allocating shared operating cost based on connections is unreasonable, given the delay between build and connections. Totex is a better allocator and more accurately reflects the effort that drove costs across the entire business and the timing of when those costs were incurred. Where Chorus has used connections as part of our allocation, we have provided justification via our s 221 responses.
- **Allocation of certain IT costs** – There are no suitable causal allocators for a subset of shared IT assets. We have used a proxy allocator to better reflect these costs incurred to establish Chorus as a standalone fibre business, as required for the UFB initiative.
- **Allocation of exchange space** – The Commission's suggestion to reduce the allocation of building space to FFLAS is inconsistent with FCM pre- and post-implementation. It would not change incentives during the pre-implementation, however, post-implementation it would incentivise inefficient behaviour.
- **Life of the financial loss asset** – The calculation of the life of the financial loss asset by Analysys Mason is IM-compliant and better meets the relevant economic

² As set out in the purpose of Part 6, under section 162 of the Act.

³ This includes the Commission's decisions on how it will allocate pre-implementation costs to the fibre business, treat Crown financing that was part and parcel of the structure of the Crown partnership, then determine our cost of capital for the period up-to 1 January 2022.

purpose than the interpretation suggested by the Commission. The attached expert report by Incenta elaborates on and supports this position.

- **Correction for the use of a post-tax WACC** – The Commission has acknowledged that a correction is required for the time value of money effect for using the post-tax WACC in the Discounted Cash Flow (**DCF**) calculation of the FLA. The matter will need addressing urgently to be included in the final pricing decision for first price-quality path (**PQP1**).

Context for our submission

1. This is Chorus' submission on the Commission's consultation paper, *Chorus' initial price quality regulatory asset base as at 1 January 2022*, dated 30 April 2021 (**Consultation Paper**). This submission should be read alongside the detailed supporting information that accompanied Chorus' initial RAB model (submitted on 26 March 2021).
2. To understand the context for the submissions made in this paper, we believe a correct understanding of the process to date is necessary. We are concerned that the Commission has mischaracterised the initial RAB model provided in response to a statutory information request as "Chorus' initial RAB proposal" and dismissed, without any consideration, our submission that an appropriate valuation in the range of \$6 billion would better reflect the requirements of s 177 and the unique circumstances of Chorus' establishment.⁴ To be clear:
 - a. Our response to the Commission's s 221 notice provided information in a form specified by the Commission and reflected, in our view, a conservative lower bound for an appropriate initial RAB valuation; and
 - b. Our position is that a proper application of s 177 requires that certain upfront costs as a direct result of the UFB initiative are included in the RAB and recovered through FFLAS prices, and this approach produces a RAB closer to \$6 billion.
3. We were advised by the Commission that the process for setting the initial RAB was a compliance exercise based on scrutiny of the information provided.⁵ This differs from the process now being undertaken. We also expected that the Commission would need to largely complete this process prior to issuing a draft price-quality determination. To help expedite the Commission's process, we provided an initial RAB model that deliberately took a conservative approach to meeting the IM requirements. This produced information supporting an initial RAB of \$5.5 billion.
4. Our supporting information also outlined that different IM-compliant choices on technical matters were available and could better reflect the outcomes that in our view were expected under the Act. Adopting these approaches would support an initial RAB in the range of \$6 billion. These matters had been foreshadowed in the course of setting the IMs, and we expected that the Commission would provide us with the opportunity to raise these matters in the event that there were broader consultation processes on the Commission's proposed initial RAB.
5. The Commission has now acknowledged that its original timeframes for setting an initial RAB value for Chorus' draft price-quality determination are not achievable and proposes a transitional process whereby a decision on a draft initial RAB for the purposes of revenue-setting would be made in August 2021.
6. For this reason, our submission sets out our views on how the IMs could be applied to best give effect to s 177 of the Act, provides further details around an alternative approach to allocating certain categories of corporate opex for the loss calculation that better reflects the investment undertaken as a direct result of the UFB initiative. We

⁴ Paragraph 1.1 of the Consultation Paper.

⁵ Chorus-Commission meeting, 2 March 2021.

have also included a model with this submission as supporting information which translates the various technical choices into outcomes that can flow into the Commission's determination of the initial RAB.

7. We reiterate that these matters have been traversed to a greater or lesser extent in previous engagement with the Commission and are not in themselves novel or unexpected. Rather, they reflect the Chorus' unique position as a once vertically integrated wholesaler that entered into an agreement with the Crown, which required it to demerge and establish itself as a standalone fibre business.
8. In terms of process and to provide greater certainty, we recommend that the Commission confine the matters that will be subject to a 'true up' between the transitional and final initial RAB. We expect the Commission will provide the opportunity to meaningfully consult on the transitional initial RAB before incorporating it into PQP1.

The initial RAB decision must give best effect to section 177

Significance of the decision-making process

9. The Commission must determine Chorus' initial RAB in accordance with Parliament's expectation under s 177. Once set, the initial RAB does not change and is a set parameter within the Commission's regular determination of Chorus' MAR under the new fibre regulatory regime. Guided by s 177, the initial RAB value represents the investment incurred by Chorus to establish itself as a fibre provider, prior to the implementation of the new Part 6 regime under the Act.
10. The Commission's task is clearly set out in s 177 of the Act and leaves little room for discretion:
 - a. S 177(6) defines "fibre asset" as any asset constructed or acquired by Chorus that is "employed in the provision of fibre fixed line access services (whether or not the asset is also employed in the provision of other services)".
 - b. S 177 requires the Commission to value fibre assets at their depreciated historic cost (for post-December 2011 assets) and depreciated book value (for pre-December 2011 assets).
 - c. S 177(5) provides, for the avoidance of doubt, that the initial value of a fibre asset includes the costs incurred by Chorus in relation to the asset "as a direct result of meeting specific requirements of the UFB initiative".
 - d. S 177 also provides for the determination of the FLA, which must include unrecovered returns made by Chorus "under the UFB initiative".
11. Cabinet, on advice of the Ministry of Business, Innovation and Employment (**MBIE**), opted to include in the legislation specific guidance on the valuation methodology in

order to “minimise any residual uncertainty”.⁶ The intent was to limit the scope for disagreement regarding the investment required to deliver on Chorus’ contractual agreements under the UFB initiative, which would be recovered through regulated fibre prices.

12. The definition of “fibre assets”, and particularly the express references to investments made under the UFB initiative, indicate that Parliament’s expectation was that investments that related to the UFB initiative would be recovered through FFLAS prices. In addition to assets commissioned as part of the UFB initiative, any asset employed in the provision of FFLAS is included in the RAB. The approach to asset valuation and cost allocation must therefore ensure that costs directly related to the UFB initiative are included in the RAB so that they can be recovered through FFLAS prices. An approach that excludes a material proportion of UFB-related costs from the initial RAB implicitly allocates those costs to consumers of non-FFLAS services, which would be inconsistent with the statutory intent.
13. By expressly acknowledging Chorus’ unrecovered returns, Parliament also recognised the fact that the UFB arrangement stipulated areas of priority build and communal infrastructure was rolled out well ahead of demand.
14. The Commission’s task is therefore to apply the IMs in a manner that gives effect to the words of s 177. Any divergence from s 177 in the decision-making process would be inconsistent with Parliament’s intent and undermine the ability for Chorus to earn a normal return.
15. Determining the initial RAB is a complex exercise that involves risk of regulatory errors. The Commission needs to ensure that its regulatory decision-making required to estimating Chorus’ reality do not result in under-compensation. We refer to risk of regulatory errors below.

Decisions to date increase risk of under-compensation

16. Chorus should be able to recover its investment in the UFB initiative. However, the Commission’s decisions to date put us at risk of not recovering our costs incurred as a direct result of the UFB initiative.
17. We have provided several submissions describing why better approaches were available to the Commission. Below are examples of the Commission’s discretion that – in the absence of favourable subsequent decisions – could leave Chorus under-compensated for the actual risks faced during the pre-implementation period:
 - a. **Treatment of Crown financing** – our view was that the Commission’s decision under-allocates the portion of Crown financing that should be treated ‘debt-like’.
 - b. **Regulated return on investment of our financial loss asset** – our view was that the asset beta for the pre-implementation period is out of step with international comparators and is too low; the use of the mid-point estimate does not reflect the reasonable expectations investors would have held in 2011 of a normal return over time; and recalculating financing on an annual

⁶ Cabinet Paper, *Review of the Telecommunications Act 2001: final decisions on fixed line services, mobile regulation and consumer protection*, at paragraph 25.

basis instead of treating the pre-implementation period as either a single regulatory period or a commercial period of 10 years.

- c. **Asset stranding allowance** – our view was that the Commission has ignored our expert advice on asset stranding and taken a position that the appropriate allowance is 10bps, rather than 57-135bps.
18. The nature of this process is that the Commission will always be balancing the possibility that it is either underestimating or overestimating an initial RAB that could be known with perfect information. In our view, for a number of major decisions to date it has erred on the side of underestimating the initial RAB.
19. Unless the Commission balances the risks of over- or under-estimation in its remaining regulatory process, the cumulative effect of decisions made to date mean Chorus will expect to earn NPV<0, which would not meet the requirements of s 177 or the purpose of Part 6.

Error correction for post-tax WACC

20. In its November IM Reasons Paper, the Commission stated that a correction for the time value of money effect of using a post-tax WACC rather than a vanilla WACC in the DCF calculation of the financial loss asset would be needed in the event of substantial tax losses.
21. Our estimated regulatory tax losses at the start of the first regulatory period total approximately \$800m⁷ and the estimated amount of the consequential adjustment to regulated revenues could exceed \$40m in present value terms. This is clearly material and requires addressing urgently for it to be included in the final pricing decision for the first revenue path.
22. Chorus will provide a recommendation to the Commission as to how best to progress this issue. It may be that an IM amendment is required, in which case Chorus can suggest drafting to be included as part of the fibre IM amendment consultation that the Commission has commenced.

Pre-implementation investments and operating costs must be recoverable

23. As discussed above, the Commission must ensure FFLAS prices allow the recovery of all pre-implementation investment and operating costs undertaken to deliver the UFB initiative. Where those investments or costs do not meet the Commission's application of "directly attributable", but where those costs were nonetheless incurred as a direct result of our participation in the UFB initiative, we believe a proxy allocator should be applied that allocates 100% of those costs to FFLAS. This approach is required to deliver the Commission's obligations in respect of s 177 and is permitted within the existing IMs framework.
24. If this approach is not adopted, then this risks a perverse outcome in which Chorus is not permitted to recover through FFLAS prices the investments required to implement the UFB initiative. Not only does this conflict with Parliament's intent as demonstrated

⁷ This is equivalent to tax payable loss opening balance of \$225m.

in the legislative background and set out in s 177, but it would result in non-fibre consumers implicitly bearing the costs of the fibre network.

25. To the extent that assets were fully depreciated in the pre-implementation period, their recovery is via their inclusion in the FLA. Chorus' FLA represents the unrecovered returns prior to the fibre regime's implementation and makes up a significant portion of the initial RAB (i.e. ~27%).
26. The determination of pre-implementation investment and operating costs is a critical exercise that requires an application of the IMs that appropriately reflects the circumstances that underpin Chorus' inception.
27. When applying the IMs to costs related to carrying out the UFB initiative, the Commission must be guided by the activities that took place as a result of taking on the UFB initiative. To the extent these costs are not "directly attributable", as defined in the IMs but nonetheless are directly related to the UFB initiative, they should be allocated using a causal or proxy allocator that ensures those costs are recovered through FFLAS prices.
28. There are a number of costs attributable to the UFB initiative for which we have not been able to identify a suitable causal allocation. In those cases, in order to best give effect to s 177, the Commission should use a proxy allocator that allocates 100% of those shared costs that were incurred as a direct result of participating in the UFB initiative. We believe the Commission should apply the following:
 - a. A proxy allocator that allocates 100% of certain shared IT assets that were incurred as a direct result of taking on the UFB initiative to FFLAS. This allocation approach was adopted in the model submitted to the Commission in our s 221 response, dated 26 March 2021. We have provided further details on the rationale for this approach in later sections of this submission.
 - b. A proxy allocator that allocates 100% of certain categories of corporate costs, including Board, audit, and CEO costs; and a proxy allocation of at least 60% for personnel and other categories of corporate costs to FFLAS. These allocations better reflect the significant management resource and increased corporate headcount that was required to respond to important processes that arose from establishing a standalone company and implementing the changes as a result of the Commission's copper review.⁸
29. The IMs are sufficiently flexible to allow a proxy allocation that recognises Chorus' unique position as a utility transitioning from a contractual agreement to building blocks regulation while our fibre network is still being built and demand is still growing. This recognises that the driver of the investment was the need to implement the UFB initiative and therefore achieve Parliament's intent of ensuring UFB investments are recovered through FFLAS prices.
30. We have provided a model alongside this submission that translates the technical choices necessary to best give effect to the statutory intent of s 177. This model has had the same level of assurance as the model submitted under our s 221 notice.

⁸ This is reflected in s 77 of the Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011.

Chorus response to issues related to the initial RAB model

31. The IMs explicitly provide for allocators beyond those on the “default” list and we have provided justification for our choices based on subject matter experts (**SMEs**) and external economic advice.
32. As described above, Chorus submitted an initial RAB model along with supporting information in response to a statutory information request. Our model provided an initial RAB model that deliberately took a conservative approach to meeting compliance with the notice request and IM requirements, which produced an initial RAB of \$5.5 billion.
33. At the time we submitted our response to the Commission, we signalled that different IM-compliant choices on technical matters were available and could conceivably better reflect the outcomes that in our view were expected under the Act.
34. Where we apply a 100% proxy allocator, this is consistent with the IMs. Under the accounting-based allocation approach (**ABAA**), proxy allocators are available where causal allocators cannot be established. In Chorus’ case, we have identified a subset of assets where it’s not possible to identify causal allocators of the assets. These assets were only employed (i.e. available for use) because our participation in UFB initiative required demerger, and therefore their purchase.
35. The model is highly complex and significant work has gone into sourcing current and historical financial operational data, building and testing. The model is a culmination of a multi-year process by SMEs from across Chorus’ business and external international experts. It incorporates expertise, information and limitations specific to Chorus, which other parties do not readily have at hand. The Commission has previously recognised that utilising this information is critical and incorporated some into the IMs.
36. Unlike a traditional utility, where the network is already built and demand is stable, a considerable amount of cost incurred by Chorus has resulted from standing up a fibre network before end-users connect, with the intention of supporting demand growth. This is highlighted by the Commission’s own comments which indicate that even toward the end of the UFB rollout the proportion of fibre capex was significantly higher than the proportion of fibre connections.⁹ This is an undisputed aspect of the UFB initiative and its specific contractual arrangements. Therefore, it is a key factor in our choice of our alternative allocators, such as Totex and future benefit.
37. In seeking views on the allocators, we used in response to the s 221 notice for initial RAB information, the Commission should not disregard Chorus’ information in lieu of third parties’ without credible justification. Any allocators provided must meet the requirements of the Act and the IMs and this is especially important given that there is no opportunity to make cross-submissions on this consultation paper.

‘Connections’ must only be used for allocation where justified

⁹ Commerce Commission (30 April 2021), Consultation on Chorus’ initial price quality RAB proposal, at [4.31].

38. We disagree with the Commission’s suggestion that an “allocator that reflected the relative segments of Chorus might be a better proxy for the effort required in corporate support roles”. We understand this to mean that the Commission considers the ratio of customer connections may be a suitable allocator for corporate operating costs. If this is the correct interpretation of the Commission’s suggestion, it runs counter to the fact that we built an entirely new business to deploy a new network. A connection-based allocation does not make logical sense given the time lag between ‘build’ and ‘connect’.
39. The Commission’s suggestion that connections could be a more suitable allocator type is based on two points, which we consider in turn below:
- a. An unreferenced note that the UBA and UCLL Final Pricing Principle (**FPP**) was a time-consuming process. The Commission interprets this to mean that a higher allocation of certain corporate costs to copper might be justified; and
 - b. Chorus’ statement that the “FFLAS proportion of opex is expected to increase significantly as fibre uptake grows and the copper network is retired”.
40. On the first point, the FPP was a time-consuming process. However, it cannot be considered in isolation. During that period we were standing up a fibre business and ramping up the fibre rollout. The FPP did not require the same level of effort across the business as the nation-wide fibre rollout and therefore did not cause as much cost. It is not demonstrably reasonable to assume that a single project was representative of the effort required by the entire business. As discussed by Incenta¹⁰ Chorus has applied Totex as an allocator because it better reflects the actual effort that drove costs across our entire business and the timing of when those costs were incurred. The default allocators do not provide a demonstrably reasonable proxy whereas Totex does.
41. To suggest that connections could be a reflector of the business focus and effort in the initial rollout period ignores reality. Chorus was established to build the UFB network and this was the business’ primary reason for existence. The copper pricing events of 2013-2015 demonstrated this. The Government commissioned an independent assessment of Chorus’ funding gap and in December 2013 Ernst and Young (**EY**) confirmed a \$1 billion funding gap by 2020.
42. The EY report found that without external support, Chorus would be unlikely to be able to meet all of its forward commitments, given the funding needed for the UFB rollout. The Minister for Communications and IT asked Chorus to engage with Crown Fibre Holdings to discuss options. Chorus was placed on negative watch by credit ratings agencies through this period and the Board held an extraordinary number of meetings.
43. In addition, Chorus had to implement a range of revenue, cost and investment-related initiatives to enable it to continue meeting its UFB obligations. This included suspending dividends for the shareholders that were helping fund the UFB rollout through their contribution of capital. These efforts were all about saving the business

¹⁰ Incenta (March 2021) Certain cost issues related to the IAV, at section 4.2.3.

so that it could successfully meet its UFB commitments and deploy a fibre network for New Zealanders.

44. Chorus wrote to the Minister:¹¹

Chorus is committed to providing resilient critical infrastructure nationwide. New Zealand got a very good deal for the UFB upgrade by entering into an innovative public-private partnership to leverage Chorus' balance sheet to fund it. It is our revenues and the funding we receive from lenders and shareholders that underpins this kind of investment. The majority of those revenues are from our existing network. Fibre is being taken further, for less taxpayer funding than other countries. We are already 20% of the way through one of the largest nationwide civil engineering projects ever undertaken in New Zealand and ahead of schedule. We are delivering on the RBI initiative and providing leadership through initiatives such as "Gigatown" and a proposed improved fibre product set. New Zealand is leading the way in broadband growth.

45. The Minister acknowledged this very fact when announcing the EY report findings, stating:¹²

Copper price changes will have a significant impact on Chorus' financial position, and the wide range of actions that Chorus can consider taking itself will not be sufficient to cover the funding shortfall to safeguard the UFB and RBI build commitments.

46. On the second point, that the FFLAS proportion of opex is expected to increase significantly as fibre uptake grows and the copper network is retired, the statement referenced is forward-looking and is consistent with using Totex as an allocator. UFB uptake has grown significantly and will continue to grow, resulting in the proportion of opex driven by fibre services growing due to the effort required to operate and maintain the UFB network increasing, this coincides with the capex required to rollout UFB reducing as the network nears completion. As the copper network is retired there is less Totex required for the copper network – the capex required to maintain and replace copper equipment will reduce and this will reduce the shared corporate costs required to support that capex, e.g. labour costs to support project planning and technicians. This is in addition to the lower network opex required to support the copper network. As a result, the FFLAS proportion of opex will naturally continue to grow.

47. Using connections as an allocator cannot be justified solely as a means of preventing double-recovery. Incenta demonstrates that using connections as an allocator for shared operating costs and assets could reasonably be expected to result in an under-recovery of cost across copper and fibre services when share cost or asset values increase due to providing multiple services.¹³ We also note that there was some discussion during the IM consultation process about the appropriateness of the FPP allocators for use in the cost allocation for the RAB, including the use of connections. However, as we have previously submitted, the FPP model cannot be used as a basis for checking recovery across FFLAS and non-FFLAS services.

48. Where Chorus has used connections as an allocator (or a weighting as part of an allocator) we have provided documentation justifying our choices. Broadly speaking, connections should only be considered as an allocator if there is a demonstrably reasonable justification that it is more suitable than those chosen by Chorus SMEs. In

¹¹ See Chorus letter to Minister, released on NZX dated 8 November 2013.

¹² <https://chorus-nzx.hosting.outside.net/api/announcements/download/2013/a7922dc6-4e9d-4adf-b64e-9cb664239341/1f9573a4-b844-4737-9d5b-123772a4fdf8/186998.pdf>

¹³ Incenta (March 2021) Certain cost allocation issues relevant to the IAV, section 3.2.

our response to the Commission's s 221 notice, we noted allocators (including connections) that we considered and the rationale for our chosen allocators. Chorus expects that we'd have the chance to cross submit on any allocator changes proposed.

Allocation of certain shared IT assets during pre-implementation

49. We have used a proxy allocator to allocate a subset of the IT assets that are shared between FFLAS and non-FFLAS; this subset is the IT assets associated with standing up Chorus immediately post-demerger. Our allocator apportions 100% of the value of these assets to FFLAS, which reflects: (i) limitations with our data which means it's difficult to identify utilisation; (ii) the driver of the investment – the need to establish Chorus as a standalone business to undertake the UFB initiative; and (iii) the service which is intended to benefit from the assets over their useful life – FFLAS. We could not find a suitable causal allocator which accounts for these factors.
50. In relation to this specific subset of IT assets, we note that the IMs preclude use of direct attribution because this is only available "where an asset is wholly and solely employed by a regulated provider in the provision of a particular service". Therefore, allocation is required using ABAA. We could not find a suitable causal allocator in this case because:
 - a. The link between the various allocator metrics (such as connections, length of assets, or numbers of certain events) and costs for IT assets is very tenuous; and
 - b. For these assets, the relevant services will be supported by the asset investment over an extended period that is longer than the accounting lifetime of the specific purchases.
51. As a result, we have used a proxy allocator of 100%. In order to remain consistent with s 177, for these assets (which would not have been purchased if Chorus had not been undertaking the UFB programme) a proxy allocator of 100% UFB FFLAS has been used, which represents the key factor that influenced their employment – participation in the UFB programme which required demerger and therefore their purchase.
52. Chorus believes that this approach is consistent with the IMs and s 177. None of the allocators in the default list are suitable in the case of these specific IT assets, because in this case these allocators do not reflect s 177.
53. The proxy allocator where 100% is allocated to UFB and our approach is demonstrably reasonable and objectively justifiable for several reasons discussed below.

We have limited data on utilisation for certain shared IT assets

54. These assets are intangible, and so it is difficult to identify the proportion of an IT asset that is utilised for a particular service, or to define the assets in more granular terms that enable direct attribution of more narrowly identified assets to particular uses.
55. Furthermore, in many cases the asset relates to an upgrade to add new functionality to an existing system, including employee time to integrate that new functionality.

Where the investment was made to support the UFB initiative, those costs should be allocated to UFB FFLAS, notwithstanding the system as a whole supports a range of services.

Certain shared IT assets exist to support the UFB initiative

56. The nature of IT investment by Chorus post demerger was to build new systems that are intended to support and benefit FFLAS over an extended timeframe. The Copper Deed requires us to report annually to the Minister about certain IT investments as a result of result of demerger, as it was recognised that providing a stable long-term IT platform was key to fulfilling our regulatory obligations as per the UFB agreements. Although the relevant IT systems are intended to give benefits over decades, those systems are made up of a series of components (assets), each of which have a short accounting asset life, generally of around 4 years before being upgraded.
57. Lastly, the asset lives for the relevant assets, for the purposes of the RAB, are short (four to five years) but the assets will remain in use for a substantially longer period for the benefit of FFLAS consumers. Accordingly, a proxy allocator such as connections would not be reasonable since it would result in these assets being over-allocated to non-FFLAS services despite the fact the investment was incurred for the sole and express purpose of supplying FFLAS. Under-allocating these IT assets would be inconsistent with FCM and the intention of s 177.

Allocation of exchange space

58. We have allocated exchange space based on the ratio of floor space used by fibre-related equipment relative to copper-related equipment. This allocator is based on bottom-up calculations performed by SMEs and is included in the default allocator list in the IMs. Using this allocator, 100% of exchange costs can be recovered by at least one service.
59. The Commission has asked for views on “whether an alternative allocator which better reflects the space actually occupied should be considered”.¹⁴ We interpret this to mean that during any given year that the total exchange space allocated to all services (FFLAS and non-FFLAS) could be less than 100%.
60. The Commission’s suggestion is inconsistent with FCM pre- and post- implementation. This is because in those circumstances where an exchange had a net book value (**NBV**) greater than \$0, there would be no possibility of the full cost being recovered if unused space is not recoverable.
61. For example, in an exchange with 100m² of space, if PQ FFLAS equipment occupied 20m² and copper (and other non-FFLAS) equipment occupied 40m² then the allocator value for PQ FFLAS would be 20% and the total implied recovery would be 60%, *strictly less than* 100%. Conversely, Chorus’ approach provides ~33.3% recovery via FFLAS (with implied recovery from non-FFLAS services of ~66.6%) with the opportunity for Chorus to recover 100% of the exchange costs.
62. In the example above, where the copper service has ceased then the maximum NBV recoverable would be 20% (all of which is recovered by FFLAS). The outcome of this is that Chorus would not have the opportunity to recover the full cost of the exchange

¹⁴ Para 4.22 of the Consultation Paper.

even if the continued use of the existing exchange was at each time the efficient solution.¹⁵

63. The Commission has also asked for views on the “implications of either approach for Chorus’ incentives to rationalise its property assets as demand migrates from copper to fibre”.¹⁶ Chorus’ approach already provides incentives to repurpose and rationalise exchanges consistent with workably competitive markets. As a publicly listed firm subject to price caps, Chorus already has the incentive to try to reduce cost and find new revenue however there have been limited opportunities to achieve such new revenues because the costs of rationalising and repurposing exchanges have often outweighed the benefits.

64. Equally, on a forward-looking basis, under a revenue cap Chorus has incentives to earn unregulated revenues. However, the NPV of the future costs of staying in the existing space is often lower than the NPV of future costs of a move to a newer, smaller exchange building (including the costs of the migration between the buildings). As Incenta notes:¹⁷

...[as] part of considering the extent of exchange space costs that could be avoided, account would need to be taken of the cost of removing the copper equipment (if this would not otherwise be required), separating off unnecessary exchange space and putting in the necessary security measures. In addition, other apparent potential options – like moving from the current premises to a different, fit-for-purpose building would need to incorporate an assessment of the cost of realigning fibre cables to the new location.

65. Chorus’ allocation already accounts for exchanges being used for non-FFLAS services. Where new services are provided in the future then a portion of the remaining asset NBV will be allocated based on the space the new services use.

66. The Commission’s approach does not improve incentives to repurpose and redevelop exchanges during the pre-implementation period. Applying the Commission’s approach during pre-implementation doesn’t provide any additional incentive to repurpose/redevelop exchanges since past decisions cannot be altered.

67. On a forward-looking basis, artificially reducing the amount of exchange space that could be recovered from FFLAS would incentivise Chorus to make costly, inefficient decisions. The Commission’s suggestion is that we could find new, smaller, exchange sites however this would lead to additional cost to be incurred for FFLAS. New buildings would cost significantly more than the largely depreciated cost allocated to FFLAS with the added cost of redirecting the network.

68. The proposal to allocate building costs using the FFLAS proportion of total building space is inconsistent with s 177 of the Act, because it essentially amounts to a write-down of historical asset value. Section 177 prescribes the rule for valuing fibre assets, including pre-2011 fibre assets and the Commission has already confirmed its position not to apply efficiency adjustments to historic costs.¹⁸

¹⁵ FFLAS have had the benefit of a partly depreciated exchange building that had physical space available to use. If the FFLAS deployment had had to deploy its own building of the optimal size for just FFLAS, then the total costs of the FFLAS deployment would have been higher and all of these costs would have fallen on FFLAS customers.

¹⁶ Paragraph 4.22 of the Consultation Paper.

¹⁷ Incenta (March 2021) Certain cost issues related to the IAV, at section 2.3.2.

¹⁸ Commerce Commission (3 November 2020) Fibre input methodologies: Financial Loss Asset – reasons paper.

Asset life of the financial loss asset

69. The Commission has sought views on the calculation of the weighted average asset life of the FLA. The Commission's interpretation of Analysys Mason's approach is that it is not consistent with cl 2.2.10(1)(d)(i).¹⁹
70. In its consultation paper the Commission noted that Analysys Mason had calculated the asset life of the FLA for PQP1 in Chorus' IAV model by effectively weighting the remaining asset lives of the UFB-related core fibre assets at 1 January 2022 by depreciation expense, rather than the initial value of UFB-related core fibre assets as referred to by cl 2.2.10(1)(d)(i) of the IMs. On this basis the Commission concluded that the method did not appear to comply with cl 2.2.10(1)(d)(i).²⁰

Chorus' method complies with cl 2.2.10(1)(d)(i)

71. The calculation of the life of the FLA by Analysys Mason is compliant with cl 2.2.10(1)(d)(i) and better meets the relevant economic purpose than the interpretation suggested by the Commission. As such, this does not require approval under cl 3.3.2(5) as it is not an alternative method under cl 2.2.10(1)(d)(ii).
72. Specifically, Analysys Mason's calculation of the weighted average remaining life is an accepted type of weighted average, weighted on the initial RAB values at implementation date, and is therefore consistent with cl 2.2.10(1)(d)(i). While the actual calculation of the weighted average remaining life uses depreciation as the weighting variable, this was a simplified and equivalent method of applying a weighted harmonic average remaining life (**WHARL**) using initial RAB values for the core fibre assets as weights. This is demonstrated by Incenta in the attached expert report.²¹
73. As Incenta note, the Commission appears to interpret cl 2.2.10(1)(d)(i) as referring to the weighted arithmetic average remaining life (**WAARL**). However, a particular type of weighted average is not specified in cl 2.2.10(1)(d)(i).²² Therefore there is no technical reason in that a WHARL would not comply with the IMs.
74. A comparison of the formulae for WHARL and WAARL shows that both produce average remaining lives and both use the initial RAB values of UFB-related core fibre assets as weights as required by cl 2.2.10(1)(d)(i).

Chorus' method (WHARL) is more consistent with economic purpose of the FLA life

75. A WHARL method better meets the apparent objective for using a weighted average remaining life over PQP1, which we discuss further below.
76. In Chorus' view, the main criterion for choosing a method for calculating the weighted average (in this case the choice between Chorus' WHARL and the Commission's WAARL) is which provides the best fit for if the accumulated losses had not been

¹⁹ Paragraphs 4.51-4.58 of the Consultation Paper.

²⁰ This is also raised and discussed in the Commission's draft price-quality reasons paper, where the Commission reiterated its view that the Analysys Mason method applied in the IAV model "does not appear to comply with cl 2.2.10(1)(d)(i) of the IMs." The Commission noted that views were being sought on the appropriate asset life of the FLA through the IAV consultation. Commerce Commission (27 May 2021) Chorus' price-quality path from 1 January 2022 – Draft decision, at [B35].

²¹ Incenta (May 2021) Remaining life for the FLA asset, at Appendix A.

²² Incenta (May 2021) Remaining life for the FLA asset, at section 1.2.2.

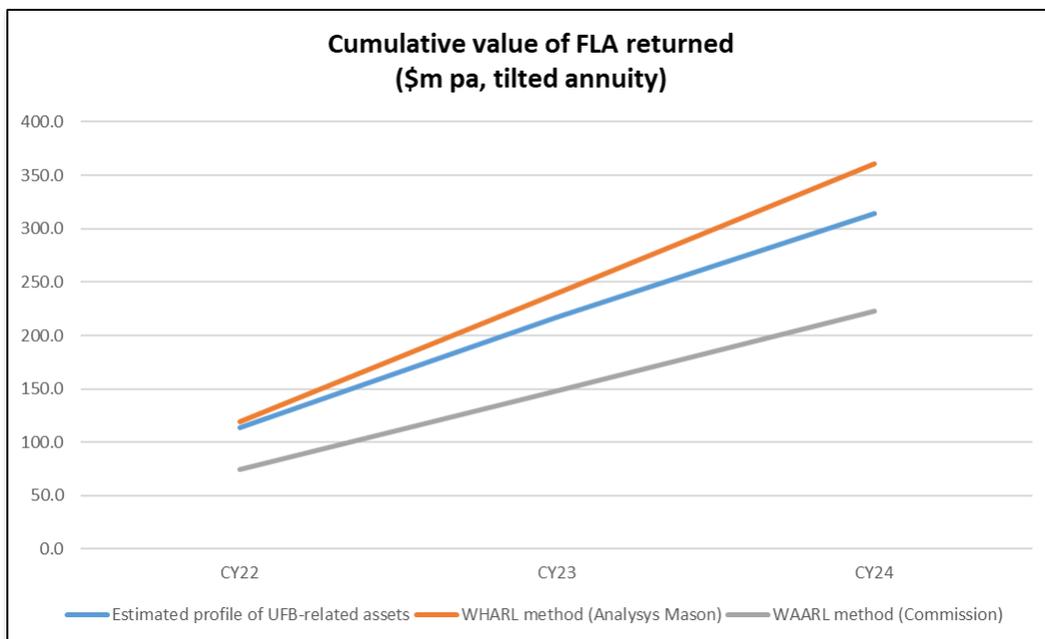
aggregated into a single asset and instead were to be recovered as part of the core fibre asset values (using their individual lives). Incenta illustrates that numerically:²³

- a. The WHARL method fits the path of straight-line depreciation precisely until shorter-lived assets start to become fully depreciated; and
- b. The WHARL method fits the path of tilted annuity depreciation very closely until the shorter-lived assets start to become fully depreciated.

77. The determination of the regulatory asset life for the FLA prescribed by cl 2.2.10(1)(d)(i) envisages a one-off calculation undertaken at as the implementation date which we would assume should seek to replicate a profile of depreciation for the FLA over time that approximates the profile attached to the group of UFB-related assets from which the financial losses were generated. However, the Commission’s WAARL method effectively produces a depreciation profile for the FLA that is likely to be a poor reflection of the profile of depreciation expected to be produced for the underlying UFB-related assets.

Chorus’ method (WHARL) provides a better depreciation profile than the Commission’s WAARL for PQP1

78. The Commission noted that Analysys Mason’s calculation would result in “a depreciation charge profile for the FLA that matches the depreciation charge profile arising in respect of the corresponding core fibre assets”.²⁴ The following chart illustrates the ‘fit’ of the two methods relative to the estimated depreciation profile of the underlying UFB-related assets for Chorus for PQP1.²⁵



²³ Incenta (May 2021) Remaining life for the FLA asset, at Appendix A.3.

²⁴ Paragraph at 4.55 of the Consultation Paper.

²⁵ Note that the estimated data in the charts is based on the tilted annuity method of depreciation applied to various UFB-related core fibre asset groups as an ‘alternative depreciation method’ under cl 3.3.2(5) of the IMs in Chorus’ MAR Model, submitted to the Commission on 14 May 2021.

79. Across PQP1, it can be observed that the Commission's WAARL method produces an annual depreciation profile and cumulative value of FLA returned that is considerably lower than the profile estimated for the UFB-related core fibre assets. This is particularly pronounced across the early years of the FLA asset life.
80. By contrast, the WHARL method applied by Analysys Mason returns values across PQP1 that better approximate the UFB-related asset group profile. From an administrative perspective, Analysys Mason's WHARL method is as easily applied as the Commission's WAARL method to calculate the remaining life of the FLA at implementation date: it is a one-off calculation drawing on readily available IM-compliant data, and is objectively verifiable and replicable.
81. We also understand that for PQP1 this would be a similar approach to that taken under Part 4 default price-quality path regulation when estimating remaining lives for regulated assets.
82. In addition, Incenta notes that a method such as the WHARL which avoids under-depreciating the FLA would advance the purpose in s 162(a) in terms of mitigating the risk of asset stranding without creating an outcome that compromised s 162(d) as the depreciation method for the FLA is NPV neutral and will not permit Chorus to "extract excessive profits". As the Commission notes in its draft price-quality reasons paper, the considerations of promoting competition and consistency with s 197 smoothing are generally not relevant in the present context.²⁶
83. The following also supports adopting the WHARL method for calculating the life of the FLA:
- a. In the context of Chorus' MAR model (submitted on 14 May 2021) the WHARL is consistent with s 197 of the Act as it does not cause price shocks and mitigates risk of financial hardship, avoids revenue shocks and therefore avoids sub-optimal outcomes for investors;
 - b. The reciprocal method is consistent with (and does not duplicate) the partial stranding allowance (10 basis point pa) currently provided for in the IMs and the NPV-neutral tilted annuity depreciation method applied in the MAR model and is therefore consistent with s 162(d) of the Act;
 - c. As mentioned above, the Analysys Mason method for PQP1 appears to have some precedent in electricity price-setting – e.g. default price-quality paths; and
 - d. Some of losses are arguably in substance comprised of unrecovered opex that would normally be expected to be recovered immediately, which would suggest that a shorter life for the FLA (i.e. that produced by the WHARL) should be preferred.
84. Based on the evidence above, the WHARL method as applied by Analysys Mason is to be preferred as an IM-compliant and economically correct method in the circumstances and should be applied as part of the MAR decisions for PQP1.

The Commission should confirm the WHARL for the initial PQ RAB before PQP1

²⁶ Commerce Commission (27 May 2021) Chorus' price-quality path from 1 January 2022 – Draft decision, at [B18] and [B25].

85. Given the extent of the disparity between the two methods, we believe that the Commission itself would have concluded that the WAARL method was unsuitable for determining the remaining life of the FLA had the Commission had access to relevant asset data at the time the fibre IMs were determined in 2020.
86. If the Commission’s process does not include consultation on this issue before the draft initial RAB decision in August, Chorus is open to other steps that will help the Commission ensure that the WHARL is used for the asset life of the FLA. This will enable the WHARL to be used for PQP1.
87. If despite the analysis above the Commission does conclude that the WHARL method is not compliant with the IMs (a position that Chorus strongly refutes given the evidence in this section) then Chorus is open to the WHARL method being considered to be an ‘alternative depreciation method’ under cl 3.3.2(5) of the IMs as the Commission has already referred to in its consultation paper and draft price-quality decision.
88. We would also support an IM amendment to clarify that the WHARL method should be applied, either for PQP1 or for regulatory periods beyond that. We look forward to engaging with the Commission as part of the IM amendment processes which are occurring in parallel with the initial RAB and PQP1 consultation processes, and would supply suggested drafting amendments to cl 2.2.10(1)(d)(i) if that were to expedite the matter.

Chorus’ response to consultation questions

89. Chorus has previously commented on the issues raised in the consultation paper. We have provided some references to our previous statements below.

Consultation question	Chorus reference
<p>What are your views on Chorus’ forecast level of direct attribution of capex spent between 1 December 2011 and 31 December 2021 to UFB FFLAS, is Chorus’ estimate reasonable? Please explain your views.</p>	<p>“Response to Attachment B of the Commerce Commission’s 26 February 2021 section 221 Notice”, dated 26 March 2021.</p>
<p>Do you support Chorus’ proposed direct attribution of assets to UFB FFLAS (i.e., whether Chorus’ approach of 100% allocation is consistent with the definition of “directly attributable” in the IMs, which is where an operating cost is wholly and solely incurred, or an asset is wholly and solely employed, in the provision of a particular service)? Please explain why you support or do not support Chorus’ proposal.</p>	<p>Refer to “Allocation of certain shared IT assets during pre-implementation” in this submission.</p> <p>Regarding power asset allocation:²⁷</p> <p>The starting allocation post-2011 Won power assets also reflects that Chorus has had to invest in infrastructure well in advance of demand - specifically:</p> <ul style="list-style-type: none"> • The nature of this infrastructure meant significant costs were incurred early on to enable the first customer in an area to be connected.

²⁷ This is consistent with our reply to RFI05 “Allocation of power assets”.

Consultation question	Chorus reference
	<ul style="list-style-type: none"> • Chorus has had to build new power assets to support the fibre network electronics (OLTs and switches). In many cases there wasn't sufficient power and cooling capacity for the new fibre electronics. • Investment in network electronics has been optimised to avoid costly site revisits by the service companies. Network electronics capacity was sized for future demand, and this is reflected in the high initial investment in the power and cooling infrastructure (for example, an OLT supports up to 2000 connections; at a small site, this could easily double the demand for power & cooling).
<p>What are your views on Chorus' forecast level of direct attribution of opex spent between 1 December 2011 and 31 December 2021 to FFLAS, is Chorus' estimate reasonable? Please explain your views and provide justification if you consider a different level would be more appropriate.</p>	<p>The justification for the level of direct attribution is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.</p>
<p>What are your views on Chorus' proposed allocation of pre-2011 ducts based on the proportion of those ducts that are within its UFB contract areas, multiplied by the proportion of UFB uptake? Please explain your views and provide justification if you consider a different allocation would be more appropriate.</p>	<p>The justification for the allocation of pre-2011 ducts is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.</p>
<p>Is Chorus' proposed allocation of costs associated with any surplus space within buildings to UFB FFLAS appropriate? What alternative allocators might better reflect the space actually occupied and should therefore be considered? Please explain why you support Chorus' proposal or why any alternatives you propose would be more appropriate.</p>	<p>The justification for the allocation of building space is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.</p> <p>Further discussion is provided in the section "Allocation of exchange space" in this submission.</p>
<p>What are your views on Chorus' proposed allocator types for sharing operating costs in the calculation of the FLA? If you consider alternative allocator types would be more appropriate, or you support the proposed allocators, please explain why, and outline any alternative allocators you would propose.</p>	<p>The justification for the allocator types provided as part of the initial RAB model was provided in response to the s 221 is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.</p>
<p>What are your views on Chorus' proposed use of Totex as an allocator for sharing operating costs? If you consider alternative allocator types would be more appropriate, or you support the proposed use of Totex, please</p>	<p>The justification using Totex is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.</p>

Consultation question	Chorus reference
explain why, and outline any alternative allocators you would propose.	See also "Connections must only be used for allocation where justified" above.
Is Chorus' proposed choice of allocator types from the default list reasonable? Are these choices likely to be consistent with the IM, and if not, which allocator types should be used and why?	The justification for the allocator types provided as part of the initial RAB model was provided in response to the s 221 is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.
Do you agree with Chorus' proposed use of a number of alternative allocator types, which must be approved by the Commission? Are these choices likely to be consistent with the IM, and if not, which allocator types should be used and why?	The justification for the allocator types provided as part of the initial RAB model was provided in response to the s 221 is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.
What are your views on Chorus' approach to the calculation of the weighted average life of the UFB-related core fibre assets in the initial RAB as at the implementation date? Please explain why you support it, or what alternative approach you recommend and why.	<p>Refer to section "Asset life of the financial loss asset" in this submission and the attached expert report "Remaining life for the FLA asset".</p> <p>Analysys Mason's calculation is included in the documents provided as part of "Response to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice", dated 26 March 2021.</p>