7 June 2023

Committee Secretary
Standing Committee on Communications and the Arts
Inquiry into Co-Investment in Multi-Carrier Regional Infrastructure

Dear Committee Members,

Supplementary Telstra Submission

Telstra provides this supplementary submission to clarify for the Committee some of the matters raised during the public hearings, and in some recent published submissions.

1. Sharing of infrastructure by Telstra

An assertion was made at the Launceston public hearing that Telstra does not, nor are we willing to share, our infrastructure.[1] This is not correct. The ACCC's 2022 Regional Mobile Infrastructure Report reveals that Telstra in fact co-locates with other mobile network operators (**MNOs**) on over a third of locations (35%) where we have a base station deployed. In inner regional locations we are co-located at 35.8% of our sites, and in outer regional locations still at over a quarter of our sites (25.6%). In the more remote parts of Australia, where the options to co-locate are far fewer due to Telstra often being the first and only MNO to invest in extending our network into new areas, we are still co-located at 11.9% of our sites in remote areas and at 4.8% of our sites in very remote Australia.[2].

As the Committee would be aware, Telstra has also recently entered an active network sharing arrangement with TPG. If this agreement, which was initially rejected by the ACCC and is currently being reviewed by the Australian Competition Tribunal, is permitted to proceed, it will result in Telstra and TPG sharing an additional 3700 sites (approximately 60% of Telstra's sites in regional and urban fringe areas). It is also important to note Telstra and Amplitel, like all licensed carriers, are obliged to provide access to their infrastructure on regulated terms under the facilities access regimes set out in Part 34B and Parts 3 and 5 of Schedule 1 of the Telecommunications Act.

The current low rates of co-location on both privately funded and government co-funded sites in regional and remote Australia are not due to Telstra's unwillingness to share. They are instead driven by an unwillingness of other MNOs to invest in establishing a presence at these locations, which are often geographically distant from the edge of their networks. The investment needed to provide a quality mobile service in regional and remote Australia is significant. Importantly, it extends beyond the investments Telstra makes in improving and maintaining our leading network. For example, it

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1 Hansard, p.2. "*…the incumbent…doesn't share and really isn't interested in sharing its infrastructure*" Available at: https://parlinfo.aph.gov.au/parlInfo/download/committees/commrep/26673/toc_pdf/Communications%20and%20the%20Arts%20Committee_2023_04_14.pdf;fileType=application%2Fpdf#search=%22committees/commrep/26673/0000%22

2 Mobile Infrastructure Report, 2022. ACCC, published Sept 2022. See Table 4.5, p.16. Available at: https://www.accc.gov.au/system/files/Mobile%20Infrastructure%20Report%202022.pdf

includes the investment we make in the 138 stores we operate in regional locations across Australia providing sales and service support, and in our Regional General Managers and dedicated Regional Network Advisers who live and work in regional communities to help us understand and address community concerns and expectations. It is a legitimate commercial choice of our competitors to differentiate their mobile services by investing in different things, for example investing more heavily in metro networks, or indeed saving money by investing less. However, it is not correct to suggest Telstra is responsible for the consequences of these choices.

2. Limits to potential benefits of infrastructure sharing

Sharing mobile infrastructure is one way to deliver better connectivity to regional Australia and is generally something we support. In many locations throughout the country Telstra and other MNOs are already achieving efficiencies and seeking to reduce visual and environmental impacts by co-locating their equipment. We also see a lot of potential for improved regional outcomes from commercially negotiated active sharing arrangements. Our landmark commercial agreement with TPG, for example, will deliver greater choice and better quality services to millions of Australians, if permitted to proceed. Through collaboration with government, between the MNOs and with other stakeholders, we also believe there is a role for temporary emergency roaming to play in disaster situations to improve access to connectivity in times of crisis.

However, there are limits to the potential efficiencies that can be achieved from infrastructure sharing, which we believe are important for the Committee to understand. The simplest example is the potential for co-funded multicarrier infrastructure to save costs for the government and for industry by avoiding "infrastructure duplication".

For this potential to be realised, firstly the infrastructure needs to be "in the right spot" from the perspective of multiple MNOs. In Telstra's experience, mobile network design is *far* more complex than MNIP's and Neutral Host providers often appreciate. When selecting the location for a new site, our network engineers carefully consider a range of factors such as call traffic movement, capacity balancing and interference management. If a tower isn't built in a location that an MNO can make practical use of in terms of their existing network locations; their spectrum; their network equipment and the preferences of their target customer base, then that tower is unlikely to be of much benefit to the MNO and potentially could degrade existing services. Plainly, any obligation on the MNO to nevertheless utilise this infrastructure[3] could involve the MNO incurring unnecessary costs and potentially having to forgo more efficient and effective ways to improve their mobile offering, which would not be in the best interests of end-users anywhere in Australia.

Secondly, the infrastructure needs to be designed and built upfront so that it can be shared by multiple MNOs. Especially in more remote locations, this is not always practical or cost effective:

- Many remote deployments (which are a long way from the nearest fixed infrastructure) use satellite backhaul. This is very costly, and reserved capacity needs to be limited to the minimum required for viability. Adding additional end-users is likely to degrade the end-user

[3] Such as the suggestion by Vocus that "*consideration should be given to establishing a requirement on MNOs to utilise publicly-funded mobile infrastructure in areas where they do not already provide coverage*": Submission 37, p.3.

experience such that some basic online activities become unreliable or impossible. The alternative is to upgrade the satellite backhaul capacity, but the cost of this is significant.

- To support the economic viability and technical feasibility of deployments in more remote areas, some co-funded sites in past rounds of the Mobile Black Spot Program have involved structures supporting a small cell. These light, small structures are typically specifically designed to just meet the minimal needs of a single mobile cell. Accommodating multiple small cells for multiple operators (passive sharing) would require the building of a bigger and more costly structure, more akin to what's required for a macro site. This upgrade cost alone can amount to more cost than if separately sited individual carrier small cells were built to minimal standards.
- More remote sites may also be limited in their utility for active sharing. In our experience, cell radio power is commonly a limiting factor for sites in remote Australia. Users are typically located further away from the site than in metro areas, requiring the use of higher transmission power and lower frequencies of spectrum to ensure the mobile signal reaches them. Consequently, we typically operate our radios at their maximum power rating to maximise the coverage of a site. In this situation, if additional bandwidth is needed to support additional demand from multiple sharing MNOs (for example, traffic from metro-based customers of a second MNO who are visiting as tourists), the added bandwidth can only be supported if the amount of coverage from the site is reduced. This option may be less beneficial for end-users in the area than the installation of separate additional infrastructure.

Lastly, we note the recent claims that have been made to the Committee asserting cost benefits of extending regional mobile coverage through the sharing of co-funded active equipment supplied by a neutral host, which in some cases has been termed "open access".[4] We recommend treating these claims with a degree of caution. In our considerable experience of network rollout in regional and remote Australia, by far the most significant costs involve acquiring, constructing, and maintaining the site as well as in the supply of power and backhaul to the site. Moreover, these costs tend to increase the remoter a site is. The active equipment such as the radio units, antennas and feeders comprises only a very small component of the overall costs. Even assuming there is sufficient spare capacity to make it technically feasible to share this active equipment between MNOs[5], there is a high potential for any cost savings to be outweighed by the costs of establishing the active network sharing arrangements – which require securing spectrum and collaboration and agreement between the neutral host and multiple MNOs, and the integration of each of their separate networks. Absent the kind of scale involved in our proposed arrangement with TPG, in our view the prospects for any material cost savings are low.

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4 For example, BAI claim that the "*…single site per operator in a multi-operator market is unequivocally sub-optimal in terms of overall cost…In regional areas with lower population densities, it is unlikely that the spectrum and systems will be at capacity. Active sharing provides an opportunity for cost savings in these cases*": Submission 38, p.2.

5 As we note above, in many cases, this will not be true – as reflected in the ACCC's Preliminary Finding number 9 in its Regional Mobile Infrastructure Inquiry that "*Options for capacity upgrades to meet consumer demand for mobile services are more limited in regional, rural and remote areas compared with urban areas*" - ACCC Regional Mobile Infrastructure Inquiry – report on preliminary findings – 18 April 2023

3. Mandatory requirements for co-funded sites to support multiple carriers – is there a downside?

During the hearing in Sydney on 26 May 2023, the question was raised by Committee members as to whether there was any downside to imposing requirements for future co-funded sites to support multiple carriers. We don't believe this would be a "costless" policy direction to take. That is why we continue to advocate for a flexible, multi-faceted approach, which will allow as many potential participants as possible in future programs by matching deployment models to their individual circumstances (and the needs of the relevant regional community), while still seeking to incentivise multi-carrier outcomes where possible.

Supplementing our original submission, we reiterate below some of the most important trade-offs for taxpayers and for regional communities which may be associated with mandating particular multi-carrier requirements.

The first consideration is the potential impact on MNO incentives to invest in regional mobile infrastructure. Approaches such as mandated domestic roaming have been carefully considered in the recent past and shown not to be in the long-term interest of consumers. As explained in detail in our original submission, this would not deliver more coverage or more competition and would be very harmful to MNO investment incentives.

The second consideration is the impact of these requirements on the cost of the infrastructure. This is vital, because if potential bidders cannot make the costs of deployment stack up, they will have no incentive to participate in future programs:

- Larger, stronger towers and sites designed to support the equipment of multiple MNOs and to house multiple equipment huts typically cost more. As the ACCC's Preliminary Report in its Regional Mobile Infrastructure Inquiry (**RMII**) finds: "*While the capability to provide tower space to additional tenants is possible, it is likely to involve significant additional expenditure such as tower strengthening, power and accommodation upgrades*".[6]
- Potentially, some of these costs may be avoided where the MNOs are able to share the same active equipment. However, active sharing arrangements involve their own additional costs associated with the need to establish new commercial, technical and operational arrangements between the sharing parties, and to integrate their networks. MNIPs or Neutral Hosts may also lack access to the deployment expertise, economies of scale, established workforces and commercial relationships of MNOs, also potentially adding to their cost of deployment.[7] While site deployment costs can vary significantly from site to site, Federal Government Funding under the Mobile Blackspot Program has historically been capped at $500,000 per site[8]. By contrast, a recent example from NSW saw two 'neutral host' towers delivered in an area already covered by Telstra's mobile network for a cost to government of $5.5 million.[9]

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6 ACCC Regional Mobile Infrastructure Inquiry – report on preliminary findings – 18 April 2023, p 5.

7 In addition, as we mentioned at page 14 of our original submission, Neutral Host models also involve quality of service cost/benefit trade-offs, likely resulting in "lowest common denominator" quality of service parameters.

8 Although we note that in the most recent rounds 6 and 7 higher amounts have been countenanced, as locations become less economic.

9 Mobile Coverage project – Active Sharing Partnership | NSW Government

The third consideration is the potential impact of multi-carrier requirements on the speed of deployment. Minister Rowland has recently been quoted as saying:

> *"I've set myself a clear challenge. By the end of my tenure, I want to be able to say that I've helped narrow the digital divide: for remote First Nations communities, for growing parts of our major cities without reliable services, or those Australians who call our regions home."*[10]

The more parties that are involved in an arrangement the more complex the range of matters that need to be considered become, which can take time to sort out. Our proposed network sharing arrangement with TPG is a case in point. Here, both Telstra and TPG worked closely over many months involving many people from both organisations to develop an active sharing model that works commercially and delivers customer benefits for both organisations. Rolling out mobile networks involves consistent, long-term investment and it's certainly worth taking the time to get decisions right. However different models may involve different levels of complexity and carry different levels of execution risk, so government should at least have an appreciation of the potential trade-offs involved in stipulating more complex multi-carrier requirements.

The final consideration is what impact multi-carrier requirements are likely to have on the potential locations of future bids to build co-funded infrastructure. In our view, this is one of the most important considerations to get right in terms of driving positive outcomes for regional Australia.

If the policy goal is to both extend new mobile coverage to help improve regional digital inclusion and to maximise choice of provider, then logically the focus should be on areas that are not currently covered by any of the three MNOs. However, if the new area is not adjacent to the existing network of any or some of the MNOs, then this may result in reduced incentives of the MNOs to invest in establishing an "island" of coverage isolated from the rest of their network. Based on the current network coverage of Australia's MNOs, this suggests that the most attractive candidate locations of common interest to all MNOs are likely to be locations like highways and roads adjoining regional population centers with existing coverage, or potentially projects covering "clusters" of sites involving the extension of existing multi-carrier coverage deeper into more remote areas to include locations like smaller towns, popular tourist destinations, adjoining transport routes and more remote indigenous communities. Telstra believes that such holistic projects have the potential to deliver very positive outcomes for regional and remote communities, especially where the local community is closely involved in the arrangements. A good example is the project to upgrade the connectivity on King Island in Tasmania we have been involved in under the Regional Connectivity Program.[11]

However, in more remote parts of Australia, the reality is that a location without coverage may only be near the mobile network of a single MNO, most commonly Telstra. If multi-carrier coverage is mandated as a requirement of co-funding but only one MNOs is prepared to invest in extending their coverage to this location, then the project will not be able to proceed. Or perhaps even worse from a policy perspective, the project may proceed through the funding of infrastructure installed by an MNIP or a Neutral Host which supports open access by multiple MNOs, but never ends up having any MNOs as customers. The consequence is the relevant remote community will miss out on any immediate coverage improvements, even though the government funding could have made it economically viable for a single MNO to extend coverage at this site, absent the multi-carrier

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10 Communications Day, 30 May 2023, p 5.

11 Building a better network and transforming connectivity on King Island (telstra.com.au)

requirement. The practical effect therefore of mandated multi-carrier outcomes would be that more regional and remote Australians would miss out. This is not a trade-off to be made lightly.

Given that government funding resources are finite, a similar trade-off is entailed in the policy decision to use these funds to improve the choice of operator available at a location, by subsidising coverage by a second or third MNO in areas where there is already existing coverage by one MNO. A case in point is the project under the NSW Active Partnership where significant government funding has been allocated to two 'neutral host' towers in an area already covered by Telstra's mobile network.[12] Alternatively, to promote choice in locations where one MNO is interested in extending coverage but where the other MNOs have no natural commercial incentives to invest in their extending coverage, government may choose to increase its funding levels to overcome the cost disincentives for MNOs to participate – which might, in the case of MNOs with a more metro focus, need to be the point of making this virtually free. The use of government funds in this manner may be determined as the best option for a relevant regional community at a given location. But it does mean that a community in another regional location could miss out on any coverage at all and this is something the Committee needs to be mindful of.

4. Emerging technologies

In our original submission, we recommend that government consider the potential of emerging technologies such as Low Earth Orbit (**LEO**) satellites to provide complementary infill coverage and redundancy for public safety purposes, enabling government co-funding to be targeted at regional community requirements for higher capacity mobile infrastructure in blackspot areas with at least some resident and/or transient populations. We note that emerging alternative technologies have been a topic of discussion at recent hearings and would be happy to provide further information on this topic to the Committee if desired.

Conclusion

We hope you find the clarifications we have provided above helpful. If anything in our supplementary submission is unclear, or you would like to discuss any aspect further, my team and I would be more than happy to meet with you at your convenience.

Yours sincerely,

[redacted]

Bill Gallagher
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[redacted]

12 Mobile Coverage project – Active Sharing Partnership | NSW Government