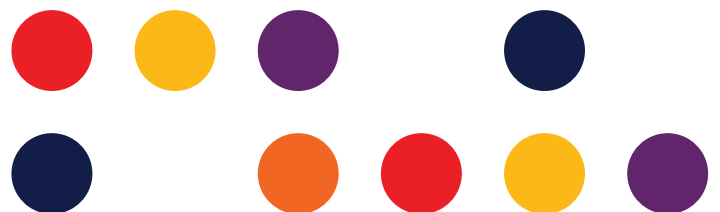




Inquiry into co-investment in multi-carrier regional mobile infrastructure

10 November 2022

Public submission



Submission

TPG Telecom Limited (**TPG Telecom**) welcomes the opportunity to make this submission to the House of Representatives Standing Committee on Communications and the Arts (**Committee**) inquiry into co-investment in multi-carrier regional mobile infrastructure (**Inquiry**).

TPG Telecom supports the Committee's goal of exploring opportunities and challenges for co-investment in multi-carrier regional mobile infrastructure.

TPG Telecom is fully cognisant of the poor economics and challenges involved in building mobile infrastructure outside of metropolitan areas in Australia. Given this reality, we have strongly advocated for telecommunications policy that incentivises greater infrastructure sharing – both active and passive sharing – between mobile network operators (**MNOs**).

The reason for this is straightforward - infrastructure sharing would enable resources to stretch further than any single MNO can hope to achieve alone. This improves mobile coverage in regional and rural Australia and increases competition by giving Australians who live in regional and rural areas real choice.

Relevant ACCC matters

The ACCC is currently considering two matters that are relevant to this Inquiry, specifically:

- as directed by the Government, the ACCC is conducting an inquiry into (a) access to infrastructure used in the supply of mobile telecommunications and other radiocommunications services in regional areas, and (b) the feasibility of providing mobile roaming during natural disasters or other emergencies (**ACCC Inquiry**);¹ and
- the ACCC is assessing an application by the TPG Telecom and Telstra to share spectrum and radio access network infrastructure in regional Australia² (**TPG-Telstra Arrangement**). If approved, the TPG-Telstra Arrangement would enable both MNOs to share mobile infrastructure in a defined mobile coverage area in regional Australia which covers approximately 17% of the Australian population.

There is substantial overlap in the subject matter and focus of this Inquiry and the ACCC Inquiry, as both inquiries seek to report on the costs involved in building and operating mobile infrastructure in regional Australia. We note the ACCC is in the process of collecting relevant information from industry participants, including detailed information relevant to costs.

There are benefits for this Inquiry to leverage factual findings from the ACCC Inquiry and the Committee could engage with the ACCC regarding the findings of the ACCC Inquiry

¹ For further information, see ACCC, *Regional mobile infrastructure inquiry 2022-23*, available at <https://www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/regional-mobile-infrastructure-inquiry-2022-23>.

² For further information, see ACCC, *Telstra Corporation Limited and TPG Telecom Limited proposed spectrum sharing*, available at <https://www.accc.gov.au/public-registers/mergers-registers/merger-authorisations-register/telstra-corporation-limited-and-tpg-telecom-limited-proposed-spectrum-sharing>.

The ACCC's ongoing assessment of the TPG-Telstra Arrangement is also highly relevant to the Terms of Reference of the Inquiry, particularly "*community views on single carrier vs multi-carrier outcomes*" and "*examples of successful multi-carrier outcomes and their applicability in the Australian context*". If approved, the TPG-Telstra Arrangement would be the most significant example of the benefits of multi-carrier network sharing in Australia.

TPG-Telstra network sharing arrangement

The proposed TPG-Telstra Arrangement aims to combine mobile network infrastructure and spectrum of both MNOs in approximately 81.4-98.8% population areas. This represents approximately 1.5 million square kilometres of mobile coverage. TPG Telecom and Telstra will continue to operate their own networks across Australia beyond this designated regional coverage area.

The immediate benefits of the TPG-Telstra Arrangement are:

- For the first time, regional consumers will be able to choose TPG Telecom (and its associated brands) for their mobile services. This radically improves competition and choice for consumers who lack choice today.
- By combining network assets, existing mobile infrastructure becomes more efficient at delivering mobile services, reducing congestion and improving both MNOs' ability to invest into other parts of their networks. This may involve improvements to network infrastructure beyond the 98.8% population coverage areas and peri-urban areas. This will increase the intensity of infrastructure-based competition, benefiting both existing and future consumers.
- Both TPG Telecom and Telstra will retain their ability to differentiate and innovate as both operators maintain separate core networks and operate their own mobile networks in areas not covered by the TPG-Telstra Arrangement. The TPG-Telstra Arrangement relates to mobile network coverage covering approximately only 17% of the Australian population, meaning TPG Telecom and Telstra operate independent radio access networks covering the majority of consumers. TPG Telecom and Telstra will undertake their own independent approaches to pricing and product roadmaps.
- A material number of sites awarded funding under the Mobile Black Spot Program (**MBSP**) will become multi-carrier by default. TPG Telecom is expected to co-locate on approximately 647 active MBSP sites in regional Australia once the TPG-Telstra Arrangement is implemented. This is a substantial public benefit as the TPG-Telstra Arrangement instantly rectifies a major design flaw of previous Mobile Black Spot Program funding rounds that resulted in almost all sites funded under the MBSP being occupied by only one MNO. Based on the ACCC's reporting, only 8 per cent, or approximately 74 sites, of all active mobile sites funded under the MBSP is occupied by more than one MNO.³

The stakeholder responses to the ACCC's public consultation process in relation to the

³ See: https://www.accc.gov.au/system/files/RMII%20Consultation%20Paper_0.pdf, page 10, and associated ACCC Mobile Infrastructure Report 2021 – output tables.

TPG-Telstra Arrangement are illustrative of community views on multi-carrier outcomes in regional Australia. Local communities are near unanimous in their support for the TPG-Telstra Arrangement.

For example, the Bunbury Geographe Economic Alliance writes (the TPG-Telstra Arrangement is referred to as the MOCN proposal):⁴

Like many Regions in Australia, mobile coverage within Bunbury Geographe is still highly variable and data services inadequate in many situations. This has significant impacts on our residents and businesses who are unable to access services for health and safety, finance, education, business systems and remote work. This places our businesses at a competitive disadvantage and often limits our Region's ability to attract new investment through expansion or attraction of new industries.

The MOCN proposal is a common-sense approach to improve mobile coverage and data services in our Region and we strongly support this agreement. As is often the case in Regional areas, the cost of installing new infrastructure and data capacity is uneconomic when the population or customer base is relatively small. In this case the MOCN proposal makes the best use of existing infrastructure that Telstra has, combined with access to TPG's spectrum which provides more bandwidth and ultimately an improved mobile network service. With Telstra proposing to share their radio network with TPG, this will also provide TPG customers with a much-improved mobile coverage in our Region. As both providers' services will be improved under this Agreement, we are confident that market choice and competition will also be maintained.

The Committee for Gippsland submits:⁵

While I understand that the Telstra-TPG MOCN proposal can improve coverage, it will not solve all coverage issues, but will also provide greater choice to regional consumers and visitors.

Regional areas are also home to farming families and businesses central to the local and national economy. Having reliable connectivity and access to the latest digital technology will ensure Australia's agricultural sector can access markets, remain competitive and thrive.

This proposal seeks to improve access to reliable communications platforms through increasing capacity and opportunity for TPG in regional areas while helping address the demand on access to data, where customers in areas with existing coverage sometimes face congestion, resulting in patchy service or slow speeds.

In relation to the choice of service provider, I understand that this proposal will also increase the choice of providers for regional residential and commercial customers. Many regional and rural areas will go from having, in effect, a choice of two 4G/5G networks to a choice of three networks, bringing them in greater alignment with customers in metropolitan areas.

⁴ <https://www.accc.gov.au/system/files/public-registers/documents/Submission%20by%20Bunbury%20Geographe%20Economic%20Alliance%20-%202014.06.22%20-%20PR%20-%20MA1000021%20Telstra%20TPG.pdf>

⁵ <https://www.accc.gov.au/system/files/public-registers/documents/Submission%20by%20Committee%20for%20Gippsland%20-%202017.06.22%20-%20PR%20-%20MA1000021%20Telstra%20TPG.pdf>

Bendigo Business Council writes:⁶

The City of Greater Bendigo population is forecast to grow by an average 1.9% per annum with the suburb of Huntly forecast to grow by 190.5% by 2036, and as the demand for data services continues to grow, so does the pressure on the existing telecommunications network, which despite new investment from multiple telcos such as Telstra and TPG, continues to increase the frequency of mobile coverage drop outs and slow speeds for residents and businesses across the region, creating further disadvantage.

By pooling the available spectrum and network coverage from two providers, the MOCN will alleviate network congestion issues whilst simultaneously introducing a third option for residents and businesses located within the MOCN area in terms of service provider and all of the solutions they offer, which Be.Bendigo believes will only encourage greater competition and further investment in regional and rural areas. In addition to this, the MOCN will cater to the tourism industry by providing a better user experience for existing metro TPG customers, and will provide the much-needed additional spectrum required to facilitate large-scale events across the Bendigo region.

The Telstra-TPG MOCN is a common-sense solution which Be.Bendigo are confident will have significant benefits for the communities within the Greater Bendigo area, and more broadly across regional and rural Australia.

The Eurobodalla Shire Council writes:⁷

Again, like other regional areas, Council regularly receives complaints regarding coverage and capacity issues from residents, visitors and businesses on telecommunications issues. Our advocacy to secure development of infrastructure and improved service provision is an ongoing piece of work. We seek and support opportunities that enable improved standards of carrier competition and capability within our region. In supporting this multi-operator core network agreement between Telstra Corporation Limited and TPG Telecom Limited, we believe as a stakeholder this will deliver the following outcomes:

- expanded carrier coverage across the Eurobodalla region enabling greater choice of retail products for business and residents,
- increase network coverage out of major towns for visitors to the region,
- address capacity issues within the network during seasonal peaks; and
- provide consistency of data speeds.

⁶ <https://www.accc.gov.au/system/files/public-registers/documents/Submission%20by%20Be.Bendigo%20-%2010.06.22%20-%20PR%20-%20MA1000021%20Telstra%20TPG.pdf>

⁷ <https://www.accc.gov.au/system/files/public-registers/documents/Submission%20by%20Eurobodalla%20Shire%20Council%20-%2014.06.22%20-%20PR%20-%20MA1000021%20Telstra%20TPG.pdf>

Broken Hill City Council writes:⁸

Broken Hill City Council writes in reference to the Multi-operator Core Network submission presented by Telstra and TPG and confirms that Council will support projects that propose a solution to connectivity issues that exist in Broken Hill and Far West NSW.

Infrastructure sharing in regional and rural Australia provides another tier in the nation's ability to deal with blackspots and poor connectivity.

The residents and businesses of Broken Hill consistently report connectivity issues which impact on online business transactions including Eftpos payment and learning and delivery of events. Broken Hill is also the strategic service centre for the agricultural industry in Far West NSW, and Council also understands the impact poor data connectivity has not only on that industry but also emergency services when there is communication service on outback roads and highways due to back spots.

Innovative solutions need to be embraced in this market to ensure that regional Australia has the same access to digital technology and urban and city residents.

Charles Sturt University submits:⁹

The digital divide between urban and regional/rural Australia is part of the lived experience of many of Charles Sturt's students and staff living in regional and rural areas. Regional, rural and remote users need reliable communications services so they can have access to remote education in these areas.

The University is able to achieve strong graduate outcomes due to a strong focus on teaching quality including the ability to deliver high quality online learning. More than 75% of the University's graduates go on to work in regional areas, showing we have a pivotal role in meeting regional workforce needs. Their skills will be more important than ever to sustain the large economy growth in regional Australia and conductivity is a key factor in continuing to deliver these outcomes.

As one of Australia's leading online University providers, Charles Sturt sees many benefits to the proposed Telstra Corporation Limited and TPG Telecom Limited spectrum sharing including;

- Greater coverage for regional and rural students wanting to study at University.
- Increased coverage for staff delivering educational training and research in regional and rural areas.
- Increased choice for staff and students living in regional and rural Australia, this extends also to more choice in new innovative products and services.

As these submissions demonstrate, the community response to the TPG-Telstra Arrangement is overwhelmingly positive. They all identify the benefits of increased consumer choice, and increased mobile network quality resulting from the TPG-Telstra Arrangement.

We believe there is similar strong community support for multi-carrier outcomes for publicly funded mobile infrastructure in regional Australia.

Open access should be required in all future co-investment programs

The TPG-Telstra Arrangement demonstrates that MNOs can share passive and active infrastructure in regional Australia without government intervention. However this does not

⁸ <https://www.accc.gov.au/system/files/public-registers/documents/Submission%20by%20Broken%20Hill%20City%20Council%20-%2014.06.22%20-%20PR%20-%20MA1000021%20Telstra%20TPG.pdf>

⁹ <https://www.accc.gov.au/system/files/public-registers/documents/Submission%20by%20Charles%20Sturt%20University%20-%2014.06.22%20-%20PR%20-%20MA1000021%20Telstra%20TPG.pdf>

mean there is no role for government to play.

We strongly believe that any co-funded mobile infrastructure must be open access. This means, for example, that any MNO can request to be involved in the design and establishment of a greenfield mobile site; or that an MNO can request to co-locate at a co-funded site on terms that are cognisant of the fact that public funds were used to build the infrastructure. Government led co-investment projects could also prioritise sharing active network infrastructure (for example, like the network design of the TPG-Telstra Arrangement) to achieve even greater cost reductions in building mobile network infrastructure.

There are state-based examples of how such programs can be designed to maximise the benefits of co-investment programs. For example:

- Regional Rail Connectivity Project (Victoria):¹⁰

The Victorian Government co-funded mobile sites to provide better mobile coverage to five regional rail lines: Geelong, Ballarat, Bendigo, Traralgon and Seymour. Under this project, the Victorian Department of Transport led the project on scope and ensured that all MNOs were incentivised to co-locate on co-funded infrastructure. The infrastructure design, commercial model, and operations were industry led. The design of this project resulted in all three MNOs co-locating on the co-funded mobile sites.

- Mobile Connectivity Program (NSW):¹¹

The NSW Government, through the Department of Regional NSW is embarked on a program of co-funding active sharing mobile infrastructure solutions in regional NSW. The Program has multiple stages and is currently in the feasibility stage where project teams, made up of industry participants, set out to design and build proof of concepts for different active network sharing solutions.

Similarly to the Victorian Regional Rail Connectivity Project, the NSW Government is responsible for defining the scope of the Program. By requiring active network sharing, the NSW Program required multi-carrier outcomes for co-funded network infrastructure. Industry participants lead on experimenting with different technical and commercial models for active network sharing solutions.

A key differentiator for the Mobile Connectivity Program is that it focuses on sharing active network elements as well as passive infrastructure. Whereas the Victorian Regional Rail Connectivity Project resulted in sharing only passive network infrastructure.

These show that multi-carrier outcomes are possible in co-investment programs if they are designed appropriately. Open access on all co-funded mobile sites must be a non-negotiable feature on all future co-investment programs. Beyond such high-level policy positions, industry participants are best placed to design and implement solutions that achieve the most

¹⁰ <https://victrack.com.au/projects/past-projects/regional-rail-connectivity>

¹¹ <https://www.nsw.gov.au/snowy-hydro-legacy-fund/regional-digital-connectivity-program/mobile-coverage-project>

efficient technological outcomes.

Multi-carrier solutions should not be limited to neutral-host solutions¹²

Recently, there has been increased optimism around neutral-host solutions. While they are conceptually attractive, there are many challenges to overcome for neutral-host solutions to be viable in regional Australia.

To date, neutral-host solutions have been unsuitable for TPG Telecom's needs. There has never been a neutral-host provider that provides the necessary scale of coverage that makes them viable. Furthermore, neutral host solutions are unproven in Australia, with no clarity on a workable commercial model or technical model. This makes it near impossible for TPG Telecom to rely on them when millions of Australians rely on TPG Telecom's mobile network every day.

However this situation may change since all three MNOs have recently sold their passive mobile infrastructure to varying degrees. These tower companies may have the necessary scale and access to capital to overcome the technical and economic challenges of providing neutral host solutions in Australia.

As a general comment, TPG Telecom expects the business case for neutral-host solutions in metropolitan areas to be more feasible than in regional areas. This is because the technical needs for MNOs are more aligned in metropolitan areas than in regional Australia.

In metropolitan areas, all three MNOs' networks are mature and have similar requirements to increase network capacity to meet consumer mobile data demand that is growing rapidly year-on-year. Practically, this requires the three MNOs to densify their networks to varying degrees. However densification is becoming difficult as local communities are increasingly against MNOs deploying more infrastructure in their neighbourhoods. Sharing a single set of radio access network infrastructure – for example small footprint capacity solutions that can easily work together with existing macro-based networks – may be the only solution in the future that enables MNOs to meet increasing consumer demand for mobile data, whilst meeting community expectations. In this context, neutral host solutions, and other active network sharing solutions, may have a key role to play.

However, just because it is possible, and maybe desirable, it does not mean it will happen. There remain many challenges to overcome for neutral host solutions. For example, a neutral host provider would have to demonstrate it is feasible to integrate with multiple MNOs without impacting their ordinary network operations. Furthermore, they would have to demonstrate they can serve the current and future needs of multiple MNOs, who have different network needs and strategic goals.

These challenges are amplified in regional Australia where the technical requirements and commercial incentives of the three MNOs are currently far apart. Consequently, a neutral host

¹² A neutral host solution used in this context of this submission means a third-party provider of mobile network services to MNOs. Some industry participants refer to this as 'Network as a Service'. This includes providing access to both passive and active radio access network elements. This is distinguished from infrastructure providers that only provides access to passive mobile towers but does not provide access to active components of a radio access network.

provider may find that it is impossible to get more than one MNO hosted on its infrastructure.

In regional Australia, neutral host solutions may be suitable in areas where all three MNO lack adequate network coverage but are immediately adjacent to all three mobile networks. In this case, all three MNOs would have some incentives to share new coverage if there is a commercial need for this coverage. However, these circumstances are limited given the differences in geography reach of the three mobile networks.

In the context of designing co-investment programs, the government should not dictate any specific network design. Industry participants are best placed to determine the best technology and commercial model for a multi-carrier outcome. The key principle government should adopt is that any future co-funded mobile infrastructure must be open access.