

The logo for Optus, consisting of the word "OPTUS" in a bold, teal, sans-serif font.

Submission in response to  
ACCC market inquiry –


Telstra and TPG application for  
merger authorisation for  
proposed spectrum sharing in  
regional Australia

Public Version

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## Section 1. EXECUTIVE SUMMARY

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- The proposed transaction is not a true sharing arrangement, it is effectively a regional network merger that will further enhance Telstra's already dominant position.
- It will lead to less competition which will result in worse outcomes for consumers and businesses including less investment, higher prices and less resilient communities.
- Given the importance of communications infrastructure to our economy and digital future, Australia can expect lower levels of economic activity and jobs growth resulting from a less competitive sector.

### It is important the ACCC rejects the merger authorisation

- 1.1 Competition is the foundation of a healthy communications sector, a sector that is critical to Australia's economic success and vision to become a leading digital economy.
- 1.2 Australia has benefited from significant investment in competitive mobile networks that have provided Australians with choice, better services, the latest technology, and value for money. Underpinning this has been the competitive impact of Optus, which is the key competitive force faced by Telstra based on its consistent large-scale investment in infrastructure.<sup>1</sup>
- 1.3 If this merger is permitted to proceed it will **overturn 30 years of regulatory and policy settings** that the successive governments and the ACCC have championed to promote competition and investment in the telecommunications sector. It will further entrench and extend the dominant market position of Telstra which will undermine the commercial viability of additional investment in regional infrastructure (which TPG is abandoning) by Optus or any other potential entrant, 'locking' competition out of the regional market and eliminating choice in regional Australia.
- 1.4 Contrary to the assertions in the Telstra/TPG application, the merger will not result in better outcomes for consumers, nor will it enable TPG to effectively compete with Telstra. It creates a dependency for TPG on Telstra, imposes limitations on the basis by which TPG can compete, and ensures Telstra has control over network decisions and pricing levels. On the contrary it will strengthen Telstra, weaken Optus and the competitive pressure that Optus imposes on Telstra, and reduce the resilience and reliability of Australia's telecommunications in regional areas – in some cases to the point where there may be no coverage in times of natural disaster.
- 1.5 The Proposed Transaction, while portrayed as a sharing deal, is in fact and substance a regional network merger between Telstra and TPG because Telstra fundamentally controls the supply of the service. This will result in a reduction from three to two regional mobile network operators. By strengthening an already dominant incumbent, it also undermines the commercial viability of ongoing investment in regional networks by Optus or any other provider. This creates the very real prospect of Australia returning to a communications monopoly in regional Australia and opening up a vast digital divide between our cities on regions.

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<sup>1</sup> Note: It is not disputed that Optus is the primary source of competition to Telstra. This is mentioned several times in the Telstra/TPG expert submission from Mr Feasey (see pages 23,26 and 41).

- 1.6 The facts are that this proposal will strengthen Telstra and substantially weaken Optus, who is the only real and relevant competition to Telstra – and this is agreed by both parties.<sup>2</sup> This means that statements suggesting the merger will also benefit TPG are largely irrelevant to assessing the state of real market competition, especially considering this proposal ensures that any TPG regional customers will be reliant on the Telstra network for coverage, contributing fees to Telstra, and are merely being badged as TPG customers. Regional customers know the difference between true network competition and a re-badged Telstra network masquerading as competition.
- 1.7 Should the proposed transaction proceed, this further strengthening and entrenching of Telstra's scale and dominance in regional areas will mean that no rational competitor will be able to justify further significant investment in regional areas. This would further entrench the market distortion that has already been created by the decision to ban certain existing equipment vendors for national security reasons, which has disproportionately affected Optus and TPG and benefited Telstra.

### **Less competition will cause material consumer harm**

- 1.8 If the Proposed Transaction proceeds, then we can expect a market structure more acutely characterised by a monopoly provider. This market structure will lead to a **loss of competition and material consumer and public detriment**. We can expect:
- (a) **Higher prices nationally.** Telstra has recently announced price increases across its mobile plans and signaled they will continue to increase every year based on inflationary pressure. As Telstra faces less competitive restraint on its future pricing, this could escalate further. The cost of the arrangement to TPG, and the control Telstra retains over the use of the network and the technologies it deploys, will not enable TPG to play the role of 'price challenger'.
  - (b) **Lower overall investment in the communications market,** especially in regional areas, at a time when we should be increasing investment. TPG is abandoning further network investment in the regions and closing down over 700 existing sites. The spectrum advantage afforded to Telstra by the merger together with the high costs of replacing legacy 4G Huawei equipment to comply with the Government's 5G security policy undermines any rational competitor's business case for further regional investment. With less competition Telstra will have no incentive to invest beyond its own requirements (including servicing the TPG agreement) in the face of weaker competition. History has shown that Telstra only invests when it faces competition.
  - (c) **Lower network and service quality** in regional areas given lower incentives to invest, further opening the urban and regional digital divide.
  - (d) **Less choice for regional consumers and slower access to new technologies** as the merger removes TPG's ability to compete on network features which are becoming an important differentiating factor. Telstra will also retain a first mover advantage on 5G across all sites and has not offered 'non-discrimination' on for enterprise customers (a market it is already extremely dominant in).

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<sup>2</sup> See footnote 1.

- (e) **Less resiliency in our communications infrastructure** which will have consequences for communities in times of emergency when access to alternative networks have proven to be critical. This arises because TPG will abandon regional sites and stop investing in regional locations. TPG has already announced it will shut down more than 700 telecommunications towers in major country centres like Tamworth, Gladstone, Shepparton and Whyalla. In addition, the business case for ongoing Optus investment has been undermined. This is at a time when Australians need more communications infrastructure not less. Without further investment by Optus, or another competitor, there would over time only be one network available in regional areas.

1.9 The proposed network merger will not improve community or customer outcomes. If approved, it will have major adverse and irreversible consequences for the communications sector and ordinary Australians, especially those living in our regions.

1.10 Given the criticality of the communications sector to the broader economy, which increasingly relies on telecommunications connectivity and services, we should also expect material adverse impacts to the Australian economy. A recent PwC report estimated that less competition in 5G could reduce economic productivity by around \$55 billion over the next decade.

**These negative impacts arise as a consequence of the adverse structural changes to the market the proposed transaction creates.**

#### *Impact to Telstra*

1.11 Telstra is the dominant mobile provider with a national mobile market share of 51%. This dominance is even more pronounced in regional Australia, with Telstra commanding close to 70% market share, giving it an unparalleled level of dominance and scale in Australia.

1.12 Yet through this arrangement Telstra's competitive position will be significantly improved.

- (a) It will receive additional revenue to carry TPG's traffic across its regional footprint. This will generate increased profits for Telstra and higher returns on both its sunk capital investments and new 5G investments.
- (b) It will gain control over an unprecedented proportion of national spectrum assets giving it technology options, capacity and cost efficiencies that no other operator will have, further entrenching its regional dominance and scale. Telstra's access to the spectrum is at the core of the competition concern that arises from the Proposed Transaction. It has acknowledged that the arrangement will improve its competitive position.<sup>3</sup>
- (c) The proposed MOCN arrangement is one-sided with Telstra retaining material control, removing TPG's ability to be an effective competitor, especially in the regions.
- (d) Telstra appears to be paid by TPG regardless of whether its customers use the regional coverage. Telstra will also benefit if customers use the service in the regional sharing area. These payment will add incremental revenue at

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<sup>3</sup> Refer para 20, page 17 and para 116, page 43.

little or no additional costs, which means that Telstra is being paid to face less competition. More cynically this could be seen as a move by Telstra to weaken its main competitor for the sole purpose of further increasing its market dominance.

- 1.13 Telstra's enhanced dominance in regional Australia will also have material implications for competition in the national mobile market given the perceived value urban and metro customers place on regional connectivity, the positive 'halo' in customer perceptions created by speed to market of 5G and the opportunity afforded to Telstra to promote its unassailable network speed and capacity by being able to utilise TPG's low band spectrum holdings.
- 1.14 Telstra's advantages of scale and spectrum access under this proposal will guarantee that no competitor could be effective in matching Telstra's cost structure, network performance, and overall core service levels. Optus considers that there is no conceivable possibility for any competitor, current or future, making an investment case that relies on shifting any meaningful market share or being able to compete on price.

### *Impact to TPG*

- 1.15 The arrangement provides TPG with additional regional coverage. However, TPG is not expected to apply additional competitive constraints on Telstra, a point acknowledged by its own expert report.<sup>4</sup>
- 1.16 TPG will no longer have the flexibility that operating its own infrastructure provides in regional Australia and will be dependent on Telstra's network, with Telstra dictating the nature of its service through the uniquely one-sided network sharing arrangement.
- (a) Telstra gets the crucial first mover advantage at new sites as it does not need to make 5G available to TPG until 6 months after activation;
  - (b) Telstra retains full control of when and where network investments made;
  - (c) TPG will lose options to differentiate on service quality or any network-related features; and
  - (d) Non-discrimination is limited to retail customers (not enterprise customers).
- 1.17 The cost of accessing this regional coverage together with the wholesale pricing structure imposed by Telstra will result in additional constraints on the extent to which TPG offers discounted prices nationally. TPG will almost certainly have to **raise prices** to cover the costs of the additional coverage.
- 1.18 Having decommissioned over 700 of its regional mobile sites, TPG will lose flexibility to change course meaning this arrangement will be irreversible over the long-term. TPG will be in a weak position to re-negotiate favourable terms when the Proposed Transaction is up for renewal at a time when Telstra will potentially have a monopoly position in some regional areas.
- 1.19 Importantly, TPG's competitive position is only enhanced relative to Optus and MVNO's and not relative to Telstra. TPG will be further marginalised as a competitor to Telstra, with Telstra benefitting from every customer TPG adds through this new arrangement.

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<sup>4</sup> Feasey Report, paras 70 to 72, page 25 and 26.



## *Impact to Optus*

- 1.20 Optus has been a significant infrastructure investor since it entered the market and now typically invests over \$1.5 Billion in capital expenditure annually in its mobile network and services.
- 1.21 However, a combination of historic low industry returns, market imbalances in spectrum and the significant costs and market distortion created by the 5G Huawei security decision (which requires Optus to replace legacy government-sanctioned 4G technology to be able to deploy 5G technology) have made it increasingly difficult to maintain this level of investment. These issues are most acute in regional areas with low population density and very low returns on investment. Notwithstanding these challenges, Optus has continued to invest in competitive infrastructure across Australia. This has been the major competitive force in the market that has created price and service innovation tension in the Australian communications landscape.<sup>5</sup>
- 1.22 The Proposed Transaction will bring Optus to a tipping point where these investment challenges become unassailable. Given Telstra's vastly increased regional dominance and scale no rational competitor will have any realistic prospect of recovering future network investments. As a result, Optus considers there is no commercial rationale for ongoing significant investment in regional areas either by Optus or any other challenger to Telstra. This means that Optus will be weakened as a competitive force to Telstra, enabling Telstra to operate in the regions unconstrained by competitive pressure.

## **Spectrum concentration breaches competition caps and will substantially lessen competition**

- 1.23 Spectrum is a critical input to the provision of mobile services, but it is a limited resource. An imbalance in spectrum holdings between carriers can have material commercial and market implications. For this reason, regulators typically set limits on how much spectrum an individual carrier can acquire when spectrum is brought to market.
- 1.24 That is no different Australia. The significance of competition considerations has been reflected in strict allocation limits imposed in relation to spectrum allocation auctions. For example, explanatory materials related to the recent 850/900 MHz allocation explained that "*the ACCC did not find that Telstra requires more spectrum in regional areas to compete or deliver services*" and that the ACCC "*also rejected Telstra's position that its larger existing customer base should permit it to acquire a higher share of spectrum*".<sup>6</sup>
- 1.25 A key commercial aspect of this merger is the pooling of spectrum assets between Telstra and TPG. This will materially enhance Telstra's spectrum position and result in it having access to as much as 75% of the available spectrum in some key spectrum bands, especially those critical to the delivery of 5G services.
- 1.26 This concentration of spectrum far exceeds what have been considered reasonable limits to promote competition in the ACCC's advice for recent spectrum auctions. The implications of this are that Telstra will have the ability to offer a 5G speed up to 10 times faster than Optus could offer given the spectrum imbalance. The imbalance guarantees an unassailable set of advantages for Telstra that completely undermine any case for further investment in regional Australia by other providers. **This**

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<sup>5</sup> Again, refer to footnote 1.

<sup>6</sup> Radiocommunications (Spectrum Licence Limits—850/900 MHz Band) Direction 2021, explanatory statement, p.38

**substantial market distortion alone should be sufficient for the ACCC to reject the arrangement.**

- 1.27 Claims from Telstra that their network congestion requires them to access additional spectrum from TPG are spurious and were rejected by the ACCC when setting the most recent auction caps. Publicly available information shows that Telstra is currently under-utilising its existing spectrum and will have additional spectrum when it closes down its 3G services in mid-2024. Telstra's claim that it requires access to TPG's spectrum to address congestion in its regional network is thus unfounded, and Telstra should not be rewarded for the inefficient use of its spectrum, especially when it comes at the detriment of a fair and competitive communications sector.

### **The proposed network sharing arrangements are an international outlier**

- 1.28 Network sharing arrangements are common across the international telecommunications sector. They can promote competition, lower costs of supply and support improved customer outcomes, such as lower prices and improved coverage. But to do so they must be correctly structured having regard to the specific competitive environment and meeting certain regulatory obligations. The present arrangement cannot be considered "sharing" since Telstra will fundamentally control the supply of the service. Internationally Optus is not aware of any examples where this type of arrangement, that strengthens the dominant player in a three-player market, has been allowed.
- 1.29 The Proposed Transaction is in substance a merger involving the dominant player in a three-player market and as such is considered an international outlier. Analysys Mason has noted that the arrangement "*is unique among active sharing arrangements in that it has an inherent degree of asymmetry*". The governance arrangements appear to strongly favour Telstra and there are clear limitations to the proposed non-discrimination obligations.
- 1.30 To be clear, sharing arrangements can be beneficial where they involve only passive equipment or in the case of active sharing arrangements where they maintain the ability for genuine service and price differentiation. In all instances they must preserve competition in the market. To state the obvious, an arrangement involving the dominant provider in a three-player market will not preserve competition. In contrast, the two smaller players coming together in order to place stronger competitive force to the dominant provider would enhance competition.

## Section 2. THE PROPOSED DEAL WILL LEAD TO CONSUMER HARM AND A SUBSTANTIAL LESSENING OF COMPETITION

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- 2.1 The Applicants seek merger authorisation for the authorisation of use of spectrum under the Spectrum Agreement. That is one of three agreements entered into by Telstra and TPG on 21 February 2022 being:
- (a) MOCN Service Agreement dated 17 February 2022 (**MOCN Agreement**);
  - (b) Spectrum Authorisation Agreement – MOCN Area dated 17 February 2022 (**Spectrum Authorisation**); and
  - (c) Mobile site Transition Agreement dated 17 February 2022 (**Site Agreement**).
- 2.2 As set out in the Application, these agreements are commercially and legally interdependent and implementation of the agreements is subject to ACCC authorisation.
- 2.3 In determining whether or not to grant the Authorisation, the ACCC can have regard to the Proposed Transaction (as defined in the Application) as a whole and the Application acknowledges that it may be appropriate to do so. The effect of the agreements is to:
- (a) grant control of TPG's spectrum to Telstra for Telstra's use;
  - (b) grant Telstra access to certain TPG mobile sites; and
  - (c) provide network access for TPG as it decommissions sites and retreats from having a physical presence in regional Australia in what the Application acknowledges is not an infrastructure sharing deal in the traditional sense, describing it as "quasi-infrastructure access". In substance, it amounts to little more than wholesale network access.
- 2.4 For the ACCC to authorise the Proposed Transaction, the ACCC must be satisfied in all the circumstances that, either
- (a) the proposed acquisition would not have the effect, or would not be likely to have the effect, of substantially lessening competition, or
  - (b) the proposed acquisition would result, or be likely to result, in a benefit to the public, and that benefit would outweigh the detriment to the public that would result, or be likely to result, from the Proposed Transaction.<sup>7</sup>
- 2.5 On the basis of the information available, and having regard to the facts outlined in this submission, Optus submits that the ACCC cannot conclude that either test is satisfied. Accordingly, the ACCC must not grant Telstra and TPG authorisation.

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<sup>7</sup> Paragraph 6.1 of the ACCC Merger Authorisation Guidelines, October 2018 citing section 90(7) of the Competition and Consumer Act 2010

## **The Proposed Transaction will have the effect of substantially lessening competition**

- 2.6 Optus considers that, based on the facts set out in this paper, the Proposed Transaction is likely to have the effect of substantially lessening competition in relation to the supply of mobile services. For that reason, authorisation should be refused. Specifically, if Telstra is permitted to take control of TPG's spectrum; and if TPG is allowed to shut down its regional network and acquire wholesale access to Telstra's network, there is a real chance that the future state of competition in relevant telecommunications markets will be materially worse than the state of competition without the Proposed Transaction.
- 2.7 The mobile sector remains the only sector of the telecommunications industry that has successfully embraced competition. This has been delivered through effective and fierce infrastructure competition. History has shown that where infrastructure competition is weak (i.e., regional areas), or where it has been reduced (Hutchison merger with Vodafone; and TPG merger with VHA), the dominance of Telstra grows and outcomes for consumers are poorer.
- 2.8 In the short term and at a superficial level, the Proposed Transaction may appear to improve the position of TPG as it will gain incremental 4G (and potentially 5G overtime) coverage through its re-seller arrangements with Telstra. However, by moving TPG irreversibly from an infrastructure provider to being a re-seller of the Telstra network in regional areas, and granting Telstra an unprecedented share of spectrum assets, the Proposed Transaction will irreversibly change the structure of Australia's mobile telecommunications sector and remove key competitive constraints to Telstra's market power. Optus considers that further embedding a dominant Telstra and removing key competitive constraints will significantly impact competitive tension that would otherwise exist if the Proposed Transaction is not permitted to proceed.

## **Telstra will likely increase its dominance in several downstream markets**

- 2.9 The Proposed Transaction will have significant implications for various markets related to the supply of mobile telecommunications services:
- (a) Retail national mobile market, including in regional areas;
  - (b) Retail wholesale mobile market;
  - (c) Enterprise and Government market;
  - (d) Fixed Wireless market; and
  - (e) Tower access market
- 2.10 Telstra is dominant in all of these markets. In the national mobile market Telstra has 53% market share of network SIOs; and 44% retail consumer share. This market share increases in regional areas, with Telstra holding a [CIC] share in the proposed sharing area. In the enterprise and government market Telstra holds an overall 57% revenue share and a 79% revenue share for mobile services. Telstra also holds a dominant position in the retail FWA market, where it holds 52% market share over NBN FWA services; and Telstra through its 51% ownership of Amplitel, also occupies a dominant position in the market for mobile tower access.
- 2.11 The Proposed Transaction will remove key competitive constraints which would otherwise prevent Telstra from exploiting its dominant position in several of these markets. Optus is not suggesting that network sharing is not a legitimate and, in certain

circumstances, where it enables players to gain relevant scale against a dominant incumbent, potentially pro-competitive initiative. However, for the reasons outlined in this submission, Optus is concerned that this particular arrangement will, having regard to Telstra's position in the market together with the substance of the arrangement, be likely to have the effect of substantially lessening competition.

- 2.12 Section 3 outlines the impacted markets and describes the nature of competition in the key national mobile market.

### **Deal will lead to less infrastructure competition and higher prices**

- 2.13 The nature of the Proposed Transaction is such that it provides Telstra with an asymmetrical degree of control over the provision of mobile services. This is not an infrastructure sharing deal in the traditional sense, but rather a spectrum leasing arrangement with associated network access for TPG as it decommissions sites and retreats from having a physical presence in regional Australia. The history of the Australian mobile industry demonstrates that effective competition comes from effective infrastructure competition – when infrastructure competition weakens, market competition weakens.
- 2.14 Section 4 and Section 5 discuss the proposed network access deal and the associated spectrum authorisation deal. Leveraging material prepared by Analysys Mason, we also show that the proposed deal is without precedent globally and that, based on those examples, regulators in other jurisdictions would be likely to carefully test and reject, or at least place significant restraints on the arrangement that Telstra and TPG have proposed.
- 2.15 Over the term of the deal, the one-sided nature of the arrangements (including spectrum holdings) will have the effect of affording Telstra an unattainable network quality and first mover advantage that will restrict the ability of other providers to invest in competitive infrastructure. If the Proposed Transaction proceeds, it will make regional infrastructure investment uneconomic for any investor (current or potential) other than Telstra. **[CIC]**
- 2.16 This is a critical effect of the arrangement which is discussed further in Section 7. The assertion by Telstra/TPG's expert that there will be no change to Optus' investment plans or incentives is simply wrong. The effect of the deal will be to remove a vigorous and effective competitor in regional areas and the only existing challenger to Telstra's dominance<sup>8</sup> – with important flow on effect through to the national market.
- 2.17 With Telstra facing less competition, the result will be lower, or at best, stagnating service quality and higher prices. Contrary to the position that is put by the Applicants, Optus considers that consumers will be faced with the very real prospect of having to pay more for lower quality telecommunications services. Telstra customers already pay a 20% price premium. History shows that this premium is limited only by the competitive pressure created by Optus' infrastructure investment. Telstra prices are likely to increase if it faces weaker competition from Optus.
- 2.18 Further, the deal is structured in such a way that TPG will face material cost pressure if it utilises Telstra's regional network – ultimately leading to higher prices for TPG customers. As a wholesale reseller of Telstra's network, TPG will always face higher

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<sup>8</sup> This fact is not disputed and agreed to by the Applicants and their expert (Feasey Report, [65] [68] [72] [109] [115]).

costs than Telstra to access the regional network and will not provide a meaningful price constraint on Telstra.<sup>9</sup>

- 2.19 Telstra will also likely face less pressure to deploy innovative new services, including 5G, in the absence of competitive threat from alternative network providers, particularly Optus. The Proposed Transaction will likely have the effect of disincentivising Optus from rolling out 5G outside metro areas – removing the ability of Optus to remain the only competitive 5G threat faced by Telstra.
- 2.20 The proposed arrangement imposes material disincentives for non-Telstra network investments in regional areas. Absent the competitive constraints that arise from alternative networks, it should be expected that prices will rise, dynamic competition will be affected, and the roll-out of new generations of technology will slow. Optus considers that when taken together, these facts suggest the Proposed Transaction will materially impact competition and cause considerable harm to consumers and the economy as a whole.
- 2.21 Section 6 discusses the likely counterfactual against which these changes should be assessed. Section 7 examines the likely impact of the deal on the future state of the market.

### **Public detriment from the deal will outweigh any public benefit**

- 2.22 Optus disputes the public benefits that are said will flow from the proposed transaction. In particular, Optus does not agree with the claimed benefits accruing to Telstra. There is no evidence to suggest that Telstra faces significant network congestion, or that congestion could not be addressed through efficient use of current spectrum assets. Further, even if these benefits did accrue internally to Telstra, the ACCC should conclude that they are unlikely to materialise in the market without strong competitive pressure from other networks. In other words, the Proposed Transaction may lead to 'potential' benefits to Telstra, but without strong competitive constraints from the market, these benefits are unlikely to be delivered to consumers.
- 2.23 Recent flood and fire disasters have demonstrated the value of having multiple resilient mobile networks. The proposed deal will also lead to significant public detriment (outside of the negative market impacts) by removing key network resiliency from the industry. There are many examples where Australians could rely on the Optus or TPG mobile networks when the Telstra network was down and faced delays in being repaired. This deal risks that. Regional Australians face the real prospect that when the Telstra network is down there will be no, or at best limited, communications.
- 2.24 It is important to be very clear about this – TPG will be wholly reliant on the Telstra network. If the Telstra network is down, TPG services will be down. TPG will not provide a real alternative in the Regional Coverage Zone ("RCZ").
- 2.25 There is also considerable public detriment flowing from a lessening of price tension in the mobile market which is a consequence when TPG prices are dictated by access costs set by Telstra and where Optus provides less competitive constraint to Telstra. Again, it is important to be clear about this – the impact of this transaction is higher prices for all consumers (retail and enterprise) across Australia.
- 2.26 But the detriment goes far beyond higher prices and lower service levels, this transaction has the likely effect of stunting Australia's economic potential. The lack of a

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<sup>9</sup> The inability of TPG to constrain Telstra market actions is recognised by Telstra and TPG's own expert Mr Feasey.

national competitive 5G market has been estimated by PwC as costing the Australian economy \$55 billion in foregone economic growth over the decade to 2030. The lost economic activity and jobs represents a major detriment attributable to this proposed deal. We expand on this in Section 8.

## Section 3. RELEVANT MARKET AND LEVEL OF COMPETITION

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- Competition is not an end in itself but is the process by which best consumer outcomes, both in terms of price and quality, are achieved. Market structure is important in achieving beneficial consumer outcomes. Concentrated markets rarely deliver good consumer outcomes, particularly when a market is dominated by a single player with inherent scale and supply advantages.
- As noted by the Application (p.9, para [9]) among others, market evidence overwhelmingly supports the position that infrastructure-based competition drives better outcomes than access-based competition. This proposal does not deliver infrastructure based competition, it eliminates it.
- The geography covered by the proposed MOCN is an important regional zone. It is critical for consumers who live in, or travel to, this zone that there are at least two strong competitive networks which can support vibrant and effective competition and, in doing so, offering competitive pricing and quality service to consumers.
- Any structural market moves that lead to the discouragement of investment and reduction of the number of networks will lead to a monopoly provider in regional Australia and will not support competition and undermine incentives to deliver service and price improvement.

### Overview of mobile networks in Australia

- 3.1 The current structure of the retail mobile industry is comprised of:
- (a) three mobile network operators (**MNOs**), being Telstra, Optus and TPG; and
  - (b) a much larger number of mobile virtual network operators (**MVNOs**), which do not operate mobile networks but instead acquire wholesale mobile services from MNOs and then supply services to consumers on a retail basis.
- 3.2 In 2021, Telstra accounted for 44% of mobile phone retail services provided in Australia, Optus accounted for 31%, TPG 17% and the MVNOs collectively accounted for 9%.
- 3.3 The MNOs each set prices on a nationwide basis but provide retail mobile services (and wholesale mobile services to MNOs) that are differentiated from one another.
- 3.4 Perceptions of network coverage and performance are very important non-price characteristics that affect consumer choice. The three MNOs' maximum network coverage footprint varies significantly:
- (a) Telstra has the greatest coverage footprint of around 2.5 million square kilometres, an area within which 99.5% of Australia's population resides;
  - (b) Optus' coverage footprint is approximately 1.0 million square kilometres, reaching around 98.5% of the Australian population; while
  - (c) TPG has the smallest coverage footprint of around 0.6 million square kilometres, reaching around 96% of the Australian population.



- 3.5 Competition between the MNOs occurs to a different extent across Australia's geography. For the purpose of assessing the Proposed Transaction, the relevant geographies are most conveniently described as:
- (a) 'metropolitan' areas, comprising only 50,000 square kilometres but reaching around 81.4% of the population, within which Telstra, Optus and TPG each operate mobile networks with extensive coverage and capacity;
  - (b) 'regional' areas, comprising 1.5 million square kilometres and reaching further population up to 98.8% of Australia, within which Telstra and Optus operate mobile networks with extensive coverage and capacity (although, Optus' network serves a smaller area than that of Telstra), and which TPG competes for up to 96% of the population but to a lesser extent; and
  - (c) 'remote' areas, comprising 1.0 million square kilometres and reaching further population up to 99.5% of Australia, within which only Telstra operates a mobile network.
- 3.6 Coverage in regional areas is valued by customers residing in regional and remote areas but it is also valued by many metropolitan-resident customers.
- 3.7 MNOs are currently competing to deploy fifth generation (5G) mobile technology. Telstra has the most extensive roll-out of 5G to date, [CIC].<sup>10</sup> TPG has less 5G coverage.
- 3.8 Competition to deploy 5G mobile technology has been affected by the federal government's decision ("Government Security Guidance") to prevent Huawei equipment from being used in the Australian 5G networks:
- (a) Optus' and TPG's deployments of 5G networks were significantly negatively impacted by this decision since they had initially planned to use Huawei equipment.
  - (b) An unintended consequence of this decision is that Optus and TPG are required to swap out and replace all their 4G Huawei equipment, which for Optus is located mostly in regional areas.
  - (c) Telstra's deployment of its 5G network was able to proceed as planned since Telstra's roll-out did not use Huawei equipment.
  - (d) This means that the cost and time to roll out 5G is materially different for Optus and TPG than it is for Telstra. It requires significantly more time, labour, equipment and risk than the simple 5G upgrades available to Telstra. It also requires the removal and write-off of high quality well-performing 4G equipment that is still well within its useful life. These are very real and material consequences that already distort the market and dampen returns for Optus and TPG.
- 3.9 Competition on network coverage and performance occurs only between MNOs and not with or between MVNOs, since MVNOs have no ability to influence network coverage and performance.
- 3.10 Competition with Optus to maintain leadership on network coverage and performance drives Telstra's investment decisions, particularly in regional and remote areas.

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<sup>10</sup> Optus estimates at March 2022

Consistent with its network coverage and performance, Telstra's prices for retail mobile services are significantly higher than those of its nearest competitor, Optus. This is accepted by the Applicants and their expert Mr Feasey and is not in dispute.

## Relevant Markets

3.11 The relevant product and geographic dimensions of the retail mobile market in Australia are well accepted.<sup>11</sup> It is necessary to assess the impact of the Proposed Transaction on:

- (a) the national market for the provision of retail mobile services; and
- (b) the national wholesale market for the supply of wholesale mobile services to MVNOs for the purpose of resupply to retail customers.

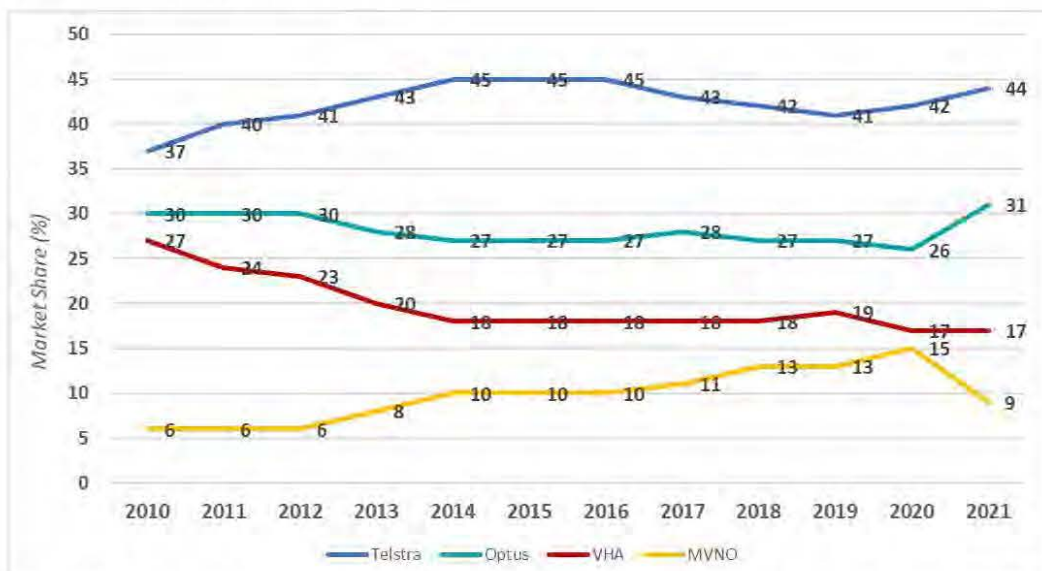
3.12 Optus considers, however, that it is also important for the ACCC to consider the impact of the Proposed Transaction on:

- (a) enterprise and government customers;
- (b) the provision of fixed wireless access services; and
- (c) on tower access.

### *The national market for the provision of retail mobile services*

3.13 The table below sets out market shares in respect of the national market for the provision of retail mobile services for the period 2010 to 2021.<sup>12</sup>

Figure 1 Retail mobile market share



Source: ACCC Annual Communications Reports. The change in shares in 2021 reflect Optus' acquisition of Amaysim.

3.14 It is clear from the above that Telstra has progressively been growing its dominance in the national retail market since 2010, increasing from 37% to 44%. There has also

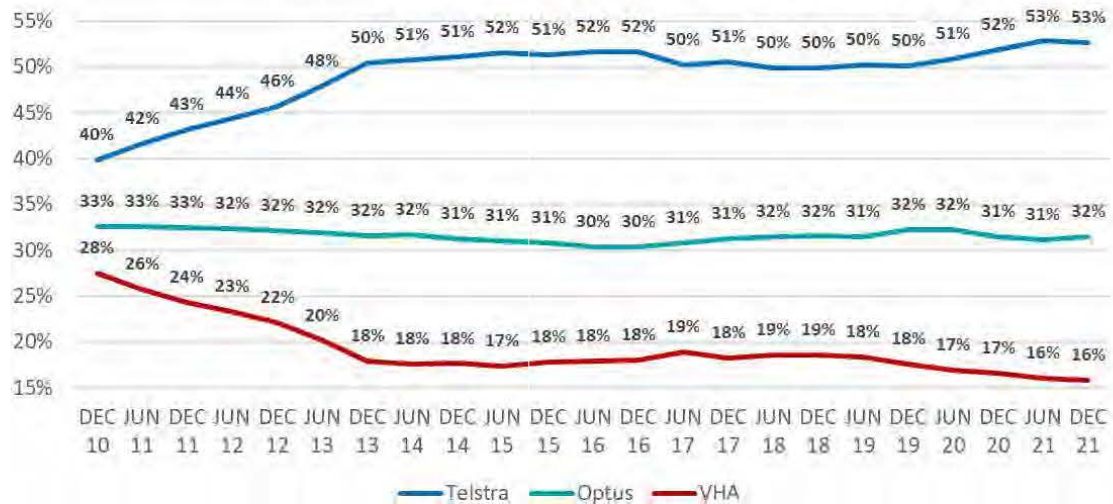
<sup>11</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [43]-[45].

<sup>12</sup> The market shares for the MVNO's in this table may include the second brands of the MNOs.

been a noticeable increase in Telstra's mobile market share since MNOs commenced deploying 5G technology in mid-2019, reflecting the uneven playing field discussed in paragraph 3.8.

- 3.15 The estimated market shares in Figure 1 above are consistent with the market share trends observed in mobile network services in operation (SIO) market share, as published in MNOs' financial reports.

Figure 2 Mobile Network Services In Operation market share



Source: Company annual reports. Includes all mobile SIO, excluding IOT.

- 3.16 The above graphs provide a general outline of the current state of competition in the national retail / wholesale market. The data demonstrates that Telstra holds a dominant position and has recently been able to regain mobile SIO market share, which, when SIOs from wholesale services supplied to MVNOs or mobile resellers is included, edges Telstra's total market share back above 53%. This is the highest retail mobile market share that Telstra has ever held.

### Competition in regional areas

- 3.17 As noted, there are variations in the state of competition across the national mobile market. Australia's geography and highly urbanised population presents unique challenges to network investment, particularly outside of metropolitan areas. The ACCC has recognised that low commercial returns for MNOs discourage building network infrastructure in areas with lower population densities, contributing to the so-called "digital divide".<sup>13</sup>
- 3.18 Telstra's legacy network advantage and network presence, combined with the impact of Government security decisions as well as receiving the majority of government co-contribution funding, have led to Telstra wielding the largest passive infrastructure network in regional Australia by a significant margin. As a result of its network, Telstra maintains substantial market power in regional areas that is otherwise disproportionate to the position held by Telstra on a national basis. Indeed, Telstra's network dominance in regional areas has been well recognised:

- (a) The Federal Court observed that "Given that Telstra owns almost all of the network infrastructure in regional and rural Australia, other MNOs are

<sup>13</sup> ACCC Mobile Infrastructure Report 2021, p.8

required to pay Telstra, typically at a premium price, to access its infrastructure in order to provide services in these areas.”<sup>14</sup>

- (b) The ACCC in its Mobile Infrastructure Report 2021 noted that “outside of Major Cities, Telstra had significantly more sites than the other MNOs between 2018 and 2021...Telstra had 75% more sites than Optus compared with 3% more sites in Major Cities. Compared to TPG, Telstra had 15% more sites in Major Cities but over 300% more sites outside of Major Cities.”<sup>15</sup>
- (c) The ACCC noted further that “As at 31 January 2020 and 31 January 2021, Telstra had deployed 629 and 735 sites respectively with the assistance of funding from this co-contribution program. This is significantly more co-funded sites than Optus (93 and 126) and TPG (60 and 60) combined”.<sup>16</sup>

3.19 It is clear that, outside of metropolitan areas, Telstra’s market power increases significantly. Its legacy network advantages have provided it with a significant first mover advantage across most generations of mobile technology, which is even more acute with the roll-out of 5G. Indeed, Telstra has stated that its 5G network will reach 95% of the population by 2025. Telstra is able to continue to build on its network presence as a result of receiving the vast majority of government co-contribution funding. Its 5G advantage has also been aided by government security decisions.

3.20 While price continues to be a significant driving factor for consumer decisions, the ACCC has recently noted that non-price factors have gained greater prominence in consumer decision-making.<sup>17</sup> As a consequence, it is likely that regional consumers are experiencing significant detriment relative to metro consumers. That proposition is supported by the recent findings of the Regional Telecommunications Independent Review Committee (RTIRC).<sup>18</sup>

3.21 Structural changes in the market since 2017 have also had an impact on the state of competition in regional areas. For example, TPG was previously identified as a potential new entrant into the mobile sector, before its merger with Vodafone. The costs required to comply with Government Security Guidance were cited as a key justification for abandoning TPG’s earlier network rollout plans. These cost considerations have also adversely impacted Optus. Meanwhile, Telstra, unaffected by the decision, has continued to expand its 5G network and gained market share.

3.22 The disparity between metro and regional competition can be observed in Optus’ internal market share model which analyses the mobile market at the ABS Australian Statistical Geographical Classification (AGSC) Statistical Area 3 (SA3) level. [CIC]

### Figure 3 [CIC]

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Source: SA3 model Facebook Analytics

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3.23 Optus’ SA3 model shows that competition is most effective in the metro areas of Australia (0-67% population band), where the three MNOs have the most equivalent market share (and MNOs have the largest share across any band). As we move from

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<sup>14</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [111].

<sup>15</sup> ACCC Mobile Infrastructure Report 2021, p. 5

<sup>16</sup> *Ibid*, p.12

<sup>17</sup> ACCC Communications Market Report 2020-21, December 2021; p.7 and 10

<sup>18</sup> See for example, 2021 Regional Telecommunications Review, p.26, p.41, p.43 and p.99

metro areas out to the metro fringe areas (67-80%), Telstra's share grows to [CIC] and holds a dominant position in the market.

- 3.24 Telstra's dominance is further pronounced in the 80-98.5% population area, which is essentially the "Regional Coverage Zone" (RCZ) covered by the Proposed Transaction. In that area Telstra holds a [CIC] share, meaning Telstra has a [CIC] share lead over the second player Optus in the RCZ.
- 3.25 The increasing concentration of the market across the three geographical areas can be seen through the growth in the industry concentration, as measured by the Herfindahl-Hirschman Index (HHI). The metro HHI sits around 3,300, which is close to the 'optimal' HHI in a three-player network market. HHI concentration grows by 23% to 4,065 in the metro fringe showing the growing dominance of Telstra; and finally grows a further 33% in regional areas to 5,412. The regional area HHI is around 64% more concentrated than the metro HHI.

### Factors that impact the level of competition for the supply of mobile services

- 3.26 It is well established that mobile competition occurs across a number of levels including price, data inclusions, geographic coverage, service quality, service add-on and retail support, with customers able to readily switch between providers.<sup>19</sup>
- 3.27 To date competition has largely driven investment in networks and services. However, the competitive dynamics of the sector appear to be at a tipping point with Telstra's legacy network advantages, particularly in relation to geographic coverage, enabling Telstra to increasingly differentiate itself in the market on the basis of coverage and performance. This has led to the establishment of "pockets of market power" within the national mobile market, particularly outside metropolitan areas and regions in which Telstra faces less competitive constraints.<sup>20</sup>

#### *Network coverage perceptions impact competition*

- 3.28 As noted above, outside of metropolitan areas Telstra's market share, and ultimately its market power, increases dramatically. Its legacy network advantages in regional areas have provided it a first mover advantage across all generations of mobile technology, and will do so for 5G. Indeed, Telstra has stated that its 5G network will reach 95% of the population by 2025 [CIC]
- 3.29 It is widely accepted that non-price factors such as network coverage and quality (together described as network perception) drives competitive outcomes in the market. The Federal Court acknowledged this in 2020:<sup>21</sup>

*If an MNO does not have coverage in an area, its customers will be unable to use their mobile devices in that area. Coverage is important to consumers, corporates and enterprise customers – in other words, 'coverage matters' and is a significant aspect of competition between MNOs. It is for this reason that MNOs and MVNOs advertise and promote their network coverage*

*Network coverage and capacity contribute to customers' perceptions of network quality, which refers to factors such as voice quality, ability to*

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<sup>19</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [43].

<sup>20</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [144].

<sup>21</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [90] and [92].

*establish a call, ability to maintain a call, data speed and latency (ie time taken for data to travel to and from the customer).*

- 3.30 The ACCC has acknowledged that coverage and quality remain a crucial factor, confirming recently that non-price factors and, in particular, network coverage and quality, including the presence of 5G, drive competition in the national market:

*Geographic coverage and network quality continue to be important factors of non-price competition, particularly as the MNOs' fifth generation (5G) networks are rolled out...5G is becoming an important differentiator as the MNOs' flagship brands focus on non-price factors such as speed, coverage, technology and customer service.<sup>22</sup>*

- 3.31 Optus agrees that network perception is a critical factor affecting competition in the retail mobile market. For regional consumers in particular, Optus submits that geographic coverage remains the key differentiator in attracting retail customers.
- 3.32 The behaviour of MNOs supports the importance of network claims. The emphasis that MNOs place on network perception is seen in their advertising behaviours, with a strong focus on 'largest' and 'fastest' network claims. For example, Telstra claims to have the 'largest and first' and 'best' 5G network; Optus advertises fastest 5G in key locations; and even TPG claimed that it has the "#1 global 5G network" even though it has the smallest 5G footprint in Australia.<sup>23</sup>
- 3.33 Telstra's commercial strategy has been to differentiate its network on the basis of its superior performance with a view to charging a premium when compared to Optus and TPG.<sup>24</sup> Telstra's ability to roll-out 5G technology first and make aggressive marketing claims has allowed it since 2020 to rapidly increase its already significant share, with 53% SIO share as at December 2021.
- 3.34 By way of example, Optus undertook a regional investment program during 2015-2017, immediately prior to the roll-out of 5G technology in Australia. The purpose of this investment was to grow market share in 'under-performing' areas of Australia – in other words, where Optus' market share was underweight compared to its national share.
- 3.35 Optus' focus on regional investment resulted in SIO market share growth and forced Telstra to re-invest in regional areas to defend its regional leadership. Ultimately however, Optus market share gains were short lived as Telstra leveraged its reputation for network leadership to win back customers through network improvements and price inducements in areas where consumers had churned to Optus. This is a good example of the competitive process, with Optus investing to challenge Telstra and Telstra responding. Infrastructure competition is important. It is this interplay of competing investment that drives consumer benefits not just in regional Australia, but across the whole national market.

#### *Network performance is a key reason for switching behaviour*

- 3.36 Customer perception of network performance is a key driver of network choice. Telstra and Optus primarily attract customers on the basis of network performance; in contrast to TPG and MVNOs which primarily focus on price sensitive customers. This is important as it again demonstrates that Telstra and Optus are each other's closest competitor. A strong Optus places competitive pressure on Telstra to maintain its

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<sup>22</sup> ACCC Communications Market Report 2020-21, p.x

<sup>23</sup> [CIC]

<sup>24</sup> Application Document [189]. See also *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [146]

network perception advantage and to check its ability to increase prices. This dynamic is accepted by the Applicants and their expert Mr Feasey. The ACCC should take this as an agreed fact between the parties.

3.37 Optus' customer research shows that [CIC]

3.38 [CIC]

3.39 [CIC]

(a) [CIC]

(a) [CIC]

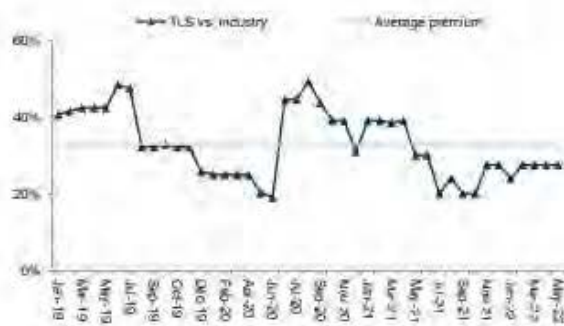
3.40 The important role that 5G plays and will continue to play on network competition has also been recognised by the ACCC. In particular, in the ACCC's recent advice about spectrum allocation limits, the ACCC noted that the "focus of competition among the MNOs going forward will be the roll out of 5G technology, including for the benefit of consumers in regional areas of Australia."<sup>25</sup> Optus endorses this view.

**The perception of Telstra's network secures a price 'premium'**

3.41 The Federal Court has recognised that Telstra's long-term strategy has been to differentiate its network with a view to charging a premium.<sup>26</sup> ACCC data also confirms that Telstra currently prices its post-paid retail mobile services at a 20-25% premium to its nearest competitor (Optus).<sup>27</sup> Similarly, Goldman Sachs finds that Telstra's mobile pricing premium is currently 28%, with a three-year average of 33%.

Figure 4 Telstra pricing premium

**Exhibit 17: TLS premium vs. industry is below its average**  
TLS Blended ARPU vs. Industry



Source: Company data

**Exhibit 18: With MNO pricing remaining broadly flat in recent months.**  
Blended ARPU A\$/month



Source: Company data, Goldman Sachs Global Investment Research

Source: Goldman Sachs, Australia Telecom Services, What comes next for mobile pricing? 11 May 2022

3.42 The ability of Telstra to maintain such a large premium while growing market share is evidence of Telstra's market power – that is, its ability to set prices somewhat independently to the market, as well as its network perception within the market.

<sup>25</sup> ACCC, 2021, 850/900 MHz allocation - Allocation limits advice to the Minister - March 2021, p.9

<sup>26</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [146].

<sup>27</sup> ACCC Communications Market Report 2021, p.29

- 3.43 Telstra has increased its retail market share by ~3% over the last 3 years while at the same time maintaining an average 33% price premium. Market experience therefore demonstrates that price competition alone is not sufficient to move Telstra customers to competitor networks (or retain those customers when they have moved away from Telstra). Network and service quality factors are required in order to attract customers away from, and compete effectively against, Telstra.
- 3.44 Importantly, and as explained in more detail in section 4 of this submission, Optus submits that the Proposed Transaction will not enable TPG to compete with Telstra on network quality or performance and in the long term will likely render TPG a weaker competitor in the RCZ than it currently is. By contrast, the Proposed Transaction will only strengthen Telstra's ability to differentiate its service offerings on network performance grounds and in particular, 5G services.

*Market switching occurs between similar competitors*

- 3.45 Optus' primary competitor in mobile markets is, and remains, Telstra. Telstra and Optus remain the only participants in the market that do not compete primarily through price and value (TPG and the MVNOs generally compete on price). The applicability of this view to regional and rural areas is accepted and advocated for by the Applicants<sup>28</sup> and their expert Richard Feasey, who notes that:

*"Optus' investments in its network in the relevant area will continue to drive Telstra's conduct, not the incentive and ability to differentiate with respect to TPG."*<sup>29</sup>

...

*"Telstra's incentive to invest in its network in order to differentiate itself from Optus, is the dominant incentive for Telstra to continue to invest in its network in the relevant area."*<sup>30</sup>

- 3.46 Further, the Application states that the "relative coverage and quality of the Telstra and Optus networks has been the primary source of infrastructure competitive tension in rural and regional areas."<sup>31</sup> This view is also repeated often throughout the expert report of Mr Feasey.
- 3.47 Optus does not dispute that Telstra's incentive to invest and compete is driven by the presence of Optus in key locations and market segments. Optus' management decisions are most often made relative to its position to Telstra and the movement of customers between Optus and Telstra. That is not to say that TPG does not play a role, but Optus' main focus is around how to attract customers from, and defend against, movements from Telstra – a logical focus considering Telstra has over half the customers in the market.
- 3.48 Optus submits that ACCC must accept that competition occurs between networks of similar coverage and quality (similar network perception), and that Optus and Telstra are each others closest competitor. All parties to this process agree with that proposition. The ACCC should accept this as an agreed fact between the Applicants and Optus.

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<sup>28</sup> Application, [189]

<sup>29</sup> Feasey, [70]

<sup>30</sup> Feasey, [72(c)]

<sup>31</sup> Application, [192].



### *Shifts in competition happen when market relativities are altered*

- 3.49 Key market movements are almost always associated with a fundamental shift in the relative competitive positions of industry participants. This may be as a result of the disruption caused by a new mobile technology or due to perceived network / price value ratios changing (either through changes in network quality or changes in price levels) or as a result of markets consolidations. These fundamental shifts in market structure are often difficult to overcome.
- 3.50 The most significant change in network perception occurred in 2010/2011 with so-called "Vodafail". It is perhaps no coincidence that this event happened after the Vodafone and Hutchison merger when the focus of management was on driving synergies from the integration of the two companies.<sup>32</sup> This event fundamentally altered consumers' perception of the quality of the Vodafone (now TPG) network. Vodafone (now TPG) lost 10% market share over the period of three years which it has not yet recovered. As noted by the Federal Court:

*... commencing in December 2010 and continuing for a number of years, Vodafone experienced a period of serious network issues arising from a variety of factors. These issues resulted in Vodafone customers experiencing high rates of dropped calls and poor internet activity, and attracted substantial adverse publicity. This event – namely, Vodafail – resulted in Vodafone losing approximately two million customers and significant market share.<sup>33</sup>*

*In the years immediately following Vodafail, Vodafone invested heavily in its network in an effort to recover. In each of 2013 and 2014, Vodafone's capex exceeded \$800 million ... Vodafone's market share has never completely recovered from Vodafail.<sup>34</sup>*

- 3.51 Other disruptive changes often occur with the roll out of new mobile generations. The deployment of new mobile generations has historically presented opportunities for challenger companies to rapidly innovate in their network planning arrangements to increase market share and bring forward national investment races. The Federal Court has accepted that the transition between mobile generations presents a period of enhanced contestability, and that this is present during the transition to 5G:

*At the point when mobile technology is transitioning between generations, there is increased contestability, market share shifts and an opportunity to win customers. The opportunity to be first in market perception will be lost as 5G becomes more widely available<sup>35</sup>*

### *Assessing the impact of first mover network leadership on market competition*

- 3.52 The transition to 3G networks illustrates the scope for significant market disruption. 3G transformed the mobile phone from a voice only service to a mobile data and internet device. The 3G market in Australia was not led by Telstra but by a new entrant, Hutchison, which was the first to market with its 3G network in 2003 with a new metropolitan focused network. The deployment of 3G in 2003 enabled Hutchison to become the fastest growing mobile operator. It was the first to migrate its whole customer base to 3G in 2006<sup>36</sup>. Hutchison was able use its 3G leadership to grow its

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<sup>32</sup> <https://www.news.com.au/finance/business/how-did-vodafone-become-vodafail/news-story/eab702db1210f0658bf6b86e6d697138>

<sup>33</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [662].

<sup>34</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [663].

<sup>35</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [374].

<sup>36</sup> ACCC, 2005, Telco Report 2004-05, p.35

market share up to 9% by 2009. Around this time, Hutchison was the second largest provider of 3G services, roughly equivalent to Optus with around 2 million 3G subscribers.<sup>37</sup>

- 3.53 The investment in 3G created a boom for the market, with total subscribers increasing by more than 50% between 2004 and 2009. Reflecting the first mover advantage of Hutchison in 3G and the disruption in the market of 3G technology, the three challenger networks to Telstra (Optus, Vodafone and Hutchison) took 63% of all new subscribers in this five-year period.<sup>38</sup>
- 3.54 In 2006, the ACMA estimated 3G networks covered 56% of the population – essentially metropolitan Australia. Importantly, at this stage Telstra did not have a coverage advantage compared to the other operators.<sup>39</sup> However, by 2008 Hutchison's coverage equivalence had ended, with Telstra, Optus and Vodafone claiming around 98% 3G coverage, while Hutchison remained at 56%. Between 2006 and 2009, Telstra took back the 3G advantage through the shutting down of its CDMA network and the migration of its customers from CDMA to 3G, which was completed in 2008. Using the largely Government funded CDMA regional network,<sup>40</sup> Telstra was able to claim 98% 3G coverage in 2008.
- 3.55 Despite Telstra's investment in 3G network and its larger population coverage, Telstra's delayed entry into 3G saw its market share fall from 52% in 2005 to 37% in 2010 – a 3 ppt decline in market share each year over that five-year period.<sup>41</sup> This decline did not last long.
- 3.56 The development of 4G networks – offering true mobile data broadband services – presented another opportunity for challenger networks to build on their market gains through the 3G period. However, this advantage never materialised. Unlike 3G, Telstra was first to market with 4G, launching its 4G network in 2011 in capital cities and 40 major regional centres, the first operator in the market to do so.<sup>42</sup> Optus and Vodafone did not launch 4G network until after 2012 and 2013 respectively. Telstra retained a material coverage advantage over the other providers for several years, and again was able to upgrade existing sites which were originally built largely through Government funded CDMA regional assistance measures. Telstra's position as the first 4G network in Australia drove strong retail market share growth.<sup>43</sup>
- 3.57 During this time, Telstra held roughly a two year coverage advantage over its competitors, achieving 85% population coverage at the end of 2013<sup>44</sup> compared to Optus which only achieved 90% in 2015. As a result, by 2015 Telstra's market share had grown from 37% to 45% in retail and 51% in SIOs -- recovering its earlier loses from the 3G market.<sup>45</sup> The ACCC attributed this significant share growth to Telstra's early deployment of 4G services and market perception around network quality.<sup>46</sup>

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<sup>37</sup> See ACCC, 2009, Telco Report 2008-09

<sup>38</sup> ACMA, Communications Report, 2005-06, Table 3.2

<sup>39</sup> ACMA, Communications Report 2005-06, p.132

<sup>40</sup> The Federal Government had provided \$400m to Telstra to provide CDMA services; and directly funded 1,000 regional sites. In addition, several States also funded the roll-out of CDMA sites. See <https://www.abc.net.au/news/2005-11-16/govt-holds-key-to-telstras-cdma-network-shutdown/741670> ; <https://www.itnews.com.au/news/federal-work-group-to-oversee-cdma-3g-transition-35148> ; [https://www.mediastatements.wa.gov.au/Pages/Court/2001/01/Government-to-boost-regional-mobile-phone-coverage-\(with-Pic\).aspx](https://www.mediastatements.wa.gov.au/Pages/Court/2001/01/Government-to-boost-regional-mobile-phone-coverage-(with-Pic).aspx)

<sup>41</sup> ACCC, Telecommunications Report 2010-11, Table 2.5

<sup>42</sup> ACCC, Telecommunications Report 2010-11, p.19

<sup>43</sup> ACCC, Telecommunications Report, 2012-13, p.11

<sup>44</sup> <https://exchange.telstra.com.au/telstra-world-first-evolving-to-the-next-generations-of-mobile-network/>

<sup>45</sup> Company Reports. 51% is SIO market share.

<sup>46</sup> ACCC, 2015, Telecommunications Report 2014-15, p.30

- 3.58 The deployment of new 5G networks presented a similar opportunity to 3G. Namely, deployment of brand new networks that offer transformational advances in mobile data services to bring 1Gbps plus speeds to the market. Reflecting this opportunity, Optus had plans to lead the market with world first deployment of 5G in capital cities using Optus' mid band spectrum holdings and Huawei 5G technology that was ahead of its European counterparts. However, Government security advice prevented Optus from achieving these plans and presented Telstra with the opportunity to take 5G leadership due to its use of European network equipment.
- 3.59 The consequences of the security decision has provided Telstra a material first mover coverage advantage in 5G – primarily due to it upgrading its regional network sites, which still include a large number of sites originally built through Government funded CDMA programmes – [CIC] Optus does not have the ability to easily upgrade existing regional sites due to Government security decisions. On current trajectory, this coverage advantage is expected to be maintained with Telstra planning to achieve 95% 5G population coverage in FY24; [CIC]
- 3.60 The 5G network first mover advantage Telstra has over the market is greater than the advantage it held for 4G, where it only held a one year first mover advantage and a two-year regional coverage advantage. Telstra's two year 4G advantage enabled it to recover almost all of its subscriber loss due to 3G and move back to its dominant position in the market. The market is already showing the impact of this advantage, with Telstra's network SIO market share growing to 53% on a national basis.

### **Level of competition in the national market for the supply of wholesale services**

- 3.61 MNOs provide access to their mobile network on a wholesale basis to MVNOs. MVNOs then supply customers with retail mobile services.
- 3.62 The national market for the supply of wholesale mobile services is characterised by the three MNOs, Telstra, Optus and Vodafone/TPG, each of which supply wholesale services to a number of MVNOs and resellers. There are approximately 60 MVNOs and resellers that acquire wholesale services from the three MNOs for the purpose of supplying retail services in downstream markets.<sup>47</sup>
- 3.63 MVNOs and resellers compete with MNOs in the retail market on the basis of price and seek to differentiate between each other on the basis of customer service, inclusions, and other add-on features.<sup>48</sup> MVNO competition focuses on niche areas of the market that are not being addressed by the main brands of the MNOs.
- 3.64 There have been several recent changes in the market relevant to the supply of wholesale services. In particular:
- (a) In February 2021, Optus acquired Amaysim, with approximately 1.2 million subscribers. Amaysim continues to supply retail mobile services over the Optus mobile network under its own brand. Optus also supplies wholesale mobile services to a number of other MVNOs and resellers, including Aussie Broadband, Coles Mobile, Dodo, iiNet, Southern Phone and SpinTel among others.
  - (b) Telstra has recently added significantly to its total number of MVNO subscribers, going from a reported 1.1 million plus SIOs in December 2018 to approximately 1.8 million in December 2022. Telstra reports that it added

<sup>47</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [125].

<sup>48</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [152].

91,000 wholesale MVNO subscribers during the first half of FY 2022 alone.<sup>49</sup> Telstra wholesale mobile customers include ALDI Mobile, Lycamobile, TeleChoice and Woolworths Mobile.<sup>50</sup>

- 3.65 Following the TPG/VHA merger and the Optus/Amaysim transaction, the ACCC considers there to be 3 'tiers' of providers of retail mobile services. These are (i) the MNOs flagship brands, (ii) the MNOs own sub-brands and subsidiary MVNOs, and (iii) independent resellers and MVNOs.<sup>51</sup>
- 3.66 The ACCC has recognised that wholesale mobile services are important to retail competition in 5G services, noting that wholesale access to MNOs 5G networks is a "*highly sought-after feature*" by resellers and MVNOs as "*it enables MVNOs to better compete with both other MVNOs, and the vertically-integrated retail arms of the MNOs, due to growing consumer demand for 5G*".<sup>52</sup>
- 3.67 The ACCC has also noted that "robust competition in the wholesale services market can improve competitive conditions in the downstream retail markets through the availability of a wider range of retail products offered by the MVNOs."<sup>53</sup> The ACCC adds that MNOs are in a strong bargaining position in deciding the terms of access, and "are generally able to decide whether to provide the MVNOs with access to new and emerging technologies, such as...5G access networks."<sup>54</sup>
- 3.68 The nature of MVNO competition distinguishes it from network based competition and, in part, is the reason why MVNO market shares have not shifted significantly:
- (a) While MVNOs set their retail prices independently, they are necessarily limited by the economics of their wholesale arrangements with the relevant MNO.<sup>55</sup>
  - (b) The competitive dynamics in each market segment are different. MVNOs by and large target the pre-paid segment, and to a much lesser extent, the post-paid segment. For example, within Vodafone there are separate business units for pre-paid and post-paid products, each with its own pricing team.<sup>56</sup>
  - (c) The MVNOs provide a different value proposition to the MNOs, in that they usually do not offer the full suite of services provided by an MNO, such as retail stores, handsets and other service add-ons.<sup>57</sup>
  - (d) MVNOs have limited ability to compete on network quality-related factors. This means that the continued improvement of mobile networks for the benefit of end-users, through things such as the expansion of network capacity and coverage as well as the roll-out of new mobile technology, is dependent on there being effective competition between the MNOs.<sup>58</sup>
- 3.69 It is noteworthy that TPG has previously identified the ineffectiveness of MVNO-based competition, where in 2017, VHA submitted to the ACCC Roaming Declaration Inquiry

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<sup>49</sup> Telstra Corporation Limited - Financial results for the half-year ended 31 December 2021 – CEO/CFO Analyst Briefing Presentation and Materials; p.3 and 41

<sup>50</sup> ACCC v *Vodafone*, paragraph *Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [114]

<sup>51</sup> ACCC Communications Market Report, 2021 p.8 and 43

<sup>52</sup> ACCC Communications Market Report, 2021 p.43 and 44

<sup>53</sup> ACCC Communications Market Report 2021, p.43

<sup>54</sup> ACCC Communications Market Report 2021, p.43

<sup>55</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [126].

<sup>56</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [133].

<sup>57</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [171].

<sup>58</sup> ACCC, 2021, 850/900 MHz allocation - Allocation limits advice to the Minister - March 2021, p.9

that the ACCC had overestimated the competitive relevance of Boost “as Boost is beholden to Telstra and hence exercises no competitive constraint on Telstra’s market power in regional Australia.”<sup>59</sup> TPG stated further that:

- (a) “Boost does not provide any constraint on Telstra’s market power and is completely irrelevant in practice...”
- (b) “In essence, Boost is Telstra – so is a symptom of the regional competition, not a cure”.
- (c) “There is no meaningful constraint on Telstra’s market power in Australia”<sup>60</sup>

3.70 The comments made about Boost apply equally to TPG’s regional wholesale arrangement under the Proposed Transaction.

3.71 Ultimately robust competition for wholesale services depends on the actual and perceived quality of the competing three wholesale mobile networks. Telstra’s recent rapid growth in wholesale SIOs demonstrates the prevalence of a perception of its network superiority, and notes that its rapid SIO growth coincides with the 5G rollout.

### Impact on government and enterprise customers

3.72 The Proposed Transaction will likely have an impact on government and enterprise (“G&E”) customers.

3.73 MNOs sell mobile-based solutions to large companies and government, of which a key component is often coverage and national network features. In addition, some of Australia’s largest companies and sectors are based in regional locations, such as agriculture and mining. These sectors are critical to Australia’s economy. Furthermore, some of these sectors are cited to be among the first to take up and benefit from 5G and advanced IoT solutions.

3.74 Almost all of the use cases generated by new 5G technology relate to enterprise and government. It is expected that the deployment of 5G technology “will enable the use of technologies such as AI, IoT, AR/VR, drones, Edge Computing and autonomous vehicles by mainstream businesses”.<sup>61</sup> Unlike previous mobile generations which were primarily consumer-focused, 5G is the first industrial mobile generation. Through the delivery of “higher speeds, lower latency and greater coverage, 5G will drive major change in supply chains and logistics, enable new production techniques that will help create jobs, and improve the quality of health care and other services”.<sup>62</sup>

3.75 The Federal Court has recognised Telstra’s significant market power in respect of enterprise and government customers, noting that:

*Telstra is able to offer bundled products and services due to its position in the mobile and fixed services markets. Telstra already has a dominant position in the supply of both fixed and mobile telecommunication services to corporate and government sectors. In the 2018 financial year, Telstra reported that its*

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<sup>59</sup> VHA submission to the ACCC Domestic Mobile Roaming Declaration Inquiry, Attachment C; 16 June 2017, p.10

<sup>60</sup> VHA submission to the ACCC Domestic Mobile Roaming Declaration Inquiry, Attachment C; 16 June 2017, p.10

<sup>61</sup> [5G Unleashed: Deloitte Access Economics - AMTA | The Voice of the Australian Mobile Telecommunications Industry](#); 2022, p.5

<sup>62</sup> *Ibid.* p.11

mobile services revenue for its small business and enterprise segments was \$2.775 billion.<sup>63</sup>

- 3.76 With this context, it is important to note the key differences between how consumer mobile services and enterprise and government mobile services appear to be addressed in the Proposed Transaction between Telstra and TPG.
- 3.77 For example, Optus observes that key non-discriminatory commitments apply only between Telstra retail products and TPG end-users (termed Comparable Customers). Further, other key protections like the guarantee to turn on 5G for TPG, occurs only after Telstra activates for retail customers. In other words, TPG appears to only be offered a residential-grade service. Further, IoT services are specifically excluded from any non-discrimination commitments.<sup>64</sup> The desire of Telstra to protect its unilateral actions with regards to enterprise services demonstrates the importance of 5G access to this market.
- 3.78 There are three key and often distinct sections of the G&E market – mobility, IoT, fixed data and fixed voice. Optus estimates this market is worth around \$5.4 billion and overall Telstra holds a dominant 57% revenue share.

Figure 5 Government and Enterprise market

Competitor	Mobile Services	IoT	Fixed
	Revenue A\$M (Category share)	Revenue A\$M (Category share)	Revenue A\$M (Category share)
Telstra	1,333 (79%)	257 (47%)	1,140 (44%)
Optus	228 (14%)	31 (6%)	470 (18%)
TPG	119 (7%)		255 (10%)
VNS			304 (12%)
Others		262 (48%)	452 (17%)
<b>Total</b>	<b>1,698</b>	<b>550</b>	<b>2,622</b>

Source: Company reports

- 3.79 Telstra has a dominant share in:
- (a) Fixed data segment with 46% share;
  - (b) Fixed voice segment with 62% share;
  - (c) Mobility segment with 79% share; and
  - (d) IOT segment with a 47% share.
- 3.80 Telstra's most dominant segment of the G&E market is mobility at 79% with overall annual revenues of \$1.3b, materially larger than the next best share (Optus) at \$228m.
- 3.81 Optus observes that Telstra's dominance is far greater in the G&E market compared to the retail consumer market; yet the ACCC has paid much less attention and has not yet taken action to address the key competitive bottlenecks.

<sup>63</sup> Vodafone Hutchison Australia Pty Limited v ACCC [2020] FCA 117 at [113].

<sup>64</sup> Application, pp.46-48

3.82 The Federal Court has also recognised the G&E market, noting that Telstra also has a dominant position in the supply of both fixed and mobile telecommunication services to corporate and government sectors.<sup>65</sup>

### **Other relevant downstream impact of the Proposed Transaction**

3.83 As noted above, Optus considers that the national market for the provision of retail mobile services (and the regional customers within that market) will be most significantly impacted by the Proposed Transaction.

3.84 There are, however, other markets, both downstream and upstream, likely to be impacted of the Proposed Transaction – including in respect of (i) the provision of fixed broadband services (including fixed wireless), and (ii) mobile towers.

3.85 Optus provides a general overview of the impact in each below.

#### *Market for the supply of fixed broadband services*

3.86 Fixed broadband services are broadband internet services provided over fixed networks such as the NBN and other fibre-based networks (FttP, FttN, HFC etc). Fixed wireless services are counted as a technology used to supply fixed broadband services “*due to the functional similarity between fixed wireless and other fixed access technologies*”.<sup>66</sup>

3.87 The improved latency and higher bandwidth of 5G means that mobile broadband and fixed wireless services may offer an increasingly attractive alternative to traditional fixed-line broadband. All three of the MNOs now offer some form of 5G home broadband product, which is generally price competitive with comparable NBN plans, though to date, Optus is the only network operator that has made its 5G access network available for wholesale home broadband products. The ACCC’s recent Wholesale Market Indicators report demonstrates Telstra’s dominant position in fixed wireless broadband. Telstra currently has just over 204,000 services out of 387,000 in the total market – 52.7% share.<sup>67</sup>

3.88 The ACCC considers that the extent to which 5G mobile and fixed wireless services could become a substitute for fixed-line broadband services in terms of speed, data allowance and price remains unclear.<sup>68</sup> That is not to say there are not a growing number of households that are switching from NBN to FWA alternatives. However, Optus submits that any issue with NBN Co’s loss of share to 5G services is attributable to the low quality, high costs and poor customer service for NBN services – particularly fixed wireless services. If issues with NBN quality of service are to be addressed, then authorising Telstra to obtain access to a dominant share of spectrum is not the answer. Optus submits that this will effectively result in one monopolist being replaced with another. Issues related to NBN should be addressed directly through efficient and effective regulation of the NBN.

#### *Market for tower access*

3.89 MNOs compete for inputs, including radio spectrum, backhaul and tower locations. As noted in the CEPA expert report accompanying this submission, “*further concentration*

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<sup>65</sup> *Vodafone Hutchison Australia Pty Limited v ACCC* [2020] FCA 117 at [113].

<sup>66</sup> ACCC Communications Market Report, p.17

<sup>67</sup> March quarter 2022 report | ACCC

<sup>68</sup> ACCC Communications Market Report, p.38

*of any of these input markets may substantially lessen competition in relevant downstream markets”.*<sup>69</sup>

- 3.90 Under the Proposed Transaction, TPG is committing to decommission more than 700 radio sites, which may lead to further consolidation in the tower market. Notwithstanding a recent restructure, Telstra continues to maintain a 51% ownership of Amplitel – with an asset portfolio of 8000 masts, towers, large pole and antenna mount structures, Amplitel is Australia’s largest tower operator.<sup>70</sup>
- 3.91 The vertical integration of Amplitel and Telstra raises the clear potential for discrimination against non-Telstra access seekers – Telstra, through Amplitel, has the clear power and incentive to prevent competitors from accessing Amplitel’s passive infrastructure, which is an essential input to mobile service delivery and ultimately regional mobile competition.
- 3.92 Commenting on Telstra’s proposed restructure into “Telstra Co, InfraCo Fixed and Amplitel”, the Amplitel sites notes “Importantly, Telstra will retain 51 per cent ownership of Amplitel, and will continue to own the active parts of our network including the radio access network that sits on this infrastructure, and our existing spectrum assets. We will continue to preserve Telstra’s strategic differentiation in mobiles and protect our network leadership”.<sup>71</sup>

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<sup>69</sup> Cambridge Economic Policy Associates (CEPA); Competition impacts of the proposed Telstra-TPG network and spectrum sharing agreements for Optus, 17 June 2022, p.9

<sup>70</sup> [amplitel Archives - Telstra Exchange](#) - exchange.telstra.com.au/tag/amplitel/; 1 September 2021

<sup>71</sup> Ibid



## Section 4. ASSESSING THE NETWORK DEAL

- Contrary to the claims of Telstra and TPG, the Proposed Transaction is an international outlier. Even on a standalone basis, the proposed MOCN Services agreement and/or the spectrum leasing arrangements would attract significant regulatory scrutiny in comparable jurisdictions.
- For consumers seeking the best price or quality of service, competition is essential. This includes innovation, which is an increasingly important form of competition and offers significant benefits to businesses and consumers.
- Under the proposed MOCN arrangement – and contrary to other network sharing arrangements such as in Europe – there will be less competition and less innovation. The key terms in the proposed arrangement ensures TPG will become structurally dependent upon Telstra and remain under its shadow for the foreseeable future limiting its ability to provide lower prices and differentiated service offerings to its customers.
- Enterprise customers also suffer under the proposed MOCN arrangement: key non-discriminatory commitments only apply to between Telstra retail products and TPG end-users, not enterprise customers.
- The economic model of the arrangement risks prices increases. TPG charges will increase based upon usage of the network in the area and, as a result, this is likely to lead to price increases.
- The Proposed Transaction creates a dynamic where Telstra can control the underlying pricing of network access for TPG in regional areas and benefits from being paid for every customer that TPG acquires for its network – in other words it is being paid more to face less competition

- 4.1 Network sharing agreements (NSAs) may deliver benefits to operators through reduced expenditure for the deployment and maintenance of mobile network infrastructure. Similarly, spectrum sharing can enable operators to provide higher capacity services and utilise spectrum that may otherwise have remained fallow. However, the potential cost savings and non-price benefits of NSAs may not flow through to consumers unless there is sufficient market pressure on sharing operators to pass them through.
- 4.2 Sharing of passive network infrastructure has generally been accepted as an effective means of enabling the cost efficiencies of network sharing while preserving sufficient levels of competition in mobile markets. Active network sharing introduces greater cost reductions but also introduces higher levels of competition risk.
- 4.3 As a general proposition, active network sharing agreements warrant a higher level of scrutiny than passive network sharing agreements. Ultimately, the greater the level of active sharing, the greater the concern about the potential impact on competition. This view is based on numerous regulatory reviews of NSAs in Europe, where there is a well established industry specific assessment framework.<sup>72</sup> Key competition concerns raised by active sharing include:
- (a) The potential to undermine parties' incentives and ability to compete aggressively on product differentiation and network quality.
  - (b) Whether each party will invest in capacity upgrades, including for next generation services, at least to the same extent as they would have in the

<sup>72</sup>

See "BEREC Common Position on Mobile Infrastructure Sharing", June 2019

absence of the cooperation. Where investment incentives are not aligned, there may be a risk of hold-up of network upgrade plans.<sup>73</sup>

- (c) The greater risks of coordination that arises as a result of the communication of sensitive information such as traffic forecasts.<sup>74</sup>
- 4.4 Where sharing involves spectrum, there is a clear risk that parties may obtain too much spectrum and ultimately undermine the efficient allocation and use of this scarce national resource.<sup>75</sup>
- 4.5 Optus has commissioned Analysys Mason to prepare an expert paper on the context and considerations arising from the Proposed Transaction and the detailed report is attached to this submission (“Analysys Mason report”).
- 4.6 On the basis of the information available, the Proposed Transaction can be defined as a multi-operator core network – network as a service (**MOCN NaaS**) NSA. A MOCN NaaS configuration resembles a full MVNO access and roaming agreement insofar as Operator B (the ‘access’ operator, in this case being TPG) relies entirely upon Operator A’s network and spectrum in the defined footprint, so one ‘main’ operator party can be identified in the agreement (in this case, Telstra).
- 4.7 A MOCN NaaS is unique among active sharing agreements in that it has an inherent degree of asymmetry. One operator owns and controls the network, leading to differentiation limitations and control challenges. It is true that both Telstra and TPG will retain control over the end user equipment, with each able to see the radio access network (**RAN**) as their own using their own public land mobile network (**PLMN**) code and own core network. However, TPG will rely on Telstra granting access to key network features, such as access to different technologies and ultimately deployment of the radio access network that it relies on to supply its end-users.
- 4.8 Notwithstanding proposed consultative mechanisms in the Proposed Transaction,<sup>76</sup> Telstra’s control of the network raises the clear risk for unilateral decision-making and, absent real competition, potential delays in network upgrades to facilitate new technologies and services. Once TPG has decommissioned its radio sites, it will be left with no real alternative than to renew the MOCN NaaS arrangements, assuming that it wishes to continue supplying mobile services within the RCZ.
- 4.9 Telstra and TPG describe the Proposed Transaction as a ‘standard’ network sharing arrangement that is common in many countries, particularly Europe. Optus views this description as a clear mischaracterisation of the true nature of the commercial relationship, which is more akin to a MVNO wholesale arrangement.
- 4.10 The MOCN NaaS network configuration contemplates an overriding degree of control to Telstra as the network operator, and renders TPG unable to effectively differentiate and ultimately compete with Telstra services. In combination with the leasing agreement and an in built first mover advantage on 5G, the Proposed Transaction will severely limit the ability for TPG (or any other MNO) to compete with Telstra in the RCZ.

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<sup>73</sup> Centre on Regulation in Europe (CERRE) – Co-Investment and Network Sharing, May 2020, para 6.2

<sup>74</sup> Body of European Regulators for Electronic Communications (BEREC) “Common Position” on Mobile Infrastructure Sharing, 13 June 2019, p.11

<sup>75</sup> Ibid., p.20

<sup>76</sup> See paragraphs 113 and 115 of the Application which refer to a “structured Change Management Process” and “the Applicants’ obligations to negotiate and agree on significant operational and technical aspects of the services” which in and of themselves present potential coordination risks (see section 7 of this submission),

4.11 For the reasons set out below, Optus submits that the inherent asymmetry of the MOCN NaaS alone warrants a high level of regulatory scrutiny. Optus considers, however, that the impact on competition becomes apparent when the nature of the MOCN NaaS is considered in combination with the abundance of spectrum that Telstra will have access to and TPG's commitment to decommission its radio sites.

4.12 In this section, Optus:

- (a) explains the different active network sharing arrangements used by MNOs;
- (b) outlines how MOCN NaaS is not, in fact, common globally; and
- (c) identifies key concerns with the proposed MOCN NaaS arrangement.

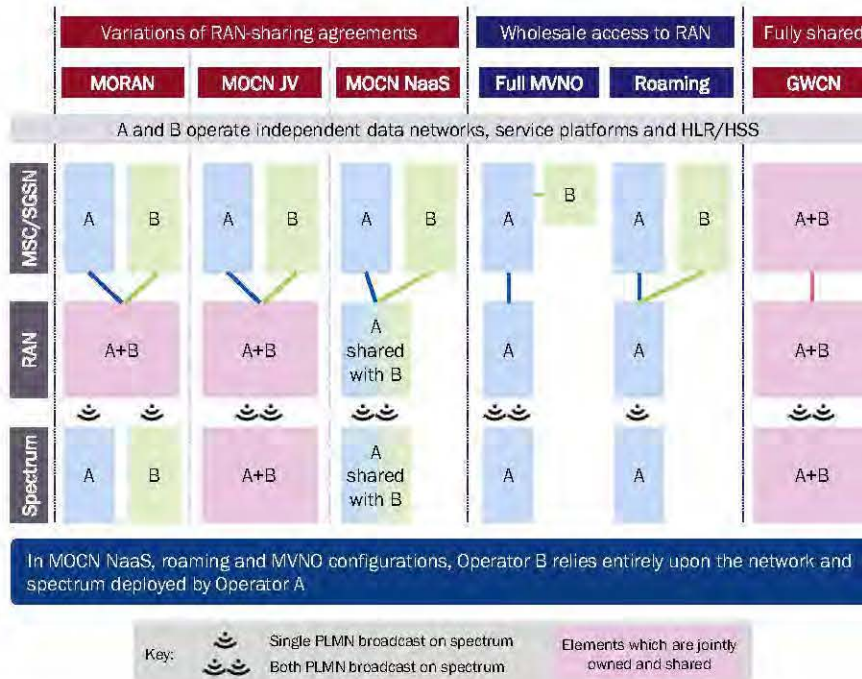
### **Models of active network sharing (MOCN, MORAN and MOCN-NaaS)**

4.13 Different forms of active network sharing have been developed by vendors and operators globally. They can be ordered according to increasing levels of integration of the participating MNOs, including:

- (a) **multi-operator radio access network (MORAN)**, where base stations and access switching equipment are shared (and owned) by both operators, but not spectrum.
- (b) **multi-operator core network based on a joint venture (MOCN JV)**, where base stations, access switching equipment and spectrum are shared (and jointly owned) by both operators.
- (c) **multi-operator core network based on a network-as-a-service agreement (MOCN NaaS)**, where RAN assets and/or spectrum are owned solely by one operator, while the other operator gains access by virtue of the 'network service' agreement. A NaaS can be asymmetric with one main party and one access seeker (as in the Telstra / TPG Proposed Transaction), or bilateral where the lessor/lessee relationships are paired in a complementary way.
- (d) **gateway core network (GWCN)**, corresponding to a fully shared configuration, where circuit switching and packet switching core elements are also shared in addition to base stations, access switching equipment and spectrum.

4.14 The Analysys Mason report sets out in greater detail the forms of active network sharing among operators. The report includes this diagram which conceptualises the heightened level of control afforded to the network operator in a MOCN NaaS configuration relative to other RAN sharing arrangements.

Figure 6 Diagram of selected active network-sharing configurations between operators A and B and comparison with full MVNO and roaming configurations



Source: Analysys Mason

4.15 MORAN and MOCN are the most widely used forms of active sharing. GWCN is not prevalent globally as operators prefer not to share core elements of their network.

### The MOCN NaaS model

- 4.16 As is shown in the above diagram, a MOCN NaaS involves one operator (A) allowing the other operator(s) (B) to access its radio access network (RAN) and spectrum to supply downstream services. It highlights that "in MOCN NaaS, roaming and MVNO configurations, Operator B relies entirely on the network and spectrum deployed by Operator A".
- 4.17 Essentially, the access seeker (TPG) 'rents' network services from the access provider (Telstra). Even if spectrum is shared between the operators, which is not necessarily required for a MOCN NaaS (see below), the access seeker must rely on the radio access network and services of the network owner and operator to supply downstream services to its customers. While both operators are able to use their own PLMN and core network with the common radio network, supply of end-user services can only be enabled by the equipment vendor, who has a commercial relationship with the main operator.
- 4.18 Ownership of the RAN elements remains with one operator, so these elements can only effectively be shared by means of a lease or other similar access arrangement. This means that only one of the MNOs controls, deploys and upgrades the network which can limit the capacity of the access seeker to differentiate and control their services. This may be compounded by an imbalance of bargaining power and misalignment of investment incentives that can typify a MVNO deal.
- 4.19 By contrast, a MOCN JV typically takes the form of a joint enterprise between partner MNOs to pool their sites, equipment and spectrum with the main aim of sharing costs and jointly running the shared network, while allowing each operator to have a degree of independence through separate core equipment and services. The joint entity is itself owned by all partners in the NSA and decisions on investment, footprint, service

quality and priority are generally jointly decided and funded. A MOCN JV can therefore be considered as a more symmetrical form of network sharing, where all partners contribute similar network elements. MOCN JVs tend to be the most common type of MOCN.

- 4.20 In practice, a MOCN NaaS arrangement means that, the access seeker is typically only able to offer services equivalent to the access provider and it is highly unlikely to be able to offer superior services (to those of the network operator). This may extend to decisions about the timing and location for the deployment and migration to new technologies such as 5G. Ultimately the network operator is in a position to determine the network design and configuration and will more than likely be incentivised to do so in a manner that suits its own customer base and handset preferences.

#### *Spectrum leasing is not required in a MOCN NaaS*

- 4.21 A MOCN NaaS agreement involves the access seeker relying on the network infrastructure and spectrum holdings of the main operator, with the access seeker not contributing any (significant) infrastructure or any spectrum to the agreement. This can be distinguished from a MOCN JV, in which spectrum and equipment that is held by both operators is pooled into a joint entity owned by these operators.
- 4.22 Spectrum leasing can, however, occur alongside a MOCN NaaS agreement if the access seeker holds spectrum it would not otherwise use. The access seeker will then lease the spectrum to the main operator, giving the main operator possession and control of the spectrum to use on the main operator's network for a certain period. Spectrum tends to be licensed over a long period of time. The planned spectrum lease under the Proposed Transaction is also for the 10 year term of the initial agreement and any further 5 year terms should TPG elect to do so.
- 4.23 Spectrum is a finite resource that is crucial to the delivery of radiocommunications services. Notwithstanding ongoing improvements in radio network and equipment that enable more efficient utilisation of spectrum, the more spectrum that is available to an operator the greater that operators ability to supply very high capacity services, such a massive MIMO and other 5G use cases.
- 4.24 A disproportionate imbalance in MNO access to spectrum raises the real prospect of affording those MNOs with large spectrum holdings an unfair advantage in the move to next generation services. In combination with the asymmetrical nature of a MOCN NaaS, the operator that controls the network is set to benefit most from such imbalance.<sup>77</sup> Optus concerns about the spectrum arrangements contemplated under the Proposed Transaction are set out in more detail in Section 5 of this submission.

#### **Key aims and drawbacks of the MOCN NaaS arrangements**

- 4.25 The following sets out at a high level a number of general observations made by Analysys Mason in its expert report about the key aims and potential drawbacks of NSAs, with a focus on MOCN NaaS and spectrum leasing. These views are largely based on the European regulatory frameworks for assessing NSAs, and Optus submits that they are at least instructive as to the issues the ACCC may have regard to in scrutinising the Proposed Transaction.
- 4.26 In summary, NSAs are principally aimed at achieving:

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<sup>77</sup> CEPA report, p.6

- (a) Cost reductions which may in turn lead to improved coverage and/or lower prices – for example, a single RAN in a MOCN NaaS will help avoid costs of network duplication and enables savings of capital and operational expenditure that may apply to both existing and future network coverage.<sup>78</sup>

However, any cost saving potential is highly context-specific and the degree to which it benefits consumers will depend largely on the state of competition in the market – for example, the prevalence of uniform national pricing among Australian MNOs means that it is highly unlikely that reduced operating costs in the RCZ would pass-through to lower national prices benefitting all consumers in Australia.<sup>79</sup>

- (b) Enhanced consumer choice – a MOCN NaaS, like a MVNO arrangement, may allow for an access seeker to expand coverage, including potentially into geographic areas where it may not be feasible to deploy competing network infrastructure. This new entry may facilitate service based competition.

However, the asymmetric nature of MOCN NaaS means that the consumer choice enabled by such competition is limited – over time the access seeker's services in the relevant areas will be indistinguishable from the network operators services, ultimately diminishing consumer choice while retaining a façade of competition and product differentiation.<sup>80</sup>

- (c) Improved efficiencies – an agreement that involves spectrum sharing may result in more efficient use of spectrum by allowing spectrum resources that might not otherwise have been utilised to support more users and traffic and deliver new higher bandwidth services due to the use of wider contiguous bandwidths.

The degree to which spectrum sharing may achieve efficiency improvements will often depend on legislative and policy objectives for spectrum management and involve a comparison of the proposed sharing arrangement with alternative use cases and the spectrum holdings of competing MNOs.

4.27 These benefits assume there is a material improvement in scale that is achieved through the deal; and are much more questionable when applied to a three-player market context where one player already has dominant scale. Optus notes that the Proposed Transaction will not result in any additional network coverage.

4.28 There a range of potential drawbacks to NSAs, mostly which relate to the reduction in incentives or ability to invest in network and service improvements. These drawbacks can be compounded by the inherent asymmetry of a MOCN NaaS arrangement as well as the nature and scope of any spectrum lease. The Analysys Mason report draws attention to the following general drawbacks of NSAs:

- (a) Reduced incentives to invest in and compete on network capability;
- (b) Reduced incentives or ability to compete on price;
- (c) Reduced incentives or ability to compete in the wholesale market;

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<sup>78</sup> Analysys Mason report, p.24

<sup>79</sup> CEPA report, p.25

<sup>80</sup> CEPA has observed that “over the course of time, TPG’s service in the RCZ would be indistinguishable in many dimensions from that provided by Telstra. The agreements clearly serve to diminish consumer choice while retaining a façade of competition and product differentiation.”; CEPA report, p.25

- (d) The requirement for increased coordination;
- (e) Reduced network resilience;
- (f) Risks to non-sharing operators (due to inability to replicate the cost and/or capability);
- (g) Long-term inter-dependence (lack of reversibility); and
- (h) Partial use of spectrum held by sharing operators.

4.29 These are discussed below, with further detail provided in the Analysys Mason report.

*Reduced incentives or ability to invest in and compete on network capability*

4.30 Mobile network-sharing agreements can restrict the incentives for operators to invest in additional network capability including to improve coverage, capacity and/or functionality. This drawback results from the fact that sharing operators will no longer be the sole beneficiary of such investment. The degree to which this may materialise will depend on the terms of the agreement – without clear and transparent mechanisms to prevent abuse, the asymmetry of a MOCN NaaS is likely to accentuate this drawback, enabling the network operator to dictate network investment and ultimately determine the capability of the access seeker's services.

*Reduced incentives or ability to compete on price*

4.31 Sharing operators make use of the same network would typically share a similar cost base and therefore, may face similar marginal costs of traffic. However, this holds only where sharing occurs under a JV arrangement. Where only one operator is charged for access to the shared network, such as with a MOCN NaaS, the cost base of the parties can deviate materially – with the network owner facing fixed costs and the access operator facing variable costs (depending on the price terms).

4.32 In this way, the ability of one party to control the other party's costs to access the shared RAN will likely mean that the access seeker can never be a price competitor in the market. The access seeker is also vulnerable to margin squeeze from the network operator and any "sub-brand" of the network operator, that may benefit from subsidised access prices. For example, Telstra could use Belong to aggressively price compete against TPG – with TPG forced to compete on a higher variable cost basis and Belong benefiting from lower unit cost due to scale economics of Telstra.

*Reduced incentives or ability to compete in the wholesale market*

4.33 It follows that, depending on the price terms, a NSA could reduce the incentive or ability of operators to compete at the wholesale level (i.e. support mobile virtual network operators (MVNOs) and/or national roaming operators), particularly if payments between the operators were based on the volume of users or traffic, such as in the Proposed Transaction.

*Requirement for increased co-ordination*

4.34 Network sharing by definition, involves a degree of cooperation between operators that otherwise compete. As such, there is clear potential for NSAs to facilitate potentially anti-competitive co-ordination between the sharing operators. Active sharing agreements, such as MOCN agreements, particularly raise coordination concerns given the greater level of information exchange involved, including commercially sensitive information such as traffic levels and targets. Spectrum sharing also invites

the potential for sharing operators to coordinate on bidding for spectrum, potentially in breach of rules designed to protect the integrity of spectrum auction processes.

- 4.35 Coordination may also create delay at both the strategic (e.g network design and strategy) and operational (e.g network deployment), due to the time taken for additional joint decision-making processes and bureaucracy.
- 4.36 Depending on the nature of the agreement, one operator may know that the other will learn of its plans ahead of launch and may be discouraged from making such investments. This may have consequences for the upgrade of non-shared parts of the network such as the core, which ultimately must be compatible with the shared network elements.<sup>81</sup>
- 4.37 The asymmetry of the MOCN NaaS means that the access seeker is highly dependant on the network operators decision making, even if there are mechanisms designed to limit unilateral action and ensure non-discriminatory treatment.<sup>82</sup>

#### *Reduced network resilience*

- 4.38 Sharing mobile network infrastructure may have the potential to reduce the overall resilience of the network in a given location or geographical area.<sup>83</sup> This is particularly problematic and potentially dangerous in emergency situations, where there is no alternative network operator in an affected area. The level of risk is commensurate to the level of sharing: if only masts or towers are shared then the risk is only to a particular site, and only if the site is physically compromised (e.g. fire, flood, landslide). However, if the level of network sharing is more comprehensive (e.g. active equipment, backhaul, network management), then a single fault in the network controllers may itself affect both networks across a wide area. Such outcomes give further support to the need to prioritise infrastructure based competition.
- 4.39 This issue is addressed in further detail in relation to the public detriments that Optus considers would arise from the Proposed Transaction.

#### *Risks to non-sharing operators (due to inability to replicate the cost and/or capability)*

- 4.40 Non-sharing operators in a market are potentially disadvantaged where they are unable to achieve the cost efficiencies of the parties to a NSA or offer the higher capacity and speeds that may flow to operators that share spectrum. Such risks have clear implications for the state of competition that may eventuate from a NSA.
- 4.41 Market structure will be critical as to the degree to which such risks materialise.<sup>84</sup> In a four-MNO market, sharing between two operators would still leave the remaining two operators with the option to also form a sharing deal. This still keeps the potential of dynamic competition in place. However, in a three-MNO market such as Australia, sharing by two of the operators, or at least two MNOs one of which is the dominant provider, results in the remaining operator being unable to replicate the performance /coverage and reduced costs of the shared network.
- 4.42 In other words, a sharing agreement, particularly an active NSA, in a three player market requires thorough consideration of the impact on competition and the capacity and incentive of non-sharing operators to invest. Where it results in a non-dominant

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<sup>81</sup> Analysys Mason report, p.28

<sup>82</sup> See proposed Structured Change Management processes under para 113 of the Application

<sup>83</sup> BEREC Common Position, p.10

<sup>84</sup> Analysys Mason report, p.29



provider being excluded from current and future options to reduce network costs, the NSA risks locking in a dominant structure that cannot be over turned, and most likely leads to a substantial lessening of competition.

#### *Long-term inter-dependence (lack of reversibility)*

- 4.43 Depending on the nature of the network sharing agreement, the operators may lose their ability to withdraw from the structure in the future. Analysys Mason observe:

*It may, for example, be easier to reverse a network sharing agreement if the operators each still have access to the relevant hardware and software platforms, local maintenance teams, as well as staff with the relevant skills and experience in-house. This highlights the possible advantage of network sharing which divides the geographical area in two, with each operator looking after half the country. Although the scale of each operator's resulting network (and network staff) will be smaller than if they were operating nationally, it means that they are in a position to reverse the agreement in a reasonable timescale, by scaling up capabilities that they have maintained in-house.<sup>85</sup>*

- 4.44 However, this this is not a realistic prospect in Australia. Optus has, elsewhere in this submission, addressed concerns regarding the extent to which the Proposed Transaction could, realistically, be reversed by Telstra and TPG. Optus disagrees with statements in the Application suggesting that TPG will be in a position to independently determine whether to renew the arrangement at the end of the initial term. That proposition cannot be accepted. After 10 years, TPG will most certainly have decommissioned its network infrastructure in the RCZ and have no real alternative other than to continue the MOCN NaaS with Telstra. The Proposed Transaction will involve a significant shift in the Australian telecommunications sector, and one that is irreversible.

#### *Partial use of spectrum held by the sharing operators*

- 4.45 Depending on end-user demand levels and the nature of competition in an area, sharing operators might choose not to utilise all the shared spectrum. Sharing of spectrum also raises the prospect of sharing operators having:

- (a) control over too high a proportion of the total available spectrum (either in total or in particular bands); and/or
- (b) a total spectrum holding which is in excess of any caps imposed during the process to award that spectrum.

- 4.46 Optus addresses the spectrum issues in Section 5. However, in summary, the Proposed Transaction will grant Telstra a unprecedented dominance in spectrum, which has the effect of preventing any other operators from offering comparable service levels. Further, Telstra is currently under-utilising its mid band spectrum assets within the RCZ (see section 5 of this submission). There is no evidence that additional spectrum is needed – rather Telstra needs to efficiently use its current spectrum assets like other MNOs do. Indeed, Optus' leadership in spectral efficiency is noted in the Application.<sup>86</sup> Optus submits that it has been incentivised to invest in this regard by the need to compete with Telstra's disproportionate and legacy enabled spectrum holdings.

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<sup>85</sup> Ibid,

<sup>86</sup> Application [241], table 12 and 13

## The TPG / Telstra network sharing arrangement is without precedent globally

- 4.47 The Proposed Transaction is a MOCN NaaS network sharing agreement, which is distinct from the JV structure used in many international examples of MOCN and MORAN. MOCN Naas is uncommon, particularly when it is combined with a spectrum leasing agreement. Only a few examples can be found worldwide, albeit under very different market dynamics and operator circumstances.
- 4.48 The Application claims that the type of deal being proposed by Telstra and TPG is common globally and should not give rise to any concern from the ACCC. The Applicants state, for example, that infrastructure sharing models have been adopted in other jurisdictions as an important tool to reduce costs; and specifically call out sharing arrangements operating in New Zealand, Canada and numerous European countries.<sup>87</sup>
- 4.49 What the Applicants fail to do, either in the Application or in their expert report by Mr Feasey, is to specifically address the type of sharing model being proposed by Telstra and TPG. The Applicants and their expert ignore the fact that MOCN NaaS arrangements are rare internationally. Looking beyond the type of agreement itself, the level of proposed spectrum pooling and it being an agreement between the first and third largest mobile providers in Australia makes the proposed arrangement a global outlier.
- 4.50 Optus asked CEPA to review the use of international examples in Mr Feasey's report. CEPA's report includes the following findings:

*Overall, we consider Mr Feasey's reference of the international evidence to be superficial and, in some cases, selective and incomplete. We will provide evidence to demonstrate that Mr Feasey's report:*

*a. Misrepresents the nuance in the approach of European regulators, whereby differing levels of scrutiny are conventionally applied to different types of mobile NSAs;*

*b. Makes a misleading comparison with a European merger case (O2-Three, 2016), understating the potential implications of NSAs on competitive dynamics of the affected markets;*

*c. Uses selective evidence on the case of an NSA in the Czech Republic (Czechia);*

*d. Understates the use of obligations (often pre-empted by way of commitments) by European regulators to protect against anti-competitive behaviours which may otherwise arise as a result of NSAs;*

*e. Omits the highly relevant case study of proposed network sharing in Germany.<sup>88</sup>*

- 4.51 CEPA went on to conclude that:

*The European evidence on NSAs demonstrates that European regulators and competition authorities would place any agreement with a similar set of facts as the TPG/Telstra agreement under intense scrutiny. The TPG/Telstra agreement involves active sharing, covers a wide geographic area, involves a dominant*

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<sup>87</sup> Application[298]

<sup>88</sup> CEPA report, [14]

*and the largest MNO, is long-lived, appears difficult to unwind, gives rise to a strengthening of dominance and would lead to a significant change in market share in relevant input markets.<sup>89</sup>*

4.52 The claims made by the Applicants and their experts that European or international evidence provides support for the Proposed Transaction is incorrect and misrepresents the international evidence. To further assist the ACCC, Optus asked Analysys Mason to conduct a review of international sharing arrangements. Their report is attached. The report clearly demonstrates that:

- (a) MOCN Naas is an uncommon type of MOCN, in particular combined with a spectrum leasing agreement. Only a few such examples can be found worldwide, e.g. in South Africa, and albeit under very different market dynamics and operator circumstances.<sup>90</sup>
- (b) In Europe, NSAs have been the subject of thorough regulatory scrutiny which often imposed considerable conditions; but Analysys Mason could not identify examples of MOCN Naas.

4.53 A summary of the network sharing arrangements analysed by Analysys Mason is shown below in Figure 7. This shows that only two proposed deals involved a three-player market moving to two – being the Czech Republic and the deal spanning Latvia and Lithuania. Both cases involved significant remedies being imposed by the regulator to address the material competition harm. In particular, Latvia and Lithuania imposed restrictions on the spectrum sharing arrangements. The agreement was terminated following limits to spectrum sharing imposed by the regulators in Latvia and Lithuania. Similarly, the proposed deal in Czech Republic is subject to regulatory intervention due to the concentrated market structure and limited infrastructure investment. The EC has issued objections to the deal.

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<sup>89</sup> CEPA report, [37]

<sup>90</sup> Analysys Mason report, p.17

Figure 7 Summary of NSAs analysed by Analysys Mason

Countries	Number of MNOs <sup>1</sup>	Combined market sh.	Type of NSA	Technologies				Shared spectrum <sup>2</sup>	Geographical footprint <sup>3</sup>				Regulatory position	Regulatory highlights
				2G	3G	4G	5G		Urban	Suburb.	Rural	Remote		
Australia	3 → 2	69%	MOCN Naas			•	•	~65%		•	•		TBC	Pending assessment
Latvia (LVA) and Lithuania (LTU)	3 → 2	62% LVA 73% LTU	MOCN JV	•	•	•	•	~57% LVA ~67% LTU	•	•	•	N/A	Remedies imposed	Imposed limits on spectrum sharing; terminated by operators
Czech Republic	3 → 2	74%	MORAN	•	•	•		No	Partly	•	•	N/A	TBC	Remedies imposed, approval pending
Denmark	4 → 3	40%	MOCN JV	•	•	•	•	~27%	•	•	•	N/A	Remedies imposed	Substantial obligations imposed including licenced spectrum limits, third-party access
Taiwan	5 → 4	30%	MOCN JV				•	45%	•	•	•	N/A	Remedies imposed	Substantial obligations imposed including coverage commitments; operators merged
France (SFR)	4 → 3	52%	MORAN	•	•	•		No	Partly	•	•		Part blocked	Amended based on regulatory guidelines
France (Orange)	4 → 3	49%	Roaming	•	•			Roaming					Time-limited	New entrant only; due to cease in 2022
France (remote)	4 → 1	100%	Active share	•	•	•		N/A			•	•	Encouraged	Sharing encouraged in remote areas
Sweden (Net4Mobility)	5 → 4	49%	MOCN JV	•	•	•	•	~26%	•	•	•		Approved	
Poland	4 → 3	53%	MOCN JV	•	•	•		~14% <sup>4</sup>	•	•	•	N/A	Approved	
Hungary	4 → 3	71%	MOCN JV			•		~4% <sup>5</sup>	Partly	•	•	N/A	Approved	
Finland	4 → 3	61%	MOCN JV	•	•			~1% <sup>6</sup>	Northern and eastern regions				Approved	
Sweden (3GIS)	5 → 4	37%	MOCN JV	•				~8%		•	•		Approved	One opt-out due to regulatory constraints
Canada	7 → 6	57%	Geography based JV	•	•	•		Area-based	East-West exchange				Approved	
Singapore	4 → 3	44%	MOCN JV			•		N/A	•	•	N/A	N/A	Approved	
Malaysia	6	100%	wholesale network			•		N/A	•	•	•	N/A	Approved	Publicly-owned single wholesale network
South Africa (Vodacom)	5 → 3	42%	MOCN Naas			•		35% <sup>7</sup>	•	•	•	N/A	Approved	
South Africa (MTN)		43%	MOCN Naas	•	•			26% <sup>7</sup>	•	•	•	N/A	Approved	

<sup>1</sup> Total market MNOs → MNOs considering NSA combinations; <sup>2</sup> Spectrum licenced to NSA MNOs (or JVs) as a share of total licenced spectrum (actual NSA perimeter may differ; when information was available we took it into account in the calculation: see notes); <sup>3</sup> Inherently approximate as definitions of 'geography' are not fully consistent amongst countries; <sup>4</sup> Considering 800MHz and 2600MHz bands at the numerator; <sup>5</sup> Considering a 2 x 10MHz block per operator in the 800MHz band at the numerator; <sup>6</sup> Considering 800MHz band at the numerator, excluding Åland Islands; <sup>7</sup> Before 2022 spectrum auction

Source: Analysys Mason, International case studies of MOCN NSAs

4.54 The ACCC should carefully test the substance of the arrangement having regard to the market structure in Australia in light of the 'uniqueness' of the proposed model.

### Specific concerns with the TPG / Telstra MOCN NaaS arrangement

4.55 The proposed ten-year MOCN NaaS arrangement between TPG and Telstra involves regional and "urban fringe" areas in Australia, covering between 80% and 98.8% of the population. The agreement provides each party with a different set of benefits, with the aim of leveraging existing assets. In particular:

- (a) Telstra will receive access to TPG's spectrum to operate 4G and 5G services in the relevant areas, increasing the capacity it has available for the provision of these services. Telstra will also be allowed to deploy its own infrastructure on up to 169 of TPG's mobile sites. Telstra expects the agreement to generate an additional AUD1.6–1.8 billion in revenue over the ten-year period.
- (b) TPG will receive access to approximately 3,700 of Telstra's mobile network sites, as well as its RAN, to offer 4G and 5G services in the relevant areas. This is expected to extend TPG's 4G coverage from 96% to 98.8% of the population. As a result of access to Telstra's assets, TPG will decommission 725 of its own sites that are located in areas included in the agreement.

4.56 Both operators will continue to operate separate core networks. Telstra will maintain the exclusive coverage between 98.8% and 99.4% of population, where it has approximately 750 sites. It will also exclusively leverage TPG spectrum as part of the arrangement in these areas.

4.57 It is important to note that, in a three-player market like Australia, the impact on competition of an agreement between two operators (particularly where one is the dominant provider) is a key issue, especially in respect of the competitive landscape for the two sharing operators competing against the remaining non-sharing operator. The

differing effects on the three players in the market influence each player's decisions on investments in network infrastructure and, in turn, the provision of service to consumers.

- 4.58 The main direct (i.e. short to medium term) changes that arise as a result of the proposed MOCN NaaS arrangement between TPG and Telstra are discussed below.

*TPG's commitment to close its regional network*

- 4.59 A principal concern with the Proposed Transaction is the decision taken by TPG (in the context of the arrangement) to shut down its regional network and decommission over 700 sites in regional areas. TPG's presence in the regional area will be served primarily by the MOCN NaaS offered by Telstra, with very limited scope to reverse the arrangement and re-install its own regional radio access network, particularly for 4G and 5G covered by the arrangement. TPG will significantly reduce its fixed costs (opex, capital costs and depreciation) in the regional area by removing its network in return for variable costs set by the MOCN NaaS pricing structures.
- 4.60 Unlike fixed cost economics, where TPG would face an incentive to utilise the unused capacity in its fixed assets (for instance, by encouraging wholesale deals or lower retail prices) TPG will instead face direct operating costs implications to the extent that it drives traffic onto the regional MOCN network. As a result of this, the nature of competitive pressure exerted by TPG in the regional area will be strongly influenced by the MOCN NaaS commercial terms.
- 4.61 A possible outcome is that TPG uses the regional MOCN NaaS network area primarily to provide occasional away-from-home regional coverage for its metropolitan customers, and hence effectively reduces its efforts to market to customers living in the regional areas under the MOCN NaaS. In the regional area, with a MOCN NaaS, TPG will not be able to outcompete Telstra because prices will be set by the agreement with the host.
- 4.62 In other words, every additional customer (or extra usage) – whether it be Telstra or TPG – benefits Telstra by driving larger scale and lower per unit costs. But every extra TPG customer (or extra usage) costs TPG additional operating expenses. The deal, by its very nature, discourages TPG to actually use the agreement in regional areas and where it does utilise the agreement Telstra materially gains
- 4.63 This situation has similarities with wholesale MVNOs who face a similar limit to their ability to compete strongly, due to the wholesale access prices agreed with the host network. The details of the Proposed Transaction show that the deal is much closer to a MVNO deal than a true network sharing arrangement.

*Non-discrimination clauses are limited*

- 4.64 The suggestion that the proposed arrangement operates on a non-discriminatory basis is promoted by the Feasey report, which states:

*A fundamental principle underpinning the agreement is that TPG will obtain access to the Telstra network on a non-discriminatory basis and that, to the extent that Telstra makes future improvements to its radio network, these will*

*be available to TPG at the same time and on the same terms as they are available to Telstra itself.*<sup>91</sup>

- 4.65 This statement is not consistent with the terms of the proposed agreement. First, the way in which non-discrimination principles are described in the Application suggests that the extent of non-discrimination may be more limited than expected. For instance non-discrimination applies:
- (a) Between TPG end-users and Telstra 'retail customer grade plans' only<sup>92</sup>
  - (b) To Telstra "Comparison Customers".<sup>93</sup> We note this is a capitalised term, which has a corresponding definition in the agreement, to which we are not yet privy.
- 4.66 Non-discrimination obligations do not appear to apply to small business, enterprise and/or Government services. Further, non-discrimination doesn't apply to IOT networks or delivery of FWA services to TPG only over 3.6 GHz spectrum.<sup>94</sup> In Optus view, the mere presence of a non-discrimination commitment that applies to only one party to the agreement demonstrates the substantial asymmetry inherent in the MOCN NaaS arrangements.
- 4.67 Moreover, even if the contract terms were sufficient, the commercial model is not consistent with the claim in Mr Feasey's report that the network is available to "*TPG at the same time and on the same terms as they are available to Telstra itself.*"<sup>95</sup> The terms, as we understand them from the limited information available, include an annual fixed fee, and variable charges based on the number users, amount of usage and will increase for 5G. If Mr Feasey's statement was correct, this charge would have to be equivalent to the costs faced by Telstra when self-supplying access to the RCZ. It is doubtful this is the case. This may be an issue that the ACCC tests further.
- 4.68 When taken together, the weak non-discrimination rules, the delayed 5G activation obligations, and the subscriber and usage based commercial terms all work to demonstrate that the arrangement operates as a disincentive for TPG to actively use and promote its services in the RCZ. This supports the view that TPG will not be present the same competitive challenge as a proper national network provider – in effect, it will be at best equivalent to a Telstra MVNO.

#### *TPG charges will increase if it uses the regional network*

- 4.69 The impact of the Proposed Transaction on TPG's pricing is dependent upon the underlying commercials of the arrangement. While we do not, at this stage, have access to relevant confidential material in the Application, based on material that is available Optus understands that TPG's costs will include:
- (a) an annual fee to access the Telstra network in the RCZ;
  - (b) a variable charge for each TPG subscriber using the Telstra network in the RCZ;
  - (c) a usage charge for data traffic over the Telstra network in the RCZ and

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<sup>91</sup> Feasey report, p.4

<sup>92</sup> Application, [132], [135].

<sup>93</sup> Application, [138]

<sup>94</sup> Application, [140]

<sup>95</sup> Feasey report, p.4

- (d) higher charges to access 5G.<sup>96</sup>
- 4.70 Optus submits that the key question for the ACCC is how this commercial model incentivises TPG to actually use the MOCN network in the RCZ. It would appear that the commercial model – with per subscriber charges, volume charges and 5G uplift charges – has been designed to limit the use of the network by TPG.
- 4.71 A commercial model of this nature provides disincentives for TPG to roll out wholesale services and provide asymmetric advantage to Telstra as the network owner. Optus is concerned that the commercial pricing may not fully reflect the underlying cost efficiencies gained by Telstra as the MOCN network operator. In other words, Telstra will face fixed cost economics in the RCZ as the network owner, but TPG will face variable costs as the wholesale access customer. This fundamentally changes the incentives to grow traffic – Telstra will face lower unit costs if it grows its customer and traffic; but TPG will face flat variable unit costs as it grows. Telstra will face no growth in its operating costs as it grows traffic, but TPG will face growth in operating costs if it grows its regional subscriber base and traffic level. This commercial arrangement has been attempted before in the Australian market, and it did not end well.
- 4.72 Such an arrangement appears similar to the structure of the historic Hutchison-Telstra regional 3G roaming agreement, which imposed material financial stress on Hutchison as its regional traffic grow faster than had been forecasted or faster than could be afforded. It is instructive for the ACCC to reflect on market pricing adopted by Hutchison at the time when it relied heavily on 3G roaming with Telstra. This is the most recent example of wide-ranging roaming agreement. Hutchison's network in 2009 (including a joint venture arrangement with Telstra) covered 56% of the population. At this time Hutchison obtained 3G roaming on Telstra's 850 MHz network, covering 96% of the population. Hutchison offered two-tier pricing in market, with usage outside of Hutchison's network charged at higher rates, or excluded from plan allowances. Hutchison's usage charge in roaming areas was five times the rate charged over its own network.<sup>97</sup>
- 4.73 The experience of Hutchison also shows that the level of regional traffic charges could lead to negative financial outcomes. For example, even with an urban-focused network, and pricing that discouraged roaming usage, Hutchison experienced significant increased costs as more customers joined the network and as more customers roamed outside its limited network. Hutchison's Annual Reports over this period made clear the negative financial impact from relying on roaming. Over two years from 1HFY07 to 1HFY09, Hutchison's direct telecommunication cost increased by 50%, which was largely attributed to roaming charges.<sup>98</sup> A substantial reduction in roaming costs was one component of the claimed \$2B NPV worth of synergies attributable to the merger with Vodafone.<sup>99</sup> VHA noted in 2011 that its operating margin increased by 22% reflecting lower domestic roaming costs.<sup>100</sup>

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<sup>96</sup> Feasey report p.4.

<sup>97</sup> For example, Hutchison's 'cap' plans in the market, which included data allowance for 3G users (e.g. \$79 per month cap allowed 1GB usage). Within Hutch's 'broadband zone' (i.e. coverage of the 3GIS network), Hutch offered unlimited access to key content, such as Sky News, ABC, Cricket Australia, Foxsports News. The pricing differential was larger for mobile broadband services (i.e. service through a 3G dongle). Broadband packages that had a data allowance of between 1GB to 3GB provided for only 2MB allowance outside of the Hutch network. That is, only 2MB allowance when roaming. Data usage above that level was charged at 50c per MB. This can be compared to a 10c per MB excess usage charge when within the Hutch network. <http://shop.three.com.au/broadband>, archive Nov 10 2009.

<sup>98</sup> Hutchison Telecoms, 2009, Half Year Results Presentation, p.11. See also 2008 Half Year Results Presentation.

<sup>99</sup> Hutchison Telecoms, 2010, Annual Results Presentation, 12 February, Slide 13

<sup>100</sup> Hutchison Telecoms, 2011, Annual Report 2010, p.4

- 4.74 The experience with Hutchison over the period prior to its merger with Vodafone shows that even commercial roaming deals which impose significant variable charges, entered into voluntarily, can lead to negative commercial and customer outcomes.

*There is a very real opportunity for Telstra to utilise this agreement to dictate or control price signals in the market given its dominant and unassailable position. The Telstra / TPG MOCN Naas arrangement would cause competition concerns in other markets*

- 4.75 The NSA will have an impact on competition in relation to the supply of mobile-related services in respect of infrastructure, as well as on a wholesale and retail service basis between MNOs.
- 4.76 Optus is not aware of the level of the charges to be levied on TPG by Telstra or the mechanisms in place to review those charges. It is, however, conceivable that Telstra may be able to control or at least influence market pricing through the way in which those charges are set. That would be influenced by whatever Telstra's motivations and incentives were at that particular time.
- 4.77 As discussed above, MOCN NaaS is proposed as an asymmetric NSA, meaning Telstra will have primary control over the network infrastructure including the backhaul, sites, network equipment and spectrum. TPG will be reliant on the network and its access to different technologies (4G/5G) will be determined by the contractual conditions of the NSA. Although TPG will be able to treat the RAN as its own, service differentiation will likely be limited due to its reliance on Telstra's infrastructure, choice of vendors and software upgrades. In short, TPG is unlikely to be able to offer better services than Telstra.
- 4.78 TPG will, in the context of the arrangement, decommission 725 sites and rely primarily on Telstra's infrastructure in the regions covering the remaining 80–98.8% population. Optus will offer the only alternative 4G network in the regions covering 80–98.5% of the population; in this area, Telstra has ~3,250 sites while Optus has approximately 1,000 fewer sites (~2,250) The overall impact of the MOCN NaaS is therefore a reduction in infrastructure and infrastructure competition.
- 4.79 In addition, the agreement is not expected to increase coverage in the remote areas or increase coverage of the 5G network in the regions covered by the MOCN NaaS. A possible impact is therefore a reduction in demand for tower infrastructure, which may lead to reduction in the number of players competing to offer tower infrastructure to MNOs (i.e. the extent of upstream competition in terms of tower infrastructure). The competitive harms resulting from such consolidation will likely be compounded by the fact that Amplitel, the largest tower operator, remains vertically integrated with Telstra to retain 51% ownership following its restructure
- 4.80 The reduction in infrastructure competition directly affects the wholesale market, with fewer networks available to offer wholesale services to other operators or MVNOs. This can be seen most acutely in two areas. First, TPG may have limitations (explicitly or commercially) on its ability to support MVNOs or other parties. Second, the wholesale market which currently exists for regional roaming will be substantially reduced or at least not broadened for the likely duration of the MOCN NaaS.
- 4.81 The Proposed Transaction would lead to a further concentration of radio spectrum holdings and greater asymmetry across the MNOs with Telstra having by far the largest



amount of low and mid band frequencies in the RCZ with clear implications for downstream competition.<sup>101</sup>

- 4.82 Although the MOCN NaaS and spectrum leasing agreements may benefit Telstra and some TPG customers in the short term, it is important that the intended superiority and scale of their network does not harm competition over the longer term. Due to its superior coverage, QoS and speed, combined with a low unit cost of traffic, there is a concern that no other operator (including Optus) will be able to compete with services offered on Telstra's network. Optus' incentives to invest would be reduced in the long-term where it does not have the prospect of effectively competing against the scale and spectrum advantages of Telstra's network.<sup>102</sup>

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<sup>101</sup> CEPA Report, [9], p.9

<sup>102</sup> See Houston Kemp report, p.18

## Section 5. ASSESSING THE SPECTRUM LEASING

- Radiofrequency spectrum is a scarce resource, which is essential for providing consumers with quality network coverage and capacity. If one market participant dominates control of key spectrum, consumer offerings will suffer.
- The Proposed Transaction provides Telstra with dominance of spectrum, both in the short and long term, which it could not have achieved through the spectrum auction process. Control of the TPG spectrum deepens an already recognised significant asymmetry between Telstra and the rest of the market.
- With TPG's spectrum, Telstra will have a material network quality and cost advantage which cannot be matched by Optus, or any other potential new entrant. Optus and other providers will not have the same volume of spectrum and TPG's network in the RCZ is effectively Telstra's network. As a result, there will be no real comparable alternative for customers and no real ability for differentiation in key aspects of network performance.

- 5.1 Radiofrequency spectrum is a scarce and finite resource that is an essential input for the provision of wireless services, such as mobile services and satellite communications, in downstream markets.
- 5.2 The ACCC, and successive Governments, have long been "*interested in ensuring that the allocation of radiofrequency spectrum licences promotes competition in relevant downstream markets for the benefit of consumers.*"<sup>103</sup> The ACCC has identified that disparity in spectrum holdings "*could give rise to competition concerns if they constrain an MNO's ability to compete with others in the mobile services market.*"<sup>104</sup>
- 5.3 The ACCC has stated that:
- (a) Spectrum holdings can help promote competition and efficiency in related downstream markets when all operators are given the opportunity to hold spectrum to compete effectively – and that consumers will benefit, in terms of choice, price and quality of services result when operators can compete effectively.<sup>105</sup>
  - (b) Differences in spectrum holdings is not by itself a competition issue, but that "*asymmetry of spectrum holdings could raise competition issues if it constrains the ability of specific operators to compete in the relevant market.*"<sup>106</sup>
- 5.4 Optus is very concerned that the asymmetry of spectrum holdings between Telstra and Optus, especially in regional areas, as a result of the Proposed Transaction will likely have the effect of constraining the ability of Optus (or a potential new entrant) from competing effectively in the provision of mobile services. The spectrum leasing arrangements will have technical and commercial impacts on Telstra and Optus, as a change in spectrum distribution can significantly affect the competitive market dynamics given the essential role of spectrum in supporting coverage, capacity, headline speeds and technology roll-out / network density. Telstra's asymmetric spectrum holding will have a substantial impact on competition.

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<sup>103</sup> ACCC, 2021, 850/900 MHz allocation - Allocation limits advice to the Minister - March 2021, p.2

<sup>104</sup> Ibid.

<sup>105</sup> Ibid., p.5

<sup>106</sup> Ibid., p.10

- 5.5 This section explains that the proposed deal will result in Telstra holding a dominant share of:
- (a) low band spectrum; and
  - (b) key 5G mid band spectrum.
- 5.6 This section also shows that Telstra's asymmetric spectrum holdings will constrain the ability of specific operators to compete in the relevant market, which in turn will likely result in a substantial lessening of competition.

### **Telstra's dominance of spectrum holdings**

- 5.7 The proposed deal involves Telstra leasing all of TPG's low band spectrum for a 10-year period with TPG holding the option of two 5-year extensions on the agreement. The spectrum leasing involves pooling:
- (a) 850 MHz: 2x20 MHz
  - (b) 700 MHz: 2x30 MHz
  - (c) 2100 MHz: 2x15 MHz
  - (d) 2.6 GHz: 2x40 MHz
  - (e) 3.6 GHz: 90-125 MHz
- 5.8 In addition, Telstra and TPG will retain ownership of their individual apparatus licensed spectrum in 1800 MHz and 2100 MHz.
- 5.9 In simple terms, the proposed deal will result in Telstra's combined spectrum holdings amounting to ~65% of the total spectrum available in Australia (across all spectrum bands). This figure compares with the ~46% of spectrum currently held by Telstra alone without the proposed arrangements.<sup>107</sup> The proposed spectrum leasing arrangements will therefore significantly affect spectrum distribution between MNOs and create a permanent market distortion which will favour Telstra.
- 5.10 Reflecting the different propagation characteristics of each spectrum band and their differing impacts on competition in related downstream markets, we discuss the state of competition in low band (sub-1 GHz spectrum) and mid band spectrum separately in turn below.

#### *Telstra's dominance of low band spectrum*

- 5.11 The state of low band spectrum ownership without the proposed deal is shown below

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<sup>107</sup> Analysys Mason report, section 4.2.

Figure 8 Low band holdings (including 850/900 MHz auction allocations)

	700 MHz	850 MHz	900 MHz	Total
<b>Optus</b>	2 x 10 MHz	..	2 x 20 MHz*	2 x 30 MHz
<b>Telstra</b>	2 x 20 MHz	2 x 25 MHz		2 x 45 MHz
<b>TPG</b>	2 x 15 MHz	2 x 5 MHz		2 x 20 MHz

Source: ACMA. Optus' 900MHz and Telstra's 2x10MHz of 850MHz spectrum is available post June 2024. \* The lower 5MHz block in the 900 MHz band cannot be fully utilised until downshift occurs, which is currently mandated for 2028.

5.12 A total of 2x100 MHz of low band spectrum is presently made available to the market – of which 2x95 MHz can be utilised to provide mobile services.<sup>108</sup> In regional areas, Telstra has 47% of usable spectrum, Optus 37% and TPG 21%. This includes spectrum awarded in the recent 850/900 MHz auction which will be allocated in June 2024, but excludes spectrum that cannot be utilised until 2028.

5.13 The state of low band spectrum ownership with the proposed deal is shown below.

Figure 9 Low band holdings (including 850/900 MHz auction allocations)

	700 MHz	850 MHz	900 MHz	Total
<b>Optus</b>	2 x 10 MHz	..	2 x 20 MHz**	2 x 30 MHz
<b>Telstra</b>		2 x 10 MHz		2 x 10 MHz
<b>TPG</b>	2 x 5 MHz*			2 x 5 MHz*
<b>Pooled</b>	2 x 30 MHz	2 x 20 MHz		2 x 50 MHz

Source: Application document. \* cannot be used for public mobile services. \*\* The lower 5MHz block in the 900 MHz band cannot be fully utilised until downshift occurs, which is currently mandated for 2028.

5.14 According to the Application:

- (a) 2x50 MHz of low band spectrum will be allocated to the sharing pool, with Telstra retaining an additional 2x10 MHz for its exclusive use; and TPG retaining 2x5 MHz for its exclusive use;<sup>109</sup>
- (b) TPG will be permitted to use the 2x5 MHz of 700 MHz band spectrum for the provision of managed private networks within the MOCN 17% RCZ.<sup>110</sup> This implies that TPG is not permitted to use this spectrum for the provision of retail or wholesale public mobile services in the downstream mobile market. This spectrum could be used for private network services in the enterprise market. Since it cannot be used for public services, TPG's 2x5 MHz of 700 MHz low band spectrum is removed from the 'total' discussed below.

5.15 No mention is made in the Application about Telstra's 2x10 MHz of 850 MHz band spectrum that it retains for its exclusive use. We interpret this as meaning there are no restrictions placed on Telstra's ability to use that spectrum. As such we have allocated the 2x10 MHz of 850 MHz band spectrum to Telstra as it retains exclusive ownership.

<sup>108</sup> The lower 5MHz block in the 900 MHz band cannot be fully utilised until downshift occurs, which is currently mandated for 2028.

<sup>109</sup> Application, see Table 5, p. 44.

<sup>110</sup> Application at [127(a)], p. 44.

5.16 In total, the state of low band spectrum ownership with the proposed deal will be as follows:

- (a) Telstra will have access to 2x60 MHz of low band spectrum across the RCZ – via ownership and leasing from TPG;
- (b) TPG will have just 2x50 MHz of low band spectrum; and
- (c) Optus will hold 2x30 MHz of low band spectrum.

In simple terms, with the proposed deal, Telstra's low-band spectrum holdings will represent a dominant 66% of all available low-band spectrum.<sup>111</sup> Optus will have 33%, and TPG will have access to 55% of all usable low-band spectrum for public mobile services.

5.17 As the ACCC is aware, low-band spectrum is valuable for coverage due to its favourable propagation characteristics. Limited access to, or significant market disparities in holdings of low-band spectrum will affect an MNO's ability to provide adequate coverage of high-speed mobile broadband, particularly in remote areas.

#### *TPG's ability to withdraw its authorisation of spectrum to Telstra*

5.18 Optus also notes that TPG has the option to "*withdraw its authorisation of spectrum on 6 months' notice for the purpose of building a mobile private network*".<sup>112</sup> While Optus does not have access to the precise language of clause 4(b)(i) of the Spectrum Authorisation, the term 'mobile private network' is noted as this is not a 'public mobile telecommunications network' in which the mobile network is made available to all subscribers. As discussed above, Optus also notes that TPG is permitted to utilise its retained 2x5 MHz in the 700 MHz band for use to "*provide private networks to enterprises*".<sup>113</sup> It is not clear whether this is a commercial decision, or whether the proposed deal expressly prohibits TPG from deploying spectrum (or assets) for the purpose of a public mobile telecommunications network. Optus expects that any prohibition of that nature would be of concern to the ACCC and would reflect Optus' concern that the effect of this deal is to limit the extent to which TPG can meaningfully compete in respect of its own regional network for a period of at least 10 years.

#### *Telstra's dominance of mid band spectrum*

5.19 The state of mid band spectrum ownership with and without the proposed deal is shown below.

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<sup>111</sup> 90 MHz in total is allocated to public mobile services; as TPG is not permitted to use its 2x5MHz of 700 MHz for public services and Optus can only use 2x20MHz of 900 MHz band.

<sup>112</sup> Application, at [125], p. 44.

<sup>113</sup> *Ibid.*, para.127

Figure 10 Regional mid band holdings

	1800 MHz*	2100 MHz	2.6 GHz	3.5 GHz**
<b>Optus</b>	2 x 25 MHz	2 x 5 MHz	2 x 20 MHz	30-35 MHz***
<b>Telstra</b>	2 x 40 MHz	2 x 10 MHz	2 x 40 MHz	50-82.5 MHz
<b>TPG</b>	2 x 10 MHz	2 x 5 MHz		20-40 MHz
<b>Pooled</b>		2 x 15 MHz	2 x 40 MHz	90-125 MHz

Source: ACMA. \* Varies by regional area \*\* 3.5 GHz refers to the 3400 – 3700 MHz range. \*\*\* excluding Regional WA due to restrictions of use. For a detailed outline of the allocation, see Figure 11.

- 5.20 Even prior to the proposed pooling of mid band spectrum, Optus observes that Telstra already had the largest holdings of mid band spectrum.
- 5.21 A total of 155 MHz of FDD<sup>114</sup> and 120-190 MHz of TDD<sup>115</sup> mid band spectrum is currently made available to the market. The state of mid band spectrum ownership without the proposed deal is set out below:
- (a) **FDD spectrum:** Telstra holds 2x90 MHz of FDD spectrum, compared to 2x50 MHz of FDD for Optus – that is, Telstra has 58% of total mid band spectrum and holds 80% more paired spectrum than Optus; and
  - (b) **TDD spectrum:** Telstra holds 50-82.5 MHz of 3.5 GHz spectrum compared to 30-35MHz of 3.5 GHz held by Optus. That is, Telstra has between 67% and 135% more 3.5 GHz TDD spectrum than Optus – notably, 3.5 GHz is the prime spectrum for 5G deployment.
- 5.22 The proposed spectrum pooling deal would advantage Telstra with an even more dominant position of mid-band spectrum holdings. With the proposed deal:
- (a) Telstra will have access to 2x95 MHz of FDD spectrum, which equates to 90% more than Optus which will have 2x50MHz of spectrum; and
  - (b) Telstra will hold 90-125 MHz of 3.5 GHz spectrum, compared to 30-35 MHz of for Optus. Put another way, Telstra will hold around 92% to 257% more total 3.5 GHz spectrum than Optus.<sup>116</sup>
- 5.23 The most significant impact of the proposed pooling arrangement is the concentration of 3.5 GHz spectrum assets – which is the leading 5G band. This band is important to provide the necessary channel bandwidth to deliver the ultrafast speed and low latency which drives the benefits of 5G technology. Less spectrum in the mid-bands can affect a MNO's ability to support traffic and provide adequate quality of service and speed to its subscribers. The ability to deliver large channel bandwidths is especially important for enterprise 5G services. As Optus had indicated elsewhere in this submission, Telstra is already dominant in the enterprise mobile services market, with 79% market share, and enterprise services do not appear to be subject to the non-discrimination clauses in the sharing arrangements with TPG.

<sup>114</sup> Include 1800 MHz, 2100 MHz and 2.6 GHz bands

<sup>115</sup> 3.5 GHz band

<sup>116</sup> For a more accurate comparison of the 3.5 GHz holding see Figure 11.

- 5.24 A detailed discussion around the impact of pooling Telstra and TPG 3.5 GHz spectrum is complicated by the complex set of licence boundaries and different level of holdings. A list of the key non-metro holdings is set out below.

Figure 11 Detailed regional 3.5 GHz holdings

	Optus	Telstra	TPG	Pooled	% difference with Optus
Launceston	35	82.5	40	122.5	250%
Regional NSW	30	65	30	95	216%
Regional VIC	35	50	40	90	157%
Regional SE QLD	35	50	40	90	157%
Regional QLD	30	50	40	90	200%
Regional SA	30	75	20	95	116%
Regional TAS	35	50	40	90	157%
Regional WA – West	65	80	45	125	92%
Regional WA – East	65	80	45	125	92%
Regional WA - Moora	0	80	45	125	92%

Source: ACMA

### Likely impact of spectrum asymmetry on competition in related markets

- 5.25 The proposed leasing of TPG's spectrum to Telstra in regional and remote areas will profoundly impact and substantially lessen the future level of competition in the market. The level of spectrum asymmetry will grant Telstra material network quality and cost advantages which cannot be matched by Optus, or any other potential new entrant network. Not only is the asymmetry large in each spectrum band – it occurs across all major spectrum bands impacting all future technology types (4G and 5G). With the proposed deal, Telstra will own and controls over 70% more low band spectrum than is available to Optus, over 80% more TDD mid band spectrum and up to 250% more 5G mid band spectrum.
- 5.26 Telstra will not only have an unchallengeable unit cost advantage in its network, but it will also have an unchallengeable advantage in 5G service levels. Analysys Mason concludes that:

*the main beneficiary of spectrum utilisation appears to be Telstra, with a significant increase in the active spectrum on its regional network. TPG will gain benefits from NaaS access to this spectrum, but given Telstra's substantial market share, the capacity (relieving congestion, where present in the radio network) and speed benefits will materially benefit Telstra's subscribers.<sup>117</sup>*

- 5.27 The importance of spectrum as a parameter of competition in mobile markets is such that Telstra's dominant spectrum holdings cannot be overcome by its competitors. An abundance of spectrum, particularly low band, improves the cost efficiencies of network deployment while access to a disproportionate amount of mid band spectrum means that Telstra is able to out perform any competition on a capacity basis without the need to invest in expensive spectral efficiency technology. Even if Optus or other new

<sup>117</sup> Analysys Mason report, p.17

entrants had the will and ability to invest in new mobile infrastructure to challenge Telstra's position, they would not be able to deliver the same network quality (nor achieve similar unit cost levels) as spectrum is not available.

- 5.28 The limited amount of spectrum on offer or to be reallocated in the foreseeable future means the structural asymmetry resulting from the proposed pooling arrangements will have an enduring effect.

### **Telstra will have a dominant share of low-band and mid-band spectrum that is contrary to the regulatory intent and competition principles underlying allocation limits in spectrum allocations**

- 5.29 The structural impacts on competition which can arise from significant asymmetry in spectrum holdings as highlighted above is the key reason why strict allocation limits are imposed on spectrum allocations. The competition principles for spectrum allocation limits are generally well-accepted and are reflected in the following:

- (a) the ACCC's recommendation to the Minister in the 850/900 MHz allocation for a 40 per cent limit on all sub-1 GHz holdings as this would "promote competition and investment for the long-term interests of end-users";<sup>118</sup>
- (b) the ACCC's view that such a spectrum allocation limit would promote effective competition in downstream mobile markets, encourage investment including in regional Australia, and enable 4G and 5G deployment by all MNOs;<sup>119</sup>
- (c) the Minister's statement that if the asymmetry of holdings across sub-1 GHz bands was not addressed "it could constrain the ability of some MNOs to compete effectively in the downstream consumer mobile market";<sup>120</sup>
- (d) the statements in the Explanatory Statement to the Radiocommunications (Spectrum Licence Limits—850/900 MHz Band) Direction 2021 that "the ACCC did not find that Telstra requires more spectrum in regional areas to compete or deliver services" and that the "ACCC also rejected Telstra's position that its larger existing customer base should permit it to acquire a higher share of spectrum".<sup>121</sup>

### **As a result of its dominant share of spectrum, Telstra will have insurmountable advantages that will limit competition in downstream markets**

- 5.30 The unprecedented level of asymmetric control that Telstra will have over spectrum holdings raises material concerns that this will limit competition in related downstream markets. Optus asked Analysys Mason to review the impact of the proposed spectrum deal. They conclude that:

*The overall effect of licensing TPG's spectrum in the regional areas to Telstra for ten or more years provides Telstra with a dominant (~65%) occupancy of spectrum in the regions. This leads to substantial technical benefits, allowing Telstra to offer much higher network speeds. These higher network speeds will not be achievable by Optus, the remaining competitor, from a technical standpoint, as Optus has less spectrum and from an economic standpoint, due*

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<sup>118</sup> ACCC, 2021, 850/900 MHz allocation - Allocation limits advice to the Minister - March 2021, p.15

<sup>119</sup> Ibid., p.16

<sup>120</sup> Radiocommunications (Spectrum Licence Limits—850/900 MHz Band) Direction 2021, explanatory statement, p.1

<sup>121</sup> Radiocommunications (Spectrum Licence Limits—850/900 MHz Band) Direction 2021, explanatory statement, p.38



*to the cost–benefit consideration of deploying mMIMO without sufficient carrier bandwidth. As a result, Optus’s speed-based offers (or that of any potential new entrant) to customers in the regional areas are unlikely to be competitive in the medium to long term compared to Telstra’s.*<sup>122</sup>

- 5.31 Being able to offer higher quality products in the market due to spectrum advantages is not by itself a bad outcome. Rather, it is when the dominant network is able to acquire a dominant share of spectrum (above that allowed in auctions) and has the capacity to use that spectrum in a manner that significantly lessens competition. In other words, spectrum holdings that lead to a lessening of competition should not be permitted.
- 5.32 Of particular concern is the material disparity in Telstra's 3.5 GHz spectrum holdings which will have significant implications for the type and quality of 5G services that can be deployed by Telstra using these licences compared to its only other true network competitor, Optus. Analysys Mason has identified the unique advantages arising from Telstra's large holdings of 3.5 GHz spectrum, which includes the following:
- (a) allows Telstra to deploy a larger spectrum carrier and significantly increase headline speeds provided by Telstra in regional areas. As the ACCC knows, acquiring additional spectrum allows an MNO to aggregate carriers and increase carrier sizes to increase offered and achieved headline speeds. The headline speed that can be offered is generally determined by the largest aggregated spectrum carrier available;
  - (b) allows for the economically efficient deployment by Telstra of massive Multiple-Input Multiple-Output (MIMO) technology which will enable a further increase in speeds by a factor of four; and
  - (c) with the use of massive MIMO using 90 MHz, Telstra could achieve speeds of 405 Mbps.<sup>123</sup>
- 5.33 This can be compared against the 25-35 MHz of 3.5 GHz spectrum held by Optus. Analysys Mason highlight that Optus can “*only offer a fraction of the speeds offered by Telstra*”, as it is “*unable to economically deploy mMIMO*”.<sup>124</sup> As a result, Analysys Mason conclude that Optus could only deploy speeds of 39 Mbps using 5G over 3.5 GHz (compared to the 405Mbps which Telstra could achieve using massive MIMO with its disproportionate 3.5 GHz spectrum holdings).
- 5.34 Without the pooling arrangements, Telstra would have been able to utilise its 50 MHz of 3.5 GHz to deploy similar speeds to Optus (56 Mbps). Whilst still higher than Optus, this would have put the service quality of the respective 5G networks on similar levels and importantly allowed the network to compete for key enterprise customers.

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<sup>122</sup> Analysys Mason report, p.21

<sup>123</sup> Analysys Mason report, p.21

<sup>124</sup> Analysys Mason report, p.3

Figure 12 Impact on 5G speeds from spectrum pooling

Figure 4.3: Achievable 5G headline speeds in the 3.5GHz band (Mbit/s)<sup>20</sup> [Source: Analysys Mason, 2022]

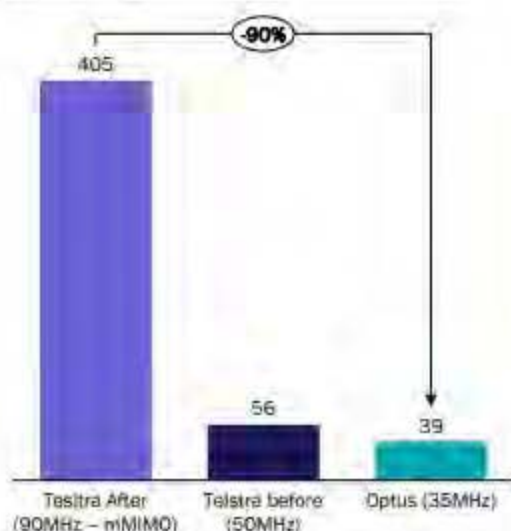
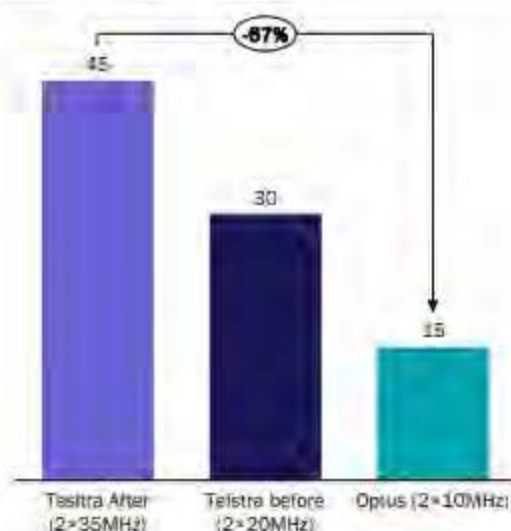


Figure 4.4: Achievable 5G headline speeds in the 700MHz band (Mbit/s)<sup>21</sup> [Source: Analysys Mason, 2022]



Source: Analysys Mason, p.21

5.35 Similar impacts to those outlined above in relation to the 3.5GHz band arise in the following spectrum bands:

- (a) **700MHz band:** this is essential for coverage and of particular use in rural areas. Telstra is expected to be able to achieve speeds of 45 Mbit/s while Optus will only be able to offer speeds of 15 Mbit/s, one third of Telstra. This analysis does not take into account the impact of optimised carrier aggregation which could further benefit Telstra given its broader portfolio of spectrum with the proposed arrangements; and
- (b) **1800MHz and 2100MHz band:** Telstra will have significant additional spectrum in these bands which could allow it to increase headline speeds. Telstra will have access to approximately double the mid-band spectrum that Optus holds, allowing Telstra to achieve double the headline speed that is achievable on Optus' network. While Telstra has access to these bands, it is noted that Telstra has not deployed this spectrum in its regional network (see below). This represents an inefficient use of these assets.

5.36 We note that Telstra has stated that the spectrum pooling arrangements provide it with greater 5G service speeds.<sup>125</sup> Telstra claims this as a benefit to Telstra. Indeed it is, but it also creates a barrier for alternative network providers which cannot be overcome. Optus also challenges the extent to which the extra spectrum provides a benefit to Telstra given its current inefficient use of mid band holdings. The extent to which Telstra is efficiently using its existing spectrum is discussed in further detail below.

<sup>125</sup> Application, p.88

*The spectrum arrangements will give Telstra the ability to aggregate spectrum across bands to deliver higher network speeds that Optus cannot match*

- 5.37 Further, Analysys Mason highlights that the arrangement enables Telstra to aggregate spectrum across bands to deliver higher speeds:

*The latest 3GPP specifications allow for aggregation of multiple 5G carriers to above 100MHz, which means that Telstra is likely to be able to further increase headline speeds in the regional areas by aggregating the 3.5GHz band with other 5G spectrum or acquiring additional spectrum in a future auction.<sup>126</sup>*

- 5.38 Analysys Mason states that the:

*... additional spectrum provided by TPG could enable Telstra to deploy larger carriers and/or allow for different carrier aggregation configurations. In the 2.6GHz band, Telstra holds double the spectrum Optus owns and is already able to offer double the speeds Optus can achieve on its network.<sup>127</sup>*

- 5.39 The asymmetric holdings – including the greater use of carrier aggregation – is likely to have a material impact on the ability of other network operators to compete in the regional areas. By allowing Telstra to gain a dominant spectrum holding, over the ten or more years of the proposed arrangements this will lead to substantial technical advantages in allowing Telstra to further optimise carrier aggregation between different bands, increase carrier sizes, and ultimately offer higher network speeds. Similar network speeds will not be achievable by Optus in regional areas, the sole remaining network competitor to Telstra, neither technically, due to its lesser spectrum holdings, nor economically, given the cost-benefit of deploying massive MIMO without sufficient carrier bandwidth. As a result, Optus's speed-based offers in regional markets in the medium to long term are unlikely to be competitive against Telstra.

### **Size of subscriber base is not an indicator of the need for spectrum**

- 5.40 The applicants argue that the asymmetric holding of spectrum is required due to the larger subscriber base of Telstra in regional areas. Indeed, the only defence put forward by the applicants for its unprecedented level of spectrum ownership is based on a spectrum per customer basis.
- 5.41 The applicants appear to be suggesting that a benefit of the Proposed Transaction is that spectrum sharing will enable Telstra to optimise the engineering efficiency of the Telstra mobile network. If such logic is taken to its conclusion, Telstra in effect is arguing that engineering efficiency requires one national network to which all available spectrum should be allocated. While this may produce the purest engineering outcome, engineering efficiency is not the relevant test for this application. Rather, the focus of the inquiry is whether the proposed asymmetric holdings of Telstra will likely lead to a substantial lessening of competition in relevant markets.
- 5.42 The Applicants' argument focuses on static efficiency (i.e highest output from input utilised) but ignores dynamic efficiency that is achieved through the competitive process. If the applicants are correct, their argument supports one national mobile network with all spectrum assets utilised and operating to the engineering maximum. But such a market structure has not been, and would most likely not be, supported by competition regulators. This is because a focus solely on static issues ignores the very

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<sup>126</sup> Analysys Mason Report, p.20

<sup>127</sup> Analysys Mason Report, p.21

important role that dynamic efficiency plays in ensuring pro-competitive and pro-consumer outcomes.

- 5.43 This conclusion should not be surprising to the ACCC, as just last year the ACCC addressed the use of engineering argument to defend large asymmetric holding. The argument put forward by Telstra in 2021 was rejected by the ACCC and we support the ACCC continuing its position in this decision. Last year the ACCC stated that it

*... does not consider that the size of an MNO's subscriber base is necessarily the best indication of capacity or spectrum requirement...the mobile services market is a dynamic market where operators have incentives to improve their networks over time in order to gain customers from their rivals. Determining the spectrum requirements of an operator based on its existing customer base at any given point risks entrenching existing market structure, and restricts the ability of operators to improve their services in order to gain market shares over time.<sup>128</sup>*

Optus submits that this is the correct interpretation.

### Telstra/TPG's analysis of spectrum holdings is incorrect

- 5.44 The above section suggests that the claim which is made by Telstra that it requires more spectrum due to a larger subscriber base is not an appropriate way in which to approach the issue (and is not how the ACCC has considered the issue in the past). However, even if it were, Telstra's claims are incorrect. In fact, when Telstra's errors are corrected, data shows that Telstra has more spectrum per subscriber than Optus.
- 5.45 Table 13 in the application document presents a breakdown of bandwidth per SIO (Hz/SIO) in the 17% RCZ. This analysis contains a fundamental error as it does not consider the number of sites deployed. As noted elsewhere in the Application, spectrum and sites are interchangeable to provide capacity. That is because each site reuses the capacity of the spectrum – if a network has more sites in an area, it can provide greater capacity for the same amount of spectrum.
- 5.46 Utilising figures in the Application document and the Feasey report, we can correct for this error. The below customer figures are derived from Figure 15 in the Application and the number of total sites is sourced from the Feasey report.

Figure 13 Customer and Sites in the RCZ

	Customers	Total Sites Feasey	Total Sites Corrected
<b>Telstra + TPG</b>	4,031,209	3,869	3,921
<b>Optus</b>	1,491,018	2,500	2,274

Source: Application Document; Feasey Report, p.9, RFNSA

- 5.47 Figure 13 corrects the methodological mistake in the Application and calculates the correct metric namely, spectrum per site per SIO (kHz/Site/SIO). The corrected analysis demonstrates that Telstra will have access to more spectrum on a site/SIO basis than Optus across all the spectrum bands. The MOCN area and Optus will hold approximately similar levels of spectrum for low-band, but the Telstra-TPG MOCN will

<sup>128</sup> ACCC, 2021, 850/900 MHz allocation - Allocation limits advice to the Minister - March 2021, p.15Ibid

dominate the alternative Optus network for mid-band spectrum, with Optus holding around two thirds the spectrum of the combined network.

Figure 14 MTM premise coverage

	Telstra + TPG			Optus			Comparison	
	Spectrum	Hz/SIO	<i>kHz x Sites/SIO</i>	Spectrum	Hz/SIO	<i>kHz x Sites/SIO</i>	R	<i>R Sites Included</i>
<b>All Spectrum</b>	470	116.58	457	220	147.55	336	1,266	0.734
<b>Low Band only</b>	120	29.77	117	70	46.95	107	1,577	0.915
<b>Mid Band Only</b>	350	86.82	340	150	100.60	229	1,159	0.672

Source: Application Document; Feasey Report, p.9

- 5.48 It is also not clear, at least on the public information available, the extent to which Telstra’s claim of congestion is a substantial issue. The Applications claims the 4G network has periods of congestion.<sup>129</sup> This may be true – after all, all mobile networks face period of congestion. We discuss this in more detail below.
- 5.49 Optus further notes that Telstra has submitted to the ACCC in relation to allocation limits for 3.4 GHz and 3.7 GHz bands, that the ACCC could not assume that Telstra will actually utilise the additional spectrum it receives from the Proposed Transaction. Telstra cannot have it both ways – either this spectrum is needed to address congestion and will be used by Telstra or it is not needed and will not be fully utilised.<sup>130</sup>

**Telstra is not efficiently using its current spectrum holdings – it does not require more**

- 5.50 A key element of claimed benefits to Telstra is that access to the additional spectrum will help to alleviate congestion in its regional network. Optus has analysed these claims and conclude that they are false. We find that:
- (a) Telstra is under-utilising its current spectrum assets by not deploying mid-band spectrum across its regional towers; and
  - (b) 3G shutdown and additional 850 MHz spectrum in June 2024 should address any congestion.
- 5.51 We discuss these in more detail below.

*Telstra is inefficiently underutilising its mid band spectrum*

- 5.52 Telstra does not lack spectrum to support the capacity demand for its customers in the regional areas.
- 5.53 In regional and rural areas, low-band spectrum, such as 700 MHz and 850 MHz, provides long range coverage for low population density areas, while mid-bands such as 1800 MHz and 2100 MHz bands could reach deeper coverage areas to provide

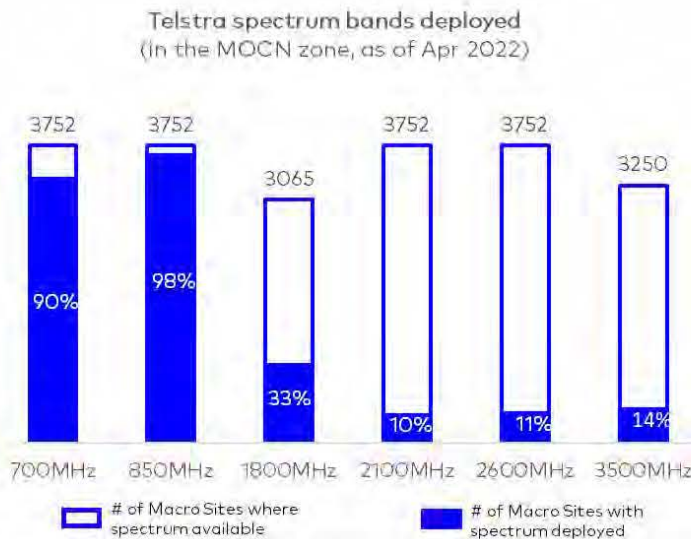
<sup>129</sup> Application, p.86

<sup>130</sup> Telstra Corporation Limited, Response to the ACCC’s consultation on Allocation limits advice for 3.4 GHz and 3.7 GHz bands spectrum licence allocation – public submission; 06 May 2022

capacity. For the sites in the major towns, 2600 MHz band provides additional capacity boost. This is a common practice in the Australian mobile industry.

5.54 Telstra has enough mid-band spectrum holdings to boost its capacity in the regional. However, as of April 2022, Telstra has only deployed 1800 MHz on 33% of sites where they hold licences; and 2100 MHz is only on 10% of sites where they hold licences (see Figure 15 below).

Figure 15 Telstra deployed spectrum



Source: RFNSA, Optus analysis

5.55 Mid bands such as 1800 MHz and 2100 MHz provide greater coverage in regional areas due to less propagation loss than in the metropolitan areas. Mid bands are the key spectrum to offer network capacity. Telstra currently holds 1.7 times more mid-band spectrum than Optus in the regional areas. Telstra may claim that even though mid band can travel further in regional areas, the population remains too fragmented for efficient use of this spectrum. Optus' analysis finds that any such claim is false.

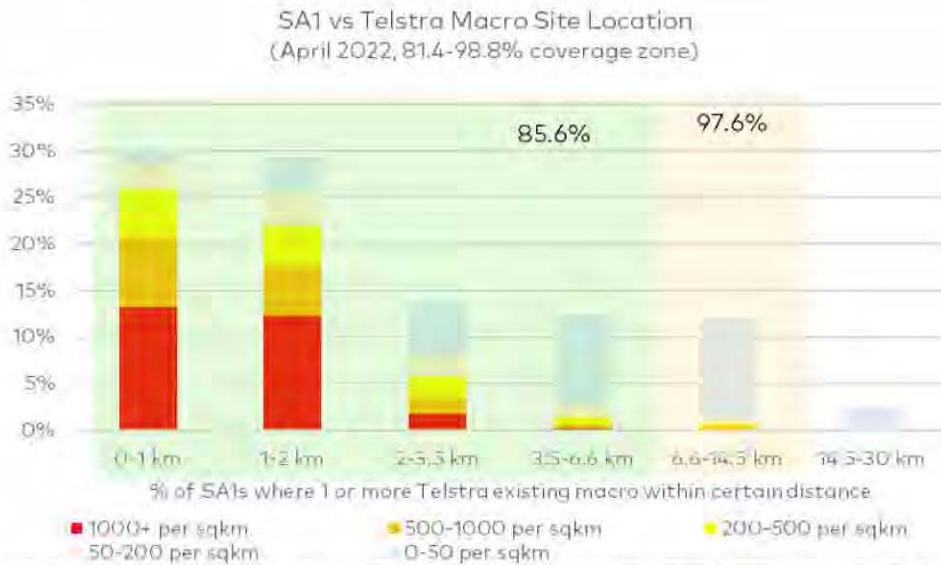
5.56 [CIC]

Figure 16 [CIC]

Source: Optus network data

5.57 Importantly, Telstra's sites in the regional areas are close enough to the regional populated areas for the mid bands to serve the increased capacity demand. Optus' analysis of SA1 populations and locations of Telstra sites shows that 86% of the population within the RCZ lives within 6.6km of a Telstra tower, and 98% live within 14.5 km of a Telstra Tower.

Figure 17 Population distance from Telstra sites



Note: The distance between SA1 and Telstra macro site is calculated between the SA1\_AUST2016 centroid and the location of the Telstra macro sites.

- 5.58 It is clear from Optus' analysis that Telstra could, if it chose to, deploy its extensive mid band holdings to alleviate congestion on its regional network. The fact that it chooses not to demonstrates the inefficiency of Telstra's spectral use. Such inefficiency should not be rewarded by a grant of additional spectrum.
- 5.59 We anticipate that Telstra will claim mid band is not suited for rural areas. The above analysis on location of sites and distances from population centres disproves this. Additionally, we note that mid band is currently used in the New Zealand Rural Connectivity Group<sup>131</sup>, who manages the New Zealand rural active sharing network. The RCG states: "RCG will mainly use 700 MHz frequency because it is the spectrum best suited for rural users, and this will be supported with 1800 MHz and 2100 MHz frequencies if additional capacity is required."
- 5.60 Any claim that mid band is not suitable to alleviate rural network congestions is not supported by facts.

*Additional low band spectrum in June 2024 will address any issues*

- 5.61 We acknowledge that it may be possible that Telstra 3G (UMTS) network provided over its 850 MHz spectrum is congested. But this is largely due to its inefficient refusal to deploy its mid band spectrum.
- 5.62 Further, Optus' analysis that the congestion on the 850 MHz band will be addressed in June 2024 without the proposed agreement, due to Telstra switching off its 3G network and an additional 2x10 MHz of 850 MHz it recently acquired. At a minimum, Telstra will have an additional 2x15 MHz of 850 MHz freed up.
- 5.63 Telstra's 2x15 MHz 850MHz spectrum-refarm from 3G to 4G or 5G will increase capacity by 2.4 and 3.6 times for 4G and 5G, respectively. This capacity boost will flow through to 87% of its regional network after Telstra shuts down its 3G network.

<sup>131</sup> "RCG Marches On Into 2022"; 23 December 2021 available at <https://www.thercg.co.nz/rcg-marches-on-into-2022/>

5.64 This low band boost is in addition to the capacity provided through efficient use of Telstra’s mid band holdings.

Figure 18 Telstra spectrum usage in RCZ

Telstra's Spectrum Bands	Spectrum Available (unit: MHz)	# of Macro Sites Spectrum Available <sup>1</sup>	# of Macro Sites Spectrum Installed by Telstra <sup>2</sup>			
			WCDMA	LTE	NR	Total (% to available sites)
700MHz (FDD, paired)	40	3752		3369		3369 (89.8%)
850MHz (FDD, paired)	50 <sup>3</sup>	3752	3248		425	3673 (97.9%)
1800MHz (FDD, paired)	70-80	3065		1013		1013 (33.1%)
2100MHz (FDD, paired)	30 <sup>4</sup>	3752	38	327		365 (9.7%)
2600MHz (FDD, paired)	80	3752		364	30	394 (10.5%)
3500MHz (TDD, unpaired)	50-82.5	3250			442	442 (13.6%)

Note 1: Macro site count is calculated by Optus based on RFNSA site data information (April 2022), public ACMA spectrum boundaries and Telstra wholesale coverage map:

<https://www.telstrawholesale.com.au/products/mobiles/coverage.html>

Note 2: Spectrum installed is based on RFNSA site data information (April 2022). Telstra does not install the full spectrum bandwidth in some mid-bands based on Optus drive testing report

Note 3: This includes Telstra’s Extended 850 MHz Band (804-814MHz/849-859MHz) which Telstra won at the auction in 2021 and will be available from June 2024

Note 4: 2100MHz apparatus licenses are included.

*Telstra will need to upgrade its rural sites with and without the Proposed Transaction*

5.65 Telstra may claim that the above work cannot be carried out as it requires expensive site visits and would otherwise be uneconomic. We would challenge any such claim.

5.66 Importantly, both with and without the proposed agreement, Telstra will need to visit these sites to operate the additional spectrum leased by TPG, or to give effect to the 3G network shut down.

5.67 We estimate that Telstra still has a large number of radio units that do not support the full 700MHz band, which will require an upgrade to new generation radio units. With an increased total low band bandwidth under MOCN spectrum pooling (Telstra is increasing from current installed base on 2x35MHz to 2x 60MHz) one radio unit will have challenges to transmit power to maintain the same power spectrum density. Any reduction of the transmit power will likely result in coverage shrink. It is expected an additional radio unit will be required for the MOCN configuration to support the increased bandwidth. This additional radio unit requires a site visit to install.

5.68 Furthermore, Telstra will need to visit and upgrade 87% of their sites in the zone to migrate their existing WCDMA850 to LTE/NR850. The site upgrade service cost forms the major part of the network cost. The delta cost for mid-band addition is not significant.

5.69 Optus’ analysis shows that Telstra will need to visit these sites under any future scenario. Optus considers that any submission based on cost to install as a reason why Telstra cannot efficiently utilise its existing spectrum holdings should be carefully tested.



## Section 6. ASSESSING THE COUNTER-FACTUAL

- Infrastructure-based competition drives better outcomes than access-based competition.
- When businesses are able to differentiate themselves from competitors, consumers benefit from the resulting choice in service and innovation from businesses to provide the best service.
- This type of competition, and the resulting benefits, would come from investment in a competitive national 5G network. Optus had committed to such an outcome prior to the proposed arrangement. It will not come from the proposed MOCN arrangement.

- 6.1 Optus does not take issue with the way in which the Applicants summarise the ACCC's task in Section 3 of the Application. Whether the Proposed Transaction is likely to have the effect of substantially lessening competition must be assessed with and without the Proposed Transaction.
- 6.2 For the reasons outlined below, Optus considers that:
- (a) The ACCC should not regard the Proposed Transaction as 'term-limited'. To the contrary, it would involve a fundamental and permanent change in the telecommunications landscape in Australia. In circumstances where TPG will be decommissioning its regional network, it is implausible that it would rebuild that network in 10 years' time. The Proposed Transaction would involve an irreversible change to the market structure for mobile services in Australia.
  - (b) Optus agrees that the most likely counterfactual for Telstra is the status quo. That would involve Telstra remaining the dominant supplier of mobile services in Australia, enjoying significant coverage advantage (including 5G) beyond Optus' and TPG's coverage areas, significant scale and cost advantages, and a significant technology first-mover advantage courtesy of the security ban on equipment that affected other competitors.
  - (c) TPG would continue to compete to supply mobile services, both in metropolitan areas and in the RCZ. Optus accepts that, absent the Proposed Transaction, TPG would be likely to consider alternate network sharing arrangements to expand its mobile coverage in regional areas. There is, however, nothing to suggest that alternate structures would invariably involve TPG decommissioning its existing mobile network in regional areas.
  - (d) Optus would continue with its current investment plans and continue to seek opportunities to accelerate its investment, [CIC]
- 6.3 In conducting its review, the ACCC will invariably have regard to the implications of the Proposed Transaction for individual market participants. The ACCC should, however, remain focused on the likely future state of competition both with and without the Proposed Transaction, rather than the particular implications that could eventuate for specific operators if the arrangement were to proceed.

## **The counterfactual is not 'term-limited'**

- 6.4 The Applicants have submitted that because the Proposed Transaction does not involve the transfer of shares or assets and is term-limited, the counterfactual should therefore be assessed against the term of the Proposed Transaction.<sup>132</sup> The ACCC should reject that proposition.
- 6.5 For reasons dealt with elsewhere in Optus' submission, the Proposed Transaction will result in a fundamental and permanent shift in the telecommunications landscape in Australia. The MOCN Agreement will extend for a minimum of 10 years and potentially for a period of 20 years. Looking back 20 years, the mobile network in Australia was operating on 1G and 2G technology. The 3G standard was not introduced until 2003. Mobile technology will continue to experience rapid innovation over the coming 20 years. The ACCC should regard the Proposed Transaction as bringing about permanent and structural market shift, particularly for services in regional Australia, which will impact incentives for the roll-out of 5G technology as well as future innovations in the sector.
- 6.6 The Application also confirms that TPG has, in the context of the Proposed Transaction, elected to decommission its mobile network in the RCZ.<sup>133</sup> That will involve TPG removing 725 mobile sites in regional Australia, with negotiations about Telstra possibly electing to gain access to almost a quarter of the sites. It is unclear if Telstra would, in time, acquire the sites.
- 6.7 In circumstances where TPG is decommissioning its regional network (subject to the possibility of granting Telstra access to some sites), it is implausible that the counterfactual should be viewed as being term limited. When the Proposed Transaction ends TPG would, in the absence of a similar network sharing arrangement, need to negotiate the re-installation of equipment to any remaining TPG sites or, alternatively, commission new sites as part of a new regional rollout. That outcome cannot be viewed as rationally possible, including based on TPG's stated position in the Application. There is also nothing to suggest that an alternate network sharing agreement would be available at the end of the proposed arrangements; that will, in part, depend on the incentives to invest should the proposed transaction proceed.
- 6.8 Despite the commercial terms of the Proposed Transaction, the ACCC should regard the Proposed Transaction as leading to a permanent shift in the mobile telecommunications landscape in Australia.

## **Telstra would continue to compete vigorously**

- 6.9 Optus accepts the position that the most likely counterfactual for Telstra is the status quo. For the same reasons as are set out elsewhere in this submission, the status quo is one in which Telstra enjoys:
- (a) 52% mobile network SIO and 44% retail market mobile share; 69% retail mobile share in regional areas; 79% enterprise mobility revenue share;
  - (b) Material network quality perception advantage and ongoing coverage advantage over the market allowing Telstra to maintain its current price premium for mobile services;

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<sup>132</sup> Application at [39].

<sup>133</sup> Application at [164].

- (c) Significant cost and technology first-mover advantages in 5G arising from the national security decision; and
- (d) Effective competitive pressure from Optus' national and regional mobile investments, resulting in Telstra targeting investment and pricing decisions off actions by Optus, and continue to react to ongoing regional investment and service improvements by Optus.<sup>134</sup>

### **Optus would compete through a roll-out a national 5G network despite the challenges**

- 6.10 Optus has been a long-term investor in mobile infrastructure aiming to compete with Telstra on a national basis. Optus' investment in leading edge technology and high-quality infrastructure has resulted in a leading market share position in capital cities and urban areas.
- 6.11 Optus' biggest hurdle has been breaking Telstra's dominance in regional markets. Telstra continues to hold a market share of circa 70% in regional locations notwithstanding the large levels of infrastructure investment by Optus. From 2015 Optus initiated a major program to extend and upgrade its 4G network nationally. This included \$1 billion of investment to improve regional mobile services by upgrading 1,800 sites from 3G to 4G and building 500 new 4G sites. This investment was designed to put Optus ahead of Telstra on 4G service performance in many regional communities. With improved coverage, service quality and a price discount to Telstra, Optus should have been able win substantial share.
- 6.12 **[CIC]** This reflects the difficulty of unrusting customers from Telstra and changing historic perspectives about service quality and coverage. It also reflects the competitive response from Telstra which improved its network and commercial discounts in areas where Optus has matched the Telstra network capabilities.
- 6.13 While Optus did not receive the boost it anticipated from the regional enhancements, consumers in these areas benefitted significantly. Not only did they have an enhanced Optus network – but they had access to Telstra's enhanced network. Optus' investment, in effect, delivered two world class 4G networks to key regional areas. Absent this investment, regional areas would not have had access to world class 4G. This is the competitive investment cycle that Optus wants to continue.

### *5G investment challenges*

- 6.14 The transition to 5G technology has proven to be even more challenging. Optus has faced significant structural market factors that make the economics of investment in regional areas challenging, particularly in respect of 5G technology.
- 6.15 The most material challenge has been the impact of the national security guidance on the use of 5G vendors. Optus had developed detailed plans to be first to market with 5G, deploying the fastest network and to lead in 5G coverage. This plan aimed to leverage Huawei's technology leadership in 5G and Optus' mid band spectrum holdings, which in combination would enable Optus to quickly deploy 5G across the major capital cities and to then leverage that advantage as Optus increasingly moved into regional areas. However, these plans were rendered impossible by the security guidance issued by the Government in August 2018.

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<sup>134</sup> The Application also accepts this point, as does the Feasey Report.

- 6.16 The Government's 5G security guidance ruled out the ability for Optus to utilise Huawei to provide new 5G technology. This required Optus to materially alter well advanced 5G investment plans due to the need to source an alternative European supplier of the 5G technology. More impactful, however, the security guidance has also necessitated the replacement of legacy Huawei technology on sites being upgraded to 5G (circa 4,000 sites) to mitigate the risk of any 5G traffic touching legacy Huawei equipment. This may have been an unintended consequence, but it has had material implications.
- 6.17 This has created significant additional burdens for Optus that are not faced by Telstra:
- (a) There are significant additional costs for Optus to acquire and deploy replacement 4G technology and to retrofit existing towers;
  - (b) 5G deployment has been significantly delayed; and
  - (c) It has been necessary to divert capital away from investment in new 5G technology in order to replace legacy equipment to make sure it complies with the national security guidance from the Government. This has materially impacted costs and timing of 5G deployment. The overall direct cost impact to Optus is estimated to be around [CIC], a cost that is not borne by our major competitor.
- 6.18 These impacts are most acute in regional Australia, which is where the majority of Optus' Huawei equipment is deployed.
- 6.19 Compounding these challenges, Telstra has sought to double down on the impact of the Huawei ban to accelerate its 5G investment. In both 2020 and 2021 Telstra announced that it would accelerate its 5G investment. Telstra has also benefited from two further advantages to help drive the acceleration its 5G roll-out:
- (a) Firstly, it has been able to leverage its low band spectrum advantage deploying its entire 850 MHz band for 5G giving it wide area 5G coverage across regional locations. Optus has no low band spectrum it can deploy for 5G until it gains access to the 900 MHz spectrum acquired in the 2021 spectrum auction. In the event that Optus is unable to obtain early access to this spectrum, it will not be available to Optus until mid-2024.
  - (b) Secondly, Telstra has been able to leverage the benefits of its historic incumbency to reinforce its dominant position in regional areas, such as access to the capacity of its fixed line transmission network and the fact that it continues to receive the vast majority of government regional funding.
- 6.20 These factors have enabled Telstra to gain a significant first mover advantage in the deployment of 5G with the result that it has a material 5G coverage advantage. Telstra currently claims that it has more than 77.5% population coverage with 5G.<sup>135</sup> Optus, on the other hand, with insufficient spectrum and the inability to affordably deploy 5G on existing sites has only managed to achieve [CIC] 5G population coverage. TPG, which is equally impacted the security decision, is even further behind.<sup>136</sup> Despite this, Optus has, until now, remained committed to a broad 5G rollout, including in regional areas.

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<sup>135</sup> <https://rcrwireless.com/20220218/5g/telstra-5g-network-covers-over-77-australian-population-ceo>

<sup>136</sup> Optus estimates as at March 2022. Optus largely agrees with the description in the Application of the commercial difficulties imposed on TPG (and Optus) as a result of the guidance.

*Optus has committed to rolling out a 5G national network*

- 6.21 [CIC]
- 6.22 While the delivery of a national 5G network is challenging, it is clear that Optus has a plan to deliver competitive national infrastructure, including enhanced 4G and 5G.
- 6.23 Considering the business case challenges, Optus also pursued several initiatives which were designed to achieve a stronger market position for Optus relative to Telstra in order to bring forward 5G investment:
- (a) [CIC]
  - (b) [CIC]; and
  - (c) Investing heavily in world-leading innovation and real network and service differentiation, introducing a Living network with features unmatched by any competitors.
- 6.24 These initiatives would enhanced and improve the Optus business case for its national 5G roll out – including bringing forward the timelines. But to be clear, even without these initiatives Optus still intended to roll out its national 5G network and has been continuing to execute on its 5G strategy developed in 2020.

**TPG would compete, potentially aided by an alternate sharing arrangement**

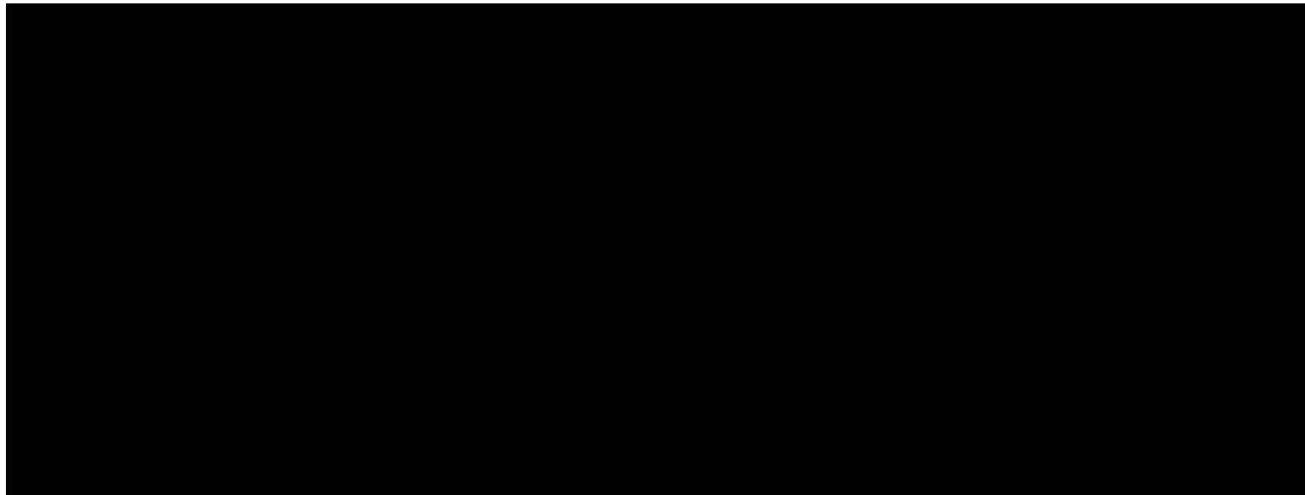
- 6.25 In the absence of the Proposed Transaction, Optus considers that TPG would continue to compete to supply mobile services, both in metropolitan areas as well as in the RCZ. While the Application indicates that TPG has made the unilateral decision to decommission its existing regional network in the context of the Proposed Transaction, there is nothing to suggest that TPG would make that decision absent the arrangement.
- 6.26 While TPG currently has fewer sites in the RCZ compared to Telstra and Optus, Optus rejects the suggestion that TPG would need to 'catch up' in order for TPG to compete.<sup>137</sup>

*TPG is likely to consider alternate sharing arrangements*

- 6.27 Optus accepts that, absent the Proposed Transaction, TPG would be likely to consider alternate arrangements that would expand its mobile coverage in regional areas. For the reasons outlined elsewhere, coverage is a significant consideration when customers acquire mobile services (either on a retail or wholesale basis). TPG would consider all commercial options to maximise its coverage.
- 6.28 An existing joint venture (eJV) arrangement between Optus and TPG has been in place since 2004 which provides for passive sharing and 3G roaming in regional and urban fringe areas. [REDACTED]

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<sup>137</sup> Application at [48].



- 6.31 The evidence confirms that the counterfactual to the Proposed Transaction is a market with an alternative competitive national 4G/5G network to compete against the dominant Telstra national network.
- 6.32 In a three-player market it is incorrect to equate a sharing arrangement between a smaller player and the dominant incumbent to a sharing arrangement between two smaller players seeking to gain a greater scale to compete more effectively against a dominant incumbent. The impact that such arrangements would have on market structure and the extent of competition that follows is completely different and will depend on the combination and form of the sharing arrangement.

## Section 7. THE FUTURE STATE OF THE MARKET

- A MOCN can be pro-competitive and deliver consumer benefits if it is structured to ensure players gain relevant scale and enhance competition in the market. These benefits include reducing the costs of and facilitating network expansion, improving efficiency of spectrum use and enhancing consumer choice by increasing competition.
- The proposed MOCN arrangement will deliver none of these outcomes.
- With the proposed arrangement, the future market will be characterised by one strong provider (Telstra) and two weaker providers who are constrained for different reasons – TPG because the arrangement ensures its structural dependence upon Telstra and Optus because it will have reduced incentives to invest and promote its network [REDACTED]
- Given the terms of the arrangement TPG will have limited scope to provide any meaningful price competition. In fact, given the economics of the arrangement, it is likely to be forced to increase its prices. Optus will not be in a position to provide investment leadership or innovation to improve customer offerings.
- The transactions would reduce infrastructure-based competitors from 3 to 2. More worryingly, the combination of players 1 and 3 by size squeezes player 2 and makes investment at the margin undesirable in the region.
- The Proposed Transaction will likely lead to a substantial lessening of competition in the national retail and wholesale mobile market, as well as in respect of enterprise and government customers.

- 7.1 The ACCC's task is to assess the effect of the Proposed Transaction on competition by testing the likely future state of competition with and without the Proposed Transaction. In carrying out that task, carefully testing market structure and the implications of the Proposed Transaction on the structure of the market is essential to the ACCC's review.
- 7.2 The application and the supporting expert report by Mr Feasey both fail to properly grapple with the permanent structural shift that will occur in the market, and the impact of that change on the roll-out of 5G technology in regional areas, particularly by Optus. They also do not properly engage with the pro-competitive features of the counterfactual which, in particular, will involve more effective competitors that would constrain Telstra. These errors are highlighted in the expert reports from CEPA and Houston Kemp. CEPA find that "*Mr Feasey has applied an inappropriate counterfactual and his analysis is therefore flawed and findings are erroneous*"<sup>138</sup>. Further, Houston Kemp state that the Mr Feasey's fundamental error is that it assumes "*that the effect of the proposed arrangement on competition results directly from net effect of the proposed arrangement on individual competitors*"<sup>139</sup>, but this approach misses an important concept – "the manner in which the proposed Telstra/TPG arrangement will affect the degree of differentiation and therefore competition between rivals."<sup>140</sup>
- 7.3 Importantly, using the very same assumptions as Mr Feasey but applying the correct methodology and assessment framework, both CEPA and Houston Kemp conclude that the Proposed Arrangements:

<sup>138</sup> CEPA Report, p.7

<sup>139</sup> Houston Kemp, p.21

<sup>140</sup> Houston Kemp, p.21

- (a) “in my opinion it is reasonable to conclude that medium to longer term competition in the retail and wholesale mobile services markets would be, or would likely be, lessened as a result of the proposed Telstra/TPG arrangement;”<sup>141</sup> and
- (b) “would likely be refused on the grounds of a substantial lessening of competition, or approved only with substantial conditions.”<sup>142</sup>

7.4 In this section Optus explains that:

- (a) As described in section 3, Telstra’s incentive to invest and compete is driven by the presence of Optus in key locations and market segments.<sup>143</sup> The Proposed Transaction will enhance Telstra's already dominant position through features of the arrangement including, among others, Telstra's access to and control of additional spectrum (particularly low band spectrum), and its first-mover advantage in terms of 5G roll-out and its ability to make coverage claims. As a result, in the long run, Telstra will not face any significant price pressure for users seeking regional coverage. This will lead to increased prices and no scope for material service differentiation.
- (a) While there may be short term benefits for TPG and therefore its customers, the Proposed Transaction will effectively lock TPG into a position of being weaker than, and dependent on, Telstra including, in particular, through the 6-month 5G delay which is imposed on TPG (and will, in practice, likely be longer due to Telstra's ability to sign customers on lock-in contracts), limitations onto TPG's ability to access 5G enterprise technologies and the fact that the non-discrimination provisions do not apply to enterprise products.
- (b) Optus is acutely aware of the value that users place on network coverage in regional areas. Optus' roll-out plans for 5G were based on certain assumptions about Optus' network relative to Telstra and TPG. Contrary to what the applicants and Mr Feasey have suggested,<sup>144</sup> the Proposed Transaction *will* have implications for Optus' incentives to compete and win business in regional areas and business that values regional coverage. **[CIC]**

7.5 Market structure is critical. In a four-MNO market, sharing between two operators would still leave the remaining two with the option to also form a sharing deal. However, in a three-MNO market such as in Australia, sharing by two operators, particularly where one of those operators is the dominant provider, is likely to mean that the remaining operator is unable to replicate the scale/performance /coverage and reduced costs of the shared network. This is exacerbated given the returns on invested capital achieved in telecommunications is lower than that achieved in other capital-intensive industries and currently does not meet the cost of capital.<sup>145</sup>

7.6 That outcome will have implications that extend beyond Optus' business. Competition is promoted by rivalry between, in particular, Telstra and Optus. We repeat that TPG is not an effective competitive constraint to Telstra – as recognised by the applicants' own external expert Mr Feasey. Further, the effect of the Proposed Transaction is that TPG will acquire customers for its own network, but that the economic benefit will pass to

<sup>141</sup> Houston Kemp, p.18

<sup>142</sup> CEPA Report, p.4

<sup>143</sup> [3.58]

<sup>144</sup> Application at [187(a)]; [190], [192]; See eg Annexure O, Expert Report of Richard Feasey (20 May 2022) at [69].

<sup>145</sup> See for example, UBS, Australian Telecom Sector, 27 April 2022.



Telstra. The incentive for Telstra to compete strongly and pass benefits to consumers depends on the extent of that rivalry with Optus.<sup>146</sup>

- 7.7 Optus will not be able to continue to provide the same degree of tension it has for three decades in the face of a combined Telstra / TPG regional network for all the reasons outline above.

### The deal cements Telstra's dominance

- 7.8 As described above, Telstra is already the dominant mobile provider nationally, and in regional and rural areas specifically, on any relevant measure. Telstra
- (a) Has a national mobile market share of 53%, a 69% market share in regional Australia, and an enterprise mobile share of 79% – see Section 3;<sup>147</sup>
  - (b) has a dominant share of low band and key 5G mid band spectrum in regional areas – see Section 5;
  - (c) vigorously promotes its network as being largest (in terms of coverage) and 'best' implying fastest or highest quality (in terms of network performance, and the availability of 5G);
  - (d) as a result, commands a significant advantage in network perception, and a significant price premium (25 to 30 per cent in retail mobile service pricing) over its closest competitor, Optus; and
  - (e) obtains higher return on capital than Optus or TPG.
- 7.9 Telstra accepts that, even for a business in Telstra's position, investing in additional mobile sites in regional and rural areas may be commercially marginal or challenging. The application states:
- "By granting TPG access to its RAN in urban fringe and regional areas, Telstra gains an incremental source of revenue and can derive more value from its RAN infrastructure, particularly in low population density areas where infrastructure investment decisions are more challenging. Infrastructure investment in areas with low population density is less likely to be profitable, given the significantly higher costs per site. Additional scale on the Telstra RAN in these areas supports return on invested capital and creates a sustainable case for ongoing investment and innovation in the network."<sup>148</sup>*
- 7.10 As that statement contemplates, whether an incremental mobile network investment is commercially viable depends on factors including site costs (which are higher in regional and rural areas and reach fewer potential customers per site),<sup>149</sup> the strength of the existing network (scale economies), available revenue streams, and the prospect of recovering that investment through increased customer revenue.
- 7.11 For reasons which are outlined in further detail below, Optus accepts that it is not commercially realistic for three networks (or three 5G networks) to be deployed across

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<sup>146</sup> As accepted by Feasey [70], [72]

<sup>147</sup> See also *Vodafone Hutchison Australia v ACCC* 2020 FCA 117, paragraph [113]: "Telstra also has a dominant position in the supply of both fixed and mobile telecommunication services to corporate and government sectors".

<sup>148</sup> Application, [21].

<sup>149</sup> See Application, [21] and Table 1.

all regional and rural areas of Australia. Telstra and TPG appear to accept that proposition:

*“Given the low population density in the 17% Regional Coverage Zone, it is highly inefficient and costly for a third MNO to rollout a duplicative network to match (or come close to matching) Telstra and Optus in this area.”<sup>150</sup>*

- 7.12 There is, however, scope for two networks and the outcome of this Application will determine the competitiveness of the second network, and the level of competitive pressure that that network will apply to Telstra's leading network.
- 7.13 The outcomes of the competitive process are principally determined by the circumstances and decisions (price, nature and timing of investment in network upgrades) of MNOs, since only MNOs can alter network coverage and performance.
- 7.14 If allowed, the Proposed Arrangements will lead to Telstra benefitting from enhanced network capacity and a lower cost to serve, enabling its network to have an enduring additional cost advantage over Optus' network. The benefits to Telstra will entrench and extend Telstra's dominant position.
- 7.15 Optus will have no commercially compelling options to match the competitive advantages afforded by network sharing in regional and rural areas. Optus' network investment decisions will be materially more challenging, given the strength of Telstra's network, and an inability to differentiate to win customers, or through alternative sharing arrangements, gain scale.<sup>151</sup>
- 7.16 This is therefore a pivotal and irreversible point in time that will determine how mobile network competition develops in the medium-long term.
- 7.17 As set out in section 6, the counterfactual would involve continued investment by Optus in accordance with its existing business plan and, in addition, there is a possibility that Optus and TPG would enter into a form of network sharing. That scenario would result in two strong networks (with the dominant Telstra network not achieving some additional benefits that it would have obtained as part of the proposed transaction). That would be a significantly preferable outcome for medium to long-term competition in mobile and other relevant markets. That outcome would result in two stronger competitors to Telstra with aligned investment incentives, and greater competitive pressure on Telstra to invest.
- 7.18 As stated by CEPA, the central concern of the Proposed Transaction is that it involves the already dominant number one player. The combination of the dominant network and the third player irreversibly squeezes and damages the second network operator (Optus):

*The transactions would reduce infrastructure-based competitors from 3 to 2, so across the RCZ (covering much of regional Australia) there is a duopoly. More worryingly, the combination of players 1 and 3 by size squeezes player 2 and makes investment at the margin undesirable in the region.<sup>152</sup>*

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<sup>150</sup> Application, [37].

<sup>151</sup> See Houston Kemp, p.15-16.

<sup>152</sup> CEPA Report p.7

## Telstra enhances its already dominant position

- 7.19 Telstra accepts that the Proposed Transaction benefits Telstra. Those benefits will further improve Telstra's already dominant competitive position.<sup>153</sup>
- 7.20 Importantly, Telstra does not make any claim that the Proposed Transaction will increase Telstra's current investment incentives or plans – rather, the Proposed Transaction will provide Telstra windfall compensation for the costs of Telstra's past (sunk) investments.<sup>154</sup> Telstra does not claim that cost efficiencies will be passed on to customers in the form of lower prices.<sup>155</sup>
- 7.21 The benefits to Telstra include:
- (a) **More efficient use of existing RAN infrastructure.** *"The Proposed Transaction will enhance the efficient utilisation of Telstra's existing infrastructure (by supporting greater bandwidth delivered to customers through existing mobile sites using the pooled spectrum)"*<sup>156</sup>
  - (b) Reduction in Telstra's previously incurred costs for existing RAN infrastructure.
    - (i) *"Telstra will achieve better utilisation and long-term capital efficiency of its existing RAN infrastructure. It does so by contributing to the cost of the existing infrastructure (through the fees it receives)..."*<sup>157</sup>
    - (ii) *"As part of its T25 Strategy, Telstra recognises that it must use the capital in its network more efficiently, including through monetising its existing infrastructure. Telstra has already monetised its passive mobile network assets ... The Proposed Transaction will allow Telstra to monetise active mobile network assets."*<sup>158</sup>
  - (c) **Provide Telstra additional certain revenue streams.** "By granting TPG access to its RAN in urban fringe and regional areas, Telstra gains an incremental source of revenue and can derive more value from its RAN infrastructure, particularly in low population density areas where infrastructure investment decisions are more challenging"<sup>159</sup> Optus understands that Telstra expects incremental revenue from TPG of \$1.6 - \$1.8 billion over the next 10 years.<sup>160</sup>
  - (d) **Increase in Telstra's access to and control of spectrum,** particularly low band and key 5G spectrum in the 17% RCZ, Telstra will have 400-435 MHz of spectrum compared to Optus' 180-185 MHz. Telstra will control a

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<sup>153</sup> See Section 4 and Section 5.

<sup>154</sup> See Application [21].

<sup>155</sup> Based on the unredacted submission, the applicants make various general statements about the impact of the Proposed Transaction upon Telstra's investment incentives and how the Proposed Transaction will likely lead to downward pressure on prices. However, there is no specific statement that the Proposed Transaction likely will increase or accelerate Telstra's network deployment, or likely result in reduced prices from Telstra. At [322], the parties state the Proposed Transaction is likely to "support" future investment by Telstra and TPG, but there is no specific claim about increasing or accelerating Telstra's investment or network deployment. Subsection 9.3(G) and (H) discuss how increased competition and service from TPG is likely to result in downward pressure on prices. While heavily redacted, there is no specific statement that Telstra will likely reduce prices.

<sup>156</sup> Application, page 9.

<sup>157</sup> Application [21].

<sup>158</sup> Application [24].

<sup>159</sup> Application [21].

<sup>160</sup> See ASX presentation, "Telstra network sharing agreement", 21 February 2022 (Transcript).

dominant share of available low band and key 5G spectrum materially exceeding the spectrum caps set by the ACMA and recommended by the ACCC. This is compounded by Telstra already not efficiently using the spectrum assets it currently owns (see Section 5).

- (e) **Increase Telstra’s existing RAN site superiority.** The application states that Telstra will gain access to up to 169 additional mobile tower sites to deepen its coverage and improve the quality of its service in the 17% RCZ.<sup>161</sup>
- (f) **Reduction in any Telstra network congestion, without additional RAN site investment.** While Optus questions the extent to which Telstra requires additional spectrum in regional and rural areas to address congestion due to its inefficient use of current holdings, the Proposed Arrangements are claimed to reduce or defer any congestion arising on Telstra’s network. Telstra states that mitigating congestion issues as usage continues to increase is a key commercial driver for Telstra.<sup>162</sup>
- (g) **Telstra obtains exclusive access to TPG spectrum in very remote areas, where TPG obtains no benefit.** The Application states that “Telstra will also be authorised to use certain spectrum beyond the 17% RCZ, i.e. only in areas beyond the 98.8% of the Australian population. That spectrum will assist Telstra to maintain that advantage, which it considers to be commercially important.<sup>163</sup>
- (h) **Telstra retaining first mover advantage over 5G.** The Application states that “Telstra does not need to make 5G available to TPG at a particular site in the 17% RCZ until 6 months after the site was activated for 5G for Telstra Comparison Customers (subject to some limited exceptions).<sup>164</sup> Telstra expressly states that this approach is to provide Telstra with a first-mover advantage in 5G and other technologies<sup>165</sup> while TPG obtains no benefit from having made its valuable spectrum available to Telstra during that period. Section 3 describes how a first mover network leadership provides a material advantage in attracting customers and winning market share (increasing the prospect of network investments being profitable), particularly in the transition from one generation of mobile technology to the next.<sup>166</sup>
- (i) **Telstra’s non-discrimination obligation is limited to certain TPG retail customers (termed Comparison Customers).** That obligation does not appear to extend to enterprise and government customers, IoT services or fixed wireless services. IoT services are specifically excluded from any non-discrimination commitments.<sup>167</sup> In other words, TPG appears to only be offered a residential-grade service. As described in section 3, Telstra is dominant in the supply of mobile services to enterprise and government customers (even stronger than in mobile retail services), and almost all of the use cases generated by new 5G technology (including advanced IoT solutions) relate to those customers.<sup>168</sup> The non-discrimination obligations will not prevent Telstra from protecting that dominant position by discriminating in favour of its own enterprise and government business. The

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<sup>161</sup> Application, [23].

<sup>162</sup> Application [22]; see also [269] – [270].

<sup>163</sup> Application [192(a)].

<sup>164</sup> Application [139].

<sup>165</sup> See also paragraph 4.14 and 4.19 above.

<sup>166</sup> [3.66ff]

<sup>167</sup> Application, pp.46-48

<sup>168</sup> [3.86 – 3.94]

desire of Telstra to protect its unilateral discretion with regards to enterprise and government services demonstrates the importance of 5G access to supplying those customers.

- (j) **Telstra retains full control of when and where network investments are made.** The arrangements enable TPG to “request”, but not require, the prioritising of a particular area for network investment that is consistent with its commercial strategy.<sup>169</sup> Optus expects that the result of those contractual arrangements is that Telstra remains free to focus on investments that are consistent with its own commercial strategy, or designed to reduce the prospect of any Optus’ network investments being profitable for Optus.
- (k) **Telstra limits the use of some TPG spectrum.** TPG will retain certain spectrum, but is highly unlikely to deploy it to supply public mobile services (and may remain inefficiently unused). That spectrum comprises:<sup>170</sup>
  - (i) TPG’s “2x5MHz in the 700MHz band, which can be used to provide managed private networks to enterprises in the 17% Regional Coverage Zone.” It appears TPG is barred under the contract to use this spectrum for public mobile services.
  - (ii) “TPG’s individual 1800MHz holdings ... [which are] not able to be used without the deployment of additional equipment.” As highlighted in Section 5, Telstra is currently under-utilising its 1800 MHz spectrum in regional areas, and it appears the Proposed Transactions will create more spectrum inefficiencies by TPG not using its regional 1800 MHz.

7.22 Optus accepts that a number of these factors are efficiency enhancing for Telstra, and improve Telstra’s position in the short term. In a competitive and contestable market, that would be expected to increase competition.

7.23 However, in a market characterised by network effects and large sunk cost investments, where those factors will extend Telstra’s existing dominant position, and where Optus has no options to derive similar efficiencies through network sharing, Optus will have a reduced ability and incentive to invest in network improvements, and the competitive tension between Telstra and Optus will reduce. Analysys Mason state:

*Optus’s incentives to invest will then be reduced where it cannot compete against the scale and performance of Telstra’s network in the long term.*<sup>171</sup>

7.24 In the short-term, the closeness of competition between Telstra and Optus will worsen and the price premium that Telstra achieves relative to Optus would increase.<sup>172</sup>

7.25 In the medium to long term, the effect of those benefits for Telstra is to reduce competitive pressure on Telstra and lock in Telstra’s dominance. As described in section 3, fundamental shifts in market structure due to changes in customers’ perception of relative network quality (and pricing) have historically been difficult to overcome.<sup>173</sup> This will lead to increased prices for customers and a significantly lower incentive to innovate than would have arisen if Optus were able to pursue its current

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<sup>169</sup> The Application refers to a Change Management Process and dispute resolution process. While further details are redacted, the Application does not put TPG’s contractual rights higher than to “request”. See Application [113], [146] and [159].

<sup>170</sup> Application [127].

<sup>171</sup> Analysys Mason report, p.5, p.23

<sup>172</sup> See Houston Kemp, section 3.3.

<sup>173</sup> [3.62ff]

strategy of competing most closely with Telstra and making network investment accordingly. Houston Kemp conclude that *"it is reasonable to conclude that medium to longer term competition in the retail and wholesale mobile services markets would be, or would likely be, lessened as a result of the proposed Telstra/TPG arrangement."*<sup>174</sup>

**Telstra will have limited or no incentive to maintain or lower prices. In fact, Telstra is likely to raise prices further**

7.26 Analyst reports show that Telstra has been able to maintain an average price premium of 33% over Optus over the last three years as 5G has become central to competition in the market. In this period, Telstra has grown its market share.<sup>175</sup> The Proposed Transaction will result in further differentiating Telstra's and Optus' product in the market.

7.27 Telstra and its expert Mr Feasey acknowledge that Optus is the driver of competitive constraint on Telstra. It is the presence of Optus, and the strength of competition from Optus, that significantly influence the pricing and investment strategy of Telstra.<sup>176</sup>

7.28 Optus and its experts agree with these statements. However, the effect of the Proposed Transaction if it proceeds would be to reduce the closeness of competition between Telstra and Optus which will in turn drive the ability of Telstra to increase prices. Houston Kemp state that in the near term:

*These outcomes indicate that the closeness of competition between Telstra and Optus will reduce under the proposed Telstra/TPG agreement, as compared to a potential Optus/TPG arrangement. A reduction in the closeness of competition between Telstra and Optus would be expected to reduce the intensity of price competition on Optus from Telstra, and vice versa. Consistent with these outcomes, overall profitability in the market would be expected to increase, as will the extent of the price premium that Telstra can command, relative to Optus.*<sup>177</sup>

7.29 These price impacts will continue in the long term, with the Proposed Transaction resulting in growing quality differential between Telstra and Optus, not of least driven by the spectrum factors outlined in Section 5, and as a result *"overall profitability in the market would be expected to increase, as will the extent of the price premium that Telstra can command, relative to Optus"*.<sup>178</sup>

7.30 CEPA also conclude that the Proposed Transaction will likely lead to higher prices due to the fact that non-price competition is becoming ever more important during the rollout of 5G. CEPA conclude:

*The increasing significance of quality of service (coverage and data capacity) in conjunction with the setting of national retail tariffs of the MNOs serve to materially increase or extend positions of Telstra's substantial market power. In our view this indicates a future market equilibrium in which prices likely to be higher.*<sup>179</sup>

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<sup>174</sup> Houston Kemp, p. 18

<sup>175</sup> See Section 3.

<sup>176</sup> Feasey report, [72], Application, [188]

<sup>177</sup> Houston Kemp, p. 10

<sup>178</sup> Houston Kemp, p. 10

<sup>179</sup> CEPA Report, p. 6

## **Telstra will have limited or no incentive to invest beyond its own requirements in additional network capability (including coverage, capacity and/or functionality)**

- 7.31 The Application indicates that Telstra's ability to invest in RAN sites is not constrained by any factor, other than whether the incremental RAN site is profitable (having regard to its rural/regional location and the extent of competitive pressures on Telstra).<sup>180</sup>
- 7.32 As noted above, Telstra claims that it is facing network congestion in rural and regional areas. A benefit of the Proposed Transaction for Telstra is to reduce congestion and, accordingly, any consequent investment incentive. Optus has provided facts which are intended to assist in testing these claims. In particular, data outlined in Section 5 suggests that Telstra's analysis of MHz per SIO is incorrect as it does not take into account Telstra's superior number of sites. Further, the facts contained in Section 5 also demonstrate that Telstra is under-utilising its spectrum assets and if it did operate efficiently, it would have sufficient spectrum to address any congestion issues.
- 7.33 As described in Section 3, Telstra's incentive to invest and compete is driven by the presence of Optus in key locations and market segments.<sup>181</sup> We further note that the decision of Telstra to not put into operation its mid band spectrum demonstrates that absent a strong third party, Telstra will minimise investment and network improvements. A rational network operator without market power would efficiently use all available spectrum assets before it sought to acquire additional assets
- 7.34 In those circumstances, where Telstra faces less competitive pressure as a result of the Proposed Transaction, Telstra will have reduced incentives to make additional network investments (or otherwise to pass any cost efficiencies to consumers in the form of price reductions).

## **TPG will remain weaker than Telstra, and have no ability or incentive to change network strategy in the medium term**

- 7.35 Optus accepts that the Proposed Transaction may provide short term benefits to TPG. The arrangement is commercially attractive to TPG because it removes uncertainty about its network access in regional and rural areas, provides cost certainty for that network access (with TPG reducing the fees payable by leasing its underutilised spectrum to Telstra). The Proposed Transaction also provides greater certainty about the extent and timing of TPG's access to 5G in those areas.
- 7.36 However, these arrangements will lock TPG into a position of being weaker than Telstra. Optus considers that TPG will have no commercially realistic ability or incentive to change network strategy in regional and rural areas in the medium to long term.
- (a) A number of the benefits to Telstra (see below) exclude or limit the competitive benefits to TPG – in particular, the 6-month 5G first-mover advantage, and Telstra's control of network developments. Telstra will also retain a coverage advantage beyond the 17% RCZ. That will limit the competitive pressure on Telstra posed by TPG, and provide Telstra certainty that TPG will not challenge its network leadership.
- (b) TPG will have no commercially realistic prospect of altering its strategy in regional and rural Australia in the future. To do so in the future, TPG would need to make even greater investments than it does currently in order to

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<sup>180</sup> Application [21].

<sup>181</sup> [3.58]

deploy a competitive network in rural and regional Australia, face an even longer deployment time, and have even less prospect of those investments being profitable.

- (c) Over time, Telstra's network configuration will also become more aligned with TPG's spectrum holdings, increasing the cost and hurdles to TPG of any change of network strategy or the prospect of any future network sharing with Optus.
- (d) While TPG remains contractually free to acquire and deal with additional spectrum,<sup>182</sup> in practice TPG would be incentivised to ensure that any additional acquisitions of spectrum further align TPG's spectrum holdings with Telstra's, in order to have the greatest prospect of negotiating with Telstra to add that spectrum to the MOCN arrangement. In particular:
  - (i) The application states that "*The MOCN Agreement expressly provides that the Applicants are not committing to jointly acquire additional spectrum for the MOCN*"<sup>183</sup>. That provision does not herald future TPG-Telstra competition in spectrum holdings. Rather, it is intended to ensure that Telstra and TPG are not "associated" for the purposes of future spectrum auctions, and so not prevented from acquiring further spectrum over Optus (which, when added to the MOCN, would further extend Telstra's spectrum advantage).

7.37 It may be assumed that Telstra has agreed to provide short term benefits to TPG, because of the greater medium to long term benefit of removing the strategic uncertainty for Telstra of a combined Optus and TPG regional mobile network challenging Telstra. Put more bluntly, Telstra will be aware that it is competition from Optus that constrains its behaviour in the market and the ability of the Proposed Transaction to hobble Optus is in and of itself an enormous benefit to Telstra. It is Optus' strong belief that Telstra's motivation behind this deal is to substantially weaken Optus as a competitor.

### **The Proposed Transaction gives rise to increased coordination concerns**

7.38 Optus considers that the principal effect on competition will be unilateral in nature, in that the Proposed Transaction will ultimately strengthen Telstra's ability to act unilaterally in the RCZ, free of any real competitive constraint. However, all NSAs and particularly active NSAs, give rise to potential coordination concerns which may harm competition. The potential for coordination largely flows from the information exchange involved and elsewhere in this submission, Optus has identified a number of areas of activity in which coordination arising from the Proposed Transaction may impact competition and consumers, including:

- (a) potential to create delay at both the strategic (e.g network design and strategy) and operational (e.g network deployment), due to the time taken for additional joint decision-making processes and bureaucracy such as created by the proposed Change Management Structure and the product development processes.<sup>184</sup>

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<sup>182</sup> Application [130].

<sup>183</sup> Application [131].

<sup>184</sup> See Application [113] [115]



- (b) The incentive for Telstra and TPG to coordinate on spectrum bidding through spectrum auction processes, notwithstanding stated commitments to avoid “joint” acquisition of spectrum.<sup>185</sup>
- 7.39 The Applicants' expert, Mr Feasey, dismisses out of hand the potential for coordinated effects on competition arising from the Proposed Transaction stating that they “are not...relevant in this case”.<sup>186</sup> This view is reflected by the parties in the Application, which states that “*the Proposed Transaction...could not credibly be said to increase the likelihood of coordinated effects*” and notes that the ACCC Merger Guidelines indicate that “increased conditions for competition makes coordination “*unlikely to be sustained if it includes new entry or expansion by firms in the relevant market*””.<sup>187</sup> Optus considers that this view ignores the obvious and accepted fact that NSAs involve a degree of cooperation beyond that which would ordinarily be expected of competitors. Alternatively, the statement could potentially be read as a clear acknowledgement of the deeply asymmetrical nature of the Proposed Transaction.
- 7.40 In relation to the extract from the ACCC Merger Guidelines, Optus notes for completeness that immediately following the extract noted above, the Guidelines then state that “*Generally, assessing whether a merger is likely to give rise to coordinated effects requires a close examination of the conditions prevailing in the market and the likely effect of the merger on those conditions*”.<sup>188</sup> The Applicants and Mr Feasey appear to assume that the Proposed Transaction will in result in increased conditions for competition. As illustrated elsewhere in this submission, the nature of the competitive constraint offered by TPG's entry or expansion will at best, be comparable to that of a “thick MVNO”. Optus submits that the absence of any risk of coordinated effects arising from the Proposed Transaction should not be assumed and that these matters should be carefully tested.
- 7.41 In responding to Mr Feasey, CEPA identifies the following areas that may warrant further examination:
- (a) The parties to the agreement would need to coordinate their businesses in the RCZ. This could lead to the sharing of information that could present harm in the form of coordinated effects. In this setting, parties to agreements are usually required by authorities to provide commitments in respect of the information exchange set out in the agreement. This is especially the case for MOCN agreements.<sup>189</sup>
- (b) By definition TPG and Telstra will now coordinate their network expansion in the RCZ. This is because TPG is effectively relinquishing its ability to expand its network in the RCZ entirely. Mr Feasey agrees that the agreement removes any incentive on TPG to deploy its own network in the RCZ.<sup>190</sup>
- (c) The agreement could potentially allow competitively sensitive information to be shared between Telstra and TPG. For example, Telstra's network performance in the RCZ will be visible to both Telstra and TPG<sup>191</sup>.
- 7.42 Accordingly, the ACCC should assess the extent to which the Proposed Transaction might facilitate coordination between Telstra and TPG, both immediately and in the

<sup>185</sup> Application [113]

<sup>186</sup> Feasey Report [105].

<sup>187</sup> Application, [238] citing para 6.14 of the Merger Guidelines

<sup>188</sup> ACCC Merger Guidelines, paragraph 6.15

<sup>189</sup> CEPA Report, p.28

<sup>190</sup> Feasey report, [62]

<sup>191</sup> CEPA Report, p.31

longer term. Coordination concerns are of higher concern for the Proposed Transaction due to the substantial market power of one of the participants (i.e Telstra). The ability of Telstra to coordinate has the potential to materially impact the level of competition in related markets.

### **The Proposed Transaction will limit the attractiveness of Optus' consumer offerings**

- 7.43 Optus has outlined elsewhere in this submission the significance of network coverage and the perceptions of an MNO's 5G network technology. Put simply, coverage matters. It is a critical feature of competition between MNOs and is demonstrated by the extent to which MNOs refer to the coverage of their networks in promotional materials.
- 7.44 The Proposed Transaction will give TPG better coverage in the RCZ, but its ability to innovate and lead prices will always be muted because of the terms of the proposed arrangements. As noted above, Optus accepts that this will have short term benefits for TPG (although the extent to which TPG will be able to promote its network coverage as a result of the Proposed Transaction remains unclear in circumstances where Telstra will principally dictate 5G roll-out and where the 6 month first-mover advantage that Telstra will enjoy may limit the extent to which TPG is able to make 5G coverage claims).
- 7.45 In terms of market competition, the ability to TPG to utilise Telstra's regional network will, in practice, put it on par with other Telstra MVNOs. It is important to acknowledge that customers who value access to Telstra's regional network but also desire low prices have the ability currently to choose services from ALDI, Boost or Belong. It is not clear the extent to which TPG would bring additional competitive pressure when such pressure is already present. The limited ability of TPG to impact market competition is acknowledged in Mr Feasey's report.
- 7.46 The much larger impact to the market is the clear differentiation that exists between Optus and Telstra. As described extensively above and in section 3.
- 7.47 Contrary to the Application and Mr Feasey's report, the Proposed Transaction will have very significant consequences for Optus' underlying 5G investment decisions. CEPA address this directly in their report, stating that:
- (a) Optus is likely to face a reduction in demand, primarily due to the spectrum acquisition by Telstra affecting quality of service, which would inevitably weaken its ability to compete in the national retail mobile communications market.
  - (b) Optus would likely face elevated unit costs in the RCZ and non-regional Australia – with potential to flow through to prices. In contrast the Telstra network would face increased demand flowing to lower unit costs. Given the cost effect on Optus, both Telstra and TPG would be able to profitably increase prices.
  - (c) Telstra and TPG could each profitably increase prices, as their quality of service would improve, and the competitive constraint presented by Optus would be diminished.<sup>192</sup>

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<sup>192</sup> CEPA Report, section 3.1.5

7.48 Further, the Proposed Transaction grants Telstra an unprecedented level of market power across regional Australia and provides the ability for Telstra to set wholesale prices (for TPG and its MVNOs) at a level designed to undermine Optus' commercial offerings. For example, it is possible that if Optus was to invest in regional areas and if Optus was successful at over-coming the non-price barriers to growth and present a credible competitive constraint, in response Telstra could adjust wholesale prices within the RCZ in a way that would prevent Optus from being commercially successful. This potential action presents a further barrier to Optus being able to recover the costs of future regional investments. The Proposed Transaction, presents the ability and mechanism for Telstra to directly undermine any future investment decision from Optus. That risk presents a further reason for Optus to reassess the way in which it was approaching its 5G rollout.

### **Optus' only option to close the network gap is to deploy additional infrastructure**

- 7.49 In the face of a combined Telstra / TPG mobile network in regional Australia, Optus needs to determine how to respond and, in particular, whether the investment that is required to close the gap on the combined network is warranted based on the costs and expected returns. This directly affects the offers it can make available to consumers both in the short and long terms.
- 7.50 An MNO can increase its network capacity by: (1) deploying additional spectrum; or (2) deploying additional RAN assets (densification). In rural and regional areas, an MNO will typically deploy all available low band spectrum when a site is established, as this provides the greatest network coverage per site, therefore maximising the value of the site and minimising costs. In addition, as no additional low band spectrum is likely to become available before 2026 at the earliest (a position that Telstra accepts<sup>193</sup>), the deployment of further spectrum is not a realistic option available to Optus to increase network capacity.
- 7.51 Increased coverage can also be achieved by deploying additional RAN sites. In the present circumstances, the only realistic option that is available to Optus to increase coverage is to deploy additional RAN sites. That, however, is a costly exercise and commercial viability must be carefully weighed in light of the competitive landscape. As outlined above, the commercial impact of the Proposed Transaction to any other third-party investor is to render investment in regional Australia uneconomic.

### **Optus' 5G business case was based on certain foundations**

7.52 [CIC]

7.53 [CIC]:

(a) [CIC].

(b) [CIC].

(c) [CIC].

7.54 [CIC].

7.55 [CIC]

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<sup>193</sup> Application at [23].

(a) [CIC];

(b) [CIC];

(c) [CIC]

(d) [CIC].

7.56 [CIC].

7.57 [CIC].

7.58 [CIC]

### **The Proposed Transaction alters those core foundations**

7.59 The announcement by Telstra and TPG that they intend to enter into a 10-year MOCN arrangement in the Regional Coverage Area directly impacts Optus' 5G business case. The Proposed Transaction materially alters the assumptions underpinning Optus' 5G roll-out plans:

(a) Telstra obtains access to substantial additional spectrum, which would prevent Optus being able to compete on network quality and provide anything close to a similar network performance.

(b) Telstra secures additional funding to offset their capital and operating expenditure in regional areas, whilst Optus loses existing and potential future income from a potential deal with TPG to subsidise regional expenditure.

(c) TPG obtains a rapid acceleration of 5G coverage not possible via its organic rollout plan.

7.60 These factors place Optus at significant competitive risk in terms of its relative network coverage and performance in regional 5G and network perception in the national market. In particular, Optus anticipates significant market share and revenue loss given that it will now lag both Telstra and TPG on 5G coverage and will likely have an inferior quality of service. [CIC]

7.61 [CIC]

7.62 The Applicants and Mr Feasey suggest that the Proposed Transaction will increase Optus' incentives to invest in infrastructure in the RCZ.<sup>194</sup> Those assertions are completely flawed. It should not be accepted that Optus will necessarily continue to seek to win business in the RCZ. Optus will only seek to do so to the extent that the infrastructure costs involved can be recovered or that those investments will generate additional revenue or are likely to win retail customers. There is no basis for believing that would be the case.

7.63 Telstra acknowledges that competition at the retail level affects investment incentives<sup>195</sup>. Telstra further accepts that the Proposed Transaction will result in Optus losing customers and share to TPG, due to a reduction in Optus' relative competitiveness compared to TPG.<sup>196</sup> The same must also be true of Telstra's competitive position relative to Optus in circumstances where Optus' investment

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<sup>194</sup> eg Authorisation Application at [192(b)]; Richard Feasey (20 May 2022) at [69].

<sup>195</sup> Application at 183(a).

<sup>196</sup> Application at 203; 205.

incentives are impacted. The Proposed Transaction can therefore be expected result in Optus losing customers to both Telstra and TPG, and Optus' share further reducing.

7.64 That outcome will reduce Optus' ability to fund network investments based on its own business' earning. The goalposts have therefore moved for Optus.

7.65 [CIC]

7.66 [CIC]:

- (a) [CIC].
- (b) [CIC];
- (c) [CIC];
- (d) [CIC];
- (e) [CIC];
- (f) [CIC]; and
- (g) [CIC].

[CIC]

7.67 [CIC].

7.68 [CIC].

7.69 [CIC]:

- (a) [CIC];
- (b) [CIC].

7.70 [CIC].

7.71 [CIC]

### **Other relevant downstream impact of the Proposed Transaction**

7.72 Optus considers that the Proposed Transaction may also have effects in other downstream markets: (i) the provision of fixed broadband services (including fixed wireless), and (ii) mobile towers.

#### *Fixed wireless*

7.73 As described in section 3, the ACCC is still considering the extent to which 5G fixed wireless is a substitute for NBN broadband services.

7.74 Whether or not those are separate markets, the ACCC should not authorise Telstra to obtain access to a dominant share of spectrum, as that would be expected to reduce the prospect of effective competition in fixed wireless services. In so far as the Proposed Transaction allows Telstra to better 'compete' against NBN FWA services, it is unlikely to lead material consumer benefit as Telstra already has a dominant share of NBN retail FWA services. It is true that Telstra will be able to make improved margins

off these customers – but it is doubtful whether absent other competitive constraints Telstra would pass these benefits onto consumers.

### *Mobile tower access*

- 7.75 The Proposed Transaction still contemplates that Telstra will retain a 51% ownership of Amplitel. With an asset portfolio of 8000 masts, towers, large pole and antenna mount structures, Amplitel is Australia's largest tower operator.<sup>197</sup>
- 7.76 The vertical integration of Amplitel and Telstra raises the clear potential for discrimination against non-Telstra access seekers – Telstra, through Amplitel, has the clear power and incentive to prevent competitors from accessing Amplitel's passive infrastructure, which is an essential input to mobile service delivery and ultimately regional mobile competition. Telstra remains the only vertically integrated owner of mobile tower infrastructure.
- 7.77 Commenting on Telstra's proposed restructure into "Telstra Co, InfraCo Fixed and Amplitel", the Amplitel sites notes "Importantly, Telstra will retain 51 per cent ownership of Amplitel, and will continue to own the active parts of our network including the radio access network that sits on this infrastructure, and our existing spectrum assets. We will continue to preserve Telstra's strategic differentiation in mobiles and protect our network leadership".<sup>198</sup>

Further, this deal removes revenue growth potential from tower companies other than Amplitel. Revenue growth in the tower market typically comes from additional charges relating to upgrading active equipment (either new 4G or new 5G equipment) and/or the colocation of additional active equipment. **[CiC]**

## Section 8. ANY OFFSETTING BENEFITS ARE NOT SUFFICIENT TO ADDRESS COMPETITIVE HARM

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- 8.1 The Application sets out a number of public benefits that the parties claim will accrue should the Proposed Transaction be authorised by the ACCC. The Application also states that to the extent that there are any public detriments these will be outweighed by the public benefits. This reflects the second limb of the tests available for the ACCC to authorise the Proposed Transaction under the CCA.
- 8.2 Optus rejects most of the claimed public benefits set out in the Application and submit that even if any of these benefits do materialise, they are significantly outweighed by the substantial detriment to competition and consumers that will result if the Proposed Transaction is authorised. Optus addresses each of the claimed benefits below and reiterates its views on the public detriment, which largely reflect its concerns about the likely effects that the Proposed Transaction will have on competition in relevant markets.
- 8.3 In summary, Optus submit that
- (a) any improvements to connectivity and service quality for end-users will be temporary as neither Telstra or TPG will face any real incentive to invest in mobile networks and services in the RCZ in the long term. This is largely because there will be no real substitutes for Telstra's services in the relevant markets, as TPG will essentially operate as an MVNO. Optus will also have lower incentives to invest and alternative services such as satellite or fixed wireless access do not offer the functionality and mobility that Telstra will be able to supply via 5G.

The Application claims that Telstra needs access to TPG's spectrum to alleviate network congestion in the RCZ, noting that it will not have another chance to obtain low band spectrum in the near future. That position is not unique to Telstra. While Optus does not dismiss the claim outright, Optus is not aware of Telstra having raised at any stage its concerns about congestion in response to recent ACMA and ACCC consultations about the recent allocation of the 850/900 MHz spectrum band. Furthermore, as has been demonstrated, Telstra already has an abundance of spectrum in regional areas, particularly in mid band which is crucial for 5G. Optus' analysis also shows that Telstra has not been using its mid band spectrum to address congestion in the regional network even where it is efficient to do. Finally, Telstra will gain an additional 2x15 MHz of low band spectrum in 2024, which will increase its network capacity by 2.4 and 3.6 times for 4G and 5G, respectively. See Section 5 for more detail.

- (b) The Proposed Transaction will not address the digital divide between urban and regional Australia through increased competition, innovation and consumer choice. This is largely due to the nature of this proposed arrangement, including its asymmetry, and long term impact of the proposed transaction on industry structure and ultimately market competition.

TPG's capacity to compete will be largely driven by Telstra's decisions on the quality of the access service that it supplies to TPG – while the Proposed Transaction includes terms that give the impression of TPG independence and mutual decision-making, the nature of a MOCN NaaS arrangement is such that the access provider (Telstra) largely controls the technical parameters of

supply due to its ownership and control of the active RAN. This will significantly reduce TPG's capacity to differentiate on service quality or any network-related feature. While there may be attraction to TPG's metro customers from the expanded network coverage, there is likely to be little to attract regional consumers to TPG's "thick MVNO" offerings. Optus' experience shows that regional customers value a visible presence from their telecommunications provider, such as having a store in a local town. It is highly unlikely that TPG will invest to develop this localised presence.

In regard to price, it appears that TPG's average unit costs will not reduce with increased market share, which is the opposite of what will happen for Telstra as it gains further market share. On the basis of the information available, it is highly unlikely that TPG will be in a position to compete with Telstra on price given its fixed costs for access and variable usage costs are well understood by Telstra in circumstances where Telstra is supplying the underlying access service – and that Telstra sets and controls that price. As a result neither Telstra or TPG is really incentivised to invest in service improvements in the RCZ, which will ultimately to the detriment of regional consumers and will serve to entrench the digital divide in the long term.

- (c) While the Proposed Transaction may result in reduced network costs and more efficient utilisation of infrastructure in rural and regional areas, it is not clear at all that these cost savings will be passed onto consumers in the form of lower prices. Rather, it is likely that these cost efficiencies will simply benefit Telstra as it is able to entrench its network dominance in regional and rural Australia through its access to disproportionate amounts of low and mid-band spectrum. Optus notes that Telstra is under no real incentive to utilise this spectrum efficiently, or invest in technologies that maximise spectral efficiency.

- 8.4 Optus notes the following comment from Mr Feasey included in the Application at paragraph 288 which states "*The effect of the agreement is to allow TPG to enter a part of the market and, by doing so, to become a closer competitor to Telstra and Optus. It would be extremely odd if the ACCC were to conclude that that this would contribute to a lessening of competition between Telstra and TPG*".<sup>199</sup>
- 8.5 In Optus' view, this comment epitomises the superficiality and ephemeral nature of the claimed benefits of the Proposed Transaction. As has been shown, a MOCN NaaS arrangement means that TPG will effectively be at the behest of Telstra's network investment decisions and wholesale supply terms, rendering TPG a weaker competitor – if you can call TPG a competitor to Telstra since every time TPG 'wins' a customer, Telstra gains a customer onto its network and benefits financially. While the proposed arrangement may help neutralise the costs that TPG will have as a result of the Government Security Decision, it will remove TPG's capacity and incentive to compete with Telstra. Meanwhile Telstra's access to spectrum, coupled with its first mover advantages, will propel Telstra into an unassailable market dominance in the regions. It is highly likely that TPG's motivation for this transaction is to reduce its costs of operations so it will more than likely be content with accruing ongoing revenue from its spectrum lease while avoiding the need to invest in regional Australia, essentially leaving the market to Telstra.

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<sup>199</sup> Feasey report, [90]



- 8.6 In the following section, Optus outlines further public detriment that it considers will result if the Proposed Transaction is authorised – namely the loss of network redundancy and resilience in the event of network outages and the significant economic detriment that would result from reduced competition in 5G services.

### **The proposed deal would undermine the security of key national communications infrastructure**

- 8.7 Telecommunications services have become crucial to daily life and provides Australians with access to essential services, particularly in regional areas. As the incumbent, Telstra has traditionally been the network that regional consumers have had to rely on for connectivity. However, recent flood and fire disasters have demonstrated the value of having multiple resilient mobile networks.

- 8.8 Noting that no communications system is totally resilient, the 2021 report of the Regional Telecommunications Review Committee (RTIRC) stated that “in instances of natural disasters and emergencies, connectivity is significantly impacted by power and network outages. This reduces access to recovery and support”.<sup>200</sup> In a disaster, a lack of connectivity can be life threatening and inquiries have identified certain vulnerabilities in network infrastructure that could be strengthened to provide greater assurance about service continuity in the event of a disaster.<sup>201</sup> The 2021 RTIRC report found that

*“there is a need to improve the resilience of telecommunications infrastructure in areas where there are frequent power outages, particularly those at risk of natural disaster. Mobile base stations, telephone exchanges and other key infrastructure are vulnerable to interruptions to the power network, and are often insufficiently provisioned with auxiliary back-up power to maintain critical communications services during extended power outages.”<sup>202</sup>*

- 8.9 To address this, the Committee has recommended the creation of a Regional Telecommunications Resilience Fund and enhanced funding for programs such as the Strengthening Telecommunications Against Natural Disasters (STAND) package and the Mobile Network Hardening Program (MNHP).<sup>203</sup> Optus is committed to maintaining the resilience of its mobile network and actively participates and invests in government and community programs designed to improve network resiliency. As with network deployment, private investment in network resiliency will be most effectively promoted where there is potential for an operator to make a return on its investment.
- 8.10 A key component of bridging the digital divide will be to ensure that regional consumer have access to reliable mobile services in the event of network redundancy caused by a natural disaster or otherwise. If authorised, the Proposed Transaction presents a real threat to the availability of a robust network alternative to Telstra in regional areas. TPG's decision to decommission its approximately 725 radio sites in the RCZ will involve an immediate reduction in network resilience. While Optus has been committed to investing in regional Australia and challenging Telstra, for reasons outlined elsewhere in this submission, this will not continue if the Proposed Transaction proceeds.

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<sup>200</sup> [2021 Regional Telecommunications Review A step change in demand \(infrastructure.gov.au\)](#), the report also noted its concerns about the level of network redundancy offered by proposed certain (non-fixed and/or mobile) alternative services, p.32 to 35

<sup>201</sup> E.g “Impacts of the 2019–20 bushfires on the telecommunications network”, ACMA, April 2020

<sup>202</sup> RTIRC report, p.7

<sup>203</sup> RTIRC report, p.11

- 8.11 The likely reduction in incentives to invest in network deployment and physical coverage expansion for all three MNOs also presents a long term threat to public safety which will be difficult to reverse. Regional Australia faces the real prospect that when the Telstra network is down there will be no communications.

### **Examples of the recovery role Optus currently undertakes during natural disasters in regional areas**

- 8.12 Optus understands how crucial a functioning telecommunications network is in an emergency and how vital it is for affected residents to be able to make calls for assistance, confirm the safety of family and friends and for emergency services personnel to coordinate their response. Optus therefore currently invests considerable time and resources into its network performance, resilience and recovery.
- 8.13 During the most recent flood crisis in New South Wales, within 12 hours of the flood's impact, our first SATCAT arrived in Lismore from Sydney. This provided temporary mobile coverage to thousands of affected residents less than a day after the network was impacted. In the days following, two additional SATCATs were deployed to Ballina and Nimbin, expanding the temporary coverage area.
- 8.14 Optus also deployed technicians to restore the core network infrastructure. Once access to sites became possible, we were able to quickly work to restore many of our towers. On 4 March, for example, Optus had 26 NSW sites offline in the affected area. This was reduced to eight by 9 March and just 4 by 10 March. Overall, this meant 335 of our 361 sites (93%) in the affected area across NSW and Queensland were online by 10 March. These sites can and do provide emergency service access for customers of other operators.

### **Support for Affected People**

- 8.15 Optus support for the flood response didn't just focus on the mobile network. We provided a range of support for residents.
- 8.16 An important example of this was our support for the evacuation centre in the first week of the response. Optus provided power packs for phone charging, pre-paid devices and SIM cards for those who had lost their phone, recharge vouchers and bottles of fresh drinking water. This enabled affected residents to stay connected and not have to incur the costs of replacing phones/SIM cards and/or topping up their pre-paid credit whilst also dealing with catastrophic personal circumstances.
- 8.17 In addition, an Optus truck was deployed at Southern Cross University in Lismore to support over 1,000 displaced residents. The truck provided a mobile charging station, a support hub for locals to re-connect their services, a mobile screen displaying important evacuation centre updates.
- 8.18 There are in fact many examples where the Optus mobile and satellite networks have provided regional communities with connectivity when the Telstra network was down and faced delays in being repaired. Some recent examples are recounted below.
- 8.19 In March 2022, Telstra had an eight-day outage in the NSW town of Uralla due to upgrades. Essential services relied on non-Telstra networks. Telstra customers in Uralla – including residents, business owners and visitors – faced 'SOS only' on their mobiles.

## 8.20 The Guardian reported:<sup>204</sup>

*Late in the afternoon of Wednesday 16 March, Tina Ryan needed to call triple zero to get her terminally ill husband Owen to hospital for pain relief.*

*“He had really chronic pain. There was no way I could get him to the car, so that’s when I tried to call triple zero,” she says.*

*Ryan attempted to call the emergency service from two Telstra phones, one an NBN landline and the other a mobile.*

*“It just didn’t connect to anywhere,” she says. “Then I tried a non-Telstra mobile which thankfully connected.”*

*Ryan had changed providers on one of the household’s mobile phones, seeking value for money. “It was pure luck that we had it here in the house,” she says.*

*Two days into the outage, the deputy mayor Bob Crouch, who lives 2km out of Uralla, found he couldn’t make a call from his Telstra mobile while in town.*

*Crouch is president of the Diggings Rural Fire Brigade in the Uralla district and there was a callout for a fire.*

*“We have pagers, but a lot of us don’t carry the pagers anymore,” he says. “Now we have a phone app that notifies us when there’s a callout, and there was a callout when me and our senior deputy captain just happened to be in town.”*

*But neither received the app alert until they returned to their homes a couple of hours later, when their phones indicated a grassfire outside Uralla.*

*Owen Ryan was taken by ambulance to Armidale hospital to access the pain relief he needed on 16 March. He died on 14 May.*

*The grassfire on the edge of Uralla on 18 March was put out by other Rural Fire Service volunteers.*

## *Flood recovery relies on communication*

8.21 The Northern Rivers towns impacted by February’s devastating floods found that recovery efforts became even more difficult because of telecommunications outages.

8.22 The Guardian reported on Kingscliff’s Tanya Phillips struggles:<sup>205</sup>

*“We were really in a communication black hole,” Phillips said after having had to leave home to work in Tweed Heads where she has finally been able to get a signal.*

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<sup>204</sup> “We were kind of terrified: rural Telstra customers lose service for a week”; the Guardian, 16 May 2022 available at <https://www.theguardian.com/australia-news/2022/may/16/we-were-kind-of-terrified-rural-telstra-customers-lose-service-for-a-week>

<sup>205</sup> ‘Black hole’: telecommunications outage hampering flood rescues and recovery in northern NSW; the Guardian, 4 March 2022 available at <https://www.theguardian.com/australia-news/2022/mar/04/black-hole-telecommunications-outage-hampering-flood-rescues-and-recovery-in-northern-nsw>

*"It has been difficult. There's been family worrying about us," she said.*

*Phillips said many people were calling the evacuation centre at Kingscliff to find out news, to check "if dad made it or if mum is there".*

*For Phillips, who is the main administrator and editor of the community Facebook group Kingscliff Happenings (Coojingburra), the lack of connection has made it difficult for her to provide the essential service messages to the community.*

*"Things change so fast. We need to be putting things up on the site in real time because old news can be dangerous."*

*In order to post this week, Phillips said she would gather information from police at the evacuation centre, then borrow a phone with an Optus simcard to text another moderator on the other side of the river who still had internet.*

*"Everybody was relying on whoever had an Optus phone. Optus seemed to be the only one working. If we could have flipped over and used Optus or Vodafone, services aren't great but it would have been better," Phillips said.*

- 8.23 Optus is proud of the efforts we have made to support the response and recovery from these once in a century floods. Telecommunications services are vital to enable affected residents to seek assistance, communicate with family and friends and for emergency services responders to coordinate their vital work. Any proposed measure that sees a reduction in the capacity of network providers to render such assistance should be rejected.
- 8.24 If the transaction is approved and Optus is forced to reduce its investment and presence in regional Australia, then the opportunities for Optus to provide back-up services or assistance in times of emergency may not be the same as they are now. No other carrier will be able to fill this gap.

### **Non-competitive 5G rollout will cost the national economy \$55 billion in lost economic gains**

- 8.25 Optus' commitment to deploying new radiocommunications sites has been noted by the ACCC in its recent Mobile Infrastructure Report, which states that

*Between 2020 and 2021, the MNOs collectively added a total of 1,005 new sites across their three networks. A majority of these new sites were deployed in Major Cities, where Optus deployed the greatest number of new sites (238 new sites), closely followed by TPG (236 new sites). Telstra added the lowest number of new sites in Major Cities (174 new sites).<sup>206</sup>*

- 8.26 As noted elsewhere in this submission, leaders in the adoption of transformative new technologies can gain a first mover advantage, with early adopters able to improve productivity and service delivery and ultimately gain market share. Over recent years, Optus has been discussing with Government the benefits of national 5G networks and the economic risks that arise if a non-competitive 5G market were to develop. This work

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<sup>206</sup> ACCC Mobile Infrastructure Report, p.11

was undertaken in the context discussed in Section 6 to assist the roll-out of competitive 5G infrastructure, especially in regional areas.

- 8.27 5G networks and services are crucial to the realisation of Australia's digital economy and the broader economic benefits of enabling 5G use cases. If the Proposed Transaction is authorised, Optus submit that it has the real potential to undermine the realisation of these broader economic goals and Australia's productivity.
- 8.28 5G mobile technology presents significant economic potential for Australia. 5G networks deliver faster speeds, better reliability, lower latency and improved capacity compared to previous generations of mobile technology. These features will improve telecommunications services in Australia and enable many new technologies such as drones, Internet of Things (IoT), M2M, Edge Computing, autonomous vehicles, and virtual reality along with potentially numerous others. Undermining competition in the provision of 5G services will prevent the emergence of new markets and technologies that may benefit Australia consumers and businesses.
- 8.29 The potentially substantial productivity benefits of 5G are well documented. A study by Price Waterhouse Coopers (PwC) suggests the adoption of 5G technology in Australia could increase the size of the economy by \$US20 billion by 2030 in 2019 dollars.<sup>207</sup> The healthcare sector, smart cities/transport, manufacturing and agriculture are all sectors that have been identified as likely to benefit significantly from the technologies enabled by 5G services.<sup>208</sup>
- 8.30 The work conducted by PwC estimated both the potential benefit of a national competitive 5G market; and the potential lost economic growth attributable to a 5G market dominated by one provider. This analysis is instructive as it captures the risks that are present with this proposed arrangement. The Report is attached.
- 8.31 5G has the potential to provide the next productivity stimulus to Australia's economy. This follows more than a decade of limited labour and multifactor productivity growth and stagnant wage growth.<sup>209</sup>
- 8.32 Using PwC's geo-spatial modelling, Optus estimate that widespread roll-out and adoption of 5G in Australia could add approximately \$36.7 billion to GVA,<sup>210</sup> equivalent to 1.2% of economic value in 2030. The cumulative additional GVA across a decade would be \$130 billion, equivalent to 205,000 net new jobs created across a ten year period.
- 8.33 This analysis also shows that regions stand to benefit more from 5G compared to metropolitan areas. PwC expects that across Australia 8,000 new jobs could be created in regions in 2030. The associated GDP impact of 5G in regions would be \$11.3 billion in 2030, representing a higher rate of growth than that for metropolitan areas. Cumulatively, this would amount to \$38 billion and 45,000 new jobs over the decade.

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<sup>207</sup> The global economic impact of 5G, PwC; available at

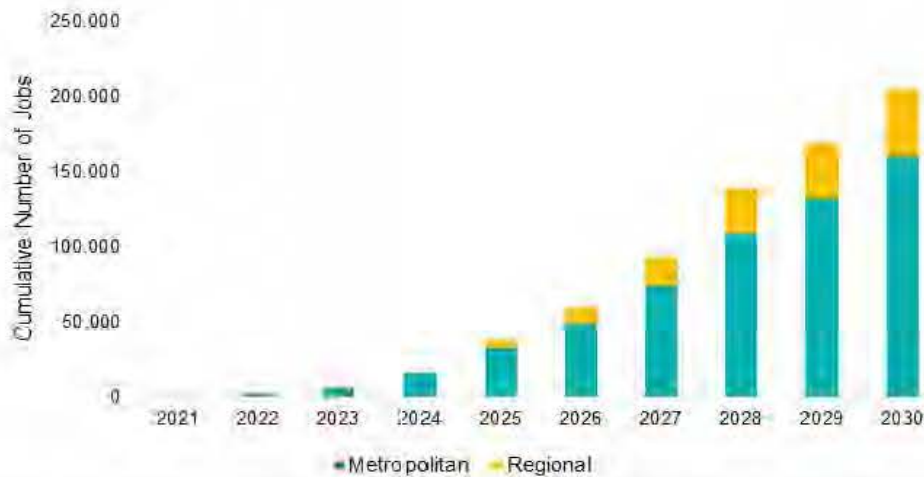
<https://www.pwc.com/gx/en/industries/technology/publications/economic-impact-5g.html>

<sup>208</sup> <https://www.pwc.com/gx/en/about-pwc/contribution-to-debate/wef-the-impact-of-fiveg-report.pdf>

<sup>209</sup> <https://www.pc.gov.au/research/ongoing/productivity-insights/recent-productivity-trends/productivity-insights-2020-productivity-trends.pdf>

<sup>210</sup> in real, 2019-2020 terms.

Figure 19 Potential additional job creation due to 5G impacts nationwide in all industries from 2021-2030



Source: PwC analysis based on IHS Markit estimates: <https://www.qualcomm.com/media/documents/files/ih5-5g-economic-impact-study-2019.pdf>

- 8.34 The PwC geo-spatial economic analysis is based on potential economic benefits from the competitive deployment of national 5G networks. 5G is expected to drive productivity and employment growth in both metropolitan and regional areas. The associated GDP impact of 5G in regions represents a higher rate of growth than that for metropolitan areas.
- 8.35 This analysis, however, assumes these networks are deployed efficiently and in a competitive market. Competition drives innovation and investment in new technology – pushing new 5G networks out to the regions. Absent these competitive incentives the deployment of 5G will be delayed and uneven, with a lack of choice and high prices. Together, these impacts will greatly reduce the potential benefits of 5G.
- 8.36 As a result of the deployment challenges described in Section 6, 5G deployment in Australia is being dominated by one service provider, a situation which will be cemented if the proposed transaction is allowed to proceed. This is resulting in a narrowing of choice for 5G and potentially a slower deployment of the network nationally. Based on experience with the deployment of 3G and 4G, diluted competition risks dilution of price competitiveness and stagnated network roll-out.
- 8.37 Without 5G availability for key industries and communities in the regions, and true enterprise choice in 5G in all areas, the 5G jobs dividend is at risk. PwC has considered what we call the monopoly and network delay factors. Having a monopolistic market for 5G could cause an economic value loss of \$14.9 billion in 2030, and a 5G network rollout delay of three years could cause an economic value loss of \$13.3 billion. These factors are interrelated, and the economic value at stake attributable to both factors is estimated at \$21.6 billion. The value loss from a monopolistic market is expected to grow over time. Even by 2027 we expect that the value loss from a monopolistic market for 5G in that year alone would be \$6 billion. Across the decade to 2030, we expect that the value loss would amount to \$55 billion; representing 42% of the potential economic gains from 5G services.