

**OPTUS**

Submission in response to  
Departmental consultation

***Draft  
Radiocommunications  
(Ministerial Policy  
Statement – Expiring  
Spectrum Licences)  
Instrument 2024***

PUBLIC VERSION

April 2024

## EXECUTIVE SUMMARY

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1. Optus welcomes the opportunity to provide feedback to the Department's consultation on the draft *Radiocommunications (Ministerial Policy Statement – Expiring Spectrum Licences) Instrument 2024* (the draft MPS).
2. The use of spectrum, subject to the MPS, for mobile services delivers billions of dollars of economic activity and many thousands of jobs each year. Multiple reports demonstrate that the annual Australian economic uplift due to 5G mobile services amounts to between \$30-60 billion in 2030.<sup>1</sup> Globally, the GSMA predicts the continued use of low band spectrum for 5G mobile networks will contribute \$130b in economic growth in 2030.<sup>2</sup> In America, BCG predicts that by 2030, 5G will have contributed from US\$1.4 trillion to US\$1.7 trillion in US economic growth.<sup>3</sup>
3. The single largest risk to the delivery of the predicted economic and jobs growth is a lack of certainty around ongoing spectrum availability. Ensuring the expiring spectrum licences process supports the ongoing economic and social benefits of mobile services must be the priority of the MPS.
4. Optus generally supports the draft MPS. In particular, Optus welcomes the recognition of the importance of continuity of service and a sustainable investment environment. Support for these policy objectives will ensure continued economic and jobs growth, and in turn help realise wider Government policy priorities relating to regional connectivity and Closing the Gap.<sup>4</sup> The MPS should explicitly state that continuity of services and the promotion of sustainable investment are the priority objectives for the ESL process.
5. However, the MPS should provide further guidance as to the policy intention behind the competition related objectives, in particular “facilitating opportunity for new entrants and use cases, including for low earth orbit satellites”. Optus cautions against any changes to existing arrangements designed to simply support entry for the sake of it. Actual or potential fragmentation of spectrum can have disproportionately adverse customer consequences for existing mobile network performance and coverage.
6. The ESL process and the ACMA's decision-making framework provide a real opportunity to deliver for Australia's digital future. In an uncertain industry and investment climate, the Government should seek to provide the certainty required, through the MPS or otherwise, to promote investment and innovation in the sustainable supply of critical communications networks and services for the long-term benefit of Australians.
7. Optus submission sets out some high-level policy considerations that should be reflected in the decision-making framework for ESLs. We then provide specific feedback on the policy objectives set out in the draft MPS. Optus would welcome the opportunity to discuss our feedback with the Department to help ensure that the ESL process delivers for the long-term public interest of Australia.

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<sup>1</sup> AMTA, 2021, 5G Unleashed; Optus, 2021, 5G Impact; PwC, 2020 Global Impact of 5G; CSIRO, 2018; BCAR, 2018, Impacts of 5G on productivity and economic growth.

<sup>2</sup> GSMA, 2023, Socio-Economic Benefits of 5G. The importance of low-band spectrum.

<sup>3</sup> <https://www.bcg.com/publications/2023/accelerating-the-5g-economy-in-the-us>

<sup>4</sup> as reflected under “connectivity and investment in regional areas to deliver improved services to end users”

## EXISTING SPECTRUM ARRANGEMENTS ARE FIT FOR PURPOSE

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8. Spectrum licences are afforded a high degree of exclusivity and certainty under the *Radiocommunications Act 1992* (“the Act”).<sup>5</sup> This has made the licence type suited to the long-term investment required for multiple generations of mobile network deployment. As a result, the Australian mobile market is one of world’s leading in terms of penetration and speeds. Australia is served by multiple advanced 4G and 5G mobile networks, supplying data throughputs that rank amongst the best in the world.
9. Mobile services, supplied using long term spectrum licences, enable greater productivity growth and result in more jobs throughout the whole economy. Numerous economic studies support this conclusion, including:
  - (a) Deloitte Economics forecasts that adoption of 5G technology in Australia could increase the size of the economy by \$70 billion in 2030 in 2022 dollars.<sup>6</sup>
  - (b) Optus, using PwC modelling, expects the widespread rollout and adoption of 5G in Australia could increase the economy’s GVA by approximately \$36.7 billion, equivalent to 1.2% of economic value by 2030.<sup>7</sup>
  - (c) The Federal Government’s Bureau of Communications and Arts Research estimated that 5G will result in a \$1,400-\$2,000 increase in GDP per capita by 2030. This equates to a total contribution of \$42-60 billion.<sup>8</sup>
10. Global studies produce similar estimates. The GSMA predict that 5G is expected to yield more than \$960 billion in additional GDP value-add to the global economy, or approximately 0.70% of global GDP in 2030<sup>9</sup> – of which 87% comes from spectrum ranges that are subject to ESLs.
11. Optus submit that the MPS should recognise that changes to existing spectrum arrangements risks these public benefits and risks future investment and innovation in critical infrastructure and the ongoing supply of essential services.

### Early certainty of ESL renewal is important to Australia’s digital future

12. Digital connectivity is essential to Australia’s economy and society. National mobile networks and services are a central component of Australia’s digital infrastructure, connecting Government, businesses and consumers, enabling new vertical industries and supporting the realisation of key Government policy objectives for an inclusive, secure and prosperous Australia.<sup>10</sup>
13. The billions of dollars of investment made by mobile operators to deploy national mobile network infrastructure and deliver essential services across Australia has been premised

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<sup>5</sup> For example, sections 60B, 105 and 138 of the Act support the relative exclusivity of spectrum licences by limiting the ACMA’s power to issue class and apparatus licences (respectively) that overlap with spectrum licences while certainty of access is implied in the long-term duration of spectrum licences under s.65 of the Act and the protections afforded to licensees regarding variation or resumption of spectrum licences by the ACMA (chap 3).

<sup>6</sup> AMTA, ‘5G Unleashed: Realising the potential of the next generation of mobile technology’ *Australian Mobile Telecommunications Association* (2022)

<sup>7</sup> Optus, ‘Submission in response to ACCC Consultation Paper Allocation limits advice for 850 MHz expansion band and 900 MHz band spectrum allocation’ *ACCC* (December 2020)

<sup>8</sup> Bureau of Communications and Arts Research, ‘Impacts of 5G on productivity and economic growth’ *Australian Government Department of Communications and the Arts* (Aprile 2018). Assumes population of 30 million.

<sup>9</sup> GSMA, ‘The Socio-Economic Benefits of Mid-Band 5G Services’ (February 2022), p.11

<sup>10</sup> The broader socio-economic benefits of mobile networks and services are well documented. GSMA research “Mobile technology: two decades driving economic growth”, 2020, shows that the baseline economic impact of mobile services increases when upgrading from one generation of mobile technology to the next (15% from 2G to 3G and 25% from 2G to 4G).

on access to spectrum via long term licences. However, the mobile sector is at an inflection point with the demand of digital infrastructure investment coupled with long-term decline in returns on invested capital (ROIC) raising the prospect of a digital investment gap.<sup>11</sup> Ongoing certainty of access to spectrum is needed to support Australia's digital future.

14. Compared to the previous renewal process, this ESL process is inherently more uncertain for incumbent licensees. This is largely a result of the revised legislative framework and the significant discretion and independence afforded to the ACMA in making decisions about future use of ESL spectrum. An overly broad discretion, while providing flexibility for the ACMA, can create unnecessary uncertainty among stakeholders, acting as a disincentive to long term network planning and investment.
15. ESLs expire between 2028-2032 and the new legislative framework means that the ACMA can only provide a final view in response to a renewal application. Optus compares this to the regulatory framework for renewals in Finland, Canada and the UK where the expectation of renewal of spectrum licences is near automatic or very strong.<sup>12</sup> The Government's Statement of Expectations provides that the ACMA should be "risk based, and data driven" with a view to "manage risks proportionately". A lack of certainty that ESLs will be renewed raises risks to Australia's digital future that outweigh any perceived benefits of retaining discretion to re-allocate or auction spectrum for new uses.
16. Optus welcomes the ACMA's view that "continued support for wireless broadband (WBB) use of ESL spectrum bands is "likely conducive to promoting the long-term public interest".<sup>13</sup> However, to minimise the risks of delayed or slowed investment the Minister should indicate in the MPS that certainty of renewal of ESL, at least in specified circumstances, is to be considered in the public interest.
17. Optus submits that the MPS further requests the ACMA to identify in what circumstances, incumbent licensees can be provided with sufficient detail of what spectrum holdings will be renewable and which spectrum might not be renewed well before the application window open. At a minimum, Optus submit that where no viable alternative demand or use case for ESL spectrum is established via the ACMA's Stage 2 consultation, the need to promote certainty of investment should weigh heavily in favour of the ACMA forming a "preferred view" that "renewal of ESLs to incumbent licensees is in the long-term public interest".

### **Renewal of ESLs at a nominal price is in the long term public interest**

18. Mobile services are increasingly recognised as an essential service both as an input to the supply of other critical services and in its own right. However, the industry does not receive any of the regulatory benefits of designation as an essential service. For example, unlike electricity and water, the mobile sector has no regulated guaranteed return on the assets for the lifetime of the asset required to supply the service. In addition, water and electricity entitlements are in perpetuity with complete certainty and no risk to the past, existing or future investment.
19. Given the centrality of spectrum to a mobile operator's business model, the ESL process raises the risk of higher prices for spectrum access through potential auction processes or Government revenue raising via administrative renewal. Higher spectrum access

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<sup>11</sup> Optus May 2023 submission to the ACMA's Stage 1 consultation paper citing Venture Insights report

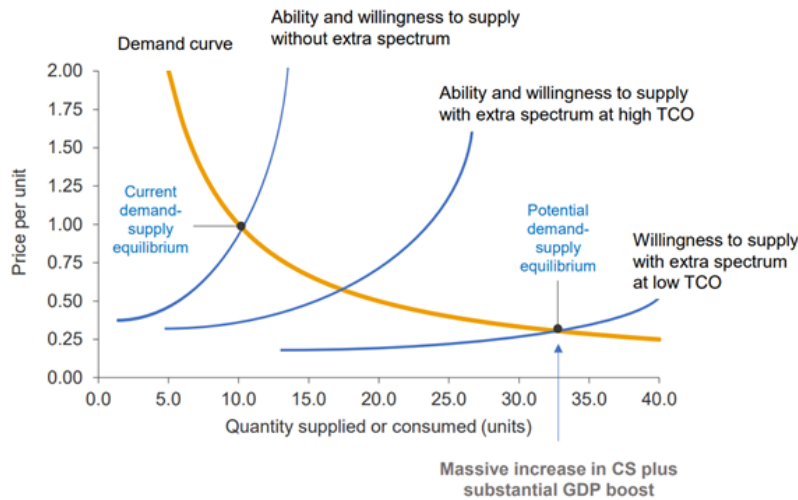
<sup>12</sup> Unless there has not been "productive use" of the spectrum or there are exceptional circumstances such as an overriding policy need

<sup>13</sup> ACMA Expiring spectrum licences: stage 2 Information gathering, and views on uses of frequency bands and alternative licence conditions; March 2024; p.2

charges can have downstream effects, as consumers and business potentially bear the cost of operators having to recoup their investment through higher retail prices. Less capital for investment may also result in lower quality mobile services.

20. This diagram illustrates the potential broader public benefits of low spectrum pricing:<sup>14</sup>

Impact of large spectrum allocation at low prices (illustrative)



21. A sustainable telecommunications sector is in the public interest – industry sustainability must be an overarching consideration in the ESL process. The risk of a digital investment gap can be eased by low prices for ESL renewal.<sup>15</sup> The ACMA proposes to issue spectrum access charges determinations at Stage 4 for each ESL spectrum band. Optus submits the MPS explicitly state that spectrum access charges payable by licensees should be set at a nominal level to support long term industry sustainability and network investment.<sup>16</sup>

### ESL process should not be used to implement too broad a policy agenda

22. The Government has set out an ambitious industry policy agenda, including a list of critical technologies in the national interest such as Artificial Intelligence (AI), advanced manufacturing and information and communication technologies among others.<sup>17</sup> The success of this agenda will rely in part on the availability of reliable, high quality and potentially high bandwidth connectivity services.
23. Therefore, it will be important to ensure that the regulatory framework is sufficiently supportive of the investment required to densify networks and deliver sufficient bandwidth at a competitive price point. National mobile operators benefit from economies of scale and scope that mean they are best placed to support these industry policy objectives and boost productivity, as long as they have sufficient spectrum to do so. For example, the ESL process can assist the Government’s regional connectivity objectives, which requires cost effective network deployment in regional areas depends on access to suitable low band spectrum.

<sup>14</sup> Coleago, Mobile Spectrum and Network Evolution to 2025, p.33

<sup>15</sup> ACMA states that where public interest tests are required (such as where a licence includes a public interest test or the licence is to be renewed for 10 years or longer) the ACMA will have regard to whether an “incumbent would be significantly compromised if the licence were not renewed and potential flow on effects” when assessing the public interest of renewing a licence; Our approach to radiocommunications licensing and allocation, pp.25-26

<sup>16</sup> Section 294(2) of the Act

<sup>17</sup> [List of Critical Technologies in the National Interest | Department of Industry Science and Resources](#)

24. However, certain policy objectives, including in the communications portfolio, cannot be delivered via spectrum management policy and should not be a policy priority of the ESL process. Optus submit that given the potential unintended consequences, the extent to which other policy objectives may be achieved through means other than changes to spectrum licence arrangements should be a guiding consideration in implementation of the ESL process. For example, linking improvements in network resilience and disaster responsiveness to the ESL process may, in our view, undermine the purpose of both processes and lead to duplication of outcomes.

### **Avoiding unintended impacts to quality of existing services in policy implementation**

25. Optus consider that the application of the decision-making criteria for ESLs may have unintended adverse technical implications for mobile network coverage and performance. The main source of concern relates to spectrum fragmentation that may result from decisions to re-allocate ESL spectrum, particularly low band spectrum, to prospective spectrum holders, with no proven business case or flowing from access granted to spectrum by way of the operation of proposed new licence conditions, such as “Use-it-or-lose-it” (UIOLI) or “Use-it-or-share-it” (UIOSI). It is important that such impacts are factored into the broader framework.
26. These impacts may also be avoided by the ACMA consideration of whether non-ESL licensing, such as recent or ongoing AWL allocation processes in the 3.8 GHz band, have or will meet demand for alternative use cases.<sup>18</sup>

### **Low band spectrum utility is particularly susceptible to fragmentation**

27. Changing the geographic scope of a spectrum licence increases (co-channel) interference risk due to the presence of licence boundaries. Interference can result in coverage loss beyond the carved-out area. This “out-sized” impact of a change to geographic area is particularly relevant to low-band spectrum, such as the 700 MHz band, currently heavily utilised by all mobile operators.<sup>19</sup>
28. The introduction of new boundaries, especially for low band spectrum, will result in “dead zones” with no mobile service between different licensees. Given the importance of low band to regional and remote coverage, this effect is more likely to disproportionately impact people living in regional and remote areas. Fragmenting existing low band holdings for the sake of enabling localised entry in regional Australia will only serve to undermine coverage and performance of existing mobile services. As the ACMA noted:
- “there are constraints on increasing the number of operators using low-band spectrum: Any approach to increase the number of operators using this spectrum is challenging as the ‘wide area’ benefits of the band can be lost by disaggregation into smaller frequency blocks of spectrum. ... Therefore, minimising the number of boundaries and avoiding boundaries through or near population centres is important to maximising the overall utility of the spectrum.”<sup>20</sup>
29. The MPS should make clear that low band spectrum should be allocated nationally to ensure it is deployed without inefficient dead zones caused by licence boundaries.

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<sup>18</sup> As per the draft MPS under “scope and policy context for MPS” at section 5 of the draft MPS

<sup>19</sup> Low-band spectrum propagates over long distances, making it highly suitable in supporting national wide-area networks. However, this also makes it extremely difficult to coordinate across co-channel spectrum boundaries and the distances required between radio sites to prevent harmful interference for licensees on either side would need to be extremely large, resulting in wasted spectrum.

<sup>20</sup> “Connecting the country: Mission critical”; Inquiry into co-investment in multi-carrier regional mobile infrastructure; House of Representatives Standing Committee on Communications and the Arts; para 2.24; p.17

## **Existing mechanisms enable spectrum access**

30. Mandating use or sharing of spectrum via licence conditions runs the high risk of regulatory failure, by incentivising inefficient use and/or non-commercial investment. To the contrary, use of existing legislative mechanisms allows for coordinated access to spectrum that enables new use cases or operators while maintaining the operating integrity of the existing mobile networks. Through secondary trading and/or third-party access, mobile operators can develop coordination approaches that avoid the problems of geographic boundaries outlined above.

## SPECIFIC COMMENTS ON THE DRAFT MPS

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31. Optus provides the following comments on the specific policy objectives outlined in the draft MPS for the Department's consideration in finalising the MPS instrument.

### Scope and policy context for the MPS

32. Optus understands that the matters set out under the MPS fall under the ACMA's fifth decision-making criteria of "support relevant policy objectives". In this way, the MPS instrument seeks to provide clarity on the policy objectives that the Minister considers the ACMA must have regard to in its ESL decision-making.<sup>21</sup>
33. As noted above, Optus considers that the ACMA's discretion in relation to ESL decision-making risks being unduly broad, creating uncertainty about the prospects of renewal and potentially undermining long term investment planning. Optus is concerned that the draft MPS may compound this by not confining the matters to which the ACMA must have regard to the MPS itself.
34. For example, the draft MPS states that "the ACMA will need to consider the broader communications environment within which these licences exist. This could include consideration of existing spectrum holdings which are otherwise outside the scope of the expiring spectrum licences process."<sup>22</sup> While the example provides welcome clarification, Optus considers that the statement "will need to consider the broader communications environment" remains too open-ended.
35. In this context, it is unclear to Optus whether the broader communications environment would involve consideration of "the Government's broader communications policy agenda, which includes, but is not limited to" the policy matters listed in the MPS.<sup>23</sup> Optus submit that such an interpretation would create an inappropriately broad range of potentially irrelevant policy issues for the ACMA to have regard to in its ESL decisions.

### Supporting service continuity for end users, particularly where no alternative service is available

36. Optus welcomes this policy objective and consider that the need to support continuity of service should weigh heavily in favour of renewing all ESLs in full.
37. The ESL process presents a risk to service continuity in a number of ways. For example, if an operator were to lose access to part of its spectrum holdings, this is likely to impact network coverage or service quality causing noticeable disruption to customers. Further, the announcement of an auction to re-allocate ESL spectrum would precipitate a period of uncertainty for an incumbent about how/whether to maintain services on that band or migrate them to other bands. The potential impact on end-users, including loss of service, could be very serious and must be afforded priority consideration in all ESL decisions.
38. Optus submit that prioritising continuity of service will promote the "public interest" whereas a change in licensees would "put at risk delivery of services to a significant

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<sup>21</sup> Section 28B; the Act

<sup>22</sup> Draft MPS; p.5

<sup>23</sup> Which states that the MPS is "made within the context of the Government's broader communications policy agenda, which includes, but is not limited to, Telecommunications Universal Service Obligation Reform, initiatives to improve digital connectivity for First Nations Australians and communities, the 2024 Regional Telecommunications Review, and activities to support the resilience of telecommunications networks and temporary disaster responses."



number of people”.<sup>24</sup> Given ESL spectrum is used to supply essential services across Australia, we consider that continuity of service should be the primary consideration, particularly where no, or limited, alternative communications services are available. Optus welcomes changes to the MPS to make this clearer.

### **Facilitating opportunities for new entrants and use cases, including for LEO Sats**

39. Optus agrees with the general sentiment that competition remains crucial to drive investment and innovation in mobile markets. However, such competition needs to be efficient. Optus is concerned that the MPS appears to be focused towards the potential for new entry or use cases.
40. Optus is concerned about the apparent rationale for the inclusion of this draft policy objective, namely to “explore future arrangements that reduce barriers to new entry” as recommended by the ACCC. Optus notes that incumbent licensees have, through open auctions, paid billions of dollars for access to spectrum to enable the deployment of mobile networks and further billions to deploy networks providing connectivity to over 30 million customers nationally.
41. While Optus readily concedes that the mobile sector is characterised by high barriers to entry due to the high cost of spectrum and high cost to deploy, we note that the ACCC’s recommendation is not based on a formal analysis of the current state of competition in the national mobile market. More specifically, there does not appear to be any assessment of whether existing legislative mechanisms are in fact unfit for the purpose of enabling the desired spectrum access. Establishing clear evidence of market failure should be a pre-requisite to regulatory intervention.
42. If lowering barriers to entry means supporting low-cost access to ESL spectrum for prospective licensees, then Optus considers such a step to constitute a significant departure from established regulatory practice – and is a step that will not promote the public interest. In such a scenario, it is incumbent on the ACMA to explain its approach to pricing and valuation transparently and through public consultation processes.
43. A further question remains as to the nature of the entry that might be supported – for example, any intervention to support entry into the national mobile market should be treated with a high degree of caution. Recent history would suggest that any new entry at a national level is highly unlikely. Optus notes that there have been numerous open auctions in recent years for mid and low band spectrum. None of which has demonstrated any real demand by new entrants. Any policy decision that aims to promote inefficient entry is likely to reduce the public benefit of spectrum use.
44. The MPS should make clear that licenced spectrum is not the only spectrum available for new entry. For example, the need to further support localised entry must be considered in the context of the ACMA’s recent administrative allocations in the 3.8 GHz band across metro, regional and remote areas. There are existing legislative mechanisms that support trading and third-party authorisation of spectrum. Calls for the re-allocation of ESL spectrum to new local area use cases or operators should be substantiated by clear evidence that market mechanisms for access to spectrum have and/or are failing.
45. We observe that the ‘demand’ for ESL spectrum appears to be theoretical and not supported by any market evidence. Optus notes that it has not been approached by any prospective local area WBB operators to access any of its ESL spectrum in recent years. Optus welcomes such approaches. In this context, Optus supports the reference to “the importance of ESLs to continuity of existing service coverage” under this draft policy

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<sup>24</sup> ExMemo to Modernisation Act, p.34

objective as a relevant consideration to temper the introduction of new entry mechanisms simply for the sake of entry.

#### *LEO satellite services provide an opportunity to connect the country and Close the Gap*

46. Optus support entry of new use cases that help maximise the use of ESL spectrum holdings. Our collaboration with SpaceX is evidence that existing market mechanisms can be used to promote spectrum utilisation in regional and remote areas where there has been limited or no previous mobile coverage. Spectrum policy arrangements can help usher in the benefits of technological advancements that will see end-users seamlessly communicate across terrestrial and non-terrestrial (satellite) networks.
47. Our arrangement with SpaceX authorises the use of Optus ESL spectrum to deliver direct to mobile services to underserved geographic areas of Australia, thereby promoting the efficient use of this spectrum and helping to deliver on regional connectivity goals. The “IMT” satellite “DTM” use case was enabled by the flexibility afforded to licensees under the existing spectrum licence regime. An important benefit of maintaining the spectrum with the (terrestrial) spectrum licence holder is that the spectrum licensee remains ultimately responsible for interference management, lessening the burden on the ACMA and any affected adjacent licensees.
48. Optus observes that this policy guidance supports the reallocation of ESL spectrum to existing licence holders.

#### **Connectivity and investment in regional areas to deliver improved services to end users**

49. Optus supports this draft policy objective and notes that it reflects key elements from the Government’s broader policy agenda, including on Closing the Gap.
50. That said, Optus questions the extent to which spectrum policy and in particular, changes to arrangements governing ESL spectrum, will be able to deliver the desired outcomes. To the contrary, ensuring ongoing access to ESL spectrum at low cost for incumbents will enable and support investment to deliver improved services in regional Australia.

#### **Promoting competition**

51. Competition can drive investment and innovation and ultimately the supply of higher quality and more affordable services to consumers. Competition in the mobile sector has delivered enormous consumer benefit over the last 30 years in the form of high-quality affordable mobile communication services. Mobile competition includes infrastructure and service-based competition.<sup>25</sup>
52. Optus generally supports the ACMA’s consideration of competition issues as part of its public interest assessment. However, we note that the reference in the draft MPS is one of three competition related considerations that may inform the ACMA’s decision-making.<sup>26</sup> Any confusion or inconsistencies between these three references should be clarified in any final MPS instrument.

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<sup>25</sup> Infrastructure based competition describes competition on coverage, capacity, and capability of services, which depend upon the underlying network infrastructure. Service competition, on the other hand, occurs within the confines of available network infrastructure: MNOs compete on, for example, price and inclusions (including data and content). The promotion of competition will help deliver the productive, allocative and dynamic efficiency benefits.

<sup>26</sup> The others being “facilitating opportunities for new entry and use cases” and Criterion 3 “enhances competition” under the ACMA’s final framework.

53. Optus notes that in high fixed cost network industries which supply essential services to the public, competition should not simply be promoted at all costs – failed entry can have significant negative consequences for businesses, consumers, competition and the industry as a whole. Failed entry has also resulted in stranding spectrum, leaving spectrum fallow for years, which is anathema to the objectives of the Act. Australia has seen this happen many times, more than most jurisdictions, as the market has continually consolidated over the last few decades as it strived for sustainability and profitability (e.g One, Tel, Qualcomm, AAPT, Hutchison, Vodafone/TPG, Dense Air).
54. It will be important to balance competition objectives with other objectives to ensure that competition is efficient, sustainable and not simply enabling bad or improperly resourced actors, or even speculators, e.g. Dense Air. It follows that new entrants must demonstrate a viable and sustainable business case that is superior to the incumbents.

### **Capacity for sustained investment and innovation**

55. Optus welcomes the inclusion in the MPS of the need for the ACMA to consider the “capacity for sustained investment and innovation” in its ESL decision-making. Optus submits that delivering this policy objective should largely favour renewal of ESLs, simply because of the significant investments that have been made by industry to date based on the existing spectrum licence arrangements.
56. Mobile is a high fixed cost industry. Mobile networks require significant large upfront capital investment to deploy physical infrastructure and network equipment followed by less expensive marginal investments to extend those networks and add new users. Mobile markets are also characterised by cycles of technological improvement and investment (4G to 5G, to 6G etc). The eventual obsolescence of older technology means that consumers will lose existing coverage, capacity, and capability if a mobile operator does not continually invest in the requisite infrastructure upgrades.
57. Optus has been a significant infrastructure investor since it entered the market over 30 years ago, having invested \$43.7 billion since 1992. Optus typically invests over \$1.5 billion in capital expenditure annually in its mobile network and services. This investment has been possible through the security and certainty from spectrum licences.
58. Investment and innovation play a crucial role in promoting the public benefits of efficient spectrum utilisation, through the introduction of new technologies and improved services.<sup>27</sup> The potential for a digital investment gap is compounded by the rising costs of capital. The ACMA should seek to maximise certainty to encourage investment and innovation where possible.
59. Spectrum policy settings must continue to support investment in networks and services to ensure Australia’s communications networks continue to evolve with technological developments and support our ongoing global competitiveness and productivity. Changing the core conditions of a spectrum licence or introducing new licence conditions will change the investment environment, potentially in a manner that is not conducive to the long-term investment horizons required for mobile network deployment.
60. In this context, Optus welcomes the statement in the draft MPS to the effect that “The ACMA should consider past, existing and potential future investment by licensees, as well as known market demand for spectrum and the capacity for other prospective licence holders to make the investment required to deploy and maintain an effective service with the spectrum.” Consideration of the viability of new entry should help reduce the likelihood of opportunistic potentially speculative claim for access being rewarded.

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<sup>27</sup> ACMA, Consultation Paper. p.19