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Submission to the House Standing Committee of Communications and the Arts Inquiry into the deployment, adoption and application of 5G in Australia

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Commpete—the industry alliance for competition in digital communications—welcomes the opportunity to make this submission to the House of Representatives Standing Committee on Communications and the Arts inquiry into the deployment, adoption and application of 5G in Australia.

Commpete represents non-dominant telecommunication service providers. Our members provide fixed and mobile voice and data services across a range of customer segments, including residential, SME, corporate, and government. Our members acquire access services from a range of wholesale suppliers and some members also have fixed line carrier interconnection arrangements in place with the major carriers.

The members of Commpete make this submission in their capacities as mobile virtual network operators (**MVNOs**). MVNOs play an important role in the mobile ecosystem through strengthening and deepening the forces of competition. MVNOs do this by serving the needs of niche markets through pricing, product and service innovation.

Commpete contends that the success of 5G in Australia demands that MVNOs are—and are encouraged to be—active participants in the mobile ecosystem. Further, this ultimately requires the introduction of a legal or regulatory obligation that compels mobile network operators (**MNOs**) to offer MVNOs a wholesale access service (a so called “network slice”) on reasonable terms and conditions.

Updated regulation for the 5G era

5G is the fifth generation in mobile technology development. However, 5G is considered more than simply the next generational step. 5G represents a fundamental transformation of the role that mobile communications plays in society. 5G is an opportunity for players in the mobile

ecosystem to collaborate across economic sectors such as finance, transport, retail and healthcare to deliver a suite of new, rich services.

The introduction of 5G provides an opportunity for a fundamental transformation of the role of mobile communications in society. It will enable significantly faster mobile telecommunication services with greater bandwidth and ultra-low latencies. This in turn will provide the platform for the delivery of future communications, including virtual reality, autonomous cars, industrial internet, and smart cities. It will provide the intelligent connectivity that will underpin the fourth industrial revolution.¹ As such, the long-term impact of 5G will come to be measured in terms of its contribution to Australia’s social and economic development.

Ensuring that the social and economic benefits of 5G are captured requires effective policy and regulatory conditions. The emergence of 5G and its transformational characteristics essentially demand that regulations must adapt to the dynamic 5G environment. That is, just as 5G is not simply an incremental step in the development of mobile technology, the design of regulatory settings to govern 5G should not simply be an incremental change from legacy arrangements. As the GSM Association—the global industry association representing mobile network operators—has observed, ‘Failure to adapt regulation to this dynamic new environment can distort competition, stifle innovation and negatively impact consumer welfare.’² Commpete thus welcomes the Government’s commitment in its 5G strategy to ‘[review] existing telecommunications arrangements to ensure they are fit-for-purpose’.³

Commpete submits that 5G regulation should be based on the consideration of some fundamental principles. In particular, these principles concern the following:

- Competition—ensuring that markets are contestable and are able to offer consumers choices;
- Innovation—prioritising regulatory approaches that serve to promote innovation;
- Investor confidence—creating an environment conducive to investment; and
- Consumer centricity—the long-term interests of consumers are paramount.

¹ See, eg, Isabelle Mauro, *5G for the Fourth Industrial Revolution* (Speech to Mobile World Congress, Shanghai, China, June 2019), <www.gsma.com/spectrum/wp-content/uploads/2019/05/1-Isabelle-Mauro-Director-Head-of-Telecoms-Digital-Communications-Industry-WEF.pdf>

² GSMA, *The 5G era: Age of boundless connectivity and intelligent automation* (2017) [28] <www.gsma.com/latinamerica/wp-content/uploads/2018/08/2017-02-27-0efdd9e7b6eb1c4ad9aa5d4c0c971e62.pdf>

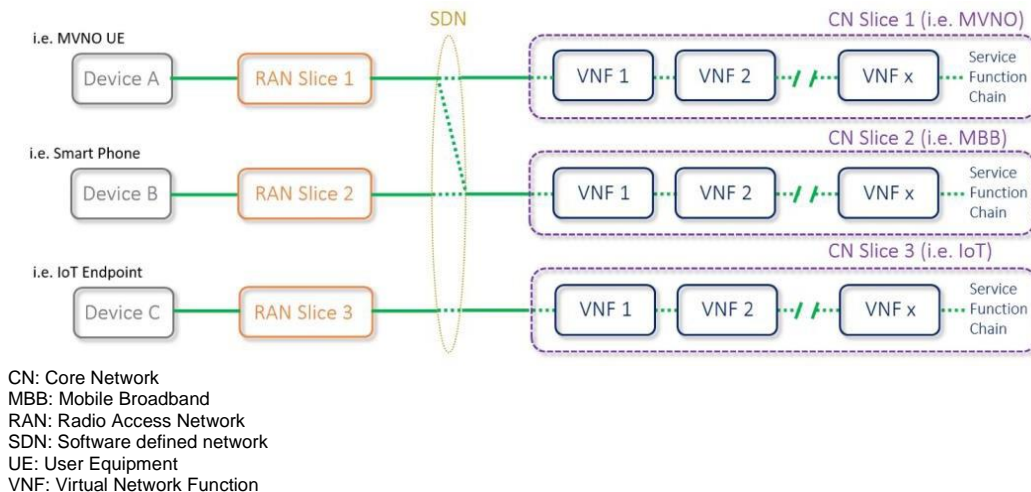
³ Commonwealth of Australia, *5G—Enabling the future economy*, (Department of Communications and the Arts, October 2017) [10] <www.communications.gov.au/file/31661/download?token=CgV_CF5x>.

MVNOs and the 5G Ecosystem

MVNOs play an important role in the mobile ecosystem through strengthening and deepening the process of competition. MVNOs do this by serving the needs of niche markets through pricing, product and service innovation. The advent of 5G provides new and exciting opportunities for MVNOs to continue to serve niche markets and to continue to develop and to offer consumers innovative prices, products and services.

One of the key aspects of 5G that creates opportunities for MVNOs is **network slicing**. Through network slicing technology, a MNO will be able to provide multiple dedicated virtual networks (“slices”) with individualised functionality specific to the service or customer over a common network infrastructure. (Refer Exhibit 1). Commpete submits that network slicing is the key to unlocking an additional (MVNO-led) wave of competitive forces and innovation incentives in the 5G era. It will create the ability to quickly secure virtual, dedicated slices of the wireless broadband network, on-demand, for a particular customer or application, and optimised for that particular usage. Moreover, such access may be dialled down again when it is no longer required.

Exhibit 1: Illustrative 5G network slices



In the 5G environment, competition will intensify at the service layer. Traditional communications services will continue to migrate to Internet protocol (**IP**) and new services will increasingly be created natively in IP. MNOs, MVNOs and Over-the-Top (**OTT**) players will compete strongly with each other to provide the services that consumers demand. To meet the demands of consumers, all players will need to collaborate to develop new technical solutions and commercial models.

Commpete believes that in order to capture the benefits of 5G, Australia’s regulatory settings must be conducive to on-going and enhanced MVNO participation in Australia’s communications sector. This ultimately requires the introduction of a legal or regulatory obligation that compels MNOs to offer a wholesale access service (“network slice”) to MVNOs on reasonable terms and conditions.

Regulation of Wholesale MVNO Access

Australia’s MVNOs have generally not performed as well as MVNOs in other markets. Commpete submits that this situation may be explained by the encouragement that regulators in other markets afford to MVNOs to boost competition and lower prices for consumers. For example, in 2014, the European Commission cleared the *Telefonica/E-Plus* merger in Germany on the condition the merged operator provide wholesale access to MVNOs (specifically, 30% of the merged operator’s network capacity was to be supplied to up to three MVNOs at fixed prices before the merger could be completed).⁴ Consequentially, MVNOs currently account for around 20% of mobile subscriptions in Germany;⁵ 17% in the UK;⁶ and 16% in the Netherlands.⁷ (These shares have actually reduced over the last five years—from 35%, 18% and 38% respectively⁸—as a result of merger and acquisition activity.) In contrast, MVNOs in Australia have ‘beaten the odds’⁹ and, after 20 years, have only just recently achieved a collective market share of 13–14%.¹⁰

Commpete believes that a wholesale MVNO access service should be mandated. This could, for example, be achieved by a ‘declaration’ by the Australian Competition and Consumer Commission (**ACCC**) under the access regime established by Part XIC of the *Competition and Consumer Act 2010*. Other regulatory options also exist and are being explored in other jurisdictions (such as primary legislation or conditions attached to spectrum licences). Commpete believes that regulatory or policy intervention is necessary because, in its absence, MVNOs must rely entirely on bilateral commercial negotiation in an environment where market power clearly favours the MNOs relative to the MVNOs. As a result, wholesale MVNO access—to the extent that it is offered at all—is supplied with undue technical and commercial restraints and on unequal and discriminatory terms.

By way of example, when the telecommunications sector transitioned from 3G to 4G networks, the arrangements under which wholesale mobile access was offered were significantly and

⁴ European Commission, *Mergers: Commission clears acquisition of E-Plus by Telefonica Deutschland, subject to conditions* (Press Release, Brussels, 2 July 2014), <https://europa.eu/rapid/press-release_IP-14-771_en.htm>

⁵ Red Dawn Consulting, *MVNO landscape: Global perspectives and New Zealand Applications* (Report prepared for the Commerce Commission, 14 May 2019) [34] <https://comcom.govt.nz/_data/assets/pdf_file/0025/146680/RDC-MVNO-landscape-14-May-2019.PDF>

⁶ *Ibid* [37]

⁷ *Ibid* [42]

⁸ NEREO, *MVNOs in Europe*, (Madrid, October 2015) [2], <http://nereomc.com/wp-content/uploads/2015/10/151009_MVNOs_in_Europe_0-1_short.pdf>

⁹ Red Dawn Consulting, above n 5 [45].

¹⁰ Venture Insights, *Australian MVNO market overview – no longer just about price*, (25 July 2019) <www.ventureinsights.com.au/product/australian-mvnos/>. See also Red Dawn Consulting, above n 5 [14].

materially constrained. For example, MVNOs on Telstra’s mobile network are not able to access equivalent geographic coverage to that enjoyed by Telstra’s own retail customers,¹¹ the quality of service of the wholesale service is “dialled down” compared to the Telstra retail offering, and the MVNO and its customers are precluded from using machine-to-machine applications.

Australia’s MVNOs have effectively been limited to reselling (often called “skinny MVNOs”) and prevented from offering the genuine alternatives implied in the term MVNO. Consequentially, with limitations on customer-ownership and the potential for product differentiation, the competitive constraint that MVNOs can impose on MNOs and the potential for MVNO-led innovation are unduly retrained to the detriment of consumers. The pro-competitive effects of active MVNOs can only be realised if MVNOs have greater (indeed, maximum) control over the technical implementation and delivery of the MVNO’s own services, and MVNOs are able to maximise the use of their own systems and infrastructure. Around the world this has proven not to be possible without some form of enabling access regulation.

5G provides the very technology necessary to empower MVNOs, to enable MVNOs to offer a meaningful differentiation from MNOs, and to turbocharge service-based competition and innovation. Commpete believes that a wholesale MVNO access service based on network slicing should be mandated under Part XIC of the Act or some other legal or regulatory mechanism. Such an intervention would overcome the market power imbalance that constrains commercial negotiations between MVNOs and MNOs. More particularly, it would ensure that the terms and conditions of wholesale access services are reasonable and do not unduly constrain service-layer innovation or the deployment of machine-to-machine applications or any of the wide-range of potential applications of 5G connectivity that will become possible in the fourth industrial revolution.

In Europe, this issue is also a matter of considerable debate. For example, a study by the Centre on Regulation in Europe (**CERRE**) on the necessary policy and regulatory settings to support 5G in Europe recommended the introduction of an obligation on MNOs to make a wholesale access offer available to enable a new era of virtual mobile network operators (**VMNOs**).¹² CERRE envisaged VMNOs as the evolution of the MVNOs of earlier generations, serving specific market segments and/or leveraging a particular brand but with a key difference. The introduction of 5G technology would make it possible for this new era of VMNOs to assume greater control of the capabilities and functions of the underlying physical network infrastructure, potentially equivalent to that of MNOs themselves. This would unleash significant consumer benefits through increased competition and service innovation.

¹¹ See for example the interactive maps at <www.whistleout.com.au/MobilePhones/Guides/Telstra-network-coverage-vs-ALDI-Woolworths-Belong-Boost>

¹² Centre on Regulation in Europe, *Towards the successful deployment of 5G in Europe: What are the necessary policy and regulatory conditions?* (Project report, Brussels, 2017) [82] <www.cerre.eu/sites/cerre/files/170330_CERRE_5GReport_Final.pdf>



Summary of Key Points

Commpete appreciates the opportunity to draw the Committee's attention to the potential use of 5G to promote competition by facilitating new forms of wholesale access that will strength the innovation and differentiation capabilities of MVNOs.

5G represents a fundamental technological shift and the accompanying policy and regulation must adapt to the new dynamics and potential of this new era. If not, enormous social and economic benefits will be foregone.

MVNOs are a key pro-competitive force in the mobile ecosystem but their long-term effectiveness is dependent on enabling access regulation. In preparation for the coming 5G era, fresh thinking is needed about the type of policy and regulatory settings that will maximise competition and innovation in the mobile telecoms sector, especially as the sector's key role in the coming fourth industrial revolution.

Commpete believes that 5G's potential for network slicing is key to unlocking an additional (MVNO-led) wave of competitive forces and innovation incentives in the 5G era. However, this ultimately requires the introduction of a legal or regulatory obligation that compels MNOs to offer MVNOs a wholesale access service—a network slice—on reasonable terms and conditions.

Commpete strongly believes this is critical to ensuring the benefits of 5G for consumers are realised. Commpete welcomes the opportunity to participate further in this inquiry.

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