INTERNET ASSOCIATION OF AUSTRALIA LTD
ABN 71 817 988 968
ACN 168 405 098
PO Box 8700
Perth Business Centre WA 6849
Phone: 1300 653 132

30 July 2024

Assistant Secretary
Regional Connectivity Branch
Department of Infrastructure, Transport,
Regional Development, Communications and the Arts

GPO Box 594
Canberra ACT 2601

By submission: https://www.infrastructure.gov.au/have-your-say/2024-regional-telecommunications-review

RE: 2024 Regional Telecommunications Independent Review – Issues Paper

The Internet Association of Australia Ltd (**IAA**) thanks the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (**Department**) for the opportunity to respond to the consultation on the 2024 Regional Telecommunications Independent Review.

IAA is a member-based association representing Australia's Internet community. Our membership is largely comprised of small to medium sized Internet Service Providers (**ISPs**), many of which also provide other classical telecommunications services and a number that provide connectivity to regional, remote and rural areas in Australia. Furthermore, IAA is itself a licensed telecommunications carrier and we operate Internet exchanges across the country, as well as operate NZ-IX in New Zealand. Our response is therefore primarily in representation of such members, the role of IXPs to improve connectivity in regional Australia, as well as the broader telecommunications industry and the general public good of the Internet.

IAA and our members support the Department's concerted focus on improving telecommunications for regional Australia and thank the work of the Regional Telecommunications Independent Review Committee (**Committee**). We are keen to work with government, industry and consumers to ensure regional Australians' digital connectivity needs are met.

OUR RESPONSE

TELECOMMUNICATIONS CONSUMERS

1. What initiatives or tools could be implemented by the telecommunications industry or the Australian Government to improve connectivity literacy and make it easier for regional consumers and businesses to understand their connectivity options and help them to choose affordable services that meet their needs?

3. How can government and industry address any misleading and inaccurate information surrounding telecommunications services in regional, rural and remote areas, to ensure

consumers and businesses have access to reliable and unbiased information when making decisions about their connectivity options?

We note that industry is subject to a broad range of legislation including consumer law to ensure service providers do not engage in misleading marketing practices, as well as to ensure consumer protections more generally. However, we understand there can still be confusion for consumers when trying to identify the services and service provider appropriate to their personal needs.

Therefore, IAA encourages the Committee to consider recommending new programs that would assist in upskilling local communities to bridge gaps in connectivity and digital literacy. Such programs should be designed in partnership between government and regulators, industry, and the local communities to ensure they are effective and appropriate.

We are concerned that in general, there is an increasing gap between industry and consumers when it comes to expectations and standards for the provision of telecommunications services. We believe this gap to exist generally, but understand it would widen for vulnerable groups such as those in regional, remote and rural areas. In addition to the various regulatory reform and consultations currently in train, we believe that there should be concerted focus on developing educative material and awareness campaigns to help consumers understand communications services better, and these should be tailored to different groups.

2. What further initiatives can be implemented to support First Nations communities in developing and leading their own digital inclusion solutions while ensuring cultural appropriateness?

In particular, IAA understands that the gap in digital and connectivity literacy within First Nations communities compared to those in metropolitan areas is particularly large. We therefore support the First Nations Digital Inclusion Roadmap and support programs that are developed in partnership with First Nations communities and are genuinely dedicated to building skills within the local community.

In addition to connectivity literacy, we believe issues surrounding reliability and affordability are of particular importance for First Nations communities. Improving access to affordable and reliable services is critical to ensure First Nations people are not left behind in the digital age. We note that NBN Co's Low Income and Digital Inclusion Forum has identified First Nations communities as a cohort requiring special focus and eagerly await further developments and solutions to improve digital access across all Australia.

4. Deploying and maintaining telecommunications infrastructure in remote areas requires a skilled workforce. What initiatives can be implemented to ensure there is a skilled workforce in regional and remote Australia capable of supporting the construction, maintenance and operation of future proof telecommunications infrastructure?

We note that the lack of a skilled tech workforce is an issue that is prominent Australia-wide, but understand it would be further exacerbated in regional and remote areas. IAA has long called for and continue to encourage government to work with industry and the education sector to implement an end-to-end plan to improve tech skills. According to the OECD,[1] Australia has not retained a strong ranking in STEM education performance in primary and secondary education compared to international benchmarks. There should therefore be a comprehensive and targeted strategy that focuses on technical education starting from primary school that continues to lifelong training for

---

[1] *OECD, Programme for International Student Assessment,< https://www.oecd.org/pisa/>.*

those already in the workforce. Ongoing training opportunities should be provided and prioritised in regional and remote Australia via institutions like TAFE to allow people to up-skill and move into technical roles.

UNIVERSAL SERVICE ARRANGEMENTS

We support the government's review of the universal services arrangements as we believe the current arrangements are not fit for purpose. In particular, we are concerned that the contractual obligations under the USO entrench Telstra's monopoly and results in outdated technology that does not benefit those in regional and remote Australia.

We refer the Committee to our response to the recent consultation held by the Department in relation to the delivery of universal services, annexed to this response (**Annexure A**), for a more detailed response to the questions set out in this section.

MOBILE

8. How can we achieve equity with respect to mobile services (voice, data and SMS) in regional, rural and remote communities and on regional and remote roads?

9. How can we ensure regional, rural and remote areas have access to the networks, equipment and capacity they need for improved household connectivity and to foster innovation and efficiency across regional industries, including for IoT applications?

The cost of backhaul and infrastructure, such as towers and electricity supply, limits wider investment in regional and remote areas, resulting in reduced competition and consequently, reduced quality for users. IAA recommends government support the increased operation in regional areas by a wider telecommunications provider pool through investing in, and subsiding or funding, shared infrastructure. This can allow a wider array of carriers to enter the regional telecommunications market. Funding for this should be considered as part of the government's existing initiatives such as the Mobile Black Spot Program or the Regional Connectivity Program. By enabling and encouraging infrastructure sharing, we believe there would be greater competition within the sector which would ultimately improve affordability and quality and reliability issues for consumers in regional and remote areas.

FIXED BROADBAND

10. The cost of building and maintaining telecommunications infrastructure in rural and remote areas can be a barrier to offering better services. What can be done to improve the fixed broadband options available to regional, rural and remote Australians?

We take this opportunity to raise awareness of the utility of Internet exchange points (IXPs) to optimise backhaul usage and reduce Internet related costs. IXPS provide common points of interconnection between ISPs and content and digital service providers such as cloud providers and online marketplaces. IXPs keep local network traffic and content local, and share infrastructure to deliver cacheable content from local facilities. Reduced backhaul bottlenecks means both consumers and providers are able to achieve faster content upload and download speeds, improved bandwidth management and enhanced network performance.

We recommend government support to IXP providers for the construction of IXPs by providing access to public property assets within larger regional centres, particularly those located on major optical

fibre routes and key connectivity junctions such as Townsville, Rockhampton, Toowoomba, Dubbo or Albury. Such centres can be repurposed into low-cost data centres that can function as IXPs and local data centre facilities, which can over time, evolve into vibrant regional digital hubs. Again, we believe that this could be supported by existing government funding programs with greater government consideration of a more diver array of technologies and solutions.

DISASTER RESILIENCE AND EMERGENCY

12. What can be done to maximise access to multiple connectivity options in case of outages?

13. What can be done to increase capacity and improve the reliability of telecommunications services in regional, rural and remote Australia?

14. How can the energy and telecommunications sectors work more effectively, especially with respect to redundancy?

15. What innovative solutions can be explored to ensure telecommunications infrastructure remains operational during and after natural disasters? How could partnerships with local communities improve the maintenance, security and availability of infrastructure?

We note the currently ongoing work by government in partnerships with industry to improve telecommunications resilience in the face of natural disasters, as also set out in the Issues Paper. We also note that recently in late 2023, there was also a review into the Commonwealth Government's role and capabilities for crisis response. As noted in our response to this consultation, we believe the Commonwealth Government can play a larger role in facilitating the coordination between state and territory governments.

Moreover, there needs to be greater government investment into reliable access to electrical power to improve network resilience. Power outages are one of the main causes of disruption to network connection. As such, remote facilities should have either diverse power feeds, battery backup or solar power to ensure the continuous operation of networks. In addition, regional centres must be serviced with physically diverse and reliable backhaul. This way, during instances of natural disasters affecting one area, other pathways can still be used to ensure connection.

Furthermore, again, education and the availability of local skilled workers are important to ensure those in regional areas with disrupted networks are reconnected promptly.

IMPACT OF GOVERNMENT AND PRIVATE INVESTMENT

16. What lessons can be learned from private sector investment in regional telecommunications in closing the digital divide in regional and remote areas?

18. What changes to Australian Government investment programs are required to ensure they are successful, efficient and effective in delivering improved, reliable and equitable telecommunications for regional, rural and remote consumers?

19. How could Australian Government programs better align with state, territory and local government planning and funding processes in delivering telecommunications services and infrastructure?

20. What other matters should the Committee consider in its review and why are they important?

As expressed above, there is little incentive for private sector investment to invest in regional and remote Australia due to the high costs associated with improving network coverage. Carriers are required to build their own networks or use existing copper infrastructure which is old and similarly costly to operate. We note the ACCC's recent Regional Mobile Infrastructure Inquiry 2022-23 which has also found changes required to Australia's regulatory regime in terms of mobile infrastructure in order to optimise connectivity in regional Australia.

Hence, we strongly recommend government increases funding for backhaul, including funding for operators to offer shared infrastructure to increase coverage in regional areas across multiple providers rather than for just one mobile network operator. We also consider that changes to regulatory frameworks to encourage active sharing of infrastructure may be appropriate.

In addition, as above, we recommend the government increases its support for peering including encouraging all carriers and CSPs to peer, and on multiple Internet exchanges to ensure appropriate redundancy.

CONCLUSION

Once again, IAA appreciates the opportunity to contribute to the 2024 Regional Telecommunications Independent Review. As reliance on telecommunications and digital services becomes increasingly vital, and given the potential for economic growth in regional, remote and rural Australia through the use of new technologies, it is imperative that digital connectivity is improved in these areas. To that end, we are committed to working with government and other stakeholders to develop regional connectivity.

ABOUT THE INTERNET ASSOCIATION OF AUSTRALIA

The Internet Association of Australia (IAA) is a member-based association representing the Internet community. Founded in 1995, as the Western Australian Internet Association (WAIA), the Association changed its name in early 2016 to better reflect our national membership and growth.

Our members comprise industry professionals, corporations, and affiliate organisations. IAA provides a range of services and resources for members and supports the development of the Internet industry both within Australia and internationally. Providing technical services as well as social and professional development events, IAA aims to provide services and resources that our members need.

IX-Australia is a service provided by the Internet Association of Australia to Corporate and Affiliate members. It is the longest running carrier neutral Internet Exchange in Australia. Spanning six states and territories, IAA operates over 30 points of presence and operates the New Zealand Internet Exchange on behalf of NZIX Inc in New Zealand.

IAA is also a licenced telecommunications carrier, and operates on a not-for-profit basis.

Yours faithfully,

Narelle Clark
Chief Executive Officer
Internet Association of Australia

Annexure A

INTERNET ASSOCIATION OF AUSTRALIA LTD
ABN 71 817 988 968
ACN 168 405 098
PO Box 8700
Perth Business Centre WA 6849
Phone: 1300 653 132

01 March 2024

Department of Infrastructure, Transport, Regional
Development, Communications and the Arts

By submission: https://www.infrastructure.gov.au/have-your-say/better-delivery-universalservices

RE: Better Delivery of Universal Services – Discussion Paper

The Internet Association of Australia Ltd (**IAA**) thanks the Department of Communications for the opportunity to respond to the consultation on the Better Delivery of Universal Services Discussion Paper.

IAA is a member-based association representing Australia's Internet community. Our membership is largely comprised of small to medium sized Internet Service Providers (**ISPs**), many of whom also provide other classical telecommunications services. Our response is primarily in representation of such members, the telecommunications industry, as well as the broader public good in relation to the Internet.

IAA and our members are very glad to see this broader review into the delivery of universal services, and believe it to be long overdue. We are keen to work with government, the industry, civil society and other stakeholders to develop a universal services framework that is fit for purpose, not only in today's modern world, but also for the future.

RESPONSE TO QUESTIONS

1. *What do you consider are the key outcomes that a modern universal service framework should deliver?*
4. *Which existing requirements under the current universal service framework should be retained, or changed?*

Overall, the universal service framework should be efficient, future-proof, deliver high quality service, and be capable of evolving to meet changing consumer expectations and technology capabilities.

In order to meet these outcomes, we are of the firm belief that the framework must be specific to performance and service delivery standards, rather than being designed to specify a technology or technology provider, or in a way that would preclude services or technologies that are suitable. As

such, we strongly recommend changes to the current universal service framework which relies on specific technologies, such as copper.

In addition, a key problem with the current way in which the universal service framework operates is that it entrenches monopolies or established players while inhibiting competition in the telecommunications sector. Going forward, funding should be based on open access infrastructure. If government has funded the infrastructure, then access to such should be open. The operation of the universal services framework should be such that all providers can access what is public infrastructure, and therefore have an equal footing. Another related issue is the cost of backhaul and to interconnect. We believe that statutory infrastructure providers should be required to connect to mandated readily available interconnection points, and/or aggregation POIs.

7. *How should affordability be considered?*
8. *How can a modern universal service framework deliver better outcomes and meet digital inclusion needs of First Nations Australians?*

We believe that resolving the above issues would result in positive consequences that could also address concerns surrounding affordability, and better outcomes for First Nations and rural and remote communities. The cost and availability of backhaul is a major issue that prevents better service provision in rural and remote Australia where many First Nations and other vulnerable communities are based. Furthermore, shifting the focus to be on performance, and being more open to diverse technologies so long as they are able to deliver the requisite service, should also provide better outcomes.

2. *What safety-net services does a modern universal service framework need to address?*
3. *To what extent do you consider mobile services are important to complement fixed services supported under the existing framework?*

As per our general position, we support using diverse technologies to ensure that consumers are provided with high quality services. However, we also note an issue with mobile services in relation to its operation when making emergency calls. Noting the ability to connect to emergency services to be an integral service that Australians must have, we understand that from 4G technology onwards, operators have been relying on 3G fallback for emergency handoff in some technical cases. This has meant that as 3G technology is retired, emergency handoffs may cease working. While not directly related to the universal services framework, we believe it is important that government makes sure that as part of its funding contracts, providers are expressly made to ensure proper emergency handoff operations.

Discussion has also emerged in recent times to include internet access as part of any universal service. Should access to the internet be included as part of any obligation, it is important that true internet access be the case, and not a cut down subset of services, deemed to be "internet". A true internet access system includes any to any connectivity, with a multitude of paths from any network to any other network, giving end users a myriad of choices in the providers and content sources they access, or indeed themselves provide. This has not necessarily been the case in mobile networks and we caution that the provision of mobile services will not necessarily provide internet access should this be the future policy position. Australia's mobile networks also do not directly connect to the commonly used Australian internet exchange points, thus again preserve the dominance of major players in the Australian market. Our position again is that any standards be imposed from a

perspective of service performance not a specific technology and act as a truly universally available service.

CONCLUSION

Once again, IAA appreciates the opportunity to respond to the Better Delivery of Universal Services Discussion Paper. We support the government's commitment to find ways to improve the delivery of telecommunications services. As discussed above, we believe this is very necessary, and in order to achieve this, there needs to be a change in focus and approach to ensure actual high quality services. We look forward to continue working with government, industry and other stakeholders to develop a modern universal service framework that is fit for purpose.

ABOUT THE INTERNET ASSOCIATION OF AUSTRALIA

The Internet Association of Australia (IAA) is a member-based association representing the Internet community. Founded in 1995, as the Western Australian Internet Association (WAIA), the Association changed its name in early 2016 to better reflect our national membership and growth.

Our members comprise industry professionals, corporations, and affiliate organisations. IAA provides a range of services and resources for members and supports the development of the Internet industry both within Australia and internationally. Providing technical services as well as social and professional development events, IAA aims to provide services and resources that our members need.

IX-Australia is a service provided by the Internet Association of Australia to Corporate and Affiliate members. It is the longest running carrier neutral Internet Exchange in Australia. Spanning six states and territories, IAA operates over 30 points of presence and operates the New Zealand Internet Exchange on behalf of NZIX Inc in New Zealand.

IAA is also a licenced telecommunications carrier, and operates on a not-for-profit basis.

Yours faithfully,

Narelle Clark
Chief Executive Officer
Internet Association of Australia