Minister for Transport and Main Roads
Minister for Digital Services

1 William Street Brisbane 4000
GPO Box 2644 Brisbane
Queensland 4001 Australia
[redacted]
Email transportandmainroads@ministerial.qld.gov.au
Website www.tmr.qld.gov.au

[redacted]

30 August 2024

The Honourable Alannah MacTiernan JP
Chair
Regional Telecommunications Independent Review Committee
C/- Committee Secretariat
rtirc@infrastructure.gov.au

Dear Ms MacTiernan Alannah,

I would like to thank you for the opportunity to provide a submission to the 2024 Regional Telecommunications Review. The Regional Telecommunications Independent Review Committee plays an important role to identify much needed reforms and programs to ensure that all Australians, regardless of geography, have affordable access to high-quality, resilient, and future-proof telecommunications services.

As Minister for Transport and Main Roads and Minister for Digital Services, I understand the importance of improving the quality of telecommunications as a facilitator for economic and social opportunities for communities. I believe it is imperative that we as a nation recognise telecommunications as an essential service, fundamental to the livelihood, well-being, and prosperity of each Australian. I believe this definition would then ensure that policies and industry practices align to deliver improved connectivity for regional and remote Australians.

I value the opportunity to participate in existing programs such as the Regional Connectivity Program to address gaps in connectivity. However, a holistic approach to the planning, funding, and delivery of telecommunications is necessary to ensure funding programs are guided by strategic outcomes defined under a national connectivity strategy. Improving access to data on network performance, risks, reliability and demand will support sector-wide planning activities and assist with identification of local solutions that are fit for purpose for each community. Finally, consumer regulation should be strengthened to protect consumers to reflect the essential nature of service and keep telecommunications accessible and affordable for all Australians.

Improving connectivity in regional and remote communities is fundamental to reducing digital exclusion and ensuring that everyone has the right service, the right device and the right skills to participate in the digital economy.

Please find enclosed Queensland's submission for the 2024 Regional Telecommunications Review.

If you require further information about the submission, please contact [redacted] Queensland Government Chief Customer and Digital Officer, Department of Transport and Main Roads, in the first instance via email at [redacted] or telephone on [redacted]

Yours sincerely

[redacted]

BART MELLISH MP
Minister for Transport and Main Roads
Minister for Digital Services

Enc (1)

Queensland Good jobs Better services Great lifestyle

Regional Telecommunications Review (RTRC) 2024
Queensland Government submission

Queensland Government

Executive Summary

The Queensland Government Customer and Digital Group (QGCDG) welcomes the opportunity to provide a submission to the 2024 Regional Telecommunications Independent Review Committee (RTIRC). QGCDG appreciates the constructive dialogue already underway with the Committee and are eager to expound upon our positions in subsequent discussions.

Despite a clear call to action in the previous *2021 Regional Telecommunications Review – A step change in demand*, connectivity for regional Australians still lags behind their metropolitan counterparts. This situation calls for holistic reform across the sector, as the patchwork regulatory, policy, and funding frameworks appears insufficient to bridge the connectivity divide faced by our regional communities.

Currently, telecommunications services in regional and remote areas are subject to systemic disparities which impact not only the availability of services but also their reliability, performance and affordability. This gap poses a barrier to the socio-economic development of these communities and their safety in the event of an emergency or disaster. There are growing calls to recognise telecommunications as an essential service, fundamental to the livelihood, well-being, and prosperity of each Australian. Telecommunications are classified as critical infrastructure[1] which creates a range of positive obligations on the sector to identify and take steps to prevent security incidents, however, issues such as the affordability, consumer protections and reliability of telecommunications services remain.

To this end, the submission outlines a number of issues and barriers prohibiting inclusive and equitable access to connectivity in regional and remote Queensland and highlights key considerations for the Review Committee.

Queensland Context

As at the 2021 Census, Queensland has a population of 5.1 million people with 2.6 million of those living in regional Queensland. At 1.7 million square kilometres it is the second largest state in Australia by geographical size, and the most decentralised state in mainland Australia with 51% of the population living outside the Brisbane region[2] The Queensland economic output in FY22/23 was over $500 billion dollars, representing 19.7% of the total national output.

There are 482,000 small business that employ more than 1 million Queenslanders,[3] with over 124, 000 of these businesses located outside Southeast Queensland. There are 273,000 First nations people in Queensland, 62.4% of whom live in regional and remote Queensland. With a geographically distributed population and economy, Queenslanders increasingly rely on telecommunications services to connect with family and participate in the digital economy.

However, connectivity across Queensland remains challenging. The NBN is available in 2.47 million Queensland homes, yet as the NBN acknowledges only 1.7 million of these are currently connected.[4] Analysis of crowd sourced data show no improvement in remote mobile downloads speeds since 2019 and little improvement in regional areas. There have been multiple reports of long telecommunications outages in regional and remote communities that have significant social, wellbeing and economic impacts.

[1] Under the *Security Legislation Amendment (Critical Infrastructure) Bill 2020*
[2] https://www.qgso.qld.gov.au/issues/11951/qld-compared-other-jurisdictions-census-2021.pdf
[3] https://desbt.qld.gov.au/small-business/strategic-documents/small-business-strategy/snapshot
[4] https://web.archive.org/web/20240521051054/https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/weekly-progress/2024/public-pogress-data-20240425.pdf.coredownload.pdf

Access to an affordable and reliable telecommunications service where a person lives and works is fundamental pillar of digital inclusion. Digital exclusion occurs when someone does not have a reliable connection, access to the right devices for their needs, lacks the skills and knowledge to be able to safely navigate and undertake tasks online.[5] Digital exclusion does not look the same for everyone. Through QGCDGs annual customer satisfaction survey, we found that in Queensland:[6]

- 39% of Queenslanders face digital exclusion
- 20% of these are a result of slow/unreliable internet connection.
    - Of those, 38% are First Nations people and 32% live in remote areas
- 24% of Queenslanders can't afford internet/data services
    - with 44% of those being First Nations people
    - and 30% of those being people with a disability
    - and at least 31% of those families with young children.

Digital exclusion harms individuals and communities across Queensland with those in regional and rural communities disproportionally impacted. Digital exclusion can result in lower economic and job opportunities, social isolation, increased risk of experience and harm from scams, hamper trust in government services, and impact access to essential services such as banking, health, and education.[7] It can also limit the opportunity for businesses and economic growth in important sectors such as tourism, small businesses, and agriculture. Poor reliability and regular outages can frustrate efforts to maintain services, impact safety, and access to information particularly during disasters.

Queensland Government actions

The Queensland Government recognises the importance of improving digital inclusion and maximising the benefits of participation in the digital economy. That is why the Queensland Government is delivering it's Digital Economy Strategy[8] to support a thriving digital future for all Queenslanders.

To date the Digital Economy Strategy has:

- partnered with Federal Government and industry to improve broadband internet and mobile voice and data services through 22 projects in regional/remote areas.
- delivered a device equity and on country mobile phone program to improve access and affordability to digital devices contributing to increasing digital inclusion in these communities.
- supported the establishment of two community owned, First Nations digital service centres delivering commercially sustainable services and local jobs.
- established Low Earth Orbit (LEO) satellite connectivity in all discrete First Nations communities, to provide more effective and reliable fixed broadband coverage while longer term improvements are being progressed.

Additionally, the Queensland Department of Education (in partnership with Telstra) is upgrading connectivity in schools across the state. The five-year agreement will result in over 350 telecommunications exchanges being upgraded for faster speeds across Queensland.

[5] https://goodthingsaustralia.org/

[6] Queensland Government Customer Satisfaction Survey

[7] https://www.digitalinclusionindex.org.au/wp-content/uploads/2023/07/ADII-2023-Summary_FINAL-Remediated.pdf AND https://goodthingsaustralia.org/the-digital-divide/what-is-the-digital-divide/

[8] Footnotes to be updated and cleaned up once paper structure is agreed to *Our Thriving Digital Future, Queensland's Digital Economy Strategy* (https://www.qld.gov.au/about/how-government-works/strategies-and-initiatives/digital-economy-strategy)

Strategic Issues

Coordinated operation and planning of the telecommunications sector

Australians are highly digitally connected using mobile phones, computers and apps to communicate. Adoption of digital platforms is high with Australians using these platforms to access news, daily services such as payments, banking, online shopping, work, and education.[9] The digital economy represents opportunities for individuals and communities to expand businesses, access new services and social communities as well as employment opportunities. Digital options become even more important when physical services are removed or reduced. This is most pronounced as banks across Australia close regional branches and reducing access to cash.[10] When regional Australians haven't got a telecommunications service that allows them to make payments or transact with their bank, it leaves them isolated and excluded from participating in society.

Digital exclusion is more pronounced for those living in regional and remote Australia. Digital inclusion in Australia is measured by the Australian Digital Inclusion Index (ADII) which measures digital inclusion across aspects such as access, affordability, and ability. The Centre of Excellence for Automated Decision-Making and Society prepare the index every two years; the 2023 index data from the Australian Internet Usage Survey was collected between June and December 2022.[11] The ADII national digital inclusion index score for major cities is 74.6 while the score for those living in outer regional is 66.3, remote is 70.0 and very remote is 62.6.[12] This is in part due to poor connectivity, less opportunities to access training and support to build skills, and affordability issues.

In recent years, the already complex telecommunications sector has undergone rapid change with new technology, changing consumer and business demand, and increased outages and vulnerability to natural disasters. There also is growing evidence that the significant public investment in telecommunications infrastructure in rural and regional Australia is not as effective at closing the digital connectivity divide as it could be.

The **Telecommunications Industry Ombudsman (TIO)** stated in media interview when asked about the essential nature of telecommunication:

Because ultimately phone and internet services are essential services like electricity, gas or water.[13]

It doesn't have the same status as an essential service as electricity, gas and water … but very much people are relying on it in the way that they conduct their lives, and I think we really do need to ensure that it reflects how intrinsic it is to our lives.[14]

The Chair of the **Australian Communications and Media Authority (ACMA)** when launching new ACMA research said:

[9] https://www.acma.gov.au/publications/2023-12/report/communications-and-media-australia-how-we-communicate
[10] https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/BankClosures/Report
[11] https://www.digitalinclusionindex.org.au/wp-content/uploads/2023/07/ADII-2023-Summary_FINAL-Remediated.pdf
[12] https://www.digitalinclusionindex.org.au/wp-content/uploads/2023/07/ADII-2023-Summary_FINAL-Remediated.pdf
[13] https://www.abc.net.au/news/2024-07-17/ombudsman-calls-to-make-mobile-phones-an-essential-service/103993012
[14] https://www.abc.net.au/news/2024-07-17/ombudsman-calls-to-make-mobile-phones-an-essential-service/103993012

> *Telecommunications is an essential service. Being connected and having access to a reliable and affordable phone and internet service has become crucial for many people to work and connect to education, health and government services.*[15]

The **Australian Communications Consumer Action Network (ACCAN)** in response to the 2021 Regional Telecommunications Review stated:

> *If we had nationwide recognition of telecommunications as an essential service, this would mean that telcos could better maintain phone towers and as one example get priority access fuel to power generators during outages to keep Australians connected during emergencies.*[16]

In addition, **Consumer Action Law Centre** in support of the ACCC submission to the 2024 Telecommunications Consumer Protections (TCP) Code review said:

> *This is simply not good enough at a time when consumers are finding it difficult to afford day-to-day living expenses, especially when telcos are providing an essential service that people can't live without.*[17]

The growing calls to redefine telecommunications as an essential service, combined with the rapid transformation of the sector, underscores the benefit of managing and planning for the telecommunications system and market in a way that is holistic and strategic to ensure that every Australian has access to affordable, reliable and performant telecommunications services.

Independent planning and operating bodies have been established to successfully drive coordination and planning activities in other sectors.

Strategic vision for the sector

Recognising the fragmentation of the sector, the piecemeal approach to public funding programs, along with the development of telecommunication strategies and initiatives across governments at all levels, there is a critical need for the development of a unified National Digital Connectivity Strategy (NDCS). A strategy could harmonise and integrate the policy, regulatory and funding activities with a single, cohesive strategic vision that drives shared connectivity goals. This will improve the delivery of national telecommunications infrastructure, particularly in underserved regional, rural, and remote areas.

At the Regional Connectivity Minister's Roundtable in April 2024, the Federal Government committed to working with states and territories on a national connectivity strategy. To maximise its utility and success, broad consultation with consumers, advocacy groups, market participants and government bodies should be undertaken as it is developed, and it should leverage research and findings of previous parliamentary inquiries,[18] other reviews and inquiries and their recommendations (ACCC infrastructure review, USO Review, Bean Review, funding reviews, infrastructure sharing reviews, etc).

The current incremental, fragmented funding and short-term investment approach is unlikely to deliver the best outcomes for consumers and businesses. A proactive planning approach would deliver necessary infrastructure with flexibility to adapt to changing demand at the lowest cost.

[15] https://www.acma.gov.au/articles/2023-04/acma-calls-telcos-improve-support-customers-hardship
[16] https://accan.org.au/media-centre/media-releases/1923-further-action-needed-for-regional-australia-to-stay-connected
[17] https://consumeraction.org.au/the-telco-code-has-run-its-course-and-failed-to-deliver-acma-must-explore-other-options-to-protect-consumers/
[18] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/RB000010/toc_pdf/ConnectingthecountryMissioncritical.pdf

Stronger regulation to protect consumers

As emphasised previously, telecommunications services are essential for Australians to conduct the necessary activities (such as work, business, education and health services) required to participate in modern life.

Regulators and advocacy groups have consistently raised that the current industry-led regulatory framework is ineffective in protecting consumers.

ACCAN has stated *The TCP Code is insufficient in protecting consumers of an essential service.*[19]

In the TCP Code 2024 review, submissions made by the ACCC and TIO conclude that the TCP is no longer fit-for-purpose.

The **TIO** stated:

> *We support the introduction of essential consumer protections through direct regulation. This would recognise the essential nature of telco services by ensuring the protection of consumers is the primary objective of the rules.*
>
> *When the protections of the Code do not work as intended, it is often vulnerable consumers who are disproportionately affected.*
>
> *Further, the Code does not generally provide clear remedies consumers are entitled to in the event a telco does not comply with the Code. For this reason, it is less likely our officers will look to the Code for guidance when making decisions about complaints, than to direct regulation that does specify remedies, such as the Australian Consumer Law (ACL).*[20]

The **ACCC** noted the following:

> *Overall complaints relating to telecommunications suppliers remain very high, with more than 1 million complaints reported in 2021-2022.*
>
> *2023 Research showed that consumers consider telecommunications to be the most distrusted industry in Australia.*
>
> *These factors suggest a consistent and widespread compliance culture is lacking across the telecommunications sector, and that much more needs to be done to protect consumers.*[21]
>
> *… based on ongoing industry non-compliance, the fact that the Code is drafted by industry itself, and that the ACMA is stymied in its ability to enforce or improve the TCP Code, the ACCC is not confident that this Code review process will result in beneficial outcomes for consumers.*[22]

The ACCC has also called for higher penalties to be applied in the telecommunications sector.[23]

[19] https://accan.org.au/media-centre/media-releases/2310-essential-communications-direct-regulation#:~:text=%E2%80%9CThe%20ACCC%20has%20now%20acknowledged,securing%20better%20outcomes%20for%20consumers.%E2%80%9D
[20] https://www.tio.com.au/sites/default/files/2023-06/TIO%20submission%20to%20Communications%20Alliance%20-%202024%20TCP%20Code%20Review.pdf
[21] https://www.accc.gov.au/system/files/ACCC%20submission%20to%202024%20Telecommunications%20Consumer%20Protections%20Code%20Review.pdf
[22] https://www.accc.gov.au/system/files/ACCC%20submission%20to%202024%20Telecommunications%20Consumer%20Protections%20Code%20Review.pdf
[23] https://www.accc.gov.au/system/files/accc-response-to-the20-may2024-draft-of-the-tcp-code.pdf

The TIO in undertaking systemic review of their complaints data identified issues with direct debit, unclear and incomplete information about products and charges continuing after cancellation that contribute to financial hardship amongst customers. [24] They consider that direct regulation will help address these issues and prevent poor business practice from exacerbating existing affordability issues.

In 2021 Telstra was ordered to pay $50 million for selling Indigenous customers multiple post-paid contracts that they could not afford through the manipulation of credit assessments and misrepresenting products as free and exploiting language and literacy barriers.[25] Whilst actions to address those specific issues have now been made, a holistic review of the consumer protections framework is required to prevent other misconduct and poor practices.

There has also been a push to introduce a consumer duty framework to the energy sector[26] and digital platforms.[27] A consumer duty places a positive responsibility on service providers to determine that their service offerings are in the best interest of consumers.[28] This ensures there is a framework that is flexible and can respond to changing technology and disruptive forces while maintaining accountability on business to act in the best interests of consumers.[29]

Addressing strategic vulnerabilities and risks across the sector

Emergency response planning requires a forward-looking strategic response to better identify risks, build resilience, and ensure coordinated planning and emergency response processes are effective when needed.

There are several networks and agencies at the federal and state levels involved in the coordination and management of responses to emergencies and crises. While carriers are responsible for their own networks, the nationwide Optus outage showed there is a need for a coordinated and longer-term strategy for identifying and addressing vulnerability across the sector.

The Australian Government Crisis Management Framework (AGCMF) outlines the Federal Government response to crises and disasters. This is then implemented through national level crisis plans. At a sector specific level there is the Protocol for Notification of Major Service Disruptions which sets out how the communications department and Minister for Communications liaise with industry in the event of a major disruption.

The Bean Review into the Optus outage[30] found that there were communication, collaboration and information sharing issues throughout the outage, indicating these frameworks did not operate as effectively. For example, the AGCMF was not engaged during the Optus outage.

Whilst the Federal Government has committed to implementing all the recommendations from the Bean Review[31], there are lessons from the Optus outage that can inform identification and long-term planning for other strategic risks across telecommunications sector.

---

[24]. https://www.tio.com.au/sites/default/files/2023-06/TIO%20Systemic%20Investigations%20Report%20June%202023.pdf
[25] https://www.accc.gov.au/media-release/telstra-to-pay-50m-penalty-for-unconscionable-sales-to-indigenous-consumers
[26] https://media.licdn.com/dms/document/media/C4E1FAQEaFc5gwXgdKA/feedshare-document-pdf-analyzed/0/1668918155811?e=1723680000&v=beta&t=K87uEfBciisVF3eLImyVZ13Xs3JEatxbVcYjckfKMaU
[27] https://cprc.org.au/wp-content/uploads/2023/11/CPRC-working-paper-In-whose-interest-March-2023.pdf
[28] https://media.licdn.com/dms/document/media/C4E1FAQEaFc5gwXgdKA/feedshare-document-pdf-analyzed/0/1668918155811?e=1723680000&v=beta&t=K87uEfBciisVF3eLImyVZ13Xs3JEatxbVcYjckfKMaU
[29] https://www.pwc.co.uk/industries/financial-services/understanding-regulatory-developments/fca-proposes-new-consumer-duty-in-paradigm-shift-for-firms.html AND https://cprc.org.au/wp-content/uploads/2023/11/CPRC-working-paper-In-whose-interest-March-2023.pdf
[30] https://www.infrastructure.gov.au/department/media/publications/review-optus-outage-8-november-2023-final-report
[31] https://www.infrastructure.gov.au/sites/default/files/documents/review_into_the_optus_outage_of_8_november_government_response.pdf

Addressing competition and market failures in regional and remote Australia

Competition amongst market players particularly in regional areas is important to provide competitive pressure which can lower price and increase consumer mobility and choice. In considering what levers are available to encourage and support market delivery of infrastructure and services, the NSW audit office has highlighted there may be conflicts between the aims of improving competition and expanding connectivity. For some areas the priority may be expanding connectivity by funding existing players to expand their network and in others it may be to encourage greater competition by funding new players to enter a network area.[32] Identifying the right section of the market to promote competition will be critical to balancing these objectives.

Infrastructure sharing is an important component in fostering greater market competition, particularly in regional and remote Australia. In early 2024, Optus and TPG agreed to a Multi-Operator Core Network arrangement where Optus will provide TPG with access to its regional radio access network and they will share spectrum in regional Australia.[33] Infrastructure asset sharing arrangements such as these are important steps forward in delivering choice to consumers and can reduce costs and timelines for delivery of telecommunications in regional areas. The ACCC Regional Mobile Infrastructure Inquiry[34] considered a wide range of issues associated with mobile infrastructure sharing and found that there were benefits to sharing of mobile infrastructure, however it remains unclear whether the current divested market structure of infrastructure operators will lead to better infrastructure sharing and access, and that regulatory reform was required.

Other jurisdictions, such as New Zealand, have taken a much more active role leading infrastructure sharing reforms by establishing a public-private partnership to build and operate a multi-operator core network with the primary purpose of improving market competition in rural and remote New Zealand.

These challenges and opportunities in promoting market competition require a long-term strategic action to address and promote the best outcomes for consumers.

Impact of Low Earth Orbit Satellite technology on the sector

Low Earth Orbit Satellites (LEOSat) are a new satellite telecommunications technology that can provide data services (and in the future voice services) to consumers in areas where other forms of connectivity are not accessible. LEOSat services provide lower latency connections than traditional geostationary satellites as a direct result of these services being closer to earth, which results in services that are comparable performance to traditional terrestrial voice and data services.

The first LEOSat direct-to-consumer data service was launched in mid-2021 in Australia and since that we have seen the purchase of over 200,000[35] services across the nation resulting in improved data service availability and performance in regional and remote Australia.[36] By comparison, only 87,000 services of the NBN geostationary service have been purchased since 2015 and there is evidence to show the new purchases of these geostationary services are in decline.

As well as direct-to-consumer services, LEOSat services are also improving other aspects telecommunications infrastructure. Telstra is using LEOSat services to improve mobile base station backhaul,[37] as well as in the early stages of piloting LEOSat devices for USO services.[38] In 2024, Optus will be able to provide a LEOSat delivered

[32] https://www.audit.nsw.gov.au/our-work/reports/regional-digital-connectivity-program
[33] https://www.optus.com.au/about/media-centre/media-releases/2024/04/tpg-telecom-and-optus-sign-network-sharing-agreement
[34] https://www.accc.gov.au/system/files/Regional%20Mobile%20Infrastructure%20Inquiry%20final%20report.pdf?ref=0&download=y
[35] https://independentaustralia.net/business/business-display/nbn-and-telcos-feeling-pressure-from-new-satellite-operators,18675
[36] QGCDG analysis of publicly available OOKLA speed test data
[37] https://www.telstra.com.au/aboutus/media/media-releases/telstra-and-oneweb-first-voice-call
[38] https://www.telstra.com.au/internet/starlink AND https://www.telstra.com.au/exchange/telstra-satellite-home-internet-with-starlink-is-here---here-s-w

SMS service direct-to-device without the need for additional hardware, extending this in 2025 to voice and data services.[39] Western Australian Police has deployed LEOSat services in 550 vehicles and 129 regional police stations.[40] Queensland Government is deploying LEOSat services into first nations communities to rapidly improve resilience. Remote schools are using bonded Starlink and NBN satellite services to improve reliability, performance and resilience.

The broad diffusion of LEOSat services already across the sector, at significant speed compared to traditional terrestrial technology change, shows this new technology has and will continue to make a significant impact on the sector.

Case Study: *The Queensland Government Customer and Digital Group (QGCDG) has launched an innovative program enabling Local Councils in discrete First Nations communities to establish Low Earth Orbit (LEO) satellite connectivity in high priority locations, providing more effective and reliable fixed broadband coverage.*

Consider the impact of retiring assets and systems in undertaking long term planning

The industry led shutdown of the 3G network has had minimal independent oversight up until the establishment of a Commonwealth Senate Inquiry. The shutdown is cause for concern for some communities and businesses who may not have sufficient information and time to replace handsets and 3G enabled equipment.[41] The Parliamentary Inquiry into 5G in Australia in 2020 recommended improvements to the management of redundant or aging telecommunications assets.[42]

Triple Zero Custodian

Fears about the impact of the 3G shutdown on triple zero calls and the Bean Review findings, indicate growing calls to establish a Triple Zero custodian that has accountability of this critical function. The Bean review recommended this could be through a new body or by enhancing the role of an existing body.[43] The Federal Government agreed to undertake further investigation and consultation.[44]

Public Funding Frameworks

Strategic delivery of infrastructure supported by government funding

The Federal Government response to the ongoing reviews of funding should focus on changing the approach from the current patchwork, industry led models to a holistic, strategic view that takes a shared infrastructure and asset approach and prioritises investment based on evidence of need.

Existing infrastructure grant funding models were designed to address market failure and ensure telecommunications services that were unlikely to be commercially viable were available across the country, particularly in regional and remote areas. Funding is also provided for public interest services such as the National Relay Service and emergency calls.[45] Despite the significant amounts of funding through these programs over many years, evidence and community sentiment indicate inefficiencies in the current system. This is compounded

[39] https://www.optus.com.au/about/media-centre/media-releases/2023/07/together-optus-and-spacex-plan-to-cover-100-percent-of-australia
[40] https://www.itnews.com.au/news/wa-police-to-deploy-starlink-600630

[42] https://www.aph.gov.au/Parliamentary_Business/Committees/House/Communications/5G/Report
[43] https://www.infrastructure.gov.au/department/media/publications/review-optus-outage-8-november-2023-final-report
[44] https://www.infrastructure.gov.au/department/media/publications/australian-government-response-bean-review-final-report-review-optus-outage-8-november-2023-april
[45] https://www.infrastructure.gov.au/sites/default/files/documents/funding-of-universal-telecommunications-services-april-2024.pdf

by the multitude of funding programs that are disjointed, operate semi-independently and are not strategically aligned.

A significant portion of the current grants-based funding model are contingent on telecommunications providers leading and agreeing to deliver projects put forward by governments and communities for funding. This may result in projects being proposed without a longer-term strategic view of required infrastructure in a local area, and a prioritisation of projects that are beneficial to providers commercial interests, rather than in the national or community interest. There is also evidence that shows where proposed projects may deliver a significant public benefit (such as projects that require shared infrastructure between operators) operators have been reluctant or have declined to participate in these projects.

There is also a lag between funding allocation and delivery of mobile infrastructure,[46] highlighting the need for a holistic review of infrastructure planning and investment. There are several factors that contribute to these delays, including extended assessment processes, delays in signing funding agreements, native title, development approvals, logistics, weather conditions and power supply arrangements.

We note there is an ongoing Federal Government consultation regarding funding for universal telecommunications services which has also posed the question about broader public funding reform across the sector.[47]

Funding of ongoing service delivery

Funding is used to deliver public interest services such as payphones, emergency calls and the Standard Telecommunication Service., all of which form part of the Universal Service Obligation (USO). These are government funded to ensure the continued delivery of basic levels of services across the country.

The USO historically has been important for regional and rural Australians and currently it does not necessarily reflect the current delivery and use of telecommunications services by Australians.

Administrative funding

The ACMA is partly funded through cost-recovery from industry such as carrier licence charges. They also receive funding through the federal budget process. The role of ACMA has grown with new responsibilities for online gambling, monitoring misinformation and disinformation and overseeing the News Media and Digital Platforms Mandatory Bargaining Code.

Delivery of telecommunications infrastructure for Regional and Remote Australia

There is consensus that a lack of mobile market competition in regional and remote Australia is impacting on consumers ability to afford an essential telecommunications service. There are also challenges in establishing shared infrastructure arrangements to reduce service delivery costs and support greater market competition.

The 2021 RTIRC recommended the ACCC be directed to conduct a regional telecommunications infrastructure inquiry. The ACCC released the findings of their inquiry in July 2023. They considered a range of factors that might influence incentives of mobile network operators to invest to improve mobile coverage. They found that to lift coverage it will require an increase in the number of sites either through construction of new towers or co-locating on a tower owned by another party. The costs of building new towers are higher than co-locating and yet

[46] https://www.accc.gov.au/system/files/Regional%20Mobile%20Infrastructure%20Inquiry%20final%20report.pdf?ref=0&download=y
[47] https://www.infrastructure.gov.au/sites/default/files/documents/funding-of-universal-telecommunications-services-april-2024.pdf

there are regulatory and commercial barriers that limit the sharing of assets which means that infrastructure can become a bottleneck in improving new services.[48]

In 2017, the New Zealand Government in partnership with their three mobile service operators, established the Rural Connectivity Group (RCG) to design, build and operate a brand new shared mobile telecommunications network in rural and regional New Zealand. As of December 2023, the RCG had built over 500 new cell sites, covering 30,000 rural homes and business, 1000kms of rural state highways and coverage at 100 tourist hotspots.[49] Most importantly, at each of these sites all three carrier services are available, driving market competition into regions where it may not have existed before and supporting consumers to get the best service at the lowest cost.

In November 2023, the Australian Parliament Standing Committee on Communications and the Arts released the *Connecting the country: Mission critical*[50] which inquired into the experience, opportunities and challenges for co-investment in multi-carrier regional mobile infrastructure. The Committee explored the New Zealand RCG model in its final report, noting that:

> *It is clear to the Committee that commercial imperatives, where carriers seek to maximise profit to shareholders, are the key impediment to achieving multi-carrier objectives in regional and remote Australia.*

And:

> *The Committee believes the Government has an essential leadership and coordination role to play, to bring together infrastructure providers, mobile carriers, regulatory and other interested parties … relating to multi-carrier infrastructure*

In its report, the Parliamentary Committee recommended (Recommendation 4) that the Australian Government establish a working group involving mobile network operators, infrastructure providers, regulatory bodies, and relevant government agencies to address technical, regulatory, and policy barriers to the adoption and deployment of multi-carrier mobile infrastructure across regional and remote Australia. The Federal Government is yet to respond to the report.

A joint-venture multi-carrier approach for regional Australia aligns with global best practices and has the potential to drive competition, decrease costs for consumers, and enhance the quality of service, as evidenced by the RCG achievements in New Zealand.

Location specific approach to connectivity investment

"Place-based initiatives take a holistic approach, connecting existing government investment and services and building cross-sector collaborations that tackle the root causes of local challenges and build on opportunities. They can also build community resilience, trust, and cohesion, and empower communities through a sense of belonging, connection, and purpose" **Victorian Government Place Based Approach best practice guide**[51]

[48] https://www.infrastructure.gov.au/sites/default/files/documents/issues-paper-facilities-tower-access-regimes.pdf AND https://www.accc.gov.au/system/files/Regional%20Mobile%20Infrastructure%20Inquiry%20final%20report.pdf?ref=0&download=y
[49] https://www.thercg.co.nz
[50] https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/RB000010/toc_pdf/ConnectingthecountryMissioncritical.pdf
[51] https://www.vic.gov.au/place-based-approaches-guide

Place-based approaches are collaborative, long-term approaches to building thriving communities that are delivered in a defined geographic location.[52] These approaches have shown to be effective in impacting social service outcomes as they empower communities to define a shared design, shared agenda and shared accountability for programs that are tailored to their needs. Whilst typically these approaches are used to address complex, intersecting local factors that require a cross-sectoral response in a social service setting, there is merit in the consideration of the approach in defining new localised connectivity investment funding models.

Successful place-based approaches typically have several underlying components that drive their success. These include:

- meaningful engagement with local community stakeholders
- appropriate effective governance structures
- long term strategic focus and outcomes
- data and information to understand local issues within a community
- devolved local decision making and flexibility for investment
- monitoring and evaluation of the impacts of the service or investment.

The Victorian framework for place-based approaches also defines *place-focused* approaches, which share all the common elements of place-based approaches apart from devolved decision making, which is retained by government.

We heard through RTIRC community consultation in Queensland, that the community expressed frustration at the patchwork of telecommunications investment which regularly doesn't meet their needs.

Case Study: *The Western Queensland Alliance of Councils (WQAC) have identified a model of place-based connectivity investment. As a collective of local councils, they recognise the need and benefits of telecommunications to their local communities. As they describe it 'think strategically and deliver locally'. The WQAC identified eight elements that are required to achieve this:*

Unified Governance*: WQAC proposes bringing together all stakeholders, across all levels of government, to achieve the vision that delivers a new connectivity model.*

Digital Demand: *WQAC will capture and forecast the region's digital demand across all stakeholder groups, including wholesale and retail demand.*

Digital Supply: *WQAC will engage with the industry to better position current and planned technologies that can achieve the vision.*

Policy Priorities: *WQAC will define pragmatic policy options to address the digital gap between supply and demand.*

Community Engagement: *Through its members, WQAC will engage with all stakeholder groups to determine the best way to achieve the vision.*

Investment: *WQAC will quantify the investment and fiscal process required to achieve the vision.*

[52] https://www.housing.qld.gov.au/initiatives/place-based-approaches

Measurement: *WQAC will define a monitoring and evaluation method that aligns with current approaches defined for public sector expenditure.*

Risk Analysis: *WQAC will support a comprehensive risk management approach that seeks to mitigate the uncertainty such activity creates for its members.*

Better Data for Better Outcomes

Often data - when it is available - is aggregated or diluted, and not always representative of service availability, especially in regional, rural, and remote communities. For consumers, this means that publicly available data from service providers (such as coverage maps) often inflate service availability and provide no indication on historical reliability or the performance of the service in the local area. There have been multiple instances over the last five years where the ACCC has taken legal action against telecommunications providers for making false or misleading statements about their products or services.[53]

Improving the availability of data across the telecommunications sector is crucial for:

- The identification of constraints or vulnerabilities in the system which will improve resilience planning, particularly for rural and regional Australia and emergency and disaster scenarios.
- Driving greater accountability through transparency of market participants across the system and ensuring they deliver a quality product or service as stated to consumers.
- Allowing consumers and communities to identify the right plan and connectivity solutions for their needs and location.
- Supporting the development of holistic forecasting and planning products to assist to assist with the identification of where new or enhanced infrastructure investment is needed across the country.

Minimum Data Standards

The first step in driving greater data availability is to define the minimum data standards across the sector. Data standards would typically define availability, reliability and performance of services across all assets and at a local level. Data standards should be developed in conjunction with industries and look to utilise international standards where possible.

Sourcing data from network operators for the 'last mile' connections (between core networks and consumers) and in premises connections (Wi-Fi in the home) is challenging due to a range of factors and consideration should be made on alternative data sources that could be used for a minimum data standard.

For fixed line services, these challenges extend to the type and condition of connection used to provide the last mile link (e.g. copper, fibre or HFC), the type of endpoint (router) used in the premises, and whether the fixed line is then provisioned wirelessly to consumer devices in the premises (i.e. through local Wi-Fi connections).

For wireless services, the challenges are greater as these are impacted by a range of localised variables that impact on service availability, reliability and performance. These include but are not limited to: obstructions

[53] https://www.accc.gov.au/media-release/telcos-to-pay-a-total-of-335-million-for-misleading-statements-about-nbn-maximum-speeds

caused by terrain, buildings and vegetation depending on the consumers current location, the device that is being used, and with high frequency services such satellite services, weather conditions.

Crowdsourcing

However, these challenges should not deter efforts in sourcing data to understand last mile performance, as this data is crucial for understanding the real-world performance experienced by consumers.

One alternative approach to understanding last mile performance is crowdsourcing. Crowdsourcing is the practice of obtaining input and contributions on a specific topic from many people through digital tools. Some examples of crowdsourcing telecommunications data include:

- ACCC measuring broadband performance[54]
- OOKLA Speedtest[55]
- MLab[56]
- National Audit of Mobile Service Coverage (which proposes to use crowdsourced data)[57]

The ACCC measuring broadband performance program (MBP) is a good example of a successful data crowdsourcing program. Utilising the devices, platform and technology of a third-party service provider, as at June 2024 the MBP has[58] 1744 remote testing devices across the nation, providing detailed tests of performance across a range of metrics across multiple time-periods. However, there are some limitations with the MBP program. For example, of the national 1744 testing sites, only 260 are from rural and remote locations across Australia, and only 45 of these are from regional Queensland. The program also doesn't cover mobile phone data services.

Another successful example of crowdsourced data is the OOKLA speed test (speedtest.net) data. Speedtest is a website run by OOKLA where consumers can get a point-in-time performance assessment of their network connection. QGCDG has utilised the dataset collected and maintained by OOKLA to provide connectivity performance analysis to support its own planning activities. The dataset contains over 45 million tests (39.6 million broadband and 5.8 million mobile) between 2019 and 2024 in 1.1 million different locations. Limitations of the OOKLA dataset include its point-in-time nature means there can be challenges in understanding performance in a single location over time, it doesn't collect addition metrics like daily outages, and location data of the test relies upon the user allowing location services to the website or device when conducting the test.

OOKLA can also provide individuals with an ability to collect data they can use to advocate for improvement to their network operator and to provide greater certainty that the service meets service standards. QGCDG has been promoting the use of OOKLA speed testing in First Nations communities.

Uses of data

As discussed, there is a benefit to greater access to availability, performance and reliability data across the sector as it can drive improved outcomes across a range of critical activities.

The Bean review into the Optus outage found there is a need for provide real time network information from providers to emergency service organisations in crisis situations and made recommendations specifically to

[54] https://www.accc.gov.au/by-industry/telecommunications-and-internet/telecommunications-monitoring/measuring-broadband-australia-program
[55] https://www.speedtest.net
[56] https://www.measurementlab.net/about/
[57] https://www.infrastructure.gov.au/sites/default/files/documents/national-audit-of-mobile-coverage-audit-methodology-fact-sheet-june2024.pdf
[58] https://www.data.gov.au/dataset/ds-dga-1350c1aa-27f1-4190-b120-4e54d9dccc05/details?q=broadband%20performance

address this.[59] The Bean review also found information provided to consumers in an outage was inadequate and standards should be developed.

There is also a lack of visibility of network vulnerabilities, capacity constraints and telecommunication provider's mitigation strategies to address these strategic risks. As we saw with the CrowdStrike global IT outage in July 2024, a failure by one vendor in addressing strategic risks can have significant global economic impacts across multiple sectors, with limited recourse by governments and organisations for recompense. Improving data on network vulnerabilities and providing a whole-of-sector approach to identifying strategic risks, would not only improve responses to outages or natural disasters it will provide necessary information to support longer term planning to improve the resilience and performance of the entire telecommunications system.

Improved access to availability, reliability and performance data access can also be used to better target infrastructure investment to where it is needed most.

Availability and Performance.

Improving the availability of telecommunications services in regional and remote communities is an ongoing priority. As outlined in this submission, connectivity is a critical component of addressing digital exclusion. Digital exclusion can have negative social and economic impacts on individuals and communities as it can impact on access to services, education and work. Priority should be given to First Nations communities and other vulnerable cohorts that are below the national digital inclusion average such as those in regional, rural, and remote Queensland.

Increasing the availability and performance of telecommunication services is fundamental to improving economic participation for regional and remote Australia. Improved connectivity can enhance the competitiveness of regions by attracting business, investment, people and opportunities to promote digital economic growth in community.

As an example of digital driven economic growth in regional communities, the Queensland Government is partnering with First Nations communities and businesses to establish Digital Service Centres. These regional digital service centres enable companies to deliver a variety of digital services on Country. Centres also offer great benefits to regional and remote communities through the creation of new jobs, new skills and economic diversification. They provide a culturally safe place that delivers tailored digital training, upskilling and employment opportunities to local people and builds community, confidence, capacity and capability. These economic and digital inclusion benefits provided by the Digital Service Centres wouldn't be achievable without fit-for-purpose telecommunications connectivity in these communities.

Modernisation of Universal Service Arrangements.

The Universal Service Arrangements, including the Universal Service Obligation (USO), the Universal Service Guarantee (USG) and Statutory Infrastructure Provider (SIP) schemes, provides important safety net across the country ensuring all Australians can access fixed phone and pay phones services (USO) and minimum performance speeds for data services (USG/SIP) wherever they live and work. The Federal Government

[59] https://www.infrastructure.gov.au/department/media/publications/australian-government-response-bean-review-final-report-review-optus-outage-8-november-2023-april

commenced consultation on Universal Service reform in October 2023 (*Discussion Paper: Better Delivery of Universal Services*) with Queensland submitting an officer-level response in March 2024.

It is reiterated that it is important that any reforms to the Universal Service Arrangement regimes should result in a truly universal safety net for services, regardless of location, technology, provider or delivery mode.

Telecommunications technology change has required regular reforms to the USO over recent years which further demonstrates the need to take a longer-term strategic view in the provision of Universal Service Arrangements. These reforms should apply a technology, provider and delivery-mode agnostic approach. Relying on blanket determinations for a specific technology, provider or delivery mode may result in communities not effectively being served by any new Universal Service Arrangement.

Finally, access to public phones should remain under any new Universal Service Arrangements. Evidence shows how they provide a vital service, and use has increased since they were made free.[60] To further maximise this existing infrastructure, consideration should be given to installing small cell infrastructure to public phones (where this has not already been done) as this will support local based connectivity improvements and place-based Wi-Fi, particularly in regional and remote Australia.

Improve community adoption of connectivity by strengthening connectivity literacy and awareness.

Digital inclusion is a broad concept that requires addressing several issues including connectivity, as well as targeted support to improve digital ability and ensure everyone has access to the right devices for the right task. Whilst the RTIRC terms of reference specifically focus on connectivity and affordability of the telecommunications system in regional Australia, it is important to also highlight the need for investment in programs that address digital ability, improve the affordability and access to devices in conjunction with connectivity.

Given the complex range of services and transactions that continue to move to digital channels across all sectors, having a mobile phone is not enough to be considered digitally included. To conduct work, or undertake education and training, or complete long and complex transactions a computer device is more often than not required.

Digital inclusion programs should seek to address device accessibility in conjunction with other digital exclusion issues. Device accessibility is likely to be ineffective in reducing digital exclusion on its own.

Connectivity literacy is another significant issue that exacerbates digital exclusion. Understanding of telecommunications products and services available, including technologies, plans and services, is something that is often challenging for communities in regional and remote Australia. These challenges are exacerbated by incomplete or biased information from telecommunications retailers, and many sources of independent information are only available online. We recommend that any federally funded digital inclusion programs should include connectivity literacy activities. This would support households and businesses to identify the best technology, services and plans to maximise the performance of connectivity for their location and needs. Digital inclusion programs should be co-designed with local communities and offer placed-based local solutions that address specific needs in a particular community.

[60] https://www.infrastructure.gov.au/department/media/publications/independent-regional-telecommunications-review-2024-issues-paper-april-2024

Improving consumer confidence and understanding of connectivity options can help support the uptake of the NBN. In Queensland alone, up to 31 per cent of premises[61] where NBN is available have not connected to the network. Awareness campaigns of services available will only go so far to address this issue, and a multi-faceted approach should be developed that includes uplift of connectivity literacy across the nation.

One initiative that has been established to address connectivity literacy is the "Regional Tech Hub."[62] Established by the Federal Government in response to the 2018 Regional Telecommunications Review, its purpose is to provide regional and remote consumers with information and support to determine the right connection options for their location and needs. However, it was heard that some regional and remote communities were not aware of these services.

Affordability

The current cost-of-living crisis means that everyday people are juggling increasing costs to their bills and may have to make sacrifices to ensure they can continue to afford essential services. No one should face potential loss of access to connectivity or weigh access against other essential services. These considerations contribute to digital exclusion.

The cost of access to telecommunications may not have seen the price spikes such as those seen in the energy and housing sectors, nevertheless many Australians are experiencing connectivity affordability stress. The ADII defines affordability stress as spending more than five per cent of their household income on connectivity services. Despite a clear need for support, consumers have traditionally been let down by the industry led regulations. Data from ACMA shows that:

- routinely consumers are not provided with and are not aware of hardship support options available to them.
- telcos are not proactive in reaching out to offer hardship support.
- there are fewer hardship support options available when compared with other essential services.
- telcos are less flexible in supporting people who are experiencing hardship.[63]

There have been attempts to address this with the recent introduction of mandatory standards guiding the delivery and promotion of hardship assistance programs. [64] More is needed to ensure that consumers and small business can find an affordable plan to meet their needs and get help when they need it.

Case Study: *Prepaid vs Postpaid services*

In the First Nations Digital Advisory Group Initial report in August 2023, it was recognised that First Nations people, particularly those in remote and discrete First Nations communities, select mobile prepaid services as the primary means of digital access.[65] This fact is not just for First Nations people, but also common for those who live in remote areas, or those that are on the lowest incomes.[66] There are many reasons that a person might choose a

[61] https://web.archive.org/web/20240521051054/https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/weekly-progress/2024/public-pogress-data-20240425.pdf.coredownload.pdf
[62] https://regionaltechhub.org.au/
[63] https://www.acma.gov.au/financial-hardship-telco-sector-keeping-customer-connected
[64] https://www.acma.gov.au/telecommunications-financial-hardship-industry-standard#:~:text=use%20those%20services.-,How%20the%20standard%20works,policies%2C%20and%20options%20for%20assistance
[65] https://www.digitalinclusion.gov.au/sites/default/files/documents/first-nations-digital-inclusion-advisory-group-initial-report.pdf
[66] https://www.digitalinclusionindex.org.au/wp-content/uploads/2023/07/ADII-2023-Summary_FINAL-Remediated.pdf

prepaid service over a postpaid service, ranging from certainty of payment for budgeting purposes to unsatisfactory credit score or lack of identification making them ineligible for a postpaid service.

Recent analysis of Telstra's price increases[67] conducted by QGCDG showed that there is a gap between the price per GB of data between prepaid and postpaid broadband and voice plans (excluding casual services), with prepaid mobile and broadband plans on average over 100% more expensive per GB than their post-paid equivalents.

Our analysis also showed that the recent price increases are higher for pre-paid than for post-paid plans. On average, Telstra price increases for their pre-paid services (excluding casual services) in July are 9.5%, while for post-paid the increase was 4.3%.[68] [69] This inadvertently harms people who are more likely to be vulnerable or at-risk of digital exclusion.

This simple analysis is only of one retail provider in a competitive market and further work is required to understand the underlying drivers of price difference between prepaid and postpaid services, and assess of whether these price disparities are endemic across the sector.

Financial councillors have also provided evidence that customers who want pre-paid plans are upsold to post-paid plans they did not want and can't afford.

> *"I see many clients, on pensions that have been up sold to big plans they do not need and most of the time cannot use. I hear regular stories from clients that go into the telco stores just for a pre-paid mobile and walk out with a very expensive mobile with all the extras and an unaffordable plan."[70]*

Improve the quality of price, service and reliability information for consumers.

Commercial comparison websites are available, but they do not include all available plans and may take commissions to promote certain plans.

The aim of these kinds of websites is to support consumers to compare prices and plans to ensure they are getting the best deal. Listed plans and services should include a reference price for voice and data (e.g. price per GB of data) to provide customers (particularly prepaid customers) with information to determine what the best product is for their own unique needs. Further consideration should be given to including performance and reliability information on websites. This would help consumers compare providers on more than just cost. It would also provide public accountability for the performance of providers. In the energy sector, the EnergyMadeEasy website was established by the Australian Energy Regulator for this purpose.[71]

Consideration could be made in relation to whether the Critical Information Summaries (CIS)[72] currently used to provide information about a landline, mobile or broadband service is fit-for-purpose and whether any reforms or updates to the CIS are required, including actions to promote it. The Retail Pricing Information Guidelines[73]

[67] https://www.telstra.com.au/exchange/changes-to-our-mobile-pricing-and-why
[68] Data collected by QGCDG
[69] Telstra mobile program https://www.telstra.com.au/mobile-phones/sim-only-plans and https://www.telstra.com.au/mobile-phones/prepaid-mobiles were assessed on 17 July 2024 by QGCDG. The data was collated in a spreadsheet and an assessment was made of the cost per GB of data. This showed a range of between $0.33GB and $4.33 per GB.
[70] https://www.financialcounsellingaustralia.org.au/fca-content/uploads/2021/09/FCA-Submission-on-ACMA-SOE.pdf
[71] https://www.energymadeeasy.gov.au/
[72] https://www.acma.gov.au/critical-information-summaries
[73] https://www.aer.gov.au/industry/retail/retail-pricing-and-default-market-offer

outlining how retailers should present their products and services in the energy sector could be used as a basis for any CIS changes. Ensuring the right information about the product and service is present at the point of sale (both online and in store) will support consumers with accurate information to make informed decisions on selecting a service that best meets their unique needs.

The US Federal Communications Commission has established a broadband label process to deliver this goal.[74]

Review current consumer focused subsidy programs to ensure they reach the most vulnerable communities.

There are existing federal subsidies and programs aimed at improving the affordability of telecommunications, such as the School Student Broadband Initiative[75] and the Telephone Allowance.[76] These consumer subsidies and payment should make sure that:

- Eligibility is set to reach those who most need it, and that vulnerable people are not missing out. Subsidies linked to concession cards can be more straightforward to administer, but may miss people who have too high an income for a particular welfare payment, but earn a relatively low income and are in affordability stress.[77]
- Set at the right level relative to the current cost and use of telecommunications, including increased costs for regional and remote communities who may have no other choice but to rely on more expensive options such as LEOSat services.
- Examine if efficiencies could be gained by streamlining administrative arrangements and combining programs (where appropriate).
- Those that are eligible are aware of any direct subsidies that are available to them and have every opportunity and simple pathways to claim those subsidies.

Reliability

Telecommunications outages - particularly long-term outages - disproportionally occur in regional and remote Australia. These are highly disruptive to local communities and their economies. It makes it difficult to access emergency services, connect with family and community and impacts business and service availability. Anecdotally, we understand that outages occur more frequently in regional and remote areas where the network may be fragile, unreliable and does not have the capacity needed to deliver modern communication needs. However, without data and transparency about network vulnerabilities this evidence remains anecdotal, often with community reporting as the primary collection mechanism.

***Case Study**: Connectivity Outages and their impacts in Queensland*

Service interruptions in regional and remote communities further isolate vulnerable cohorts and have significant impact on aspects of their everyday life including conducting business, accessing essential services, making payments and obtaining public safety services.

[74] https://www.fcc.gov/broadbandlabels
[75] https://www.infrastructure.gov.au/media-communications-arts/internet/national-broadband-network/school-student-broadband-initiative-ssbi
[76] https://www.servicesaustralia.gov.au/telephone-allowance
[77] https://sacoss.org.au/telecommunications-affordability-and-waged-poor-households/ AND https://accan.org.au/media-centre/media-releases/2075-1-in-5-australians-struggling-to-pay-a-telco-bill#:~:text=Over%20a%20quarter%20(26%25),home%20internet%20connection%20is%20essential.

QGCDG has heard that there is concerning pattern of unreliability of service in remote communities across the state. Many regional and remote communities have reported widespread, long-term outages that have had a significant impact on their lives. Some of the incidents that have been reported to us or reported in the media in the last 12 months are as below:

- *Northern Peninsula Area (Kowanyama) – 4-5 days*
- *Torres Strait Islands – 4-5 days*
- *Coen – 2 days*
- *Carpentaria Shire Council – 10 days*
- *Doomadgee – 10 days*
- *Burke Shire Council – 10 days*
- *Flinders Shire – multiple instances lasting days*
- *Tambo – Multiple outages, days at a time*
- *Karumba – Multiple outages, days at a time*

***Troy Fraser (CEO) Doomadgee Aboriginal Shire Council** - "Outages to mobile services create a public safety risk for residents as well as for council staff and other government employees working in community (e.g. not able to call 000 or for other assistance). The outage occurred at a time when the community was already completely isolated due to flooding and road closures through the wet season, which further heightened the level of risk to the community."*

***Tambo** resident - "If it happened in the middle of Brisbane there'd be a national disaster declared."*[78]

***Karumba** resident - "Questions are going to be asked when someone dies because they can't call triple-0."*[79]

These are anecdotal snapshots of outages that have been reported to us. It is likely that the actual number and extent of outages in regional and remote communities is far greater that the ones we have listed here and that it's likely that investment in network reliability in regional and remote Australia has been reducing over time.

However, there is no consistent data available across the sector that shows the location and duration of outages over time, no single picture of capital investment in reliability across the system and no benchmarks or minimum standards defined for network reliability performance that network operators are obliged to meet.

Having access to reliable connectivity must be considered an essential service (like electricity, water and housing). It is no longer acceptable to provide 'best efforts' for connectivity in regional and remote Australia. A greater strategic, whole-of-system approach to reliability is needed.

Ensure investment and delivery of infrastructure delivers an appropriate level of resilience in the system to support the reliability of services

The Strengthening Telecommunications Against Natural Disasters (STAND) program provides funding to improve reliability of connectivity at emergency depots and evacuation centres and has shown to have strengthened the network in disaster events. For example, STAND funded assets were found to be effective during the 2022 East Coast Floods in NSW and QLD.[80]

Additionally, publicly funded telecommunications infrastructure programs, particularly those in regional and remote Australia, could include mandated levels of redundancy and resilience higher than the status quo to

[78] https://www.abc.net.au/news/2024-06-27/mobile-internet-outages-in-tambo-outback-queensland/103980714
[79] https://www.abc.net.au/news/2024-02-29/karumba-telstra-outages-residents-leaving-safety-risk/103517748
[80] https://minister.dcceew.gov.au/mcallister/media-releases/australian-government-delivers-increased-communications-network-resilience-kyogle

maintain a reliable service in the face of challenges posed by natural disasters, technical failures, or human-induced disruptions.

However, whilst existing programs have shown to be effective, a more strategic and holistic approach to improving network reliability is required. In the energy sector, reliability standards are used as a mechanism to improve reliability. [81]

Improving emergency response through better communication with citizens during emergencies.

The Bean review into the nationwide Optus outage provides a useful lesson of the impact of a national, widespread connectivity outage. The Federal Government has committed to delivering all of the recommendations of the Bean review, including those recommendations regarding end-to-end testing of the Triple Zero ecosystem, rationalising and improving existing disruption protocol instruments and the need for improved communication from carriers to consumers during an outage.[82]

It is important to consider the unique requirements of consumers that reside in regional and remote Australia when developing any new standard on improving communications to consumers in an outage. Anecdotally, we've heard from communities in remote Queensland that notifications from carriers when outages occur is inadequate, with many reporting that they had no idea an outage had occurred, what had caused the outage, how long the outage was forecast to remain and no visibility of any efforts on restoration. The only information that was available was on the network operator's website, which nobody could access.

In many communities in Queensland, local councils are the seen as a curator of information in the event of disaster or other local community disruptions (such as road closures). ACMA, when developing the consumer communication standard, should consider what role local councils could play in disseminating information from a network operator on an outage to their local community, particularly if that outage is impacting the entire community.

Partnering with local councils will ensure rapid dissemination of information to ensure communities and individuals have actionable steps for safety in the event of an outage, with information that is tailored to their location. Local councils, in partnership with state governments, also conduct work in developing and promoting disaster preparedness activities (such as disaster event plans and toolkits).

Temporary Disaster Roaming

The ACCC inquiry into regional mobile infrastructure discussed the feasibility and challenges relating to temporary mobile roaming in a disaster event. The Federal Government is currently considering its response to Temporary Disaster Roaming.

The inquiry defined temporary mobile roaming as:

"The ability for a consumer device to connect to a mobile network not owned or operated by their nominal mobile network provider during a specified emergency event, for a limited time and in a limited geographical area that is not determined by mobile network operators but specified by federal/state/territory governments in consultation with emergency agencies."

81 https://www.aemc.gov.au/energy-system/electricity/electricity-system/reliability#:~:text=The%20reliability%20standard%20requires%20at,to%20be%20met%20each%20year.
82 https://apo.org.au/sites/default/files/resource-files/2024-04/apo-nid326618.pdf

Mobile roaming across networks already occurs in Australia, with the most prominent use being international roaming. There are international examples that allow roaming during natural disasters or extended outages that demonstrate it is feasible.[83]

In its report on regional mobile infrastructure, the ACCC found in relation to temporary mobile roaming there are three major streams that need to be addressed: technical, policy and commercial. The priority issues identified are:

- To define what events are classified as disasters which would then lead to temporary roaming. The Bean Review recommended that once TDR is in place for natural disasters work should be completed to support TDR during outages like the Optus Outage.[84] The Bean Review also highlighted that TDR could improve the quality of communications to consumers during a major service disruption as this expands the availability of communications channels.[85]
- Depending on the duration, infrastructure and size of area affected, temporary roaming could put extra strain on the remaining networks that could see a degradation of performance for the host networks customers, including for 000 calls.
- The communications required to customers to alert them to changed conditions and limit complaints to the TIO. Some consideration may need to be given to exempting telcos from complaints when they are hosting temporary roaming, however it should not be blanket exemption as there may be other issues that occur where consumers rights must be protected.
- The total investment and funding models required to build and maintain temporary mobile roaming capability.

The report noted that congestion on the surviving network was identified as the main risk to temporary mobile roaming and that many network operators said that significant investment in network capacity would likely be required. With the right data, modelling and forecasting could be done on the impact and investment required at local levels to implement Temporary Disaster Roaming capability across the whole sector.

[83] https://www.accc.gov.au/system/files/Regional%20Mobile%20Infrastructure%20Inquiry%20final%20report.pdf?ref=0&download=y
[84] https://www.infrastructure.gov.au/sites/default/files/documents/review_into_the_optus_outage_of_8_november.pdf
[85] https://www.infrastructure.gov.au/sites/default/files/documents/review_into_the_optus_outage_of_8_november.pdf