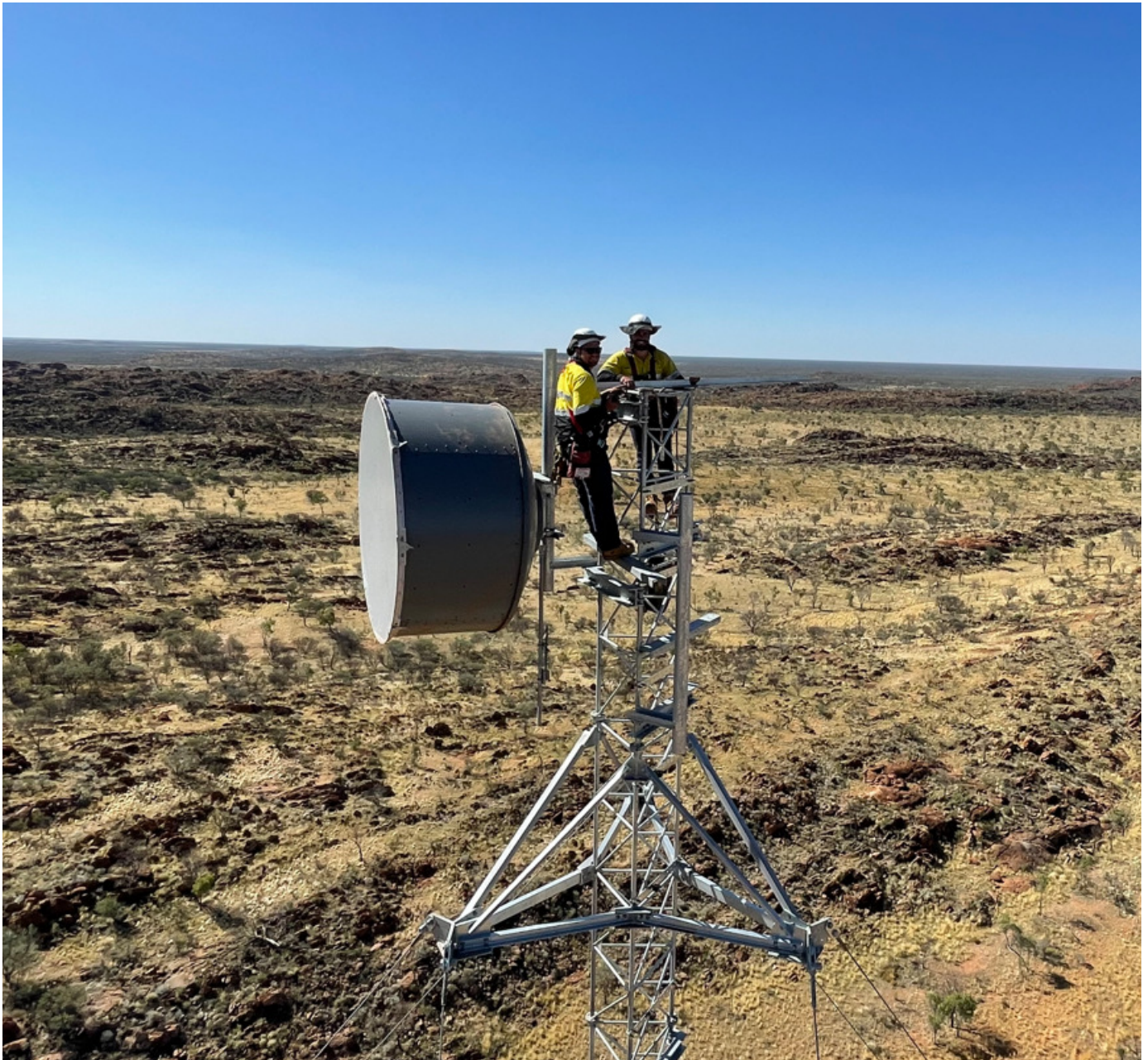


Regional Telecommunications Review 2024

Northern Territory Government submission

July 2024



Contents

1.	Executive summary	3
2.	Introduction	4
3.	Northern Territory Context.....	5
4.	A vision for modern connectivity	7
	4.1 Fixed broadband	8
	4.2 Mobility matters.....	9
	4.3 Consumer protections	9
	4.4 A failed market.....	11
	4.5 Universal Services.....	11
	4.6 First Nations communities.....	12
5.	Reliability and disaster resilience.....	14
6.	Role of the Australian Government.....	14
	6.1 Funding connectivity	14
	6.2 Future funding programs	15
7.	Recommendations.....	16
8.	Department Contact.....	17

1. Executive summary

A vision for modern Australia must provide universal access to connectivity for citizens to fully participate in the economy and society more broadly - regardless of where they live. This requires a ubiquitous, robust, affordable and resilient network to support adequate access across all regions of the country.

The current model for providing telecommunications services in Australia is no longer fit for purpose, with commercial carriers not delivering outcomes for regional Australians. This further disadvantages people living in remote areas, especially First Nations people with lower household income. Thus, households often spend a higher proportion of their total income on connectivity. In many areas, however, connectivity is not even available, which further exacerbates the digital divide across the nation.

People in very remote parts of the Northern Territory (NT) are too often living with either basic voice services only via a public telephone or no service at all. This is unacceptable in an age in which being online is fundamental to everyday life and the national economy. Both businesses and governments often make decisions based on the assumption that connectivity is ubiquitous in Australia. This results in failed service delivery and further intensifies the digital divide.

Remote Australians are victims of a commercially failed market, as telecommunications providers have no appetite for extending services to high-cost remote locations that offer very limited or no commercial returns. As a result, the further away one resides from major population centres, the greater the chance of receiving sub-standard connection - if any at all.

The various co-investment grant funding initiatives between telecommunications companies and governments have had some success in providing new (or sometimes overbuilt) connectivity. These, however, are failing to provide sufficient services to those people who need them the most and remain disconnected because they are in regional, rural and remote Australia.

Planning for telecommunications services across regional Australia should start with the principle that every community needs to have access to modern connectivity, through a mixture of technology and service options to support consumer choice and network redundancy.

With advancements in technology, it is now feasible to provide affordable modern connectivity to every Australian, regardless of where they live. The ability to provide fast speed, low latency, reliable connectivity to remote locations via satellite has shifted the narrative about connecting regional areas. The question is no longer "*how can we afford to connect regions and provide services*" – it is now, "*how can we afford not to.*"

The Regional Telecommunications Review Independent Committee has the opportunity to set a new direction for regional connectivity. This can change the lives of millions of people living across regional Australia, by ensuring they are not left behind, as the nation moves into an increasing digital world.

It is critical that all involved in providing telecommunications services identify new models to close the digital gap and leave no one disadvantaged. Some of the measures to be considered include:

- establishing a national connectivity strategy with baseline service requirements to set policy and investment priorities;
- prioritising government investment to underserved regions with no commercial returns, in order to support the development of baseline connectivity and enabling infrastructure across regional Australia;
- empowering consumers by:
 - requiring carriers to provide transparent and meaningful data about their service quality;

- continuing funding the tech hubs and digital mentors that provide independent advice and training; and
- supporting communities to engage in regional planning.
- focusing on place-based solutions and regional planning to maximise the benefits from existing infrastructure and deliver solutions for communities.

2. Introduction

In April, the Regional Telecommunications Independent Review Committee (RTIRC) commenced consultation on the 2024 Regional Telecommunications Review (RTR). The NT Government welcomes the opportunity to provide input to improve the adequacy of telecommunications services in regional, rural and remote parts of the NT.

There has been significant disruption to the telecommunications industry since the 2021 Regional Telecommunications Review. Telecommunications across the NT has improved incrementally since the previous review, largely due to additional coverage in remote locations, achieved through NT Government co-investment and Australian Government funding programs. However, approximately 5,300 remote NT residents, almost exclusively First Nations people, still live in areas without any mobile coverage or access to any form of digital connectivity.

As reported in previous telecommunications submissions to Australian Government inquiries, the core telecommunication requirements in the NT continue to be:

- service coverage (**Access**) – ensuring people across the Territory can access modern, reliable, telecommunications services, including voice and data delivered to a mobile device;
- service suitability (**Affordability**) – having telecommunications products and services that suit people living in remote areas, including cultural alignment, flexibility and affordability; and
- designing products and services to meet the ability, needs and usage patterns of remote residents (**Digital Ability**), rather than necessitating these customers change and adopt products created for metropolitan consumers.

Since the 2021 RTR, there have been significant industry and technology developments which impact telecommunications services in regional and remote areas, including:

- introduction of high speed, low latency, Low Earth Orbit (LEO) satellite services;
- NBN Co roll-out of more terrestrial fixed wireless coverage in lieu of the Sky Muster geostationary satellite services;
- planned shutdown of the 3G network in 2024;
- mobile network operators planning for the introduction of satellite direct-to-device services;
- better research and information on digital inclusion and remote communities through the Australian Digital Inclusion Index (ADII)¹ and Mapping the Digital Gap² research projects;
- significant Australian Government investment through *the Better Connectivity Plan for regional and rural Australia*;
- increasing interest in community Wi-Fi driven by smaller licensed carriers; and

¹ The Australian Digital Inclusion Index uses survey data to measure digital inclusion across three dimensions of Access, Affordability and Digital Ability <https://www.digitalinclusionindex.org.au>

² Mapping the Digital Gap is a four year research project working in partnership with local organisations in 10-12 remote First Nations communities, to generate a detailed account of digital inclusion and uses of digital services undertaken through Royal Melbourne Institute of Technology University (RMIT) from 2022 to 2024 [Mapping the Digital Gap - ADM+S Centre](#)

- roll-out of the telecommunications Universal Services Guarantee³.

The introduction of LEO satellite technology has profoundly improved the prospects for telecommunications services in regional, rural and remote areas of the country. Satellite technologies introduce new business models, challenge the conventional delivery of services and open the market for new players to deliver place-based solutions. Changes to existing delivery models provide an opportunity to address many long-term challenges faced by remote Australians.

There has been rapid uptake of satellite technology since its introduction after the 2021 RTR. SpaceX Starlink⁴ has gained over 200,000 subscriptions. On the other hand, subscriptions for the Geosynchronous National Broadband Network's (NBN) Sky Muster satellite service have dwindled to below 87,000, from a high of nearly 120,000 in 2022⁵, immediately prior to the widespread availability of Starlink in Australia.

With this new technology, it is now becoming feasible to provide affordable modern connectivity to every Australian. The current challenge is to develop a regulatory environment and new business models, focusing effort and investment to address the connectivity problems for regional, rural and remote Australia.

Since the 2021 RTR, the Australian Government has initiated several inquiries and reviews into current telecommunications frameworks, including:

- *Better delivery of baseline universal telecommunications services;*
- *Funding of universal telecommunications services (Regional Broadband Scheme);*
- *Regional mobile infrastructure inquiry;*
- *Inquiry into co-investment in multi-carrier regional mobile infrastructure;*
- *A roadmap for First Nations Digital Inclusion;* and
- *National audit of mobile coverage.*

This is the fourth submission made by the NT Government to various Australian Government reviews and inquiries relating to telecommunications issues in 2024.

This submission is focused on areas with potential to provide the most benefit for regional and remote Territorians, reiterating some of the issues, discussion points and recommendations reported in our latest submissions.

3. Northern Territory Context

The NT has an area of more than 1.3 million square kilometres yet is occupied by just over 232,000 residents⁶. The Australian Statistical Geography Standard (ASGS) Remoteness Structure classifies most areas outside of Darwin in the NT as "Remote" or "Very Remote."

There is limited terrestrial fibre and backbone infrastructure across the NT, with NBN Co fibre and fixed wireless services only offered in the major regional centres of Darwin, Katherine, Tennant Creek, Alice Springs, Jabiru, Nhulunbuy and Yirrkala, with plans to install fixed wireless (under the Regional Connectivity Program) in Maningrida and expand the footprint in Katherine and Alice Springs.

³ [Universal Service Guarantee \(USG\) \(infrastructure.gov.au\)](https://www.infrastructure.gov.au)

⁴ [Starlink post on Reddit March 2024](#)

⁵ nbn co Weekly Progress Report, <https://www.nbnco.com.au/corporate-information/about-nbn-co/corporate-plan/weekly-progress-report>

⁶ Australian Bureau of Statistics (ABS) 2021 Census

Pre-paid mobile phones remain the produce of choice in most remote First Nations communities. Where connectivity is present, mobile phone uptake is rapid and sustained.

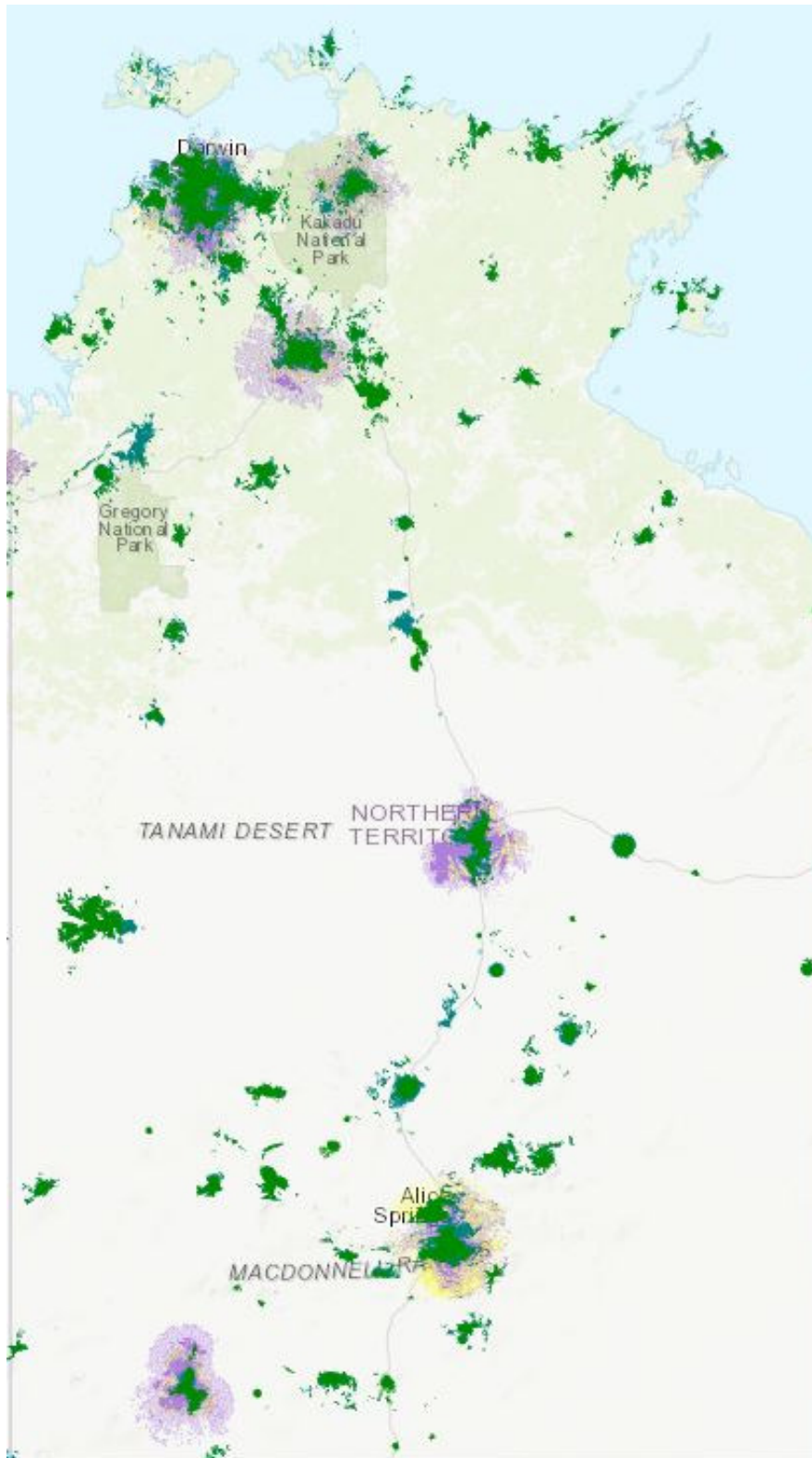


Figure 1: Map of NT mobile phone coverage 2023. Green = Telstra. Purple = Optus.

Remote NT communities have a legitimate and growing demand for reliable telecommunications services comparable to urban areas. The level of disadvantage for remote residents is exacerbated with poor connectivity. As awareness of this disparity increases, community tolerance for disruptions and poor services expectedly decreases, leading to growing criticism and public attention.

To fill the growing gap between needs and service delivery, the NT Government has invested heavily in telecommunications infrastructure. Since 2009 the NT has invested over \$66 million in co-investment programs with major service providers to deliver a combined total of nearly \$170 million in new telecommunications infrastructure. Under current and previous co-investment programs nearly 35,000 people in 76 remote NT communities have received new or improved telecommunications services.

In the NT, telecommunications access is a significant issue for remote Aboriginal communities. Approximately 130 of these communities rely solely on Telstra payphone provided under the Universal Service Obligation. A further 160 communities are dependent on either a community or Wi-Fi phone, delivered through the National Indigenous Australians Agency (NIAA) Remote Indigenous Communities Telecommunications activity⁷ as their only telecommunications service. These communities represent more than 4,000 Territorians.

There are more than 5,300 Territorians living in remote communities and homelands with inadequate data services, or none at all, including more than 1,000 remote Aboriginal residents across 133 homelands with population of less than 20.

Beyond the communities and homelands, digital connectivity and coverage are poor along more than 7,500km of major or minor highways in the NT, particularly outside major regional centres. It is estimated that only 20% of the NT's major roads and transport routes have mobile coverage, leaving vast stretches of major highways, freight routes and tourism drives without any coverage.

The three main interstate highways (Stuart, Victoria and Barkly) cover nearly 2,700km with approximately 600km covered by a mobile provider (22%). The 11 minor intrastate highways cover nearly 5,000km within the NT (the vast majority of which is unsealed) with only 12% coverage (approximately 600km). Road coverage, when available, is almost exclusively provided by Telstra.

4. A vision for modern connectivity

With the introduction of new technologies, increasing community expectations, growing government service delivery and provision of information through digital channels, it is urgent to rethink the approach to providing telecommunications services in Australia. The digital divide aggravates existing disadvantage and creates further barriers across regional, rural and remote Australia, and First Nations communities.

A vision for modern Australia must include providing every person with access to sufficient connectivity to fully participate in the economy and society more broadly - regardless of when and where it is needed. This requires a ubiquitous, robust, affordable and resilient network for communications.

Measuring appropriate access to connectivity must extend beyond assessing whether individuals have access or minimum upload and download speeds, and instead focus on its quality, consistency and usability. To support meaningful access to the digital world, connectivity needs to consider sufficient

⁷ The Remote Indigenous Communities Telecommunications program maintains a network of community payphones, WiFi satellite phones and WiFi hubs across First Nations communities in the NT, Queensland, South Australia and Western Australian. This is outside services provided by the USO

bandwidth, reliability, low latency, adequate devices, and services that meet the needs of consumers and communities.

Planning for telecommunications services across regional, rural and remote Australia should start with the principle that every community needs access to modern connectivity, through a mixture of technology and service options to support consumer choice and network redundancy.

Recommendation 1: *Establish a national connectivity strategy to set a consistent direction, guide policy and priorities for investment, and can adapt to new and emerging technologies and consumer needs.*

Recommendation 2: *The Australian Government should define baseline telecommunications services for all Australians based on the overall performance of the service, enabling full participation.*

4.1 Fixed broadband

There is limited fibre available across the NT to underpin the delivery and expansion of fixed broadband services, with many towns and communities connected through aging ADSL services. Much of the essential enabling infrastructure is still owned and operated by Telstra and InfraCo, despite lobbying by the NT Government over many years to have NBN Co acquire this backbone infrastructure (dating back to when NBN Co was established).

Maintaining and sourcing components for the Telstra network is becoming increasingly challenging due to age, remoteness and accessibility issues during the northern monsoon. These factors render the restoration timeframes in the current USO Customer Services Guarantee impossible to meet. In the NT Government's experience, co-investment has been the only way to encourage carriers to invest in costly infrastructure in difficult-to-service areas with minimal prospect of a reasonable commercial return on investment.

While new connectivity options provided by LEO satellite solutions have changed the landscape of remote connectivity and opened opportunities to ubiquitous coverage through future satellite direct-to-device services, these developments also represent risks for regional areas if they are left solely reliant on this technology to deliver essential connectivity.

The NT Government would welcome further work by the Australian Government to establish appropriate regulation and protections for new LEO satellite services, including a better understanding of the impacts of space weather and sovereign risk, and explore the provision of wholesale services as part of the National Broadband Network.

Noting the risks above, the Australian Government needs to continue the rollout of the National Broadband Network and renew its focus and investment in critical enabling fibre infrastructure to provide backbone connectivity across regions. Given the importance of this infrastructure, a strategic long-term approach should be developed to ensure a foundation network is established across regional Australia, particularly in northern Australia.

Recognising that these projects may not offer a compelling business case for immediate benefit, they are nevertheless critical to establish the foundation for essential services and provide redundancy across regional areas, creating the potential for regional development, growth, security and stability.

These projects should build on existing infrastructure in remote regions to maximise the return on investment and avoid infrastructure over-build. Further, the Australian Government should explore options to enforce active sharing of infrastructure and spectrum in regional and uncompetitive markets to maximise the potential of existing assets to provide services.

Recommendation 3: *The Australian Government establish appropriate regulation and protections for LEO satellite services.*

Recommendation 4: *The Australian Government should focus investment in the National Broadband Network on critical enabling fibre infrastructure across northern and regional Australia.*

4.2 Mobility matters

Mobile phone services are estimated to reach 99% of the Australian population, however by area mobile phone coverage only covers about 30% of the country. Specifically in the NT, the actual area of coverage is closer to 5%⁸. The three mobile network operators are concentrated on the traditional and lucrative markets in major metropolitan areas and struggle to achieve return on investment in less populated regional areas.

The lack of available backbone infrastructure in the NT, other than that owned by Telstra, severely limits co-investment opportunities for other telecommunications providers, perpetuating Telstra's dominance in the NT market. Without legislated mobile roaming, remote NT residents cannot benefit from multi-carrier mobile phone services.

With Mobile Network Operators (MNOs) preparing for the introduction of satellite direct-to-device services in the coming years, it is becoming harder to attract any form of interest or investment in new coverage in remote, sparsely populated areas, especially along highways.

While direct-to-device services should introduce ubiquitous coverage, it will take several years before it is properly established as a proven service. The NT Government does not believe that these services will replace the requirement for mobile services, especially for remote First Nations Territorians who rely heavily on mobile devices for their connectivity needs.

Regional areas, particularly road and transport corridors with limited mobile coverage, risk being left behind in the wait for new direct-to-device services. To address these concerns, the NT Government calls for dedicated funding programs targeting new connectivity at roadside rest areas, to provide services directly to mobile devices through open access Wi-Fi options or traditional MNO solutions.

Recommendation 5: *Refocus existing roads funding programs to deliver new connectivity at roadside rest areas in underserved regions, through technology that offers open access for mobile devices.*

4.3 Consumer protections

Digital connectivity literacy has been highlighted as an issue across regional and remote communities, and specifically with First Nations consumers. In order to develop informed and empowered consumers, the Australian Government should use its regulatory levers to ensure telecommunications providers are required to deliver clear, consistent, accurate, comparable and understandable information about their services.

⁸ Refer to Figure 1 on page 6 for mobile coverage map

Some telecommunications companies have been penalised for overselling post-paid plans and devices to remote customers who cannot afford the repayments, do not require them, or are located outside the company's coverage footprint. This practice often occurs without customers' full knowledge of the contractual obligations, violating consumer protection standards.⁹

The Australian Government's audit into mobile coverage will offer independently verified information into the coverage and performance of mobile services nationally. The ACCC is already working with service providers to improve the comparison of mobile coverage with consistent terminology and has developed guidance on how to advertise broadband speeds.

In addition, the Australian Government should mandate transparency and accountability from service providers. This could include requirements for providers to report on bandwidth, capacity, congestion, outages and conditions for consumers to understand the options and to make the better and informed decisions suitable for their individual circumstances.

This transparent reporting will need to be understood by First Nations people and other vulnerable consumers, contributing to digital awareness and ability. This will provide support for informed decisions on availability and suitability of connectivity services, and ultimately help achieve desired digital inclusion outcomes.

The Australian Government should explore the expansion of its First Nations Digital Mentors initiative to establish roles across regional Australia that can build on the Regional Tech Hub and the recently announced First Nations Digital Support Hub to provide independent localised support and advice, building digital literacy, skills and confidence.

To foster digital skills development, it is important to invest in the design of appropriate resources and training programs, and build capability in the local communities where services are being delivered. Considering the local context increases digital confidence as new technology is introduced and creates opportunities to develop into digital employment pathways.

Building local digital capacity can also address ongoing maintenance requirements of digital services in remote regions. For example, it can mitigate local outages that otherwise would last for extended periods of time.

The 2023 ADII shows a large digital gap between the necessary skills of non-First Nations people in remote communities (71.5) and First Nations people (46.1). Many current systems needed for online interaction are not suitable for remote First Nations people. The user interfaces for many online forms and resources are often complicated, text heavy and not well-designed for mobile device usage. This can create additional barriers for residents trying to access essential services.

Additionally, businesses often outsource their support services offshore, making it even more difficult for remote residents who do not speak English as a first language. The recently announced Australian Government Digital Mentors initiatives should be able to provide assistance in language and guide community members through the processes required to access online services.

⁹ Telstra resolves sales practices investigation for 108 vulnerable Indigenous customers, [Telstra media release 26 November 2020](#)

Recommendation 6: *Establish a regulatory requirement for telecommunications providers to deliver regular, meaningful, transparent and comparable information on service quality, enabling consumers to make informed decisions on connectivity, coverage, performance, reliability and cost.*

Recommendation 7: *Continue investment in the Regional Tech Hub, First Nations Digital Support Hubs and First Nations Digital Mentor network to provide services across all regional areas and increase digital training, literacy and support, particularly for First Nations communities.*

4.4 A failed market

Remote Australians are victims of a commercially failed market, as telecommunications providers have no appetite in extending services to these areas due to high costs and low return on investment. In a market devoid of competition, there is no incentive for providers to improve or maintain their infrastructure. This neglect disproportionately impacts First Nations people, as well as families and workers on remote cattle stations, tourist operators and other remote businesses and their workers, who depend on connectivity for basic access to essential services.

Current incentives and programs have not elicited a market response that meet remote needs and there remain areas that will never be connected by solely relying on market forces. In areas deemed a market failure or significantly disadvantaged, there is a role for the Australian Government to regulate and provide incentives and/or funding to ensure a baseline level of connectivity is delivered.

Providing telecommunications services in some of the most sparsely populated and remote regions in Australia on a semi-commercial basis has only been achieved through co-investment programs and significant investment from government to ensure that the underpinning infrastructure can be built to support delivery of services.

Recommendation 8: *Declare market failure in underserved areas to enable the development of innovative service models and government partnerships without breaching regulatory principles.*

4.5 Universal Services

The provision and funding of universal services has the potential to provide modern telecommunications to all Australians through the subsidisation and provision of high-quality connectivity in remote and regional locations that are uneconomic for commercial service delivery. This foundation provides a pathway to inclusion of all Australians, especially digitally disadvantaged First Nations communities.

It is estimated that 4,000 remote Territorians live in communities having the only practical access to telecommunications via a payphone or none at all. This represents 1.7% of the NT's population living across 290 communities and homelands.

It is the NT Government's view that a modern universal service framework needs to provide all Australians with basic access to connectivity in order to support the essentials of daily life, including access to triple zero, important health and safety information online, voice calls, government services and information, and connecting to family, friends and services.

To provide an effective safety net, it is essential that a modern universal services framework delivers telecommunications services that are up-to-date, reliable, robust and able to meet the needs and

expectations of consumers, particularly those in regional and remote areas. This will provide the foundation for access to services for all Australians and underpins efforts to achieve digital inclusion.

A modern universal service framework needs to recognise the importance of mobile services and connecting via portable devices. This requires a move away from the emphasis on connecting premises and a recognition that, for most remote First Nations Territorians, connection to the home is not a practical solution. Further, these business models do not meet the needs of many transient, disadvantaged and lower-socioeconomic groups across Australia.

A flexible delivery model would allow universal services to appropriately reach Australian communities, by using a mixture of technology and business models to best respond to the local circumstances and provide a minimum level of access.

The NT Government's position is that payphones should continue as part of the universal service obligation until a viable alternative can be proven to connect these remote communities and provide residents with access to services. Many remote Territorians are likely to continue to depend on payphones as their only source of connectivity until there are significant changes in the provision of services across remote Australia.

While payphones no longer meet the expectations of Australians to support modern connectivity requirements, they still provide essential services and an important link to the outside world for many Territorians – and across many remote and disadvantaged communities nationally.

The existing payphone network provides important telecommunications services across many Australian communities and the introduction of free Wi-Fi by Telstra and other carriers provides digital connectivity to many Australians who otherwise would not have access.

The extent to which payphones should continue to play a role in any future universal service framework will depend upon other technologies and platforms that can effectively provide services to marginalised Australians. It is possible that the modern version of the payphone is a community Wi-Fi service with access to a device able to connect to the Internet and make calls, and these services could continue to provide an important source of connectivity and redundancy for communities.

Recommendation 9: *A modern universal services regime must provide all Australians with affordable access to basic connectivity to access the essentials of daily life.*

4.6 First Nations communities

First Nations people have unique consumer preferences that are influenced by cultural, geographical and socioeconomic factors. The NT Government advocates for services in remote communities to be wireless, pre-paid/pay-per-use, data and voice capable, transportable, affordable, reliable and resilient.¹⁰

Mobility is an important principle in remote Aboriginal communities where overcrowding of households can limit the effective use of standard broadband services. Mobile phones remain the product of choice, with residents largely choosing pre-paid mobile services over post-paid models. Post-paid plans tie consumers into expensive long-term commitments, generally beyond the means of vulnerable, financially-stressed households. Despite pre-paid data costs being much higher per gigabyte than post-paid rates,

¹⁰ Better delivery of baseline universal telecommunications services, NT Government submission, February 2024, p.10
<https://www.infrastructure.gov.au/sites/default/files/documents/bdus2024-nt-government.pdf>

many remote First Nations residents often choose pre-paid mobile phone services, which allows them to pay what they can afford and when.

Until it is recognised that existing models used by industry do not reflect real world requirements in disadvantaged environments, there will be no meaningful progress towards closing of the gap or reducing the digital divide.

The Australian Government should reflect the preference for pre-paid services when framing regulations for the protection of customers and establishing frameworks for the efficient and equitable delivery of telecommunications services.

The NT Government supports the adoption of a technology-agnostic approach to connectivity in remote First Nations communities. This includes the use of diverse and innovative technologies including satellite, radio, mobile and fixed-line services to deliver the most suitable and sustainable options for communities. Having such flexibility can enhance the resilience of telecommunications networks and promote greater inclusivity, equity and opportunity for remote communities.

Place-based telecommunications strategies for First Nations communities are essential for addressing the unique needs and challenges of different communities. The current approach does not meet the needs of remote First Nations people, with business models that often act as a barrier to connectivity and are driven by service providers at the expense of adequate digital access.

To address digital inclusion, funding must be allocated based on the need, rather than size, population or co-investment capacity of the jurisdictions. Priority for government support should be applied to regional and remote areas, particularly with high proportions of First Nations people. This will drive industry attention, aggregate buying power and help entice industry to provide new and innovative solutions for priority locations.

The communities with infrastructure and service gaps should be prioritised for investment and support to ensure an equal baseline of digital inclusion. By setting clear standards for access, policymakers can identify gaps and direct investment into services that will have the most significant impact on digital inclusion.

The NT Government calls for greater integration of national policies and programs with local initiatives to improve digital inclusion at a national level. Australian Government programs should be flexible, adaptable and allow for a level of local authority and agency in co-designing services, which are fit for purpose and consider local and cultural contexts.

The Australian Government's announcement of a First Nations Digital Support Hub should enable the development and distribution of information for First Nations communities to connect them digitally, understand their options, stay safe online and build digital skills and confidence. This resource should be used to provide meaningful support to the Digital Mentors network (also recently announced by the Australian Government) and other place-based resources to help local communities access services and develop skills.

Recommendation 10: *Allocate dedicated funding for the delivery of technology-agnostic connectivity solutions in First Nations communities, primarily on the basis of need and greatest disadvantage, to ensure solutions for Australia's most remote and vulnerable communities.*

Recommendation 11: *Ensure the First Nations Digital Hub and Digital Mentors provide outreach directly to First Nations consumers and communities, and support place-based planning for appropriate projects to meet local needs and foster further digital opportunities.*

5. Reliability and disaster resilience

Australians are increasingly dependent on telecommunications services and reliable connectivity. When remote communities experience telecommunication outages, the consequences can be severe, leaving residents unable to access essential goods and services. The time taken to repair infrastructure in remote areas is often much longer than in urban areas. Therefore, better plans, equipment, and resources must be in place to support prompt service restoration to mitigate the impact of disruptions on community wellbeing.

Recent national service outages have highlighted impacts across every aspect of life. The impact of losing telecommunications in remote communities is more critical than for regional and urban areas. When a remote community loses connectivity, residents are often unable to buy food, petrol or power because these rely on connectivity or electronic transactions via EFTPOS that only work with appropriate connection to delegated financial authority.

The *Mapping the Digital Gap* project identified extended lack of telecommunications services as one of the factors generating significant community unrest.¹¹ In 2023, at least 34 NT communities were left in isolation with no access to telecommunications services for a total of 185 days. The longest of these was 27 days, with three other communities experiencing isolation outages that lasted more than a week.

Redundancy could be improved by utilising independent technologies, such as community Wi-Fi, mobile phone, fixed line and other services. Community Wi-Fi and similar solutions should be considered as an option to provide network redundancy in remote regions where communications outages are common and impact basic living requirements.

Recommendation 12: *Develop national service delivery standards and reporting of major outages, emergency service usage, downtime, signal strength, and speed of services in regional and remote areas.*

Recommendation 13: *Develop a program to install funded community Wi-Fi solutions or similar, to provide a redundant network in remote communities, prioritising those First Nations communities where communications outages impact basic living requirements.*

6. Role of the Australian Government

6.1 Funding connectivity

Previous telecommunications funding models have delivered benefits to residents and visitors living, working and travelling in remote areas of the NT. Since 2015, Australian Government funding has directly benefitted 17 First Nations communities, 39 tourist and roadside locations and 10 other sites, including a major transmission upgrade across Arnhem Land.

The Australian Government's *Better Connectivity Plan for Regional and Rural Australia*, announced in November 2022, also provides a welcome boost to connectivity where it is most needed – remote and regional Australia. Subsequent announcements, such as \$22 million for a First Nations Digital Support Hub and the Regional Roads Australia Mobile Program, indicate willingness to listen to the concerns raised by the community since the previous review.

¹¹ [Mapping the digital gap: Wadeye, NT community outcomes report 2022 \(apo.org.au\)](#) pp.36-39

Under the *Better Connectivity Plan*, there have been a number of funds dedicated to improve mobile coverage (in peri-urban areas, blackspots and along roads). Considering the potential for significant disruption to mobile services market with the coming introduction of satellite direct-to-device services, the next phase of Australian Government funding should broaden its focus to explore new technologies that can provide open access direct to mobile devices, and continue to advocate for shared infrastructure arrangements in these remote, under-serviced and high-need locations.

Programs such as the Mobile Network Hardening Program (MNHP) have targeted MNOs, enabling them to determine priority areas that are not necessarily based on highest needs. While this funding is appreciated, the Australian Government should evaluate whether telecommunications companies could independently fund resilience upgrades as part of their regular operations. Government funding should prioritise areas where network hardening is most urgently required (based on outage data analysis) and look for solutions that support resilience across all telecommunications services in a location or region.

Round 3 of the *Regional Connectivity Program* provided an opportunity for the NT Government to engage with multiple service providers to establish means of competition into a very small market. This led the Australian Government to fund a number of place-based solutions, moving away from traditional provider and technology driven approaches used in past funding programs.

Recommendation 14: *Allocate funding for network hardening and resilience based on outage data to prioritise upgrades for communities experiencing the highest number and frequency of outages, and explore solutions that benefit resilience across all telecommunications services in a place-based response.*

6.2 Future funding programs

The Australian Government is working more closely with jurisdictions to align funding programs and priorities and support improved outcomes for regional connectivity.

In January 2024, the Australian Government announced the Regional Roads Australia Mobile Program, which adopts a different approach to grant funding of telecommunications services. The program will fund pilot programs developed by jurisdictions, who in turn will invite providers to submit bids directly to them. Subsequently, they will be responsible for assessment, contracting and delivery of the program while reporting to the Australian Government on progress, milestones and challenges.

Although the Australian Government could be seen as outsourcing project implementation and management, this model relies more on local knowledge and enables project decisions to be made closer to where the needs are, which is welcome. New models to develop and fund place-based solutions should be further explored.

The lack of market responses, even with the incentive of Australian Government funding and co-investment, may require a rethink in delivering viable solutions to very remote regions. The Australian Government should consider new models to fund new connectivity solutions in failed markets where there is no commercial interest or return on investment. This is particularly true when looking to expand the National Broadband Network to provide backbone infrastructure across remote regions.

Recommendation 15: *The Australian Government must prioritise regional connectivity investment into underserved regions and communities with no commercial returns to support the development of baseline connectivity and enabling infrastructure for all Australians.*

Recommendation 16: *Future grant-funded Australian Government telecommunications programs should focus on place-based solutions to address the unique needs and challenges of remote communities, including moving away from MNO-only funding and exploring new models to expand existing collaboration and develop targeted solutions that meet local community needs.*

7. Recommendations

1. Establish a national connectivity strategy to set a consistent direction, guide policy and priorities for investment, and can adapt to new and emerging technologies and consumer needs.
2. The Australian Government should define baseline telecommunications services for all Australians based on the overall performance of the service, enabling full participation.
3. The Australian Government establish appropriate regulation and protections for LEO satellite services.
4. The Australian Government should focus investment in the National Broadband Network on critical enabling fibre infrastructure across northern and regional Australia.
5. Refocus existing roads funding programs to deliver new connectivity at roadside rest areas in underserved regions, through technology that offers open access for mobile devices.
6. Establish a regulatory requirement for telecommunications providers to deliver regular, meaningful, transparent and comparable information on service quality, enabling consumers to make informed decisions on connectivity, coverage, performance, reliability and cost.
7. Continue investment in the Regional Tech Hub, First Nations Digital Support Hubs and First Nations Digital Mentor network to provide services across all regional areas and increase digital training, literacy and support, particularly for First Nations communities.
8. Declare market failure in underserved areas to enable the development of innovative service models and government partnerships without breaching regulatory principles.
9. A modern universal services regime must provide all Australians with affordable access to basic connectivity to access the essentials of daily life.
10. Allocate dedicated funding for the delivery of technology-agnostic connectivity solutions in First Nations communities, primarily on the basis of need and greatest disadvantage, to ensure solutions for Australia's most remote and vulnerable communities.
11. Ensure the First Nations Digital Hub and Digital Mentors provide outreach directly to First Nations consumers and communities, and support place-based planning for appropriate projects to meet local needs and foster further digital opportunities.
12. Develop national service delivery standards and reporting of major outages, emergency service usage, downtime, signal strength, and speed of services in regional and remote areas.

13. Develop a program to install funded community Wi-Fi solutions or similar, to provide a redundant network in remote communities, prioritising those First Nations communities where communications outages impact basic living requirements.
14. Allocate funding for network hardening and resilience based on outage data to prioritise upgrades for communities experiencing the highest number and frequency of outages, and explore solutions that benefit resilience across all telecommunications services in a place-based response.
15. The Australian Government must prioritise regional connectivity investment into underserved regions and communities with no commercial returns to support the development of baseline connectivity and enabling infrastructure for all Australians.
16. Future grant-funded Australian Government telecommunications programs should focus on place-based solutions to address the unique needs and challenges of remote communities, including moving away from MNO-only funding and exploring new models to expand existing collaboration and develop targeted solutions that meet local community needs.

8. Department Contact

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