

Better delivery of baseline universal telecommunications services

Northern Territory Government Submission

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1. Executive summary

The role of the universal services framework is to ensure that all Australians can access voice and data services, regardless of where they live. Since it was last updated, there have been significant developments in technology, community expectations and how Australians access information and services.

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

To provide an effective safety net, it is essential that universal services are up-to-date, reliable, robust and able to meet the needs and expectations of consumers, and be easily accessed by every Australian.

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

The current framework does not meet the needs of remote Aboriginal Territorians and the business models used to deliver broadband services are acting as a barrier to accessing connectivity.

A modern universal service framework needs to recognise the importance of mobile services and connecting via portable mobile devices. This requires a move away from the emphasis on connecting premises and a recognition that for most remote Aboriginal Territorians a 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.

It is the view of the NT Government that a modern universal service framework needs to:

- Focus on data (including voice) in a single universal service regime
- Reflect modern connectivity requirements and community expectations, and provide a baseline of connectivity to all Australians
- Move away from focusing on fixed-line connections to premises and move to services that are more accessible, mobile and reach people where they live
- Adopt new business models to provide access to those in greatest need of service, by ensuring affordable, flexible and pre-paid services are available
- Have flexible delivery models and adopt a technology agnostic approach focused on service outcomes that can continue to maximise the use of new technology to effectively deliver services, particularly to very remote regions
- Be robust, reliable and resilient – focus on network resilience and reliability, operation during natural disasters and built-in power resilience by default
- Build on existing services and infrastructure, particularly in remote areas
- Be transparent and accountable, with regular reporting data and service guarantees to protect the rights of customers and build confidence in the reliability of services
- Consider the ongoing role of payphones.

The NT Government welcomes the opportunity to provide feedback on the current universal services framework, and encourages the Australian Government to seize this opportunity to implement a modern framework that provides fundamental access to all Australians and provides an effective safety net for digital connectivity.

2. Northern Territory context

The Northern Territory (NT) has an area of more than 1.3 million square kilometres yet is occupied by just over 232,000 residents¹. The Australian Statistical Geography Standard (ASGS) Remoteness Structure classifies most areas in the NT outside of Darwin as “Remote” or “Very Remote”.

While major centres in the NT have adequate telecommunications services, there remains approximately 50,000 people living in very isolated communities. This poses challenges in providing telecommunications services in some of the most sparsely populated and remote regions in Australia. There are more than 700 remote communities in the NT, many of which have a population consisting of only one or two families. Many are also not permanently occupied but remain as homelands in which people may periodically reside.

With low population density and the high cost of extending networks into remote areas, NT residents have a disproportionate reliance on universal services. Despite having a much smaller population than other jurisdictions, the NT is second only to Queensland in terms of usage of the USO – and for many communities and remote residents this safety net underpins their only access to telecommunications services.

The NBN Co wholesale network provides fibre or fixed wireless services in Darwin, Palmerston, Alice Springs, Katherine, Tennant Creek, Nhulunbuy and Jabiru, with planned projects to connect Yirrkala and Maningrida. The remainder of the NT is reliant on satellite services or ageing ADSL technology to connect to broadband services.

The existing arrangements support delivery of voice and broadband services through aging fixed line technology and the NBN Co as a statutory infrastructure provider. These arrangements do not reflect the way in which most Territorians access services, however there is still a strong reliance on services provided by the USO as for many remote communities this infrastructure underpins their only access to telecommunications services.

While NBN Sky Muster and other satellite services are available throughout Australia, the uptake is low in NT remote communities. The nature and suitability of telecommunications products plays a significant role in determining uptake by the community. Services that are post-paid or linked to a single premise do not meet the needs of most Aboriginal Territorians and their communities.

Mobile phones are the product of choice in remote communities across the NT, and probably across Australia. Where connectivity is present, mobile phones uptake is rapid and sustained. Through a focused NT Government co-investment program, 55 remote NT communities now have access to mobile services.

For approximately 130 NT remote Aboriginal communities, a Telstra payphone is the only source of telecommunications access. A further 160 communities are reliant on either a community phone or a WiFi phone delivered through the National Indigenous Australians Agency (NIAA) Remote Indigenous Communities Telecommunications activity² as their only telecommunications service. These communities represent more than 4,000 Territorians.

It is estimated that a further 5,500 Territorians live in remote communities and homelands with no access to telecommunications – no payphone, telephone line, WiFi or mobile coverage.

¹ Australian Bureau of Statistics (ABS) 2021 Census

² 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

3. A modern universal service framework

3.1 Background

In a submission to the Productivity Commission's *Inquiry into the Telecommunications Universal Service Obligation* (September 2016), the NT Government³ stated:

Given the national advances made in telecommunications infrastructure and technology since the commencement of the standard telephone service and payphones Universal Service Obligation (USO), it is clear that the USO is no longer fit for purpose and requires amendment to cater for user requirements in 2016 and beyond. (Summary, p.2)

In response to this Inquiry⁴, the Australian Government established the Universal Service Guarantee (USG) to provide all Australian premises, regardless of their location, with access to both voice and broadband services.

Under the USG, Telstra must provide fixed voice services to premises in Australia on reasonable request. Telstra now provides the majority of these services over NBN Co's fixed line network, mainly in urban areas, but outside this fixed line footprint, Telstra must still provide its own infrastructure where needed, and must maintain its copper network outside NBN Co's fixed line footprint until 2032.

At the time, mobile services were not included in the USG because of the difficulty of providing mobile service 'universally' across Australia no matter how remote or sparsely populated.

3.2 An effective safety net

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.

The introduction of the USG recognised that participation in the essentials of modern life required access to voice and broadband services. The way in which broadband services are delivered under the USG is still leaving many remote NT residents without practical access to the internet as these services do not meet the needs of communities.

Mobility is an important principle in remote Aboriginal communities where overcrowding of housing can be a factor. Lack of access to personal space can limit ability to effectively use standard broadband services. Account-based broadband services usually have low uptake due to the financial commitment required, along with inability to control usage in a household and therefore manage costs.

In its submission to the *Regional Telecommunications Review 2021*⁵, the NT Government called for a service standard suited for remote communities which will need to be:

³ NT Government submission available from: [Submission 59 - Northern Territory Government - Telecommunications Universal Service Obligation - Public inquiry \(pc.gov.au\)](#)

⁴ Australian Government response to the Productivity Commission Inquiry into the Telecommunications Universal Service Obligation, December 2017 p.1

⁵ NT Government submission available from: [rtr2021-submission-no-244-nt-govt.pdf \(infrastructure.gov.au\)](#)

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- Wireless - Services must use access devices that are portable and meet the expectations of having convenient, easy-to-use and portable access using existing devices.
- Pre-paid – Plans that allow users to be in control and easily manage usage. This resolves debt issues where costs can be incurred that cannot be repaid. The lack of pre-paid services for telecommunications products is a barrier for uptake.
- Data and Voice capable - Broadband service that is also capable of delivering voice (voice over IP). Dual requirements to be delivered through a single solution.
- Transportable - Access devices must also be functional in other communities. The use of additional devices compromises the user experience and creates additional cost. Ease of use is fundamental to the uptake of services as demonstrated with mobile handsets.
- Price equivalency or better - Mobile services are nationally priced and voice services in remote areas need to meet the benchmark customer pricing. Current prepaid services to access data are far more expensive than postpaid options, further entrenching existing disadvantage.
- Commercial viability – Services provided at no cost to the user may be subject to cost savings measures and ultimately diminish the product value. Commercially viable services must be delivered on a long-term basis.
- Resiliency - Reliability must be built into the service and repair and maintenance programs and be costed within the commercial viability of the product.

To effectively reach the people most reliant on the universal services framework, there needs to be a change in the business model to focus service delivery on telecommunications products that meet customer needs and allow practical access to connectivity for every Australian.

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

Residents in many remote communities in the NT are reliant on accessing this essential online information and services through their pre-paid mobile phones or via a community WiFi service that is free for residents and paid for by local organisations⁶.

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

Any move to new technology and delivery models must also consider the importance of reliability and resilience, particularly given the focus on accessing essential services. A modernised framework needs to address requirements around service availability, redundancy and resilience and ensure telecommunications providers are designing and delivering robust and resilient networks.

⁶ For example, NT Libraries, CAYLUS, local government

The impact of losing telecommunications in remote communities is more critical than for regional and urban areas. When a remote community loses telecommunications, the residents are often unable to buy food, petrol or power because the mobile service providing EFTPOS or connection to the authorising server used to replenish these essential services is unavailable. For people who rely on a visit to the local store on a daily basis to buy food, loss of telecommunications can be devastating. And a trip to the next community is often not possible, because of lack of fuel or because the road for the 200 km trip is impassable.

When an outage occurs in remote communities, the time to repair can be extensive. This would not be acceptable in urban areas and should not be considered acceptable for remote areas. Plans, equipment and resources should be in place to respond and enable prompt service restoration – and these issues also need to be considered when planning for the delivery of universal services across remote Australia.

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 an outage in the community of Yarralin that lasted 27 days, and three other communities experienced isolation outages that lasted more than a week. Telecommunications reliability is critical for all Australians, even more so for those living remotely.

A modernised universal service framework should have increased requirements of transparency and data sharing from telecommunications providers and effective monitoring of service delivery to ensure a reliable, robust and quality service is delivered.

3.3 Technology

Most NT remote communities are connected to broadband via Telstra's existing copper network, however these post-paid services connected to a single property do not meet the needs of most NT communities, so residents access the internet via the mobile phone network or community WiFi services.

The existing ageing copper network in Australia was found to be in a significant state of disrepair in many areas during the NBN rollout owing to a lack of investment over many decades. Many repairs were piecemeal with no long-term solution considered.⁷

The fact that Telstra will discontinue the copper delivery of broadband services (ADSL) in the near future⁸ and that many customers are moving to other delivery of broadband services outside of the NBN fixed line footprint demonstrates copper technology is reaching end-of-life after well over a century of service. A transition plan is needed to ensure that there is no reduction in services delivery as new technology options are adopted.

Alternative technologies in the form of fibre, geostationary satellites and, more recently, low earth orbit satellites (LEO Sats), are proving to be far more capable of delivering modern communications services with much higher capacity and infinitely more speed than copper could ever achieve and reaching almost anywhere.

Consumer preferences are evolving, with many Australians increasingly relying on mobile and high-speed broadband services as their primary telecommunications services (with voice services often provided over broadband networks).

⁷ [NBN alternative: Is Australia's copper network fit for purpose?](#) ABC webpage, 20 September 2013

⁸ [Telstra broaches ADSL's 'end of life'](#) IT News webpage, Sep 29 2021

In addition, the explosion of applications that are available for communication by smart devices makes it difficult for regulators and policy makers to actually concentrate a universal service obligation to one platform.

This change in technology means that a modern universal service should establish a baseline for connectivity rather than treating voice and data separately. Voice over data is becoming ubiquitous, and it could be argued that all wholesale services provided by Statutory Infrastructure Providers are now able to support voice services.

A key principle is that any change to existing arrangements will only be considered if there are tested and proven alternatives to existing technologies and services. The Australian Government funded Alternative Voice Service Trials (AVST) program in 2021/22 demonstrated that good quality voice services could be delivered over alternative technologies. Although LEO Sats were not widely available at the time, it is understood the Australian Government has plans to also trial the reliability of this technology to support voice services.

Considering how new technologies can be most effectively used to deliver reliable universal services to allow access to data (and voice) will be central to modernising the framework and delivering practical access to baseline connectivity for all Australians.

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

A technology agnostic approach that uses a mix of technology and delivery models would provide a national safety net that can be flexible enough to meet the needs of the most remote corners of Australia, and mechanisms to reach more urban and regional settings with the bulk of Australia's population.

Further, the roll out of an updated universal service model should recognise the existing technology and connectivity place-based solutions available in marginal markets and remote areas and enhance existing capacity rather than defaulting to a ubiquitous service model that may overbuild existing infrastructure.

Where remote infrastructure exists, it would be beneficial to consider how this can be maximised to deliver the USO, free-to-air broadcasting requirements and other services to support digital connectivity and inclusion in remote communities. The significant expense of extending networks and infrastructure into remote areas makes it even more important to maximise the use of new and existing infrastructure to deliver multiple services to a remote region. To operate effectively as a safety net, the universal service framework needs to be practical, accessible and affordable for the people it is designed to serve.

4 Key issues

4.1 Mobile services

Rather than mobile services complementing fixed services provided under the existing universal service framework, the reality for many Australians is that mobile services are used in place of fixed line services.

*The Australian Digital Inclusion Index 2023*⁹ report shows 32.6% of people in very remote areas have mobile-only internet access, compared with 10.5% nationally. Mobile-only access also

⁹ [Home - Australian Digital Inclusion Index](#)

impacts affordability, with mobile data often significantly more expensive per gigabyte than fixed broadband.

For financial and mobility reasons, First Nations people in remote communities particularly favour pre-paid mobile phone plans to access voice and broadband services. In the *Mapping the Digital Gap*¹⁰ research, referring to four remote NT communities, it was reported the use of Telstra pre-paid mobile services is 93%¹¹.

While there is limited mobile coverage across remote regions of Australia, pre-paid mobile phones offer a business model that better aligns to the needs of remote Aboriginal Territorians, so mobile phones are the product of choice in NT remote communities.

As outlined above, it is the NT Government's position that a modern universal service framework needs to recognise the importance of mobile services and connecting via portable mobile devices, versus the current focus on fixed line connections to a premise.

4.2 Payphones

It is estimated that 4,000 remote Territorians live in communities with no mobile coverage where their only practical access to telecommunications is provided by a Telstra payphone or a NIAA community phone - this represents 1.7% of the NT's population living across 290 communities and homelands.

The NT Government's position is that payphones need to 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.

The reliance on payphones is expected to diminish with time as services improve, many remote Territorians are likely to continue to depend on payphones as their only source of connectivity for the time being.

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 WiFi provides digital connectivity to many Australians who otherwise may not have access.

The extent to which payphones should continue to play a role in any future universal service framework will depend upon the other technologies and platforms that are to be included, and whether they can effectively provide services to marginalized cohorts of Australians. However there is the possibility that payphones with WiFi access could continue to provide an important source of connectivity and back-up service for many communities.

4.3 Affordability

Price equity and the provision of affordable services to remote Australians is a significant issue, and a barrier to access to modern connectivity.

¹⁰ 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

¹¹ All reports are available at <https://www.admscentre.org.au/mapping-the-digital-gap/>

In the opinion of the NT Government affordability is largely beyond the scope of a universal services regime, and should be addressed as a policy issue more broadly to support digital inclusion and equity of access.

A comprehensive modern universal services framework should support all Australians to access a base level of connectivity to participate in the online world and take the first step towards digital inclusion.

Affordability is relevant to the extent that a modern universal services framework can only provide an effective safety net if customers have the ability to afford and access these services. Of equal practical importance to affordability, is delivering universal services using business models that meet the needs of those Australians who rely on these services.

Focusing universal services on delivery of connectivity to a property with almost entirely post-paid business models offers immediate barriers to remote, low-socioeconomic and other disadvantaged Australians, further entrenching existing disadvantage.

4.4 Digital inclusion and the needs for First Nations Australians

The current universal services framework does not meet the needs of remote Aboriginal Territorians and the business models used to deliver broadband services act as a barrier to accessing connectivity.

Any modernisation of the universal services framework must explicitly address this issue and introduce the delivery of baseline connectivity services that meet the needs remote Aboriginal Australians. Key elements of this require services that can be purchased by an individual not linked to a property, and offered through affordable pre-paid services.

It remains the NT Government position that services for remote communities need to be wireless, pre-paid, data and voice capable, transportable, affordable, reliable and resilient.

It is the view of the NT Government that while the universal service framework provides an important safety net to ensure all Australians have connectivity regardless of where they live, it is not designed to solve all digital inclusion access requirements.

It is acknowledged that there are other initiatives underway to close the gap in access, affordability and ability to provide all First Nations Australians and achieve Target 17 of Closing the Gap by attaining equal levels of digital inclusion. This is broader than the safety net services that can be provided under the universal services framework, which is focused on ensuring all Australians can access connectivity.

The work needed to achieve digital inclusion is being highlighted by the First Nations Digital Inclusion Advisory Group and the Mapping the Digital Gap research projects.

5 Recommendations

- 1 The universal service regime should be consolidated to focus on data (including voice services)
- 2 A modern universal services regime must provide all Australians with access to basic connectivity regardless of where they live, and provide sufficient connectivity to be able to dial triple zero, access important health and safety information, make voice calls, access government services and information online and connect with family, friends and services.
- 3 To operate as effective safety net, the universal services regime must change its business model to move away from delivering fixed line services to premises and recognise the importance of mobility and ensure people can access connectivity on their own device.

- 4 New business models must be adopted to meet community needs so that flexible, transportable, affordable and pre-paid services are available.
- 5 A modern regime should recognise the importance of mobile services and new technology, to deliver reliable, accessible and affordable connectivity to those Australians who need it the most, particularly those in very remote regions.
- 6 Universal services must be robust, reliable and resilient – and the regulatory regime should require telecommunications providers to build resilient and reliable networks.
- 7 The rollout of new universal service models should take into consideration existing place-based connectivity solutions and maximise the use of existing infrastructure to improve services and maximise the benefits delivered to remote communities.
- 8 Be transparent and accountable, with regular reporting data and service guarantees to protect the rights of customers and build confidence in the reliability of services
- 9 Recognise the important role that payphones play in connecting remote communities and disadvantaged Australians to services and consider what role these could continue to play in providing WiFi and voice services into the future.

6. Department Contact

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