



Every Queensland
community deserves
to be a liveable one

2024 Regional Telecommunications Review

Submission to the 2024 Regional
Telecommunications Independent Review
Committee

July 2024

Contents

1.0	Executive Summary	4
1.1	Recommendations	5
2.0	Introduction	7
3.0	LGAQ Response to the Issues Paper	8
3.1	Telecommunications consumers	8
3.2	Universal service arrangements.....	15
3.3	Mobile.....	21
3.4	Fixed broadband.....	25
3.5	Disaster resilience and emergency.....	27
3.6	The impact of government and private investment	32
3.7	Other relevant reviews, inquiries and activities	36
	Attachment 1: LGAQ Policy Statement	38
	Attachment 2: Relevant LGAQ Annual Conference resolutions	39
	Attachment 3: Minimum speed requirements for key activities	41

About the Local Government Association of Queensland (LGAQ)

The Local Government Association of Queensland (LGAQ) is the peak body for local government in Queensland. It is a not-for-profit association established solely to serve councils and their needs. The LGAQ has been advising, supporting, and representing local councils since 1896, enabling them to improve their operations and strengthen relationships with their communities.

The LGAQ does this by connecting councils to people and places; supporting their drive to innovate and improve service delivery through smart services and sustainable solutions; and providing them with the means to achieve community, professional and political excellence.

2024 Regional Telecommunications Review

1.0 Executive Summary

The LGAQ welcomes the opportunity to provide feedback to the 2024 Regional Telecommunications Independent Review Committee (the Committee) on the Issues Paper released for consultation in April 2024.

The 2024 Regional Telecommunications Review is of critical interest to the LGAQ and Queensland councils. Telecommunications infrastructure and digital connectivity play a fundamental role as an enabler of economic development and in the provision of health, education and emergency services across Queensland, yet significant inequities continue to be experienced in mobile phone coverage and reliability of services particularly in regional, rural and remote areas, including First Nations communities.

In preparing this submission, the LGAQ has directly consulted with Queensland local councils through the use of a survey, case study interviews, workshops and through consultation with elected members on the LGAQ's Policy Executive. It is clear from our consultation that despite considerable investment by the Federal Government, many of Queensland's communities are under-served and without reliable connectivity to support their economic and social wellbeing.

Limited provider competition, inconsistent internet speeds, and widespread mobile blackspots are critical issues affecting many areas. The impact of these connectivity challenges on community liveability and disaster resilience is profound, with frequent outages during emergencies posing a serious risk to human life. Additionally, the slow responsiveness of telecommunication providers to maintenance and community needs frequently exacerbates these issues.

Federal Government policy settings and the current structure of funding programs are allowing providers to control how and where telecommunications investment is made. In particular, the LGAQ has heard of providers demanding access to council infrastructure and pressuring councils to make co-contributions to funding applications, at a time when the Queensland Audit Office has identified that 48 of 77 Queensland councils are at either a moderate or high risk of not being financially sustainable¹.

Addressing these challenges requires a coordinated effort from the Federal, State and Territory governments, service providers, and local councils to ensure equitable access to reliable and high-speed connectivity for all, thereby enhancing community resilience and overall liveability.

Overall, the LGAQ asks of the Federal Government through the 2024 Regional Telecommunications Review can be summarised as committing to a range of actions that will:

- prioritise investment into regional, rural and remote areas that are currently under-served by telecommunications providers,
- increase funding into programs that will improve the resilience of telecommunications infrastructure during disasters,

¹ [Local government 2023 | Queensland Audit Office \(qao.qld.gov.au\)](https://www.qao.qld.gov.au)

- require increased involvement from telecommunications providers in the planning and recovery phases of disaster management,
- improve the current delivery of digital connectivity education and consumer protection awareness,
- increase minimum standards under the Universal Service Arrangements, and
- provide greater accountability and transparency from the Federal Government in delivering on its commitments through the three-yearly review process.

1.1 Recommendations

In total, the LGAQ has made 15 key recommendations in response to the Committee, summarised below:

- **Recommendation 1:** The LGAQ recommends the Federal Government commits to improving public awareness and understanding of telecommunications services and undertakes a review of the Regional Tech Hub's purpose, scope, accessibility and resourcing to ensure it is equipped to support local communities, especially in regional, rural and remote locations.
- **Recommendation 2:** The LGAQ recommends the Federal Government considers expanding the remit of the Regional Tech Hub to support regulators in advising communities of their consumer protection rights and avenues for resolving disputes.
- **Recommendation 3:** The LGAQ recommends the Federal Government works with State and Territory governments and telecommunications providers to establish and support an appropriately skilled, on-call regional workforce that can assist providers during periods of peak demand and in response to emergencies and natural disasters.
- **Recommendation 4:** The LGAQ recommends the Federal Government, as part of the review of the Universal Service Arrangements, increases the minimum internet speed guarantee to a level that reflects modern user needs, while concurrently reviewing whether latency and reliability should also be mandated as part of these arrangements.
- **Recommendation 5:** The LGAQ recommends the Federal Government explores the use of new and emerging technologies in the delivery of the Universal Service Arrangements, to ensure equitable access for regional, rural and remote communities.
- **Recommendation 6:** The LGAQ recommends the Federal Government implements funding support or cost protection mechanisms for people in regional and remote areas who require non-NBN services, such as Starlink, to ensure equitable access to reliable internet connectivity in all regions of Australia.
- **Recommendation 7:** The LGAQ recommends the Federal Government ensures that future rounds of the Mobile Black Spot Program (MBSP) prioritise mobile infrastructure investment in regional areas currently underserved by telecommunications providers, based on a range of social and economic factors.
- **Recommendation 8:** The LGAQ recommends the Federal Government implements measures to ensure that telecommunications providers' coverage maps are accurate and more granular, to support regional consumers ability to choose the best coverage available in their area.

- **Recommendation 9:** The LGAQ recommends the Federal Government ensures that future rounds of the Regional Connectivity Program (RCP) prioritise fixed broadband investment in regional areas currently underserved by telecommunications providers, based on a range of social and economic factors.
- **Recommendation 10:** The LGAQ recommends the Federal Government establishes a new telecommunications disaster management framework that sets out the requirement for providers to work directly with councils prior to, during and post disaster management operations.
- **Recommendation 11:** The LGAQ recommends the Federal Government significantly increases funding of the Mobile Network Hardening Program, to ensure more regional communities receive the benefit of hardening infrastructure.
- **Recommendation 12:** The LGAQ recommends the Federal Government explores opportunities to fund councils to participate in the operational hardening of key sites, such as through the deployment of generators, in partnership with telecommunications providers.
- **Recommendation 13:** The LGAQ recommends the Federal Government reviews the eligibility and assessment criteria for the MBSP and RCP, to ensure they are not unnecessarily restricting telecommunications infrastructure investment in regional communities.
- **Recommendation 14:** The LGAQ recommends the Federal Government amends the timing of the three-yearly Regional Telecommunications Review to take place during the first year of a Federal Government election cycle, with the next review to commence in 2028.
- **Recommendation 15:** The LGAQ recommends the Final Report of the 2024 Regional Telecommunications Review incorporate an overview of the previous review's recommendations and subsequent Government response, to assess whether previous commitments are being delivered.

2.0 Introduction

Improved telecommunication services and digital connectivity remain a long-standing and key priority for Queensland councils and local communities. The LGAQ therefore, strongly welcomes the opportunity to make this submission to the 2024 Regional Telecommunications Independent Review Committee on the Issues Paper released in April 2024.

For far too long, growth and investment in regional, rural, remote and First Nations communities have been stifled by the telecommunications and digital divide and it is critical that investment by Federal and State governments continues to support improved access, quality, coverage, resilience and innovation of telecommunications infrastructure and services across Queensland regions.

The LGAQ has strongly advocated for improved telecommunications and digital connectivity outcomes over many years, on behalf of Queensland councils. This includes submissions to the Regional Telecommunications Review in 2021 and 2018, with many of the recommendations made by the LGAQ through those review processes still outstanding.

Most recently, the LGAQ has made submissions to the Federal Government's Better Delivery of Universal Services Discussion Paper² in March 2024 and the First Nations Digital Inclusion Roadmap Consultation Paper in July 2024. Across both recent submissions, the LGAQ included 28 specific recommendations that are relevant to, and should be considered as part of, the 2024 Regional Telecommunications Review (in addition to the recommendations outlined in section 1.1 of this submission).

To inform this 2024 submission, the LGAQ engaged GWI Management Consulting to support its consultation process with Queensland councils, undertake detailed research and support the development of detailed case studies that are incorporated throughout this submission. Local government feedback was specifically obtained through one-on-one case study interviews, group workshops, a survey and through direct conversations with elected officials and council officers.

This comprehensive approach included quantitative and qualitative analysis, ensuring a wide range of insights and perspectives and incorporating input from councils across every corner of the State, including across:

- South East Queensland (SEQ),
- North, North West and Far North Queensland,
- Remote and discrete First Nations communities, and
- South West and Central Queensland.

Importantly, this submission also incorporates and reflects the agreed policy positions of local government captured through the LGAQ Policy Statement ([Attachment 1](#)) and previous LGAQ Annual Conference resolutions ([Attachment 2](#)).

² LGAQ submission (March 2024) 'Better Delivery of Universal Services Discussion Paper' – available online [here](#).

3.0 LGAQ Response to the Issues Paper

In preparing this submission, the LGAQ has considered and prepared a response to address each key issue as set out in the Issues Paper, using findings from the LGAQ survey of member councils, workshops and case studies, to provide examples of the telecommunications issues that Queensland councils and their communities face.

3.1 Telecommunications consumers

The telecommunications sector plays a critical role in supporting Queensland’s economy, the liveability of its communities, and the lifestyle Queenslanders know and love. However, as outlined in the Issues Paper, consumers face a range of connectivity, reliability, and network capacity challenges.

Fast and reliable **connectivity** that is widespread, robust, high quality, fit-for-purpose and meets the needs and expectations of communities is critical. This will support councils to attract and retain residents and local workforces to conduct business and education activities, maintain social connectivity and interactions, as well as support disaster management, safety, and recovery initiatives.

Every Queensland community deserves to be a liveable one. The LGAQ survey found that connectivity, whether in terms of availability or speed, significantly affects liveability for residents within a local government area. Of the councils that responded, 69 per cent stated that their populations are highly or extremely impacted by connectivity issues (Figure 1).

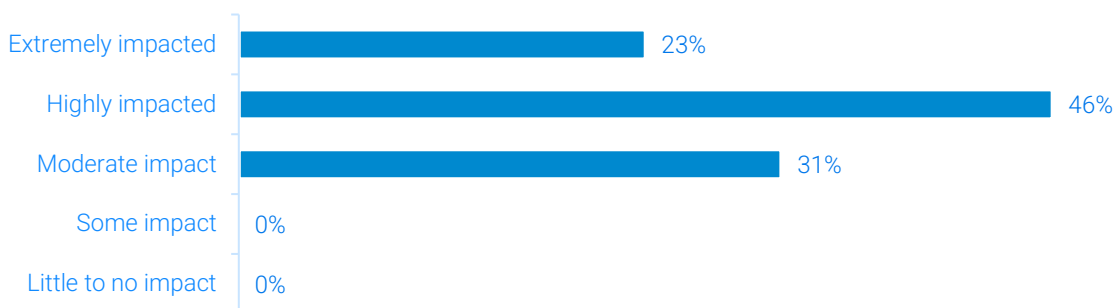


Figure 1: Level of connectivity impact on population (percentage of respondents)

Reliability is another critical concern facing many regional, rural and remote communities. As Australia’s most decentralised state, Queensland’s geographically dispersed population and large distances have historically made it economically challenging to maintain extensive telecommunications networks, resulting in limited broadband access in regional and remote areas. While major providers such as Telstra, Optus, and TPG have networks that cover Queensland’s east coast and most highly populated regional areas, many communities remain under-served by these networks.

In response, the National Broadband Network (nbn) has sought to progressively address these gaps by deploying infrastructure nationwide using a multi-technology mix (MTM). The MTM includes technologies like Fibre to the Premises (FTTP), Fibre to the Node (FTTN), Fibre to the Building (FTTB), Hybrid Fibre Coaxial (HFC), Fixed Wireless, and Satellite, each offering different speeds and reliability levels (see Table 1).

Table 1: nbn Multi-Technology Mix (MTM) breakdown

Technology	Description	Average Download Speed
FOTP	Direct fibre optic connections to individual homes and business.	100 Mbps to 1Gbps
FTTN	Fiber optic cables to neighbourhood nodes, with existing copper wires connecting the nodes to premises.	25 Mbps to 100 Mbps
FTTB	Similar to FTTN but used primarily in multi-dwelling units such as apartment buildings.	25 Mbps to 100 Mbps ³
HFC	Utilises existing cable TV networks upgraded to support broadband services.	50 Mbps to 100 Mbps
Fixed Wireless	Uses radio signals to provide broadband connections from a transmission tower to an external antenna, typically in rural and remote areas.	5 Mbps to 50 Mbps ⁴
Satellite	Provides broadband to the most remote locations using satellite technology.	12 Mbps to 25 Mbps ⁵

However, disparities persist between areas, with many communities often relying on technologies like satellite, which typically provide lower speeds at higher costs to users, compared to urban areas.

For example, in some parts of South West Queensland, satellite technology is currently the sole internet infrastructure available. While generally meeting minimum speed requirements, the current satellite technology fails to match the speed and reliability of other technologies. Additionally, internet plans via satellite are generally more expensive, with residents in some rural and remote locations paying around \$127 per month for satellite internet, while residents in other locations have access to multiple types of internet technologies with plans ranging from \$80 to \$100 per month, which offer higher speeds and better reliability.⁶

Beyond these connectivity and telecommunications infrastructure challenges, many councils have experienced a lack of responsiveness from telecommunication providers to both maintenance requests and community need. None of the councils responding to the LGAQ survey rated telecommunication providers' responsiveness to maintenance requests as acceptable, with 77 per cent affirming that providers are slow or very slow in responding to maintenance requests, with the remaining 23 per cent unsure (Figure 2).

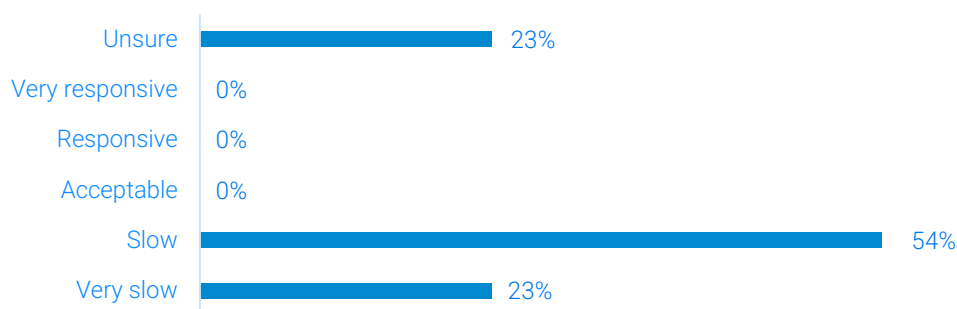


Figure 2: Council's perception of telecommunications providers responsiveness to maintenance requests (percentage of respondents)

³ FTTB NBN: Everything you need to know, Canstar Blue, 2024, <https://www.canstarblue.com.au/internet/fttb-nbn/#fast>

⁴ Fixed Wireless NBN plans and providers, Canstar Blue, 2024, <https://www.canstarblue.com.au/internet/going-wireless-with-the-nbn/>

⁵ NBN Sky Muster vs Sky Muster Plus, Reviews.org, 2022, <https://www.reviews.org.au/internet/sky-muster-vs-sky-muster-plus/>

⁶ Telstra home internet, Telstra, 2024, <https://www.telstra.com.au/internet>

Case Study 1: Connectivity challenges in Far North Queensland

Tablelands Regional Council and Mareeba Shire Council, located in Far North Queensland, approximately 1 hour south and 1 hour west of Cairns respectively, share many of the same challenges in relation to telecommunications. Tablelands Regional Council has a population of 27,259⁷ and covers an area of 11,293 square kilometres, and Mareeba Shire Council has a population of 23,702⁷ and covers an area of 53,491 square kilometres.

The economies of these regions are primarily driven by agriculture, particularly horticulture, cattle, and poultry. Home to Australia's oldest commercial coffee plantation and known as the food bowl of Far North Queensland due to its diverse range of high-quality produce, the area supplies not only the local region but overseas markets on a daily basis. These regions contribute significantly to the state economy, with GRP of \$1.5 and \$1.47 billion, respectively, in FY23⁸. Both regions also have a growing tourism industry with various points of interests and events that attract numerous tourists

Economic growth and prosperity

With the economies of these regions largely driven by agriculture, many businesses in these regions operate outside of town centres, where coverage is sparse or non-existent. Agriculture is a highly competitive market, undergoing significant transformation through emerging technologies like automation, remote sensing and drones, and requires high-speed and reliable internet mobile connectivity. However, both regions lack the necessary coverage to support widespread adoption of these technologies among local farms and businesses. This shortfall undermines the efficiency and competitiveness of local farms and businesses and impedes their ability to optimise production and growth.

Beyond agriculture, inadequate connectivity also impacts the tourism industry in these regions. Poor connectivity in these regions, particularly around key attractions, can prevent tourism operators from capitalising on visitors to the region and prevent visitors from identifying other attractions within the region to visit. Poor connectivity also prevents visitors from organically promoting the region via social media, and in some cases may dissuade visitors from visiting the region altogether. Further, insufficient coverage compromises visitor safety, with visitors facing difficulty accessing navigation tools or contacting emergency services during critical situations.

Telecommunications connectivity

Connectivity issues are a significant challenge for both local government areas. Although service providers claim ubiquitous connectivity in key towns, residents report unstable and poor connectivity. In one example provided, businesses located in areas where connectivity is poor often struggle to process day-to-day electronic transactions (EFTPOS). Critical infrastructure in key towns is also impacted by connectivity gaps. For example, local residents have reported the Mareeba airport experiences a blackspot on its eastern side, adversely affecting airport operations and limiting its capacity to expand and accommodate additional services.

In addition, the perception of telecommunication service providers responsiveness to community needs is poor, with 84 per cent of councils stating that telecommunication service providers demonstrate limited to no responsiveness (Figure 3). For example, one council reported that a telecommunications provider promised upgrades around three years ago and

⁷ Estimated Resident Population, ABS, 2022-2023, <https://www.abs.gov.au/statistics/people/population/regional-population/2022-23>

⁸ Far North Queensland Regional Organisation of Councils economic profile, .id, <https://economy.id.com.au/fnqroc>

is just now progressing past the planning phase, highlighting a lack of timely action from the provider. This is an experience shared by other councils in feedback to the LGAQ.

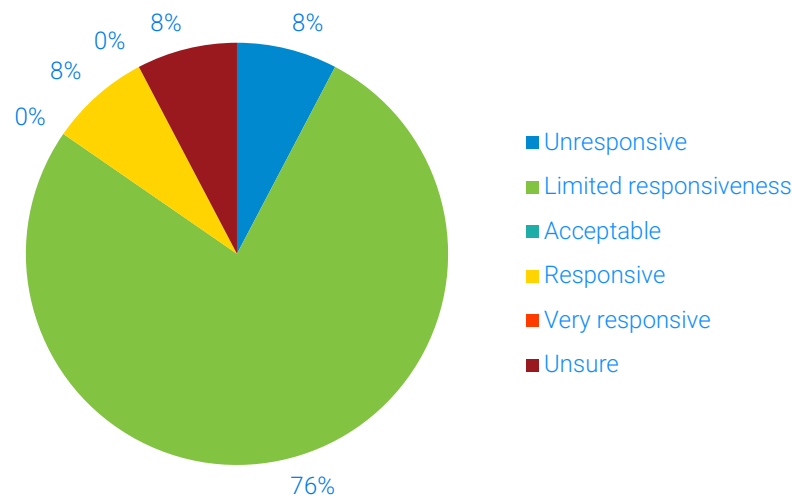


Figure 3: Councils' perception of telecommunications providers' responsiveness to community needs (percentage of respondents)

The LGAQ's consultation has also shown that the lack of responsiveness of telecommunications providers to undertake maintenance and respond to community needs, is further exacerbated during disaster periods when timely responses are needed for restoring critical communications.

Through the Independent Committee's public consultation sessions, many communities have indicated their willingness to assist providers during these times. This presents an opportunity for the Federal Government to work with State and Territory governments and telecommunications providers to develop an on-call remote workforce to assist during periods of heightened demand. By investing in a remote on-call workforce, telecommunications providers will be better placed to address issues of responsiveness to both maintenance requests and community need in times of emergency and disaster management.

For many regions, the impact of poor connectivity is exacerbated during popular events where **network capacity** is regularly exceeded. Several councils have reported that connectivity decreases (or fails altogether) during popular events, such as festivals, or when there is a high influx of tourists. This leads to issues like non-functional EFTPOS machines, impeding transactions and negatively affecting the success of these events, which are usually a critical economic stimulus for the community. Councils also reported that these issues cause long lines for fuel, leaving tourists stranded.

"If there is an event on, [we found that] there was no mobile data service at all, all EFTPOS machines in the area were unavailable. Having limited cash available to withdraw from the town it was a real dampener to our event." – LGAQ survey respondent

The **Regional Tech Hub** service was announced in March 2019, as a commitment from Federal Government in response to the 2018 Regional Telecommunications Review final report, which found that consumers in regional communities often lack knowledge of how to use different technologies and how to trouble-shoot issues. The 2018 Review recommended the

development of an online technology hub to provide independent and factual information on digital choices to people in regional areas⁹.

While the Regional Tech Hub has been in operation since 2020, the existence of this service is poorly communicated in the regions, with 100 per cent of councils that responded to the LGAQ survey stating that they were unaware this service exists. This is a poor outcome for a service that has been in place for four years and is funded by the Federal Government at ~\$2 million per year¹⁰. As there is still a clear need for information and support, the Regional Tech Hub should be reviewed to confirm its purpose and scope, and to ensure it is properly resourced to effectively serve regional communities.

Early results from the **Independent Audit of Mobile Coverage** are already demonstrating the discrepancies between what telecommunications providers report in terms of coverage, and the actual experience of councils (see Case Study 4, pg. 22). Residents may find that their area is marked as covered by these providers on the maps, but in practice, they either do not receive connectivity at all or experience poor connectivity due to the distance from the nearest tower.

For example, feedback to the LGAQ has highlighted multiple black spots along the Flinders Highway despite Telstra's assurances of coverage. Even after supposed fixes, residents still experienced a lack of connectivity in these areas.

"The day after my last meeting with the Telstra General manager in January when we were told that the black spots were fixed, I had arranged to have a discussion with our Telstra Executive. In the 5+ hour drive, we could not communicate with each other for 1.5 hours in one section and for shorter times in other sections. My average speed [during these] trips is approximately 80Kmh." – LGAQ survey respondent

The LGAQ recently made a submission to the First Nations Digital Advisory Group (Advisory Group), in response to the *Discussion Paper – First Nations Digital Inclusion Roadmap*¹¹ which aims to build on the First Nations Digital Inclusion Plan¹² (the Plan) by improving access, affordability and digital ability in **First Nations communities** through to 2026 and beyond.

In the Discussion Paper, it was noted that the latest Australian Digital Inclusion Index released in July 2023 shows a widening digital gap experienced by First Nations peoples, which increases with remoteness. First Nations communities are especially vulnerable to loss of connectivity, as infrastructure in these communities is often at risk due to their remote location, and connections to networks are easily compromised.

The Plan, and the development of a First Nations Digital Inclusion Roadmap, are an important step in recognising and addressing the unique digital needs of First Nations communities. The LGAQ's recent submission to the Advisory Group contained 11 recommendations for the Federal Government including:

- working with telecommunications providers to establish a framework for engaging First Nations communities, to ensure telecommunications products and services are affordable and designed for First Nations consumers,

⁹ [Regional Tech Hub | Department of Infrastructure, Transport, Regional Development, Communications and the Arts](#)

¹⁰ [Regional Tech Hub set to expand support for regional Australia as tender outcome announced | Ministers for the Department of Infrastructure](#)

¹¹ <https://www.infrastructure.gov.au/sites/default/files/documents/roadmap-discussion-paper.pdf>

¹² [First Nations Digital Inclusion Plan \(FNDIP\) | NIAA](#)

- continuing to earmark funding under the Regional Connectivity Program (RCP) and Mobile Black Spot Program (MBSP) for projects that benefit First Nations people and communities, and
- through the Remote Jobs and Economic Development Program, including opportunities for First Nations communities to develop small businesses that will support digital connectivity and digital literacy in their own communities.

Case Study 2: Community Wi-Fi in First Nations communities

Queensland is home to the world's oldest living and surviving culture, with both Aboriginal and Torres Strait Islander populations. Hope Vale township, situated 46km northwest of Cooktown, has a population of approximately 1300 people and is home to thirteen clan groups who mostly speak Guugu Yimithirr and other related languages, as well English¹³.

The National Agreement on Closing the Gap recognised the importance of digital inclusion for First Nations peoples, with Target 17 aiming for equal levels by 2026. However, the latest Australian Digital Inclusion Index (ADII) released in July 2023 shows a widening gap experienced by First Nations peoples, which widens even further with remoteness.

Hope Vale Aboriginal Shire Council feedback indicates that Hope Vale township and the surrounding communities are lacking ready access to affordable technologies, including Wi-Fi, leading to limited digital literacy and ability to use technology effectively.

The introduction of community Wi-Fi, along with improved mobile connectivity, would increase digital inclusion and provide significant benefits to the community through:

- Improved access to essential services such as banking, telehealth, and email,
- Increased empowerment, through universal internet access for the community, regardless of ability to pay,
- Increased access to digital resources provided by the State Library of Queensland, such as e-books, talking books, video, as well as language and other cultural resources, and
- Improved access to support during times of disaster through access to weather updates, emergency alerts, website and emergency service apps.

It would also assist Hope Vale Aboriginal Shire Council in promoting the town and surrounding area in terms of tourism development and as a lifestyle destination, as research shows that people stay longer and spend more in town where there is community Wi-Fi access.

An effective **consumer protection** framework is needed to ensure consumers receive fair and reasonable treatment from their provider and can make informed decisions about products and services. Feedback received from councils indicates that accessing independent and unbiased information about telecommunications, including available technologies and plans, is often challenging for regional, rural and remote communities.

Independent sources of information and advice are scarce, with many residents left to engage directly with sales staff of the telecommunications providers to understand the offerings available to them. Many sources of relevant information are only available online, which is of little help to residents struggling to connect to the internet. This lack of impartial information

¹³ [About Hope Vale – Hope Vale Aboriginal Shire Council](#)

makes it difficult for residents and local businesses to make informed decisions about the best connectivity solutions for their needs.

A decline in complaints to the Telecommunications Industry Ombudsman (TIO) however, does not necessarily indicate improved customer experience, as put forward in the Issues Paper. This decline could also be indicative of consumer fatigue, whereby the lack of responsiveness from telecommunications providers has led to many customers simply giving up trying to find a solution.

There are opportunities for the Federal Government and regulators to provide consumers with better information about their connectivity options and their consumer rights, as well as ensure regional communities have the necessary workforce present to address telecommunications issues as they arise.

Recommendation 1: The LGAQ recommends the Federal Government commits to improving public awareness and understanding of telecommunications services and undertakes a review of the Regional Tech Hub's purpose, scope, accessibility and resourcing to ensure it is equipped to support local communities, especially in regional, rural and remote locations.

Recommendation 2: The LGAQ recommends the Federal Government considers expanding the remit of the Regional Tech Hub to support regulators in advising communities of their consumer protection rights and avenues for resolving disputes.

Recommendation 3: The LGAQ recommends the Federal Government works with State governments and telecommunications providers to establish and support an appropriately skilled, on-call regional workforce that can assist providers during periods of peak demand and in response to emergencies and natural disasters.

3.2 Universal service arrangements

The current universal service arrangements, including the Universal Service Obligation (USO) are in place to ensure all Australians have reasonable access to basic phone and internet services.

However, as noted in the *Discussion Paper: Better Delivery of Universal Services* (pg. 12) released for consultation in October 2023, “Telstra is not currently subject to any explicit legislative requirements on the pricing of **fixed voice services** (or related customer equipment) provided under the USO”.

In addition, the LGAQ noted in its March 2024 submission¹⁴ to the *Better Delivery of Universal Services* consultation, that under current arrangements, there are no regulatory requirements on network operators to maintain a level of network resiliency or provide redundancy options on their networks. In addition to lacking requirements for network resiliency or redundancy, the USO also does not include statutory obligations on telecommunication providers in relation mobile telephony.

In the First Nations Digital Advisory Group’s Initial Report to the Hon. Michelle Rowland MP, Minister for Communications in August 2023¹⁵, it was recognised that First Nations people, particularly those in remote and discrete First Nations communities, favour mobile services over other options and are therefore disproportionately affected by the exclusion of mobile services from the USO and its successor, the Universal Service Guarantee (USG).

A modern universal framework should include requirements on telecommunication network operators to maintain a level of network resiliency or provide redundancy options on their networks as an important safety net, for example, through provision of alternative power supplies (such as battery, generator and/or solar power), to ensure communications don’t go down when they are needed the most.

In feedback provided to the LGAQ, council officers also noted the importance of transparency in pricing from service providers, to make it easier to compare the cost and the level of services provided as well as consistency in pricing of baseline services for consumers regardless of location across urban, regional, rural, remote and First Nations communities.

Under the USO, Telstra must also install and maintain reasonable access to payphones nationally. Payphones were made free by Telstra in September 2022¹⁶, in recognition of the critical role they play during natural disasters and for those in vulnerable circumstances, such as being homeless or fleeing from domestic violence.

Based on survey responses, councils generally perceive the relevance of payphones as ranging from moderate to minimal. Specifically, 69 per cent of respondents indicated that payphones are of somewhat to moderate importance, with 8 per cent stating high importance (Figure 4).

¹⁴ LGAQ Submission (March 2024) – Discussion Paper: Better Delivery of Universal Services – available online here <https://www.infrastructure.gov.au/sites/default/files/documents/bdus2024-local-government-association-of-queensland.pdf>.

¹⁵ [First Nations Digital Inclusion Advisory Group Initial Report \(August 2023\)](#)

¹⁶ [Why we’re making payphones free for calls around Australia - Telstra Exchange](#)

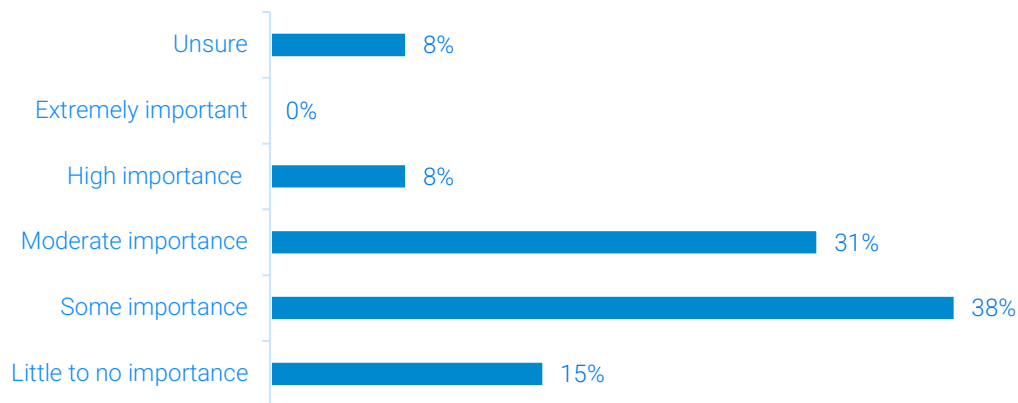


Figure 4: Importance of payphone for the community (percentage of respondents)

It is noted that Telstra does undertake some consultation when proposing to remove an existing payphone¹⁷, however it is apparent from the Mt Isa Independent Committee public consultation session held on 17 June 2024, that this process is poorly understood, and broadly relies on the public to actively seek out this information online. This service could therefore be improved through direct consultation with individual communities when Telstra is considering installing or removing existing payphones.

“... during a recent Telstra mobile service outage, which lasted from Saturday evening to Tuesday evening, our local payphone remained operational and provided a crucial means of communication which allowed tourists to stay connected.” – LGAQ survey respondent

In terms of **fixed broadband**, it is unclear whether there is an obligation for Retail Service Providers (RSPs) to provide nbn services (in particular, Sky Muster satellite) in all locations. Feedback from local councils indicates a significant disconnect between the nbn delivering fibre into areas, and an unwillingness from retailers to provide affordable connections to make the nbn network truly accessible for all Australians.

If this obligation does not exist, there is a potential that while nbn provides the wholesale infrastructure (Sky Muster satellites), no RSPs may choose to sell it, instead favouring alternatives such as Starlink. It already appears that Telstra now only offers Starlink for satellite internet services, which while offering superior speeds, is more expensive for consumers.

Councils also report that the USO is not always effective, with instances experienced where providers are not complying with the goals or spirit of the USO. Examples include providers simply crediting customers’ accounts rather than restoring services as this is more cost effective for them, leaving customers without services for extended periods of time. This highlights a clear failing in the current framework.

“Telstra currently finds it easier to credit accounts than to fix the service promptly for landlines. With monthly fees averaging about \$50 for these services, it is easier for them to simply issue credits and delay repairs for months.” – LGAQ survey respondent

¹⁷ [Telstra - Payphone services - Consumer Advice](#)

Case study 3: Cook Shire Council

The Cook Shire, located in Far North Queensland in the Cape York Peninsula and approximately 4 hours north of Cairns, has a population of 4,761¹⁸ and covers an area of 105,719 square kilometres. As the fourth largest local government area in Australia, it faces unique challenges due to its vast size and sparse population. As a result, infrastructure and connectivity in the region is scarce. Additionally, the region's unique geography and extreme weather pose natural obstacles to the provision of connectivity.

Most of the region relies on Sky Muster satellite technology to access nbn broadband, which offers lower speeds compared to other technologies. Cooktown, the major population hub, and its surrounding area have access to nbn Fixed Wireless and Fibre to the Node, which offer better speed and reliability than satellite (Figure 5).^{19,20} However, the region's other communities, such as Coen, Laura, and Lakeland, rely solely on satellite services.



Figure 5: From left to right, nbn footprint in Cook Shire including satellite and excluding it

Mobile connectivity in Cook Shire is also limited, covering key towns such as Cooktown, Laura and Coen but presenting extensive mobile coverage gaps in the rest of the region. As shown below (Figure 6), extensive portions of the Peninsula Development Road, which connects most key towns in Cook Shire and beyond, lack any mobile coverage, posing risks for drivers who may be unable to communicate with emergency services in the event of an incident. This is particularly problematic during the wet season, when weather conditions can change rapidly and leave motorists stranded.

While existing investment programs are improving connectivity within the region, more needs to be done to address the extensive gaps in coverage along the Peninsula Development Road to ensure safety. It is also noted that fibre already runs along the length of the Peninsula Development Road up to Bamaga, reducing the cost to deliver mobile coverage along this critical route.

¹⁸ Estimated Resident Population, ABS, 2022-2023, <https://www.abs.gov.au/statistics/people/population/regional-population/2022-23>

¹⁹ NBN Technology Types, Australian Government National Map, <https://nationalmap.gov.au/>

²⁰ NBN data from July 2020, last year available for this level of detail.

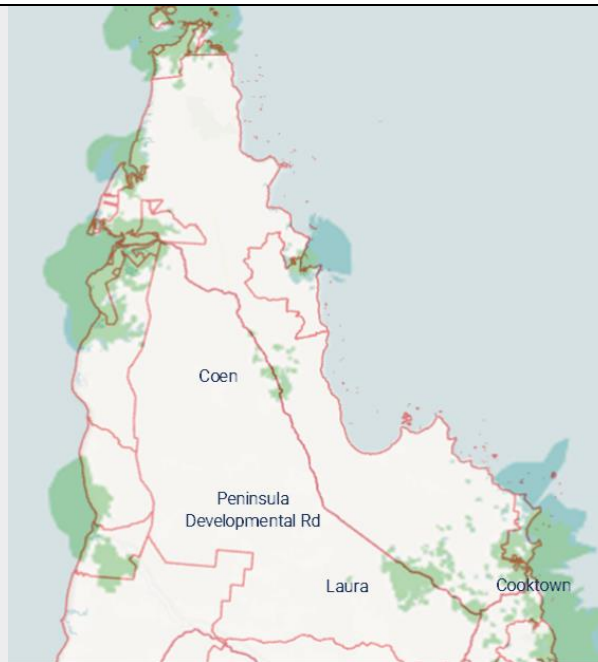


Figure 6: 3G and 4G coverage in Cook Shire²¹

Mobile connectivity in the region is primarily provided by Telstra, with Optus's presence limited to Cooktown and its surrounding areas. In Cooktown, multiple towers enhance communication resilience, but other towns in the region, such as Lakeland, are only served by a single tower.²² While a single tower can serve a community like Lakeland under normal conditions, during emergency events such as cyclones or floods, network resilience can be compromised, potentially leading to prolonged communication outages in the community, particularly as cell tower sites are often difficult to access. Extreme weather conditions can further delay access to these sites, extended the time taken to restore communications.

Safety

Limited mobile coverage on main roads is also a safety threat for residents and visitors. With no coverage for extensive segments of the road, drivers can be completely isolated in the event of a breakdown or accident. This isolation can delay or prevent contact with emergency services, increasing the likelihood of fatalities.

Equity and opportunities

The scarcity of telecommunications in Cook Shire widens the gap in access to essential services and economic opportunities. While satellite-based solutions like Sky Muster or Starlink have the potential to provide connectivity across the region, they lack the speed and resilience of terrestrial, fixed-line technologies, and are more expensive. As a result, residents in remote communities and businesses are at a disadvantage compared to those in less remote areas.

Since the Federal Government's expansion of the USO and the introduction of the Statutory Infrastructure Provider (SIP) regime in 2020, remote work and distance learning have increased dramatically. The availability of video streaming services has also increased, and with many

²¹ Coverage Map, Telstra, <https://www.telstra.com.au/coverage-networks/our-coverage>

²² Radio Frequency National Site Archive, AMTA, <https://www.rfnsa.com.au/home>

households using multiple devices at any given time, these services combined require significant speeds to effectively use and maintain (see [Attachment 3](#) for further information).

However, internet speed is only one part of the digital connectivity experience. Through our engagement with councils, the LGAQ also noted significant community frustration with poor reliability and high latency further reducing user experiences. In particular, we heard repeated frustration with Sky Muster, with many choosing to pay more to access Starlink because it was considered both faster (likely a combination of download speed and latency) and more reliable. In May 2023, Starlink reported that in the last two years it had signed up 120,000 customers, while Sky Muster users have declined from 108,000 in June 2023 to 96,1000 in April 2024²³.

If satellite and therefore Sky Muster is to continue as the solitary nbn offering for some of the most remote communities across Queensland and Australia, this service needs to be improved to ensure these locations have equitable access under the Universal Service Arrangements.

While the expansion of fibre and fixed line solutions would provide the best and most reliable connectivity to regional areas, this is not always practical due to the scale of the country and the highly dispersed population in regional and remote areas. There are **opportunities** to improve the provision and resilience of telecommunications in regional Queensland. Some of these opportunities involve leveraging emerging technologies, while others simply involve doing things differently.

Case Study 4: Low Earth Orbit Satellite (LEOSat)

LEOSat services are increasingly proving beneficial in supporting connectivity across regional, rural and remote communities, including Queensland's discrete First Nations communities. They are providing better options and alternatives to fixed standard telephone services and offer higher speeds and lower latency compared to geostationary satellites.

The Queensland Government Customer and Digital Group (QGCDG), part of the State Government Department of Transport and Main Roads, has been tasked with driving a more digitally enabled and responsive government, whilst facilitating simple and effective access to services for all Queenslanders.

The QGCDG undertook an analysis of digital connectivity and readiness of Queensland's First Nations and discrete communities that identified an immediate need to provide internet connectivity to high priority community locations as an interim solution while larger Commonwealth Government and telecommunications vendor programs deliver new digital infrastructure.

LEOSat connectivity was identified as the appropriate solution and the QGCDG has appointed the LGAQ as its agent to expedite a program to deploy this infrastructure as soon as possible. The program consists of grant funding of up to \$45,000 per community. This funding is for the purchase, installation and ongoing costs for up to three years for satellite hardware and associated internet services, to connect a range of community locations to the world via LEOSats.

This program has been taken up by all 17 First Nations councils in Queensland and has provided connectivity within critical council infrastructure including Indigenous Knowledge Centres, youth and community centres and airports, waste management, as well as roaming devices to support ranger programs and emergency responses.

²³ Australian Financial Review (May 2023) [Elon Musk's Starlink has charged past the NBN's number of \(afr.com\)](#)

While most telecommunications infrastructure in Australia is built and owned by the nbn and large telecommunications providers, there is also a cohort of smaller providers, regional ISPs who build and operate their own infrastructure to extend the reach of the nbn and other providers to better service smaller regional and remote communities. These providers are often able to serve towns that the larger providers cannot, or will not, service due to commercial considerations.

Mobile and other technologies such as Low Earth Orbit (LEO) Satellite services are providing greater options and alternatives to fixed standard telephone services and can support connectivity across regional, rural and remote communities, including First Nations communities.

LEO satellites can also be used to provide backhaul for mobile base stations to provide redundancy (or backup backhaul) for mobile towers if terrestrial/fibre backhaul is disrupted or damaged during a disaster. Sites with LEO backhaul only require access to power to continue to provide critical communications to the community.

Recommendation 4: As part of the review of the Universal Service Arrangements, the LGAQ recommends the Federal Government increases the minimum internet speed guarantee to a level that reflects modern user needs, while concurrently reviewing whether latency and reliability should also be mandated as part of these arrangements.

Recommendation 5: The LGAQ recommends the Federal Government explores the use of new and emerging technologies in the delivery of the Universal Service Arrangements, to ensure equitable access for regional, rural and remote communities.

Recommendation 6: The LGAQ recommends the Federal Government implements funding support or cost protection mechanisms for people in regional and remote areas who require non-NBN services, such as Starlink, to ensure equitable access to reliable internet connectivity in all regions of Australia.

3.3 Mobile

The mobile telecommunications sector plays a critical role in providing widespread connectivity across urban, regional and remote areas of Queensland. Cellular towers owned and operated by companies such as Telstra, Optus, and TPG Telecom form the backbone of this infrastructure, transmitting signals between mobile devices and the network (Figure 7).

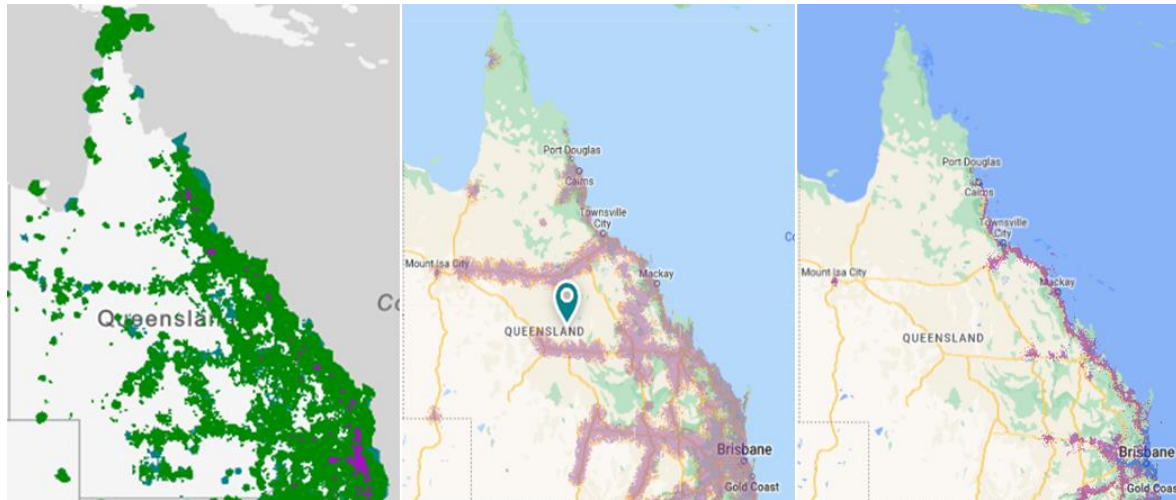


Figure 7: Network footprint of Telstra, Optus and TPG (left to right)

Throughout Queensland, 4G technology is the predominant mobile standard, providing coverage across most population centres, including urban, regional, and remote areas. However, investment in infrastructure varies, particularly in rural areas, where fewer towers and less infrastructure can lead to coverage gaps and reduced reliability, especially during emergencies or peak usage periods.

When it comes to mobile coverage, regional areas in Queensland face notable disadvantages compared to their urban counterparts. While urban areas benefit from ubiquitous and generally reliable mobile services, regional areas often experience gaps in coverage that limit connectivity for business transactions, access to healthcare and education, and for communications during emergency and disaster events.

While it is understood that coverage maps are modelled on predicted coverage, coverage is one of the most important considerations for regional consumers when deciding which service provider to use. Feedback from local councils indicates there is often significant disparity between what coverage maps show, versus what is being experienced on a day-to-day basis.

Reliable mobile coverage is also crucial for road safety, especially on main highways with high traffic volumes. The lack of mobile coverage on certain roads increases risks for drivers, as contacting authorities during emergencies becomes challenging. Locals have reported incidents where motorists have had to drive considerable distances from the scene of an accident to gain connectivity and report the incident to emergency services, delaying response times and endangering victims.

All council respondents to the LGAQ survey reported having 4G coverage within their region, with 69 per cent indicating 5G availability. Despite these results, significant disparities exist within these regions, and connectivity is often poor outside of key towns. For example, 62 per cent of respondents reported that connectivity is lost within 10 km of the town centre (Figure 8).

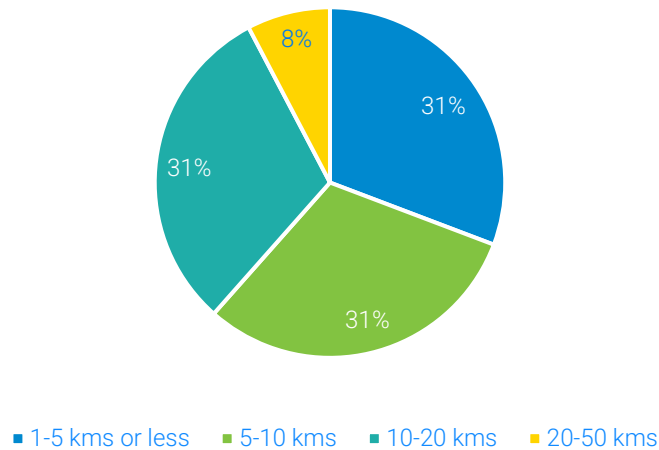


Figure 8: Distance from townships mobile connectivity is lost (percentage of respondents)

Additionally, black spots are a persistent issue, with 92 per cent of respondents to the LGAQ survey indicating they are aware of black spots within their region. The impact of these black spots is considerable, with 83 per cent of responses identifying that black spots affect more than 10 per cent of residents, and 33 per cent indicating over 50 per cent of their local population is affected (Figure 9).

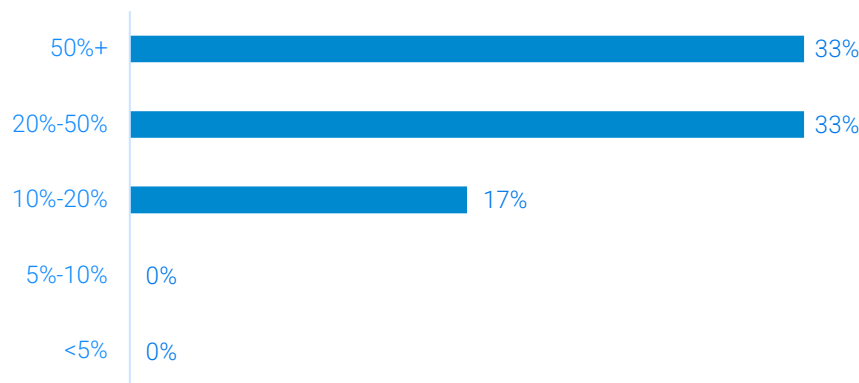


Figure 9: Percentage of population impacted by mobile black spots (percentage of respondents)

Several councils also highlighted black spots as a critical issue due to the ongoing lack of local community health services. In some locations, residents are often required to travel long distances to other local government areas to access hospital services as day patients and maternity admissions, and existing mobile black spots create significant risks to people at a time when they are most vulnerable.

Of particular concern was a woman in one council area who was asked to attend hospital nearly two hours away in the early hours of the day for the birth of her first child. It was an exceptionally challenging time for the woman's partner to transport the woman safely, as this required the couple to drive through multiple mobile blackspots while the woman's condition was deteriorating during their travel. This demonstrates the clear and unacceptable level of risk that many communities are facing on a regular basis, due to a lack of reliable telecommunications.

Case Study 5: Western Downs Region

The Western Downs region, located 2.5 hours west of Brisbane, covers an area of 38,000 square kilometres. The availability of internet connectivity is varied, and while there are pockets of strong connectivity within key towns, the region has significant gaps in internet and mobile coverage, which impacts business continuity, profitability and viability in areas outside of town centres.

Mobile coverage is quickly lost outside of town centres with residents reporting almost no coverage, for example, at the Chinchilla Weir, only eight kilometres from the centre of Chinchilla. Residents have also reported deterioration in service quality, and an increase in mobile blackspots across the region. One example provided is on the drive from Miles to Dalby, where residents previously experienced one black spot, and now experience four. The incomplete National Audit of Mobile Coverage shows mixed levels of coverage across this route²⁴, while Telstra’s mapping shows ubiquitous coverage of the route.²⁵

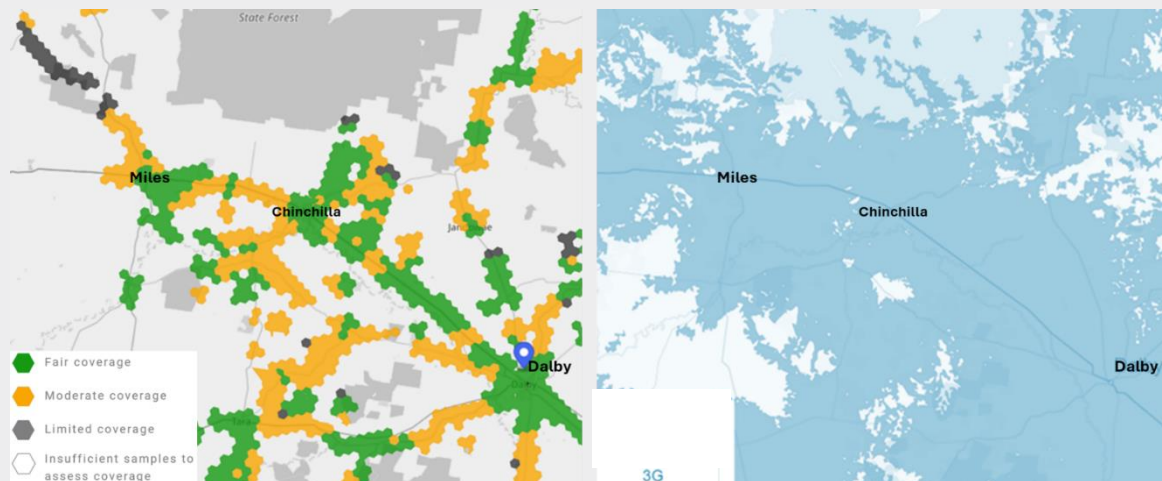


Figure 10: Telstra 4G coverage as reported by the National Audit of Mobile Coverage (left) and Telstra (right)

This highlights the discrepancy between what is reported by the telecommunications providers and what is experienced within the community. Coverage maps are also misleading as they do not distinguish areas of high and low coverage or congestion, making it difficult for consumers to distinguish the quality of service they are likely to experience at a given location.

Impacts

With significant economic activity within the region driven by agriculture, resources, and solar and wind farms, many large businesses within the region operate outside of town centres, and as a result outside of telecommunications network coverage. While larger businesses can find their own connectivity solutions (such as by setting up their own microwave links) this is cost prohibitive for most businesses and significantly limits their ability to adopt innovative and efficiency driving technologies. Limited connectivity also impacts the region’s other industries. When there is an influx of visitors to the region during large events, such as the Chinchilla Melon Festival, connectivity is further challenged as the region’s limited infrastructure is unable to handle the increased traffic. This has led to local businesses and vendors being unable to process transactions and take advantage of the critical economic stimulus these events provide to the region.

²⁴ Mobile Audit Visualisation Tool, National Audit of Mobile Coverage, 2024, <https://d1zckiwudrcznp.cloudfront.net/>

²⁵ Our coverage maps, Telstra, 2024, <https://www.telstra.com.au/coverage-networks/our-coverage>

To achieve equity in mobile services in regional, rural and remote communities, and to ensure these communities have access to the networks, equipment and capacity they need for improved connectivity and to foster innovation and efficiency across regional industries, future rounds of the MBSP need to be structured to prioritise infrastructure investment in communities that are currently underserved by telecommunications providers.

The Federal Government should work with State and local governments to identify these priority areas for investment, taking into account a variety of social and economic factors including the current number of providers and level of service, travel required to access critical health and emergency services, opportunities for future business and tourism growth, and current levels of disadvantage experienced in the community.

Recommendation 7: The LGAQ recommends the Federal Government's future rounds of the Mobile Black Spot Program (MBSP) prioritise mobile infrastructure investment in regional areas currently underserved by telecommunications providers, based on a range of social and economic factors.

Recommendation 8: The LGAQ recommends the Federal Government implement measures to ensure that telecommunications providers' coverage maps are accurate and more granular, to support regional consumers ability to choose the best coverage available in their area.

3.4 Fixed broadband

Fixed broadband is how most people access the internet when not using mobile devices and includes technologies such as fibre optics, cable, DSL, and fixed wireless connections. The fixed broadband market includes a range of different service providers.

As a wholesaler, nbn Co relies on retail service providers to provide products and services to end customers, most of whom do not build or own their own infrastructure. The largest of these providers, the established telecommunications companies like Telstra, Optus and TPG, also build and provide their own infrastructure to complement service provision provided by nbn Co.

Investment in the infrastructure required to extend the coverage of fibre and fixed wireless connections is usually conducted by nbn or these large providers. However, investment in many regional communities is lacking as small populations and large distances often mean that it is not commercially viable for these providers to invest in these locations.

There are smaller providers, regional ISPs who extend the reach of the nbn by building and operating their own infrastructure for smaller regional and remote communities. Examples include Wi-Sky, which received funding in RCP Round 3 in November 2023 to provide fixed wireless connectivity across a large area of North West Queensland, benefitting the communities of Richmond, Julia Creek, Karumba, Normanton, Croydon and the surrounding areas.²⁶

As an example, in a community within the nbn’s fixed wireless footprint, a regional ISP may build a new fixed wireless tower (or attach antennas to existing infrastructure such as a water tower near town) to:

- a) provide an alternative to nbn, or;
- b) service part of the community that may not have coverage due to geographic constraints.

An example of this is shown in Figure 11 below.

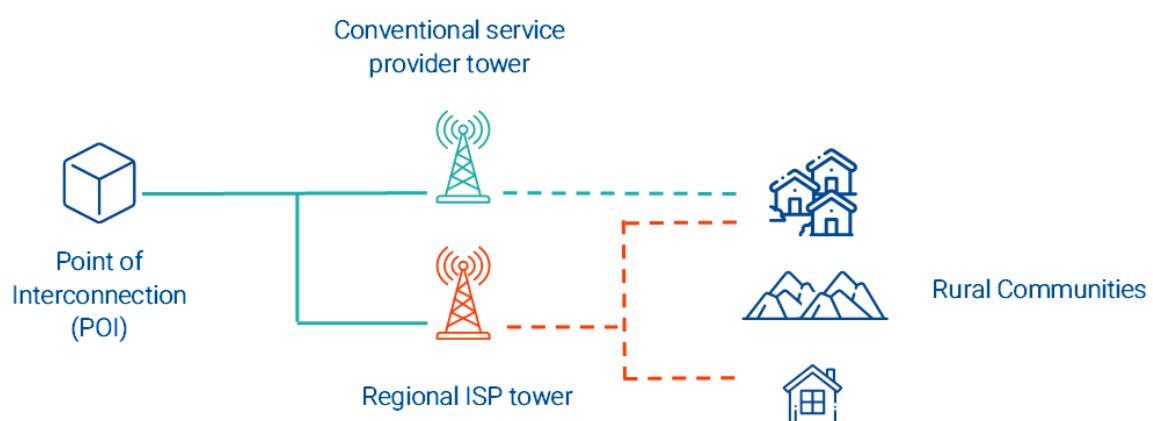


Figure 11: Regional ISP service provision

²⁶ Round 3 Regional Connectivity Program – funded projects, Department of Infrastructure, Transport, Regional Development, Communications and the Arts, 2023, <https://www.infrastructure.gov.au/sites/default/files/documents/round3-regional-connectivity-program-funded-projects-november2023.pdf>

Case Study 6: Diamantina Shire Council

Diamantina Shire Council covers an area of almost 95,000 km² and is second largest local government area in Queensland yet has the second smallest population, only 272 people.²⁷

Located in the far western corner of Queensland, Diamantina Shire borders the Northern Territory and South Australia, and sits on the edge of the Simpson Desert. In such a remote location, telecommunications can play a crucial role in empowering residents, and providing access to education, healthcare, and economic opportunities.

Unfortunately, telecommunications services and infrastructure within the Diamantina Shire are extremely limited:

- In terms of fixed broadband, the Bedourie township is serviced by limited nbn fixed line services, which provide reasonable connectivity to enterprise customers such as the police station and Council office, however, do not service any residential customers. The rest of the region is only served by nbn satellite (Sky Muster).
- However, due to the poor experiences and reliability of Sky Muster services, most residents have opted to rely on Starlink services. One example that illustrates this frustration is that ~90 per cent of students accessing School of The Air within the region now rely on Starlink due to persistent issues with Sky Muster services leading to students repeatedly dropping out mid-lesson.

The region remains under served from a connectivity perspective, despite the Council's consistent and concerted efforts to deliver base level connectivity to the region for over 40 years. Throughout this period, the Council has needed to invest ratepayer's money to advocate for and deliver what limited connectivity is available.

After 40 years of advocacy and millions of dollars of rate payer money, the broadband connectivity experience of residents remains poor with most residents now reliant on Starlink services. This means that although the Federal Government has implemented a SIP obligation to ensure all Australian premises have universal access to broadband services (25 Mbps or better), such as nbn Satellite, residents' connectivity experience means that simply having access does not equate to usable performance.

To expand connectivity in regional areas, the established telecommunications companies and nbn's existing investment programs have a role to play, focused on extending the footprint of fibre and fixed wireless. However, where it is not commercially viable for them to extend their network, smaller regional ISPs fill a niche in the market, providing critical infrastructure to improve connectivity to regional communities that would otherwise be left behind.

Recommendation 9: The LGAQ recommends the Federal Government's future rounds of the Regional Connectivity Program (RCP) prioritise fixed broadband investment in regional, rural and remote areas currently underserved by telecommunications providers, based on a range of social and economic factors.

²⁷ Queensland Regional Profiles – Diamantina (S), Queensland Government Statistician's Office, 2024, <https://statistics.qgso.qld.gov.au/profiles/qrp/resident/pdf/PM3WD517DIP6Q4GETSHIEYIZJN7CR4RW0YVHYJ0FPVZSTYZ3WLY4BST89B849S3EHLNPOGTJNGA7WI2G85G2WK5AA4M8B4T6GNHHETMK29B8AWPIHP76C8ORPAXZLN4/qld-regional-profiles-resident#view=fit&pagemode=bookmarks>

3.5 Disaster resilience and emergency

Reliable and fast communication is critical in disasters to allow residents to contact emergency services, and for communities to coordinate within themselves to keep each other safe. It is also vital for effective disaster management as it allows councils to maintain contact with residents, providing timely information about disaster developments, evacuation notices and safety measures, improving community safety. However, in regional, rural and remote Queensland, the likelihood of connectivity outages during disasters poses a significant challenge.

According to the LGAQ survey, 92 per cent of councils believe it is at least likely that connectivity will be lost during emergencies, with 54 per cent reporting a high or very high likelihood (Figure 12).

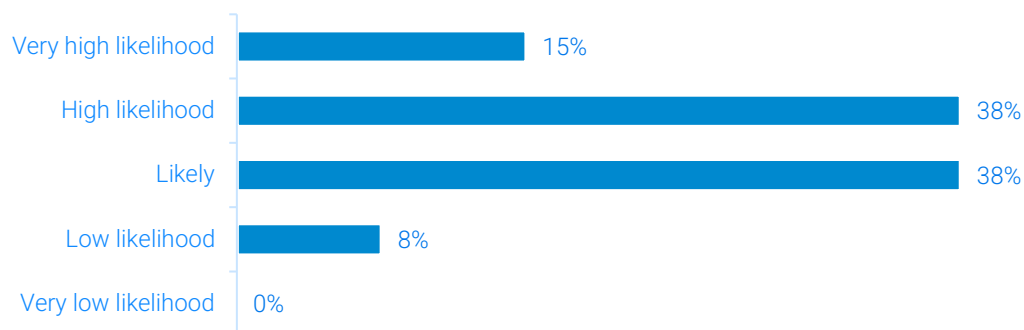


Figure 12: Likelihood of towns losing connectivity during emergencies (percentage of respondents)

Furthermore, when asked about the length of connectivity outages, 76 per cent of respondents reported that towns in their region have experienced more than a day without connectivity in the past 12 months, with 46 per cent of respondents reporting experiencing more than a week without connectivity (Figure 13).

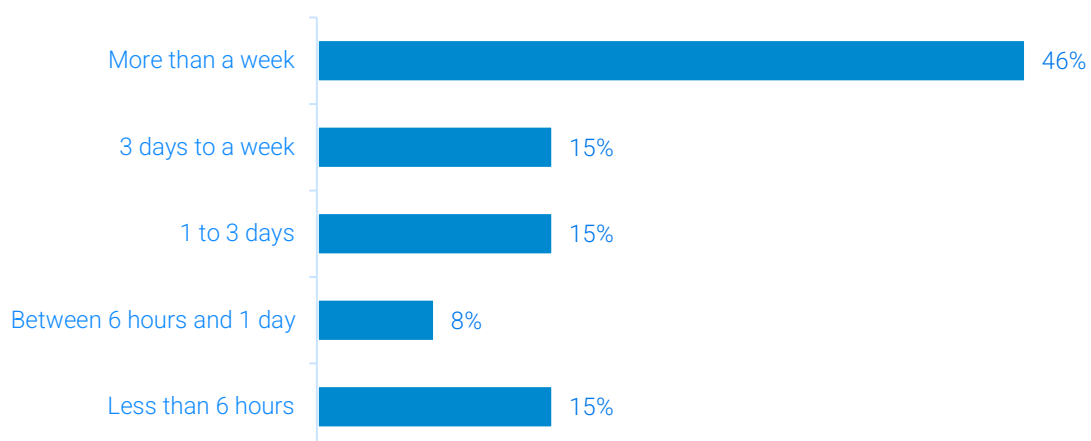


Figure 13: Duration of connectivity outages in the last 12 months (percentage of respondents)

Even after disaster events pass, it often takes a long time for telecommunication providers to restore connectivity, with 46 per cent of councils responding that it normally takes more than 48 hours to restore connectivity after a disaster event (Figure 14).

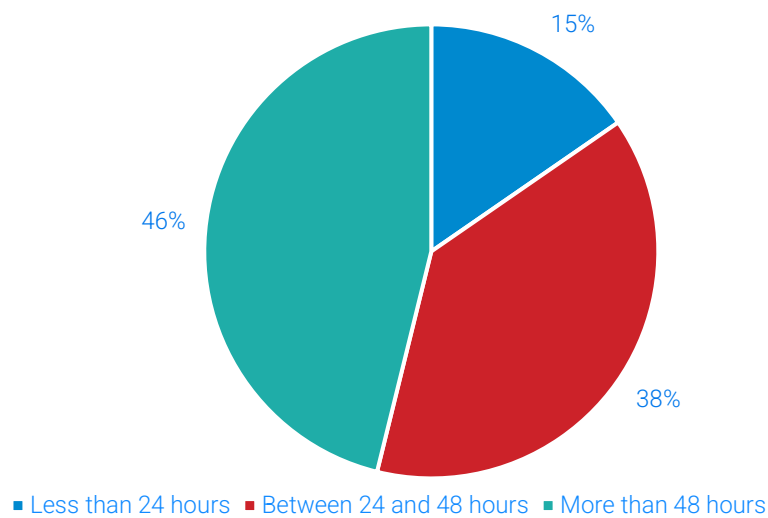


Figure 14: Time to restore connectivity after a disaster event (percentage of respondents)

One significant reason for connectivity outages is a loss of power or energy providers de-energising the network. During emergencies like cyclones, fires, or floods, power providers proactively de-energise the network as a safety measure. Consequently, infrastructure relies solely on batteries and generators, which operate for a limited time. Once batteries are depleted and generators run out of fuel, the affected areas are left without connectivity until power is restored (or generators are refuelled).

When comparing periods without power and without connectivity, 62 per cent of councils indicate that towns in their region have experienced longer periods without connectivity than without power. This suggests that communication issues extend beyond periods without power, with telecommunication providers not being as responsive as power providers.

"[During a disaster] Telstra plans to send technicians from [regional centres to our local government area] to refuel or supply generators, despite knowing it won't work due to road closures and other obstacles. This approach isn't practical, and Telstra should abandon it. We've suggested better strategies, like using local expertise or optimizing resources, but there's been no willingness to change. This issue has persisted for over 10 years." – LGAQ survey respondent

"The mobile tower battery power has a limited duration; I believe around 5 hours. This limitation can significantly impact our health and emergency services because on-call doctors, who are rarely located within fixed offices, may become unreachable, making it difficult to connect with essential services." – LGAQ survey respondent

Australia's ever-increasing reliance on Starlink also creates unique problems from a disaster management perspective. With increasing numbers of regional, rural and remote consumers choosing Starlink as their sole service provider, and with a significant number of mobile black spots still present across Australia, many consumers also choose to use voice-only and voice plus broadband via Starlink.

It is understood that there is currently no capacity to locate mobile phones using Wi-Fi from a low-earth orbit satellite or other broadband connection. This poses a significant risk to safety, as due to these consumers not being connected to a terrestrial network, they are unable to receive SMS emergency alerts.

Case Study 7: Gladstone Regional Council

The Gladstone region, located in central Queensland, approximately 6 hours north of Brisbane, covers an area of 10,484 square kilometres. The region experiences varied levels of connectivity, with significant gaps in its remote areas. While key towns in the region such as Gladstone and Agnes Water benefit from FTTN and FTTP technologies, other major communities only have access to Fixed Wireless or satellite services, which provide lower speeds and reliability compared to FTTN and FTTP. Many remote communities across the region can only access satellite-based internet connectivity.

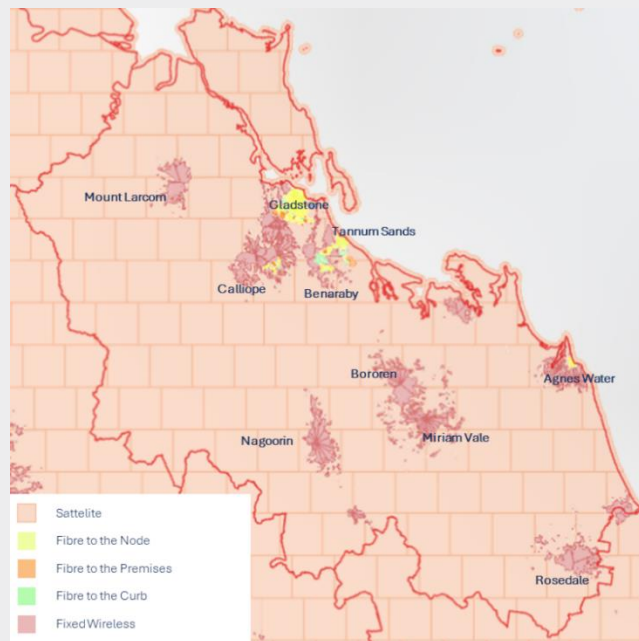


Figure 15: NBN coverage within the Gladstone region

The Gladstone region is prone to natural disasters such as bushfires, cyclones and floods, making reliable communications a critical priority in the region. During a disaster, maintaining reliable communication is crucial for the Council to effectively coordinate its response and communicate with residents to ensure their safety. However, telecommunication infrastructure is often affected by disasters, either through direct damage or loss of power, leading to prolonged communications outages.

Given Council is a key coordinating body during disasters, via the LDMG, direct, timely, and effective communication and collaboration between the Council and service providers is essential to ensure an effective disaster response. Over time, Council has experienced a decline in engagement and communication from service providers. For example, Telstra used to attend the LDMG meetings, which facilitated continuous direct communication and collaboration between Council and Telstra. However, Telstra no longer attends this forum and now only participates at the district management forum, making it challenging for Council to communicate with them. During region-wide events, there is a perception that the telecommunications service providers and their resources are stretched too thin, often leaving communities without communications for extended periods.

The Western Downs experienced multiple flood events in 2021/22 and several large bushfire events occurring in February/March and October/November 2023. Timely and reliable communication is essential to ensure safety, however during disaster events, the region's connectivity is often further disrupted. This includes connectivity infrastructure being damaged, or disruption to power supply. Further, many communities in the Western Downs region are serviced by Fixed Wireless which, along with mobile connectivity, is susceptible to congestion due to heightened use and first responder activity during emergency events.

During recent bushfire events, connectivity was disrupted or congested, resulting in little to no phone service to contact people on the fire front. This also made it difficult to communicate 'leave now' evacuation messages – which are critical life and death communications during fast moving bushfires.

The Tablelands and Mareeba council regions are also prone to extreme weather and disaster events, such as Cyclone Jasper in December 2023 and large bushfires in September and October 2023. Both councils noted that they face additional challenges in informing residents about critical events, especially seasonal agricultural workers who often reside in areas with minimal to no connectivity. These seasonal workers often have limited understanding of the region and actions to follow during a disaster compared to the rest of the community, increasing the importance of disaster communications.

Local Disaster Management Groups (LDMGs) are critical to ensure effective disaster management in each local government area as they are the primary coordinating and decision-making forums during critical events. Several councils noted that despite being invited, telecommunications service providers typically do not attend LDMG meetings. Instead, service providers only engage with the Disaster Management Groups at the district level. This makes it difficult for the councils to understand where connectivity is available and when services will be restored during disaster events. This also delays direct and timely updates and collaboration between providers and councils, often leaving local authorities uninformed about the status and recovery times of communications.

One of the main reasons for disruptions to communications during disaster events is a loss of power, either due to damage to the power grid or conscious de-energise by energy providers. Prior to or during disaster events, energy providers usually de-energise their networks in the affected area to reduce the danger posed by damaged infrastructure. While most exchanges and mobile base stations have battery backups (with some also having external local power sources such as a generator), these often only function for a limited period depending on the type of battery backup and network load being placed on the communications equipment (times can vary from several hours to 1 – 2 days).

When there is sufficient warning before a disaster hits, telecommunications providers will, in many cases, try to deploy smaller mobile generators to ensure continuity of service once battery backups run out. Unfortunately, disasters are unpredictable, and can occur quickly or hit areas different to those predicted. Further, once a disaster occurs, it can be slow, dangerous or impossible for telecommunications providers' technicians to travel into and out of affected areas, often leaving communities without telecommunications for extended periods due to a lack of power.

The Federal Government's Mobile Network Hardening Program is currently in place to improve resilience of Australia's mobile network telecommunications infrastructure in regional Australia to:

- prevent outages during a natural disaster,
- strengthen the resilience of telecommunications facilities to allow them to operate for longer during natural disasters, and
- support the rapid restoration of services following an outage.

Rounds 1 and 2 of this program committed funding of \$37.7 million to this work, however significant additional investments will be required to uplift the current resilience of Australia's telecommunication infrastructure to the level required to withstand the multitude of natural disasters experienced annually.

Recommendation 10: The LGAQ recommends the Federal Government establishes a new telecommunications disaster management framework that sets out the requirement for providers to work directly with councils prior to, during and post disaster management operations.

Recommendation 11: The LGAQ recommends the Federal Government significantly increases funding of the Mobile Network Hardening Program, to ensure more regional communities receive the benefit of hardening infrastructure.

Recommendation 12: The LGAQ recommends the Federal Government explores opportunities to fund councils to participate in the operational hardening of key sites, such as through the deployment of generators, in partnership with telecommunications providers.

3.6 The impact of government and private investment

In response to the existing telecommunication challenges in regional Australia, the Federal Government is funding various initiatives aimed at addressing connectivity issues, closing gaps, and improving regional communication infrastructure and affordability. While several initiatives have been launched, their reach to local councils and communities is limited.

According to the LGAQ survey results, awareness among councils in regional areas is primarily limited to two programs: the MBSP and the RCP, with 92 per cent and 77 per cent of councils aware of these programs, respectively (Figure 16). Other relevant initiatives, such as the Regional Tech Hub, which has been established to address key issues highlighted by councils (e.g., lack of independent information), have not reached the surveyed councils. In fact, 100 per cent of respondents admitted they are not aware of the Regional Tech Hub program.

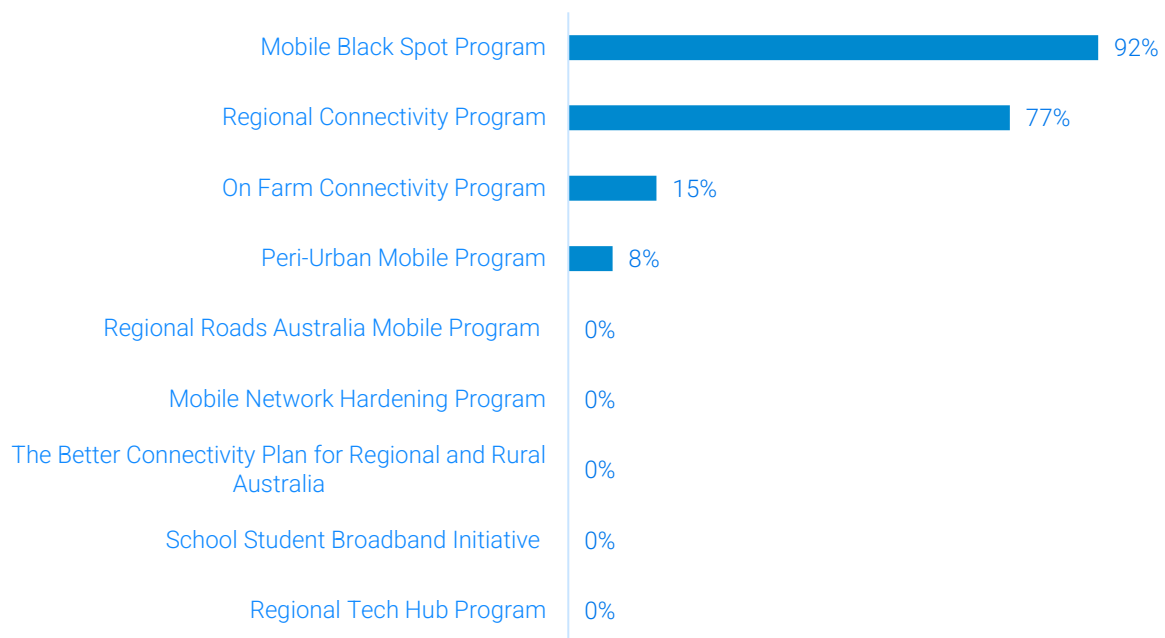


Figure 16: Awareness of investment initiatives (percentage of councils)

While the awareness level of the MBSP and RCP is relatively high among consulted councils, participation levels are lower than expected. For example, only 38 per cent of councils have participated in the application process for the RCP, despite 77 per cent being aware of it. In the case of the MBSP, participation is higher, with 85 per cent of councils affirming they have been involved in the submission or approval process.

There are many Mobile Network Operators (MNOs) who sell mobile connectivity without owning mobile infrastructure or mobile spectrum licenses of their own. However, mobile networks and infrastructure are generally owned and operated by the 'Big 3' mobile network operators: Telstra, Optus and TPG. To provide mobile coverage, mobile network operators need to own spectrum, mobile towers, and backhaul. Collectively, these can be prohibitively expensive (especially spectrum). As such, the 'Big 3' mobile network operators are the ones responsible for expanding mobile coverage.

When it comes to expanding mobile infrastructure in regional communities, MNOs often receive funding support from the Federal and/or State governments, such as through the MBSP. These

applications are made by the telecommunications providers on a commercial basis, based on population size and ability to cover their ongoing costs.

The Issues Paper notes there are key challenges in the delivery of government programs, including rising costs, declining industry contributions, competition for subsidies and increasing timeframes for deployment.

"We have had upgrade promises that date back 3 years and are now just getting past the planning phase, this is not good enough." – LGAQ survey respondent

All these factors contribute to rising inequity in telecommunications connectivity within regional communities. Using the most recent grant opportunity guidelines for MBSP Round 7²⁸ as an example, the LGAQ notes that core components in the design and requirements of government funding programs could also be limiting:

- opportunities for community involvement in program design
- the likelihood of smaller providers receiving funding, and
- the likelihood that council areas with smaller funding sources receiving investment.

Example 1: while applicants are "strongly encouraged" to consult with local governments and local communities regarding proposed solutions, there is no requirement to do so. As part of the LGAQ's recent engagement, councils frequently expressed frustration at how they are engaged by telecommunications providers as part of this process. Many councils felt that they were only engaged when a funding co-contribution was required, or after the grant had been awarded. This limits their ability to provide valuable insights to find the best solutions for their communities.

Case Study 8: Palm Island Aboriginal Shire Council

Palm Island is located 65 kilometres north of Townsville over sea and is the largest of twelve tropical islands in the Palm Island Group. It is the largest discrete Indigenous community in Australia with approximately 4000 residents. There is high mobility between Palm Island and the mainland, and the population can increase to over 5000 people during festivals and events.

Telstra are the only telecommunications provider on Palm Island with 3 towers all located on the western side, however residents still experience poor phone coverage and internet access. Council noted that while two of these towers are new, a lack of consultation with council has resulted in poor positioning and there still numerous dead spots on the island. A new tower located in the main town centre has improved coverage, however internet access remains slow and many businesses, including Council, have reverted to Starlink for consistent and reliable internet coverage.

Residents find that the Optus signal from the mainland is sometimes found to be stronger than Telstra, particularly on the northern end of the island. This has led to some residents owing a second Optus phone as a backup.

²⁸ <https://www.infrastructure.gov.au/sites/default/files/documents/mobile-black-spot-programme-rcp-round-3-with-mbsp-round-7-opportunities-grant-opportunity-guidelines-v1.2.pdf>

Mandatory consultation with local government was a key recommendation put forward by the LGAQ in its submission to the 2021 Regional Telecommunications Review²⁹ and as such, remains unfulfilled.

"Telstra has threatened to withdraw services if we don't accept draconian and unworkable conditions for lease agreement over our water towers." – LGAQ survey respondent

Example 2: under the program's Assessment Criteria, applicants are required to demonstrate a track record and capacity for delivering similar projects and solutions, an ability to deliver in the context of a broader program of work with the Federal or state governments, and have access to necessary infrastructure, power or backhaul. Applicants with a proven track record and history of engagement with governments will likely receive a higher rating for their application. For new and emerging providers, this requirement could be restricting their likelihood of being assessed favourably, particularly in comparison to other established providers.

Since the 2021 Regional Telecommunications Review, Starlink and other small providers have become ingrained in regional communities. These providers have shown their capability and willingness to provide services in smaller, less-populated regional areas that would otherwise be without reliable telecommunications.

Example 3: under the program's Assessment Criteria, applications that include a financial co-contribution from non-Commonwealth sources will receive a higher score in the assessment process. Feedback from local councils indicates they are often approached by MNOs for a financial contribution and can feel pressured to do so, however many of smaller regional councils (who are arguably most in need of support) are unable to contribute and are thereby at an immediate disadvantage when applications are assessed and ranked for funding.

"It is necessary to advocate at state and federal levels for increased funding and favourable policies related to connectivity." – LGAQ survey respondent

"There should be more resources available in the funding rounds." – LGAQ survey respondent

For decades, councils have been receiving a declining share of national taxation, while cost-shifts imposed on councils every year have been increasing by hundreds of millions of dollars a year. This situation is even worse in Queensland, where councils have two further, and unique, cost pressures:

- the costs of operating and delivering services in Australia's most decentralised state, and
- the costs to prepare for, lead the response of and recovery from natural disasters in Australia's most disaster-prone state.

Federal Government policy settings and the current structure of funding programs are allowing providers to control how and where telecommunications investment is made. The LGAQ has heard of providers demanding access to council infrastructure and pressuring councils to make co-contributions to funding applications, at a time when the Queensland Audit Office has

²⁹ <https://www.infrastructure.gov.au/sites/default/files/documents/rtr2021-submission-no-501-lgaq.pdf>

identified that 48 of 77 Queensland councils are at either a moderate or high risk of not being financially sustainable³⁰.

Moreover, several councils consider that there should be additional effort from the government to extend funding as opposed to councils being required to contribute. Increased funding and better-targeted initiatives could help bridge the connectivity gap and ensure more robust communication infrastructure in regional areas. By involving local councils more directly and effectively in the planning and implementation stages to develop local place-based solutions, these initiatives could be more successful and impactful.

Recommendation 13: The LGAQ recommends the Federal Government reviews the eligibility and assessment criteria for the MBSP and RCP, to ensure they are not unnecessarily restricting or deterring telecommunications infrastructure investment in smaller regional communities.

³⁰ [Local government 2023 | Queensland Audit Office \(gao.qld.gov.au\)](https://www.gao.qld.gov.au/reports/local-government-2023)

3.7 Other relevant reviews, inquiries and activities

An additional key challenge identified through consultation on the Issues Paper, is the timing of the three-yearly Regional Telecommunications Review in the context of the Federal Government election cycle.

Under Part 9B of the *Telecommunications (Consumer Protection and Service Standards) Act 1999*, each review of the adequacy of telecommunications services in regional, rural, and remote parts of Australia must be completed within 3 years of the Federal Government's response to the recommendations of the previous review being tabled. This requirement began in 2008, with 5 reviews now completed.

Table 2: Regional Telecommunications Review - key dates

	2015	2018	2021	2024
Review commenced	17 June 2015	30 April 2018	2 June 2021	22 April 2024
Report completed/due	Unknown	30 Sept 2018	13 Dec 2021	31 Dec 2024
Report tabled	22 Oct 2015	4 Dec 2018	14 Feb 2022	Within 6 months from report completion
Government response	23 Feb 2016	20 March 2019	31 March 2022	3 months from tabling
Federal election	2 July 2016	18 May 2019	21 May 2022	By 27 Sept 2025

As shown in Table 2, the timing of the previous reviews has consistently aligned with the Federal Government election cycle, whereby within months of a government response being tabled, an election takes place. This is likely to be the case for the 2024 Regional Telecommunications Review.

2 July 2016 election

- Continuation of previous government, with a change of Minister for Communications occurring prior to the election on 21 September 2015, and again on 28 August 2018.
- Machinery of government changes occurring prior to the election on 21 September 2015, changing from the Department of Communications to the new Department of Communications and the Arts.

18 May 2019 election

- Continuation of previous government, with a change of Minister for Communications taking place on 29 May 2019.
- Machinery of government change in February 2020, Department of Communications and the Arts combined with Department of Infrastructure, Transport, Cities and Regional Development, to form new Department of Infrastructure, Transport, Regional Development and Communications.

21 May 2022 election

- Change of government, and a change of Minister for Communications taking place on 1 June 2022.
- Machinery of government changes from 1 July 2022, to become new Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

As shown above, over the last 10 years the communications portfolio has undergone repeated changes in both its departmental structure, and in its responsible minister. The timing and frequency of these changes has led to a consistent lack of continuity in the review process. This raises concerns about the overall effectiveness of the review process, given that the responsible minister and relevant department setting the terms of reference for the review, may change post a Federal election and therefore, may not be responsible for implementation.

Recommendation 14: The LGAQ recommends the timing of the three-yearly Regional Telecommunications Review be amended to take place during the first year of the Federal Government election cycle, with the next review to commence in 2028.

While the Regional Telecommunications Review process is well-established, there is currently no requirement in place to report back on what has been delivered and at what cost, or how effective these measures have been in improving regional connectivity. This lack of transparency means it is unclear if the previous commitments made by the Federal Government have been implemented.

For example, the Federal Government's Response to the 2021 Regional Telecommunications Review Final Report recommendations proposed the establishment of a new \$811.8 million Connecting Regional Australia (CRA) initiative. The CRA was discussed as the mechanism to respond to recommendations 2-6 and 10-12 inclusive, with 6 key streams to receive funding:

1. expanding open access mobile coverage, including on major transport routes and to adjacent residences, businesses and tourist hotspots,
2. targeted investment to address specific needs, such as improving voice, broadband, mobile, business and backhaul services where required,
3. improving the resilience of infrastructure,
4. emerging technology trials,
5. improving Indigenous connectivity, and
6. improving affordability.

If fully implemented, these investment streams could significantly improve telecommunications in regional, rural and remote areas of Australia. However, the delivery of these commitments is difficult to track as since the initiative's announcement, it no longer goes by the CRA title. It is also unclear how much funding has been allocated to each area (given the ability to re-prioritise funding internally at any time), and what, if any, impact this is having in terms of delivering against the issues identified in the 2021 Review.

These reviews can only be seen as a successful mechanism for improving regional telecommunications if commitments and progress are clearly tracked between each review, and it is apparent from the LGAQ's consultation there is a long way to go before consumers across Queensland consider their connectivity and telecommunications experience is improving.

Recommendation 15: The LGAQ recommends the Federal Government ensures that the Terms of Reference for each Regional Telecommunications Review require the Independent Committee to consider and report on progress of the commitments made through the previous Review and carry forward any outstanding commitments in making its recommendations.

Attachment 1: LGAQ Policy Statement

The LGAQ Policy Statement³¹ is a definitive statement of the collective voice of local government in Queensland. The key policy positions of local government that are relevant in the context of the 2024 Regional Telecommunications Review are as follows:

6.1 Planning Policy and Development (6.1.7 Telecommunications)

- 6.1.7.1 Local government acknowledges the fundamental role played by 'telecommunications' infrastructure as an enabler of economic development and in the provision of health, education and emergency services in rural and remote areas of Queensland.
- 6.1.7.2 Local government supports efficient planning assessment and installation of telecommunications infrastructure and is the appropriate sphere of government to determine the level of assessment to be applied to telecommunications facilities.
- 6.1.7.3 Local government supports co-location of telecommunications infrastructure and information sharing amongst the development industry, digital service providers, mobile network operators, telecommunications infrastructure providers and local government in order to minimise disruption to local communities and to maximise efficiencies.

8.4 Communication (8.4.1 Service Access)

- 8.4.1.1 Advances in technology should be applied to give remote areas access to telephone, television and internet services consistent with those available in urban areas.
- 8.4.1.2 Local government across Queensland experiences significant inequities in mobile phone coverage and reliability of services between rural and urban communities. Local government will engage the State and Federal governments to address this inequity.
- 8.4.1.3 Local government supports the concept of a system of uniform telephone charges throughout Australia to reduce the disparity of remote locations.

8.9 Regional Development

- 8.9.1 Regional Queensland underpins the State's economy through a diverse industry base including agriculture, resources and tourism and seeks to be supported by appropriate levels of service and infrastructure
- 8.9.4 Development and investment in regional Queensland will occur through coordinated programs by Federal, State and local governments. Private sector investment in facilities and infrastructure in regional Queensland is crucial and should be encouraged by all spheres of government.
- 8.9.6 Digital infrastructure and technology are recognised as enablers to help overcome the barriers of remoteness, infrastructure shortfalls, attract regional investment and facilitate regional prosperity.
- 8.9.7 Local government supports the rollout of digital infrastructure, including but not limited to, the National Broadband Network and the provision of equitable access to high-speed broadband internet. This includes support from the Federal and State governments in developing the digital economy and online service delivery for local government.

³¹ <https://www.lgaq.asn.au/downloads/file/569/lgaq-policy-statement>

Attachment 2: Relevant LGAQ Annual Conference resolutions

The LGAQ is committed to member driven advocacy and working with members to build stronger local government and more resilient local communities. In the context of this Inquiry, the following LGAQ Annual Conference resolutions passed by Queensland councils, are relevant:

Resolution 148 (2023) – Improving access and reliability of telecommunications infrastructure and services

The LGAQ calls on the State and Federal governments to ensure reliable access to telecommunications infrastructure/services and improved mobile coverage in urban, regional and rural areas, by:

- mandating all mobile phone carriers to properly address and resolve key mobile black spots within shorter timeframes;
- revising the funding approval process for the Mobile Black Spot Program to include a sign off from the local government area that the infrastructure proposed will be located in as part of the process;
- increasing funding for connectivity in regional areas, in particular narrowing black spot coverage areas;
- applying and ensuring telecommunication providers comply with a Community Service Obligation (CSO)/Universal Service Obligation (USO) when supplying publicly-funded communications infrastructure/services, whether partially or wholly funded.

Resolution 17 (2023) – Communication providers’ preparedness to ensure capability to respond during disasters

The LGAQ calls on the Federal Government to ensure the response times for restoration and/or repair to landline and mobile network infrastructure align with the Universal Service Obligations (USO) and the funding conditions through the mobile black spot program.

Resolution 27 (2022) – Cyber Security Local Shared Services – Security Operations Centre

The LGAQ calls on the State and Federal governments to develop and resource an expert Security Operations Centre (SOC) for local government authorities as a shared services concept to improve cyber security management.

Resolution 81 (2022) – Better engagement for Mobile Blackspot Program projects

The LGAQ calls on the State and Federal governments to:

1. To ensure there is meaningful engagement with the community – implement a notification or “tick off” process by the Federal MP and affected councils for the consultation aspect of any project application in development.
2. Include on the ground testing to ensure value for money in the location of this infrastructure which is designed to increase connectivity and reduce the digital divide.

Resolution 135 (2022) – Funding for Digital Connectivity in Regional Areas

The LGAQ to calls on the State and Federal governments to increase funding for connectivity in regional areas, in particular regions covering widespread agricultural land.

Resolution 58 (2021) Telecommunications – Mobile Service Level Guarantee

That the LGAQ calls on the Australian Communications and Media Authority (ACMA) and telecommunications providers to commit to a customer service guarantee for mobile (calls and data) network services.

Resolution 69 (2020) – Telecommunication – Support Mandatory Roaming Services Between Mobile Telecommunication Providers

That the LGAQ lobby the Federal Government to legislate to require telecommunication operators to provide access to their mobile infrastructure in regional areas for competitors to enable roaming.

Attachment 3: Minimum speed requirements for key activities

The following table details the minimum required download and upload speed to partake in common activities.

Everyday task	Download speed (Data bandwidth required to perform the everyday task)	Upload speed (Data bandwidth required to perform the everyday task)	Source
General browsing	3 – 5 MBPS		GoBrolly.com (Web browsing)
Video teleconference	8 MBPS	1.5 MBPS	FreeConference.com
Wi-Fi calling	2 MBPS		SimpleWifi.com
Teams collaboration	0.058 MBPS (Audio) 1.5 – 4 MBPS (Video)	0.058 MBPS (Audio) 1.5 – 2.5 MBPS (Video)	Microsoft Documentation - Prepare Network
VoIP calling	< 0.256 MBPS		GoBrolly.com (Voip)
Interacting with cloud applications and cloud storage	0.5 - 2 MBPS (High output)		Helpdeskgeek.com
Online gaming and downloads	10 MBPS 12 MBPS	6 MBPS*	ConsumerReports.org GoBrolly.com (Gaming)
Video streaming / VPN	10 MBPS 4 MBPS	1.5 MBPS	ConsumerReports.org GoBrolly.com (Video streaming)
Social media	5 MBPS		ConsumerReports.org
Audio streaming	1 MBPS		ConsumerReports.org
Telehealth services	1.5 MBPS 0.6 – 1.2 MBPS		HitInInfrastructure.com telehealthspecialists.com
Online learning / eLearning	25 MBPS		Symbiosbroadband.com