Regional Telecommunications Review 2021

Submission by the Australian Communications Consumer Action Network to the Regional Telecommunications Independent Review Committee

30th September 2021

Australian Communications Consumer Action Network (ACCAN)
Australia's peak telecommunications consumer organisation

PO Box A1158, Sydney South NSW 1235

Tel: (02) 9288 4000

www.accan.org.au | info@accan.org.au | twitter: @ACCAN_AU

About ACCAN

The Australian Communications Consumer Action Network (ACCAN) is the peak body that represents all consumers on communications issues including telecommunications, broadband and emerging new services. ACCAN provides a strong unified voice to industry and government as consumers work towards communications services that are trusted, inclusive and available for all.

Consumers need ACCAN to promote better consumer protection outcomes ensuring speedy responses to complaints and issues. ACCAN aims to empower consumers so that they are well informed and can make good choices about products and services. As a peak body, ACCAN will represent the views of its broad and diverse membership base to policy makers, government and industry to get better outcomes for all communications consumers.

Contact

PO Box A1158
Sydney South NSW 1235
Email: info@accan.org.au
Phone: (02) 9288 4000
Fax: (02) 9288 4019
Contact us through the National Relay Service

Contents

1. Executive Summary

ACCAN thanks the Regional Telecommunications Independent Review Committee for the opportunity to contribute to this important review. The Regional Telecommunications Review provides an opportunity to examine the geographic equity in telecommunications services and plays an important role in the development of policy to support regional, rural and remote communities in their use of telecommunications services.

Since the last Regional Telecommunications Review, regional communities' experiences of natural disasters and the COVID-19 pandemic have highlighted and heightened the need for access to reliable, resilient, and affordable telecommunications services. Today there is little doubt amongst regional communities that telecommunications are an essential service.

There has been significant investment in the telecommunications infrastructure in recent years, through the Mobile Black Spot Program, the Regional Connectivity Program and the completion of the National Broadband Network (NBN). This investment is necessary and has resulted in considerable benefits to regional consumers and communities. However there remain gaps in access to services, and poor quality of service and lack of digital skills prevent regional consumers from realising the full potential of digital technology.

Addressing the challenges requires targeted policy action, and ACCAN calls for:

- The maintenance and improvement of the performance quality of voice services.
- The creation of a concessional broadband service for low income households, and a review of the Commonwealth Telephone Allowance.
- The Mobile Black Spot Program to support choice as well as improved access for consumers.
- The establishment of a Communications Fund to ensure the ongoing funding of telecommunications investment and digital inclusion programs in the regions.
- Statutory Infrastructure Providers to be bound by appropriate service guarantees and performance benchmarks for connection, fault repairs and appointment keeping timeframes.
- Telecommunications services to be recognised as essential services in legislation.
- Urgent action to reach the new Closing the Gap target to address the digital divide experienced by Indigenous consumers.
- Regional consumers to be appropriately supported in their choice and use of telecommunications services.

1.1. List of recommendations

The future of fixed voice services

- **Recommendation 1:** Any alternative technologies for fixed voice service delivery must be proven to have greater reliability and performance quality for regional, rural and remote consumers.

Affordability of telecommunications services in the regions

- **Recommendation 2:** The creation of a targeted concessional NBN broadband service to support low income households, supported by a gap payment from the Federal Government.
- **Recommendation 3:** The Federal Government review the existing Telephone Allowance to meet the needs of low income mobile only consumers.

Accessibility for regional, rural, and remote Australians with disability

- **Recommendation 4:** The Federal Government commit to funding to support the continuation of the Accessible Telecoms service.

Improving access and increasing choice of services

- **Recommendation 5:** Ensure no user is disadvantaged by 3G network turnoffs, with on the ground testing to guarantee a smooth transition to 4G and no loss of service.
- **Recommendation 6:** For funding to be made available for a study of regional mobile telecommunications performance.
- **Recommendation 7:** For the Federal Government to commit to ongoing mobile network expansion through the Mobile Black Spot Program or similar programs.
- **Recommendation 8**: For Mobile Black Spot Program funding to be expanded to subsidise mobile coverage extension equipment.
- **Recommendation 9:** For Mobile Black Spot Program funding to increase incentives for Mobile Network Operators to provide open access to all MNOs, with a focus on funding network neutral proposals.
- **Recommendation 10:** Local communities are supported through resources and facilitators to develop successful bids for Mobile Black Spot Program and Regional Connectivity Program funding.
- **Recommendation 11:** Following stage 2 of the Mobile Hardening Program, an audit of towers at high risk of natural disaster should be carried out to determine whether an additional round of funding is required.
- **Recommendation 12**: For the Federal Government to establish a Communications Fund for continuous funding of programs targeted towards reducing the digital divide in regional, rural and remote Australia.
- **Recommendation 13:** For any future spectrum allocation to balance the goal of maintaining current coverage with increasing competition of mobile services in regional Australia.

Guaranteeing reliability of broadband and mobile networks

- **Recommendation 14:** For all mobile towers in remote areas to receive extra backup power supply to last between 4-7 days to ensure maintenance of communications services during power outages and to allow sufficient time for technicians to restore the service.

- **Recommendation 15:** Timeframes for new connections and fault rectification should be consistent with Customer Service Guarantee timeframes and be measured in days – not working days.
- **Recommendation 16:** Associated annual benchmarks that apply to connection, fault rectification and appointment keeping standards should be set to 95%.
- **Recommendation 17:** Timeframes for fault rectification for priority assistance customers living in non-urban areas should be a maximum of 48 hours. Benchmarks for priority assistance timeframes should be set to 99.9%.
- **Recommendation 18:** Statutory Infrastructure Providers should be required to reach download speeds of at least 25 Mbps and upload speeds of 5 Mbps 100% of the time.
- **Recommendation 19:** Network providers should automatically provide rebates where standards are missed, with compensation amounts aligned with current Customer Service Guarantee levels for voice services.
- **Recommendation 20:** Statutory Infrastructure Providers should be required to provide network availability of 99.9%.
- **Recommendation 21:** Statutory Infrastructure Providers should report information relating to compliance with regulated standards to the ACMA quarterly, the ACMA should publish this information annually and be empowered to investigate circumstances where exemptions have been requested due to legitimate circumstances.
- **Recommendation 22:** The Federal Government prioritise progress on the draft standards, rules and benchmarks for Statutory Infrastructure Providers.
- **Recommendation 23**: For the ACMA to investigate and monitor widespread mobile outages in regional and remote Australia, and reliability of mobile infrastructure, to identify if measures are needed to increase reliability.

Creating resiliency

- **Recommendation 24**: The telecommunications industry must work collaboratively with fire services, emergency services personnel, the energy industry and local, state, territory and Federal Governments to prevent damage to telecommunications towers, mobile base stations, remote exchanges and power substations.
- **Recommendation 25**: Specific training should be developed and delivered to relevant fire services and emergency service personnel to ensure appropriate damage prevention measures can be put in place to protect communications infrastructure.
- **Recommendation 26**: Additional funding must be provided to ensure that all fire services and evacuation centres have Sky Muster connections that can be activated to provide connectivity for communications consumers affected by natural disasters. Trials should also be established using Sky Muster for EFTPOS to improve the resiliency of these vital connections.
- **Recommendation 27**: The industry should convene regularly to discuss the reliability of telecommunications infrastructure and measures to facilitate quick and easy restoration of services.
- **Recommendation 28**: The industry should review the use of satellite as a way to achieve greater communications redundancy and improve resiliency.
- **Recommendation 29**: Telecommunications should be recognised as essential services in legislation nationally.

Supporting Indigenous consumers

- **Recommendation 30**: That the Federal Government invests in local-level, community-informed and co-designed solutions to resolve infrastructure connectivity problems in remote Indigenous communities.

- **Recommendation 31**: That the Indigenous Digital Inclusion Plan is developed as a matter of urgency and priority, with meaningful and genuine co-design and co-leadership from First Nations peoples, communities and Indigenous organisations.
- **Recommendation 32**: That, within the year, the Federal Government collects baseline data and reports on digital inclusion for First Nations people in Australia, including those living in regional and remote areas, in accordance with the data development areas under Outcome 17 of the National Agreement on Closing the Gap.
- **Recommendation 33**: That NBN Co works with stakeholders to develop solutions that provide increased capacity and performance on shared community Wi-Fi services over Sky Muster.
- **Recommendation 34**: That the Federal Government consults on and invests in solutions to improve the affordability of satellite broadband services and pay-as-you-go community Wi-Fi.
- **Recommendation 35:** That the ACMA Payphone Guidelines are updated to reflect recent changes in public phone call charging arrangements, while maintaining clear guidance for assessing the impact of public phone removal.
- **Recommendation 36:** That the Federal Government work with Indigenous representatives to develop a digital inclusion program, to enable communities to develop local strategies and place based solutions that enable people living in remote Indigenous communities to access the internet.
- **Recommendation 37:** That demand for faster broadband speeds, increased data, and low latency is met by telecommunications networks servicing remote Indigenous communities, to enable widespread use of high-bandwidth applications and services.
  Recommendation 38: That the Federal Government supports communities to identify local solutions to develop digital skills and confidence, including local digital mentors, and vocational education programs.
- **Recommendation 39**: That the accessibility of online services for people with disability, limited English, or text literacy is improved.
- **Recommendation 40**: That service providers working within remote communities are culturally and contextually sensitive in their dealings.
- **Recommendation 41:** That the Federal Government allocate sufficient and ongoing funding to the delivery of digital skills programs for First Nations people, including expansion of the inDigiMOB program.

<u>Improving education, awareness, and skills</u>

- **Recommendation 42**: For the Federal Government to develop a national digital inclusion roadmap.
- **Recommendation 43**: For the Regional Tech Hub to be appropriately funded on an ongoing basis to provide digital capacity building and troubleshooting services.
- **Recommendation 44**: A trusted and independent party should be resourced to develop and maintain a plan comparison website about telecommunications services to support consumer choice.
- **Recommendation 45**: For there to be clearer information at the point of sale regarding the level of network coverage available to Mobile Virtual Network Operators, and increased on the ground testing to confirm the accuracy of mobile coverage maps by Mobile Network Operators
- **Recommendation 46**: That the Federal Government continue to fund the ACCC Measuring Broadband Australia Program, including its expansion to NBN Sky Muster services, and continued monitoring of Fixed Wireless services.

Ensuring infrastructure works for regional, rural, and remote Australians

- **Recommendation 47:** The Federal Government ensure that there are adequate upgrade plans and pathways for regional Australians using ADSL services that provide access to higher quality or equivalent fixed broadband services.
- **Recommendation 48**: For the Regional Telecommunications Independent Review Committee to consider the findings of the forthcoming ACCC report on Mobile Network Operator infrastructure investment, in developing recommendations on future mobile infrastructure sharing.

1. Adequacy

1.1. Changing demand

1.1.1. What telecommunications services are required in regional Australia to meet current and future needs? Are there any things regional communities and businesses need to do, but can't, on their existing services?

Improvements in mobile coverage as well as speed and reliability of broadband are required to meet current and future needs in regional Australia. Without expanded and upgraded infrastructure, regional communities will be unable to do many of the things urban residents take for granted. Additionally, there needs to be consideration for the future of voice service in regional, rural and remote areas.

Mobile Coverage

Community expectations and attitudes towards mobile services have changed since the last Regional Telecommunications Review, with more consumers relying on mobile phones for their voice services. Over the last 6 years, the proportion of consumers using only a mobile phone to make calls has doubled, with 60% of consumers reporting they were mobile-only for voice calls in 2020.[1] In the past 6 months to June 2020, 91% of Australians aged 18 to 54 reported using a mobile to access the internet.[2] Despite this, regional community expectations are not being met when it comes to mobile coverage. For example, regional Victoria contains more than 94% of the state's 2609 identified mobile black spots.[3]

Despite investment from the Federal Government through the Mobile Black Spot Program (MBSP), there continue to be areas where people live, work and travel that lack sufficient coverage. ACCAN has ongoing concerns about the limitations of mobile coverage and the need to extend coverage into more remote areas. A recent NSW Farmers Survey showed that 80% of farmers are unsatisfied or very unsatisfied with their mobile service coverage.[4] Concerningly 60% of respondents to the NSW Farmers Survey reported experiencing a decline in mobile coverage and internet connectivity in the last 12 months. Similarly a survey carried out by the National Farmers Federation saw 49% of respondents reporting that the reliability of their mobile network coverage has declined in the last 12 months.[5]

Problems with mobile coverage result in consumers needing to rely on costly repeaters and boosters to improve their mobile service, but often the service remains unreliable and can cause interference

[1] ACMA, 'Mobile-Only Australia: Living without a Fixed Line at Home', accessed 7 September 2021, https://www.acma.gov.au/publications/2020-12/report/mobile-only-australia-living-without-fixed-line-home.

[2] ACMA, 'Communications and Media in Australia: How We Use the Internet', accessed 7 September 2021, https://www.acma.gov.au/publications/2021-05/report/communications-and-media-australia-how-we-use-internet.

[3] Simon Dux, 'Infrastructure Victoria Backs Co-Investment and Network Sharing to Boost Regional Connectivity', *Communications Day*, 7 September 2021.

[4] James Jackson, 'Farms Are Losing Connectivity', The Land, 17 June 2021, http://www.theland.com.au/story/7298379/farms-are-losing-connectivity/.

[5] National Farmers Federation, 'NFF Telecommunications Survey', 2021.

blocking reception for others. The survey by the National Farmers Federation found that 50% of respondents spent between $1000-$5000 on adopting connectivity enhancing solutions.

Issues with mobile connectivity are intensified where consumers also receive a poor home internet connection, resulting in a total lack of in-home connectivity. This issue is demonstrated by following case studies:

Case Study 1: Cedar Creek, Queensland[6]

A Cedar Creek resident contacted ACCAN this year during lockdown due to the lack of mobile and broadband connectivity in the area. Whilst unable to go into the office, some residents in the area were forced to drive to the nearest location with mobile connectivity, and work from the side of the road. Many of the residents in the area still have an ADSL connection due to Sky Muster Satellite connections apparently not working well due to the topography, however the ADSL connection is deteriorating and unable to support applications such as video conferencing.

Case Study 2: Ravenshoe/Millstream, Queensland

ACCAN was contacted by a community organisation that works with residents in Atherton and the surrounding Tableland areas. The community organisation and other local service providers are concerned about the lack of connectivity in the area, and the inability to contact their clients.

One of the organisation's clients is an Aboriginal woman; she lives with her child and is experiencing severe and ongoing domestic violence (DV) in her intimate relationship. Given the severity of the DV, she has been assessed by the Queensland Police Service and a specialist DV Practitioner to be at high risk of lethality.

The remote location of the client and her family, and their inability to contact emergency services heightens this risk of lethality, particularly as the DV perpetrator continually accesses the property. Support services are unable to contact her whilst she is at home, and she has requested that support services do not attend unannounced as this may increase the risk to her safety should the perpetrator learn of service visits.

Due to the above risk factors, the lack of access to telecommunications services significantly increases the risk to both the mother and child's safety.

Case Study 3: Battle Creek, Queensland

Samantha* is an Aboriginal woman who lives with her mother but is at risk of homelessness due to ongoing family conflict. She is pregnant and has no transport out of the remote community. There are significant concerns due to the lack of

[6] A Current Affair staff, 'Why Families Are Forced to Set up Their Office on a Roadside', accessed 7 September 2021, www.9now.nine.com.au/a-current-affair/aussie-families-struggle-poor-internet-phone-connection-working-from-home/880abd25-8947-49ef-a155-0a7d44be67bf.

telecommunication coverage in the community, meaning she may be unable to contact emergency services when she goes into labour.

*name changed

Broadband

The roll out of the NBN has been a major improvement to accessing internet at home in regional Australia. Around 73% of premises outside major urban areas can access fixed-line services through a mix of Fibre to the Node (FTTN), Fibre to the Premises (FTTP) and Fibre to the Curb (FTTC) technologies.[7] However, it must be acknowledged that not everyone has benefitted from the NBN equally. Access to the internet at home remains an issue for many in regional, rural and remote Australia. For instance, in Victoria, one in six Central Highlands households do not have internet access, rising to one in four in Ararat and the Pyrenees area, in comparison to one in eight in Melbourne.[8]

Households that are connected to the NBN which sit outside of NBN's fixed-line footprint have often struggled with the speed, reliability, and data limits of their service. Previously NBN's Fixed Wireless service often had issues with congestion, however NBN has worked to resolve these issues on the network. This can be seen in complaint data from the Australian Communications and Media Authority (ACMA), which shows the number of complaints in relation to Fixed Wireless services per 10,000 services almost halved from 138 in 2018-19, to 71 in 2020-21.[9]

Consumers in the NBN Satellite technology footprint are only able to receive a maximum 25 Mbps download speed. Yet 74% of NBN's services in operation are for speeds of 50 Mbps and above,[10] showing that there is a clear demand for high-speed services across Australia. Households with multiple family members often struggle with the data limits provided by NBN Satellite, and although Sky Muster Plus services have improved the situation, consumers are still limited by what they can do online – something that urban consumers do not have to consider.

In a survey carried out by the National Farmers Federation 31% of respondents rated their overall satisfaction with the internet at their main residence as unsatisfied, 41% of respondents said that the reliability of their internet service had declined in the last 12 months.[11]

Fixed voice services

Households in regional, rural and remote communities rely on fixed voice services as mobile connectivity is not always an option and Voice over Internet Protocol (VoIP) can be of poor quality

[7] Infrastructure Australia, 'Reforms to Meet Australia's Future Infrastructure Needs. 2021 Australian Infrastructure Plan', 2021, https://www.infrastructureaustralia.gov.au/sites/default/files/2021-09/2021%20Master%20Plan_1.pdf.

[8] Infrastructure Victoria, 'Central Highlands Summary', 2021, https://www.infrastructurevictoria.com.au/wp-content/uploads/2021/08/Regional-Brochure_Central-Highlands-1.pdf.

[9] Australian Communications and Media Authority, 'Telco Complaints-Handling Performance | ACMA' (Australian Communications and Media Authority), accessed 16 September 2021, https://www.acma.gov.au/publications/2021-04/report/telco-complaints-handling-performance.

[10] Australian Competition and Consumer Commission, 'June Quarter 2021 Report', Australian Competition and Consumer Commission, 9 November 2018, https://www.accc.gov.au/regulated-infrastructure/communications/national-broadband-network-nbn/nbn-wholesale-market-indicators-report/june-quarter-2021-report.

[11] National Farmers Federation, 'NFF Telecommunications Survey'.

depending on the connection. Thus having access to a fixed voice service is essential, particularly in emergency situations. These households are dependent on the network operated by Telstra, which is funded under USO arrangements by the Federal Government and industry. Respondents to the National Farmers Federation's survey rated their satisfaction with their fixed voice phone services at an average 2.5 out of 5, and 23% of respondents reported that the reliability of their fixed voice service had declined in the last 12 months.

Under the Network Reliability Framework, Telstra is required to publish data on the reliability of its fixed voice services. Telstra reports on the percentage of Customer Service Guarantee (CSG) services with no faults in any given month, and the average service availability in any given month, nationally and across 44 metro and regional areas. Where Telstra has identified unperforming cables, Telstra must assess the cables for 6 months and meet targets to improve performance. Additionally Telstra must act to prevent any service from experiencing a certain number of faults in a given period, and report to the ACMA if the thresholds have been breached.

This current arrangement is insufficient for determining how long connections and fault repairs take, and how many customers are affected by lengthy outages. Whilst network performance is known at an aggregate level, we cannot see how faults are distributed within regions or the extent of repair times. We cannot know how many customers experienced repair times greater than one week, two weeks, three weeks, and so on. Thus more detailed reporting of fixed voice services is warranted in order to improve the reliability of fixed voice services that RRR consumers rely on.

ACCAN frequently hears reports of the unreliability of fixed voice services in remote areas, particularly when delivered over older HCFC technology. Households and businesses in these areas experience prolonged service disruptions while waiting for faults to be repaired to aging infrastructure, due to difficulties in supply of parts needed for restoration and limited availability of technicians capable of undertaking the repairs needed.

The future technology for delivery of fixed voice services remains uncertain in regional, rural and remote areas of Australia. The Federal Government is currently running Alternative Voice Services Trials to identify new ways to deliver these critical services.[12] There is concern amongst regional consumers that some of the solutions being trialled may leave them with only one method of communication, for example Sky Muster satellite for broadband and VoIP, which would significantly reduce redundancy in case of service failure. It is vital for regional, rural and remote communities that in the future fixed voice services are at least as reliable as the current services they are receiving, and in areas served by HCFC technology, considerably more reliable.

> **Recommendation 1:** Any alternative technologies for fixed voice service delivery must be proven to have greater reliability and performance quality for regional, rural and remote consumers.

Impact on regional communities and businesses

Having insufficient mobile coverage, internet access and a fixed voice service has many consequences for regional communities and businesses. Businesses operating in regional Victoria, for instance,

[12] Transport Department of Infrastructure, 'Alternative Voice Services Trials Program' (Department of Infrastructure, Transport, Regional Development and Communications, 3 March 2021), https://www.communications.gov.au/what-we-do/phone/phone-services/universal-service-guarantee-telecommunications/alternative-voice-services-trials-program.

identify inadequate digital services as a barrier to business growth.[13] Additionally at ACCAN's Small Business Advisory Forum, ACCAN heard from small businesses in regional Australia that one of their main challenges is connectivity. [14] Without connectivity businesses are unable to do the basics, such as EFTPOS, sending emails or running a website.

Not having sufficient mobile coverage, or fast and reliable internet access not only inhibits businesses from engaging fully in the digital economy, but it also prevents individuals from doing so. Nearly every aspect of daily life can be carried out with some level of digital connectivity, from accessing government services, to remote learning, applying for jobs, working from home, online banking and shopping, telehealth, or simply contacting family and friends. Inadequate access prevents regional, rural and remote consumers and businesses from doing these activities, constraining economic growth in the regions. Furthermore, as shown in case studies 2 and 3 above, not having connectivity can put individuals at risk of significant harm.

Community organisations and frontline workers are well placed to understand the impacts associated with digital exclusion on vulnerable and marginalised populations. In Queensland, 94% of community organisations and frontline workers agree or strongly agree that when their clients experience digital exclusion, they have increased barriers to accessing employment and education.[15] 91% of these organisations agree or strongly agree that when their clients experience digital exclusion, they are unable to access services, have reduced social connections (79%) and have poor financial outcomes (75%) as a consequence of digital exclusion.[16] Given digital exclusion exacerbates social exclusion, it is imperative for regional, rural and remote consumers that barriers to telecommunications services are addressed.

1.1.2. What changes in demand, barriers or challenges need to be addressed when it comes to telecommunications services in regional, rural and remote Australia?

Regional communities have the most to gain from reliable digital connectivity but currently have the least connectivity. The COVID-19 pandemic and subsequent increase in households moving out of urban areas and into the regions has changed the demand for telecommunication services in regional, rural and remote Australia. For example, migration from Melbourne increased by a factor of eight in the September 2020 quarter compared with the previous year.[17] The net regional migration index in the quarter to March 2021 is 66% higher than a year earlier.[18] Increases in population can put a strain

[13] Infrastructure Victoria, 'Victoria's Infrastructure Strategy 2021-2051 Vol 1', 2021, https://www.infrastructurevictoria.com.au/wp-content/uploads/2021/08/1.-Victorias-infrastructure-strategy-2021-2051-Vol-1.pdf.

[14] ACCAN, 'Small Business Advisory Forum Report 2021', 2021, https://accan.org.au/files/Advisory%20Forums/SBAF%20Report%202021%20Final.pdf.

[15] The McKell Institute, 'Bridging Queensland's Digital Divide', 2021, https://mckellinstitute.org.au/research/reports/bridging-queenslands-digital-divide/.

[16] The McKell Institute.

[17] Infrastructure Victoria, 'Victoria's Infrastructure Strategy 2021-2051 Vol 1'.

[18] Regional Australia Institute and Commonwealth Bank, 'Regional Movers Index', 28 June 2021, http://www.regionalaustralia.org.au/home/wp-content/uploads/2021/06/Mar21-Regional-Movers-Index-Report-210623-1.pdf.

on the limited infrastructure in the regions. At the same time a lack of telecommunications services inhibits more people moving to the regions.

Existing barriers and challenges need to be addressed when it comes to telecommunications services in regional, rural and remote Australia, including issues around affordability, accessibility, availability, reliability and digital ability.

Affordability

Affordability is a challenge for some regional, rural and remote consumers on low incomes. Whilst affordability of telecommunications services can be an issue for all low income consumers in Australia, the affordability challenges faced by regional, rural and remote consumers are unique. Regional consumers tend to have less access to services, resources, and opportunities because of distance, which can compound other types of disadvantages such as poverty or social exclusion. Indeed, poverty rates and food relief demand are higher in regional and rural communities.[19] For instance, 15% of regional Victorians live in poverty, rising to 23% of regional Victorian children, compared to 13% of people in Melbourne, and 17% of children.[20]

Anecdotally consumers in regional, rural and remote Australia spend more on communications to be able to access sufficient voice and data services, with expenditure on additional equipment such as mobile boosters, carrying two handsets for different mobile networks, and paying for multiple broadband services (such as Sky Muster and ADSL) at the same time. For example, one consumer reported paying $250 per month on broadband internet access alone. The 2021 National Farmers Federation survey found that respondents were spending anywhere from less than $100 to more than $10,000 on adopting connectivity enhancing solutions, with over 50% of respondents spending between $1,000 - $5,000.

When it comes to mobile, consumers in regional or remote areas have less choice of low cost mobile plans, as they are likely to only receive Telstra mobile coverage. This reduced choice means they may pay a premium in some instances. The Bureau of Communications and Arts Research showed there were 8 plans under $40 utilising Telstra's network, compared to 46 using Optus or Vodafone.[21]

In regard to the cost of broadband, recent research commissioned by ACCAN shows that 55% of low income consumers in regional Australia have difficulties paying for broadband.[22] Additionally, a survey of consumers with an ADSL service found that 32% of respondents living outside of NBN's fixed line footprint are unhappy with the cost of their ADSL service.[23] It is also concerning that the Australian Digital Inclusion Index showed the gap in affordability between those living in rural areas and those

[19] Anti-poverty week, 'Fast Facts. Poverty in Rural and Regional Australia', 2019, https://antipovertyweek.org.au/wp-content/uploads/2019/10/Poverty-in-Rural-Regional-Aus-APW-2019.pdf.

[20] Infrastructure Victoria, 'Victoria's Infrastructure Strategy 2021-2051 Vol 1'.

[21] Transport Department of Infrastructure, 'Affordability of Communications Services for Low Income Households' (Department of Infrastructure, Transport, Regional Development and Communications, 30 April 2020), https://www.communications.gov.au/publications/affordability-communications-services-low-income-households.

[22] Action Market Research, 'Assessing the Effectiveness of Low Income Measures in Addressing Telecommunication Needs' (Commissioned by ACCAN, Forthcoming).

[23] ACCAN, 'Submission to ACCC Wholesale ADSL Service Declaration Inquiry 2021', accessed 13 September 2021, https://accan.org.au/accans-work/submissions/1913-wadsl-2021.

living in capital cities has widened over the last year due to an increase in the percentage of household income spent on internet access.[24]

The challenge of affordability of telecommunications services can be addressed by providing an affordable home broadband product for financially stressed consumers on low incomes. ACCAN has proposed a $20 a month wholesale service, aimed at a retail value of $30 a month.[25] ACCAN proposes that the Federal Government provide a gap payment to ensure that the cost of the service does not exceed $30 each month once retail margins are factored in.

We recommend that the low income product be a 50 Mbps unlimited broadband service that will be suitable for the needs of low income families and households with multiple users. For households in the NBN Satellite footprint, the service should be a Sky Muster Plus service with 100 GBs of data.

> **Recommendation 2:** The creation of a targeted concessional NBN broadband service to support low income households, supported by a gap payment from the Federal Government.

Currently, the only form of government support for individuals who require assistance to afford communications services is the Centrelink Telephone Allowance (CTA), a quarterly payment made to individuals and couples who meet specified criteria.

The CTA is paid at the basic rate ($30.20 per quarter) to Age Pensioners, individuals on the Disability Support Pension under the age of 21 (with no dependent children), individuals on JobSeeker Payments and Youth Allowance who cannot work due to disability or have young children as dependents. Individuals on the Disability Support Pension under the age of 21 who have an internet connection are eligible for the higher rate ($44.60 per quarter), as are individuals on the Farm Household Allowance who have an internet connection. For individuals on the Age Pension, Disability Support Pension or Carer Payment, the higher rate payment of the CTA occurs through the Pension Supplement.

The CTA is not currently being paid to the vast majority of other vulnerable groups, such as individuals on JobSeeker payments and parenting payments, youth allowance recipients, people experiencing homelessness, and families living below the poverty line. This is of concern, as these groups are currently receiving no support to address the affordability challenges that they face. For those who do receive the CTA, the rate is not adequate to cover the modern day costs of telecommunications. It is for these reasons that more support is needed to assist with the affordability of telecommunications services.

ACCAN's abovementioned proposal for a concessional broadband service does not resolve the issue of affordability for consumers who prefer to access the internet through mobile only, such as transient workers, or people living in temporary accommodation. The CTA should be reviewed and reconfigured so that it appropriately provides support for consumers struggling with the cost of a mobile service. This must include broadening the eligibility criteria and providing a higher rate.

---

[24] Julian Thomas et al., 'Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2020', 2020, https://doi.org/10.25916/5F6EB9949C832.

[25] ACCAN, 'No Australian Left Offline: ACCAN Pushes for Affordable Broadband', ACCAN, 2019, https://accan.org.au/media-centre/1572-nalo-media-release.

Recommendation 3: The Federal Government review the existing Telephone Allowance to meet the needs of low income mobile only consumers.

Affordability of devices is also a barrier which needs to be addressed. ACCAN receives feedback from its members that affordability of devices to access the internet at home is a key issue for low income consumers. Having access to an appropriate device is important for education and learning skills which can be used in the workforce. Additionally, children who do not have access to a computer or laptop can be disadvantaged in the future in terms of schooling and work related tasks. During the pandemic, and periods of remote learning, access to devices has become a significant barrier to education.

Accessibility for people with disability

Many of the issues faced by people with disability who live in regional, rural and remote areas are identical to those experienced by all regional, rural and remote consumers. There are, however, several additional needs faced by people with disability which make reliable, robust and safe telecommunications options even more essential. These include lack of robust mobile and broadband options, lack of appropriate training options, affordability of technology and extra data requirements, and lack of available technology which meets their needs.

Lack of robust mobile and broadband options

One of the most significant issues encountered by people with disability is the lack of strong and reliable mobile coverage for calls and data. Many services exist now to assist people with disability in their day to day lives which use features and components of the mobile device to allow two-way communication between agents and consumers. For example, AIRA and Be My Eyes are "visual interpreting" services which use the device's camera to allow a sighted agent to describe the environment to a blind user. A further example is online Auslan and other language interpreting services, such as the Video Relay Service (VRS), which use the camera and screen to interpret between Deaf and hearing individuals, allowing a greater degree of communication for the Deaf community. Good mobile coverage with adequate data allowance must be maintained to ensure seamless use of these services so that people with disability can have reliable access whilst in their homes and out in the community. Similarly, fixed broadband options are often less readily available for remote consumers, leaving people with less reliable communications options and severely impacting on their ability to use online and self-service systems such as those which urban consumers have ready access. Poor coverage could leave people unable to communicate, or in significant danger if they cannot maintain a good connection with necessary services. This is true particularly in emergency situations where it may be necessary to summon timely assistance.

Lack of appropriate training options

Regional, rural and remote areas experience a severe shortage of services for people with disability, particularly around training in assistive technology and necessary skills people need to learn to mitigate the effect of their disability. In many cases it is necessary for an individual to receive specific training in accessible communications devices and this can be extremely difficult where these services do not exist or are hard to access. Where available, these services often prove more costly for remote consumers as it may be necessary to pay for travel and higher hourly rates. Online training programs have sought to somewhat alleviate this issue, but many people cannot access online options and it may be necessary for training to be provided face to face. This severe lack of options for training and skills development is a significant disadvantage for regional, rural and remote consumers with disability. It means that people are often unable to use the technology for which they have paid, often

significant amounts, and are unable to use more advanced features which may be of great assistance to them.

Affordability of extra data requirements

The National Relay Service (NRS) allows people who are Deaf or who have hearing or speech impairments to communicate with vital services such as emergency services, utility companies, corporate entities and friends and family. Auslan users living in regional, rural and remote areas are severely disadvantaged by having to pay for extra data in their broadband plans because of the transmission of video required to use the VRS. The data required for the VRS can be significant and this data should be unmetered, particularly on the standard Sky Muster platform as it is on Sky Muster Plus. Not allowing for this causes unfair disadvantage for people who rely on this essential and valuable service, and who are unable to afford the extra cost of a Sky Muster Plus service.

Challenges accessing technology that meets needs

Lack of access to telecommunications shopfronts significantly disadvantages consumers with disability. This leads to a lack of appropriate options for consumers with accessibility needs, which impacts on the right of choice and may lead to consumers being forced to use inaccessible and inappropriate technologies, simply because the best option for their needs was not locally available. Further, necessary expertise and understanding from telco staff regarding the accessibility needs of people with disability may lead to further inappropriate choices and leave vulnerable consumers at risk particularly in emergency situations. Frequently, a visit to the nearest city may be difficult owing to a lack of transport options and purchasing online may not be a good option for many.

Accessible Telecoms is an independent guide to assistive telecommunications products suitable for people with disability. In 2018 ACCAN, funded by an NDIA Information, Linkages and Capacity Building grant, developed and implemented the Accessible Telecoms service. This service is a nationwide free service which provides up-to-date and independently verified information about the accessibility features of digital communications equipment, services, and training resources. While the NDIA grant was essential to set-up and operate the Accessible Telecoms service for its first 2 years, the NDIA does not provide ongoing funding for successful grants projects. Following this, ACCAN secured funding to maintain the service for the 2021 calendar year.

As the paucity of up-to-date and independent information about the accessibility features of both mainstream and assistive equipment and services is a significant barrier to telecommunications access for people with disability all across Australia, ACCAN believes that ongoing funding for the Accessible Telecoms service is necessary to ensure that people with disability living in the regions are able to access the communications services that they want and need.

> **Recommendation 4:** The Federal Government commit to funding to support the continuation of the Accessible Telecoms service.

Mobile coverage and performance

As mentioned above, mobile black spots continue to be a challenge that needs to be addressed.

Changes in demand for mobile and the progression to 4G and 5G has created concern regarding the 3G mobile network switch off, as well as the implications of 5G on 4G coverage. While Telstra's 3G switch off is scheduled for mid-2024, regional, rural and remote consumers are concerned about the

potential impacts this will have on their service. This is particularly the case due to past experience with previous switch offs, which have resulted in a deterioration of service and coverage.[26]

Consumers want assurances that 4G coverage will match that currently provided by 3G, and that the 5G rollout won't impact existing mobile connectivity. We're aware of other anecdotal reports regarding upgrades to 5G that have resulted in changes to coverage due to changing the position of the infrastructure.

Case study 4: Southern Highlands, New South Wales

Between February and July 2021, mobile consumers in the Southern Highlands of NSW have been receiving text messages about Telstra upgrades in the area. These consumers have noticed that these upgrades have been affecting mobile performance. Some consumers have been left with no service, often in areas where they previously got good service. Some consumers are pursuing this through Telstra and attempting to get credits issued to them. This includes small businesses, one of whom has 6 mobile phones and 2 mobile internet dongles through Telstra and as a result of the outages could not take phone calls or EFTPOS payments.

Recommendation 5: Ensure no user is disadvantaged by 3G network turnoffs, with on the ground testing to guarantee a smooth transition to 4G and no loss of service.

Another key consideration is the performance quality of mobile services. A preliminary study of regional mobile telecommunications performance carried out earlier this year in South Australia, Northern Territory and Western Australia identified that across all regional areas studied, the average connection speeds were between 0-10 Mbps download and 0-2 Mbps upload whilst most small cells near mining sites achieved speeds above 20 Mbps. Connection speeds in more than five major regional centres in Western Australia were between 0-10 Mbps download and 0-2 upload whilst connection speeds greater than 50 Mbps download and 20 Mbps upload were only achieved in Perth and Kalgoorlie.[27] Whilst only a preliminary study, the findings indicate that not all consumers are receiving the same standard of performance from their mobile service.

In order to facilitate performance based competition amongst mobile network operators, more widely available data is needed on location specific performance of mobile services. Data on performance metrics such as upload and download speeds will allow for the current state of regional mobile telecommunications to be ascertained. Following this, if significant issues with performance are identified, then the Government could consider introducing requirements for minimum performance standards for regional mobile telecommunications.

[26] ACCAN, 'Mobile Black Spot Program Round 5A', 2020, https://accan.org.au/our-work/submissions/1768-mobile-black-spot-program-round-5a.

[27] Mark A. Gregory, 'Regional Mobile Telecommunications Performance', *Journal of Telecommunications and the Digital Economy* 9, no. 3 (2021).

Recommendation 6: For funding to be made available for a study of regional mobile telecommunications performance.

Reliability

Service reliability is critical for telecommunications services in regional, rural and remote Australia. These issues are discussed in section 1.2.1.

Digital ability

Consumers in regional, rural and remote parts of Australia need the digital skills to make the most of telecommunications products and services. Section 3.1.1 discusses challenges relating to digital ability.

1.1.3. How have the Government's policies and programs affected telecommunications service outcomes in regional, rural and remote Australia? How can these be improved?

The Federal Government has committed to a range of policies and programs intended to improve telecommunications service outcomes in regional, rural and remote Australia. These include:

The Mobile Black Spot Program (MBSP) – Commonwealth investment of $380 million over the first five rounds has generated over $875 million in total investment from state and territory governments and the telecommunications industry, funding over 1,270 new mobile base stations across Australia.[28] Round 5A, which had a focus on bushfire affected areas, was redesigned to test approaches to inform round 6. The MBSP has been critical in expanding mobile coverage into regional, rural and remote areas.

Recommendation 7: For the Federal Government to commit to ongoing mobile network expansion through the Mobile Black Spot Program or similar programs.

Mobile network providers are now at a point where there is minimal return on their investment in regional, rural and remote locations, and there is little incentive for them to build infrastructure in these areas. ACCAN has called for the MBSP to be expanded to include boosters, repeaters and other equipment that can be used to extend coverage to maximise MBSP investment, as well as support connections in bushfire prone/affected areas. [29]

Recommendation 8: For Mobile Black Spot Program funding to be expanded to subsidise mobile coverage extension equipment.

---

[28] Department of Infrastructure, Transport, Regional Development and Communications, Australian Government, 'Mobile Black Spot Program' (Department of Infrastructure, Transport, Regional Development and Communications, 23 August 2021), https://www.infrastructure.gov.au/media-technology-communications/phone/mobile-services-coverage/mobile-black-spot-program.

[29] ACCAN, 'Mobile Black Spot Program Round 5A'.

Additionally we would like to see the continuation of incentives for Mobile Network Operators (MNOs) to co-locate equipment on new towers funded by the MBSP, as well as incentives to share backhaul access at reasonable costs. However, given the thinner profit margins in more remote areas, an alternative approach is for a wholesale-only operator to build towers with one set of equipment which is available on an open-access basis to all MNOs, removing the duplicative cost of multiple providers installing equipment.

There is evidence from New Zealand that this model can be successful in improving connectivity.[30] The Rural Connectivity Group (RCG) designs, builds and maintains infrastructure that allows all three mobile providers to share one piece of infrastructure, increasing competition and connectivity. The RCG will build over 500 cell sites delivering 4G wireless broadband and 4G voice calling to rural NZ. This was funded through the Government's Telecommunications Development Levy and an additional $75 million has been provided by New Zealand's three MNOs – Spark, Vodafone and 2degrees. All three MNOs are using the same radio spectrum band for the first time, which allows all three providers to share one piece of infrastructure, including pole, antenna, power and backhaul.

Field Solutions Group was recently awarded Round 5A MBSP funding to trial a neutral host radio access network and develop a 'fourth' mobile network in regional Australia. They have stated that the 'Neutral Host model allows all Australian mobile network operators to share the same mobile network equipment on a tower'. ACCAN considers that as the MBSP matures more funding should be given to innovative solutions such as this to increase coverage and competition in regional Australia.

> **Recommendation 9:** For Mobile Black Spot Program funding to increase incentives for Mobile Network Operators to provide open access to all MNOs, with a focus on funding network neutral proposals.

The Regional Connectivity Program (RCP) – Round 1 of the RCP is funding 132 projects at a total cost of $232 million, including applicant and third party co-contributions. Successful grantees include local councils, major telecommunications companies, regional businesses, community groups, educational facilities, and fixed wireless providers.

ACCAN is very supportive of the RCP as it offers an opportunity to provide a range of location specific connectivity solutions. As part of the program, ACCAN would like to see more resources provided to communities so that where a community has identified connectivity issues, they are in a strong position to work with network providers and different levels of government to create an application with a suitable solution. Currently many communities needing connectivity improvements do not have the necessary skills to develop proposals and come to ACCAN to help them understand what can be done. There is a need for increased educational resources, and designated facilitators, who can assist local communities in addressing their needs.

> **Recommendation 10:** Local communities are supported through resources and facilitators to develop successful bids for Mobile Black Spot Program and Regional Connectivity Program funding.

Strengthening Telecommunications Against Natural Disasters (STAND) – The Mobile Hardening Program has been rolled out as part of the STAND initiatives emerging from the 2019-20 bushfire

[30] 'RCG Network', *Rural Connectivity* (blog), accessed 7 September 2021, https://www.thercg.co.nz/rcg-network/.

season. $18 Million has been allocated for the Mobile Hardening Program, to upgrade backup power supply at telecommunications facilities in disaster-prone areas. Stage 1 of this program is already underway, in which $13.2 million of Federal Government funding has been provided to Optus, Telstra and TPG to upgrade battery backup power at 467 base stations that were funded under rounds 1 and 2 of the MBSP.[31]These upgrades, expected to be completed by the end of 2021, will increase battery backup operation to at least 12 hours.

Stage 2 of the Mobile Hardening Program opened in June 2021 with a call for proposals from MNOs, Mobile Network Infrastructure Providers and Network Management Providers to improve the resilience of regional and remote mobile network infrastructure (e.g. further battery improvements, emergency power solutions like generators, expanding protection zones around sites, redundant backhaul etc.). Following stage 2 there should be an audit to understand whether there are areas in which further mobile hardening measures are required.

> **Recommendation 11:** Following stage 2 of the Mobile Hardening Program, an audit of towers at high risk of natural disaster should be carried out to determine whether an additional round of funding is required.

Peri-Urban Mobile Program (PUMP) – $16.4 million of funding was announced to supplement the MBSP. The focus is on the peri-urban fringe of major cities, bushfire and natural disaster prone areas that need improved mobile connectivity. This program will be designed in consultation with expert organisations such as the CSIRO and emergency services agencies.

Similar to the MBSP, ACCAN would like to see the PUMP funding being used to increase choice for consumers. This can be done by increasing incentives for MNOs and Mobile Network Infrastructure Providers to share infrastructure with multiple MNOs.

Regional Broadband Scheme (RBS) – The RBS provides funding support for NBN's Statutory Infrastructure Provider (SIP) obligations by establishing a long term funding mechanism for NBN's Fixed Wireless and Satellite networks. The RBS aims to level the playing field between NBN and its fixed line competitors by requiring all high speed fixed line carriers to contribute to the cost of providing high speed broadband access to regional Australia.

ACCAN supports the establishment of the RBS as a way of supporting consumers of telecommunications in regional Australia, however we consider that there is a need for continuous funding for place based solutions to improve coverage and provide upgrades, such as the RCP and MBSP. ACCAN considers that re-establishing a Communications Fund is required to budget for recommendations from the Regional Telecommunications Review.[32] The establishment of the Fund will eliminate the need for ad-hoc program funding to be found within general revenues for recurrent programs and will provide the basis for long term support of programs in the communications portfolio.

---

[31] Department of Infrastructure, Transport, Regional Development and Communications, Australian Government, 'Improving Resilience of Australia's Telco Networks', accessed 23 September 2021, https://www.infrastructure.gov.au/media-technology-communications/phone/improving-resilience.

[32] Australian National Audit Office, 'Establishment and Management of the Communications Fund' (Australian National Audit Office, 26 January 2016), https://www.anao.gov.au/work/performance-audit/establishment-and-management-communications-fund.

Recommendation 12: For the Federal Government to establish a Communications Fund for continuous funding of programs targeted towards reducing the digital divide in regional, rural and remote Australia.

Spectrum allocation – In August 2021, the Minister for Communications announced that allocation limits will apply to the amount of low-band spectrum MNOs can acquire in Australia's upcoming 5G spectrum auction.[33] The Federal Government has made the decision that different allocation limits will apply in metropolitan and more populated regional areas compared to less populated regional and remote areas.

In populated areas, MNOs will be restricted to holding no more than 40% of low band spectrum in metropolitan and more populated areas to promote competition amongst MNOs. To encourage investment in less populated areas, a higher limit of 45% of low band spectrum has been set. The limit aims to prevent spectrum being monopolised by one MNO. It is vital that any allocation of spectrum carefully considers the impact on competition of mobile services as well as ensures that existing coverage is maintained.

Recommendation 13: For any future spectrum allocation to balance the goal of maintaining current coverage with increasing competition of mobile services in regional Australia.

Sky Muster Educational Port – Distance education students have access to additional data they need over Satellite services. Each state Department of Education decides on eligibility requirements for the NBN Sky Muster Educational Port and how it is delivered. Victoria and Tasmania do not provide a subsidised educational port. As of July 2018, 743 students across regional Australia were benefitting from this product. ACCAN is supportive of the Sky Muster Educational Port however we would like to acknowledge that there are some students living in remote areas that do not benefit from the program. For example:

- Students who attend boarding school – when these students return home during the holidays, they struggle to complete assignments due to lack of data.
- Children who live in the Satellite footprint but attend school in person and therefore are not eligible for the educational port, yet are required to complete their homework using their 'regular' Sky Muster connection.
- Tertiary students who are either remote learning or are home during the holidays struggle with the limited data available over Sky Muster.

Families who are not eligible for an Educational Port could benefit from receiving the Sky Muster Plus product, however, there appears to be a lack of awareness of Sky Muster Plus. Additionally, streaming and VPN use is metered on Sky Muster Plus, both of which are often required for online learning, particularly in tertiary education. A further consideration is that not all families can afford a more

[33] The Hon Paul Fletcher MP, 'Bidding Limits Set for Low-Band Spectrum Auction in the Year of 5G', Ministers for the Department of Infrastructure (Department of Infrastructure, Transport, Regional Development and Communications), accessed 29 September 2021, https://minister.infrastructure.gov.au/fletcher/media-release/bidding-limits-set-low-band-spectrum-auction-year-5g.

expensive Sky Muster Plus service, which is why a concessional service is required for low income families.

1.2. Service Reliability

1.2.1. How do service reliability issues impact on regional communities and businesses? How do outages, including in natural disasters, impact on communities and businesses?

Reliability of service is one of the biggest challenges for regional, rural and remote consumers, as outages are an ongoing concern. In a survey carried out by ACCAN seeking to understand consumers' perspectives on their ADSL service, a quarter of comments mentioned that their ADSL service was unreliable, and 8.4% of comments also mentioned that their NBN Satellite service was unreliable.[34] A couple of sample comments from the survey are provided below:

"ADSL with Telstra is very unreliable this year. We have had 3 separate occasions where we had no internet, on one such occasion we were 5 weeks with no connection! This makes running a business from home impossible not to mention, the uni student in our household has had to travel to friends' houses to use their internet."

"Satellite at this time is not reliable or offering a reasonable data package for me to manage my business from home (which is essential for me). ADSL is the better option, though we do need NBN Fibre to the curb."

As demonstrated by the above quotes, when individual households experience outages and dropouts, it can be incredibly inconvenient and costly for the household as it means they are unable to carry out day-to-day activities such as running a business from home and studying. When outages occur on a mass scale, this can be both costly and dangerous for the area experiencing the outage. The below case study highlights the significant impact widespread outages can have.

Case Study 5: Widespread outages across Western Australia[35]

In July 2021, two of Telstra's exchanges experienced power failures which saw internet, mobile and phone services fail across the Kimberly. 6,000 NBN connections went offline, and mobile, landline and broadband services were also affected. Businesses in the affected area had to close at short notice due to EFTPOS payment terminals being inoperable. The loss of communications also slowed down the ability of the police to process border passes in place to stop the spread of COVID-19.

Recommendation 14: For all mobile towers in remote areas to receive extra backup power supply to last between 4-7 days to ensure maintenance of

[34] ACCAN, 'Submission to ACCC Wholesale ADSL Service Declaration Inquiry 2021'.

[35] Ted O'Connor, 'Kimberley Wide Communications Failure amid Tourism Season Puts Heat on Telstra', *ABC News*, 16 July 2021, https://www.abc.net.au/news/2021-07-16/kimberley-communications-outage/100295312.

communications services during power outages and to allow sufficient time for technicians to restore the service.

Below is a list of reported widespread outages which have occurred in the past few years highlighting the varying impacts they can have on communities:

- May 2021, Southern NSW – Two separate faults impacted 44 mobile sites across the Riverina, as well as some fixed line and ADSL services, which severely impacted the livestock industry's ability to operate.[36]
- February 2021, South Australia – A four day outage occurred when a piece of specialised equipment broke on a mobile tower. The outage prevented EFTPOS, and COVID-19 QR check-ins. Elderly residents who do not drive rely on being able to call the local supermarket to have their groceries delivered, which they were unable to do.[37]
- August 2019, Northern WA – Services were down for 50,000 people across the Kimberly after a third party dug through a fibre-optic cable. 3G, 4G, landline and ADSL services went down for 20 hours. People were advised to drive to their local police station or hospital in the event of an emergency as they were unable to contact emergency services by phone or online.[38]

During emergency situations access to reliable communications is essential, and the resilience of communications infrastructure can help to protect members of the community. During the Black Summer bushfire season evidence suggested roughly 1,400 telecommunications facilities were directly or indirectly affected between December and January. The average outage was three and a half days, the longest was 23 days. [39]

1.2.2. How might such impacts be addressed to ensure greater reliability? How can the network resilience be addressed in regional areas?

Broadband reliability

Earlier this year, the Department of Infrastructure, Transport, Regional Development and Communications consulted on a draft Determination for standards, rules and benchmarks for SIPs regarding timeframes for connections, repairs and appointment keeping, as well as rebates and peak speeds. SIPs are carriers that provide basic wholesale broadband services in the areas they service, including voice services if they operate fixed line or fixed wireless networks. The standards, rules and benchmarks provide an opportunity to address reliability issues on these networks.

ACCAN considers that the timeframes within the proposed SIP rules do not balance consumer need with the technical and resource limits of the networks, and are set in favour of commercial interests,

---

[36] Lauren Pezet and Melinda Hayter, 'Mouse Plague Partly Blamed for Massive Telstra Outage', *ABC News*, 19 May 2021, https://www.abc.net.au/news/2021-05-19/mice-partly-to-blame-for-telstra-outage-in-southern-nsw/100150206.

[37] Selina Green, Becc Chave, and Bec Whetham, 'Telstra Apologises to Residents and Businesses in Millicent after Four-Day Outage', *ABC News*, 23 February 2021, https://www.abc.net.au/news/2021-02-23/millicent-left-in-the-dark-amid-four-day-telstra-outage/13182222.

[38] Chris Meldrum, 'National Call for Change after 20-Hour Telstra Outage That Hit Northern WA', *ABC News*, 31 August 2019, https://www.abc.net.au/news/2019-08-31/kimberley-telstra-outage-call-for-change/11457134.

[39] '"Only the First Step": NSW Says Yes to Bushfire Inquiry Recommendations, but Where's the Money?', the Guardian, 29 August 2020, http://www.theguardian.com/australia-news/2020/aug/30/only-the-first-step-nsw-says-yes-to-bushfire-inquiry-recommendations-but-wheres-the-money.

as they largely reflect the timeframes NBN already meets as part of its commercial agreement with retail service providers. For example:

- new connections which require a technician to attend the premises could take a proposed maximum 14 business days in rural areas, and up to 19 business days in remote areas. ACCAN considers that these timeframes do not reflect the essential nature of the service and risk leaving rural and remote consumers without service for an undue length of time.
- The benchmark for meeting such standards is proposed to be set to 90%, meaning that networks can miss service levels in 10% of cases without facing consequences. This benchmark does not provide incentives for industry to improve reliability.
- There is no provision for different standards where the consumer has a diagnosed life-threatening condition. It must be recognised that some consumers require service continuity to be able to seek emergency medical assistance.
- The proposed speed standards require the network to achieve peak download speeds of at least 25 Mbps at least once during a 24 hour period. This metric is far too low to result in consumer benefit.
- The rules do not require networks to provide rebates where they have failed to meet service standards, reducing incentives to adhere to the standards.

In order to address issues of reliability ACCAN recommends that:

Recommendation 15: Timeframes for new connections and fault rectification should be consistent with Customer Service Guarantee timeframes and be measured in days – not working days.
Recommendation 16: Associated annual benchmarks that apply to connection, fault rectification and appointment keeping standards should be set to 95%.
Recommendation 17: Timeframes for fault rectification for priority assistance customers living in non-urban areas should be a maximum of 48 hours. Benchmarks for priority assistance timeframes should be set to 99.9%.
Recommendation 18: Statutory Infrastructure Providers should be required to reach download speeds of at least 25 Mbps and upload speeds of 5 Mbps 100% of the time.
Recommendation 19: Network providers should automatically provide rebates where standards are missed, with compensation amounts aligned with current Customer Service Guarantee levels for voice services.
Recommendation 20: Statutory Infrastructure Providers should be required to provide network availability of 99.9%.
Recommendation 21: Statutory Infrastructure Providers should report information relating to compliance with regulated standards to the ACMA quarterly, the ACMA should publish this information annually and be empowered to investigate circumstances where exemptions have been requested due to legitimate circumstances.
Recommendation 22: The Federal Government prioritise progress on the draft standards, rules and benchmarks for Statutory Infrastructure Providers.

Mobile reliability

There is a growing interest in the reliability of mobile services as people are increasingly using this as their main form of communication. Yet currently there is no reliability framework when it comes to mobile services. Given the growing expectation that mobile networks need to be reliable, and the fact

that in many rural and remote areas there is one monopoly provider of mobile, consideration needs to be given to more protection for mobile consumers beyond what currently exists under the Australian Consumer Law.

> **Recommendation 23:** For the ACMA to investigate and monitor widespread mobile outages in regional and remote Australia, and reliability of mobile infrastructure, to identify if measures are needed to increase reliability.

Network resiliency

All efforts must be made to prevent damage to mobile and NBN infrastructure during natural disasters and emergencies. This requires all relevant stakeholders from the telecommunications industry to work collaboratively with fire services, emergency services personnel, the energy industry and all levels of government to protect telecommunications assets.

In ACCAN's submission to the 2019-20 Bushfire Season Senate Inquiry we made the following recommendations to improve network resiliency in regional areas:[40]

> **Recommendation 24:** The telecommunications industry must work collaboratively with fire services, emergency services personnel, the energy industry and local, state, territory and Federal Governments to prevent damage to telecommunications towers, mobile base stations, remote exchanges and power substations.
> **Recommendation 25:** Specific training should be developed and delivered to relevant fire services and emergency service personnel to ensure appropriate damage prevention measures can be put in place to protect communications infrastructure.
> **Recommendation 26:** Additional funding must be provided to ensure that all fire services and evacuation centres have Sky Muster connections that can be activated to provide connectivity for communications consumers affected by natural disasters. Trials should also be established using Sky Muster for EFTPOS to improve the resiliency of these vital connections.
> **Recommendation 27:** The industry should convene regularly to discuss the reliability of telecommunications infrastructure and measures to facilitate quick and easy restoration of services.
> **Recommendation 28:** The industry should review the use of satellite as a way to achieve greater communications redundancy and improve resiliency.

Currently what is defined as an essential service is determined by states and territories, and only Queensland specifies telecommunications as an essential service at a state level. Generally in emergencies, telecommunications are treated in practice as an essential service. However, under normal conditions, telecommunications infrastructure does not currently receive the same protection or proactive management as other infrastructure types.

[40] ACCAN, 'Submission to Senate Standing Committee Bushfire Season 2019-20', accessed 13 September 2021, https://accan.org.au/ACCAN%20-%20Senate%20Standing%20Committee%20bushfire%20season%202019-20.pdf.

ACCAN supports Infrastructure Australia's recommendations that telecommunications be classified as an essential service, as well as creating a clear legislative framework for improved policies and processes for state and territory governments and network operators to plan, manage and provide resilient services by consistently classifying telecommunications as an essential service in state and territory emergency management legislation.[41] The telecommunications sector would then receive support and protection from state and territory emergency services to resolve any logistical issues which may arise, allowing for vegetation removal or management.

> **Recommendation 29:** Telecommunications should be recognised as essential services in legislation nationally.

The NSW Bushfire Inquiry recommended cross carrier roaming arrangements as a way to allow consumers to connect to alternative networks when their network is down during a natural disaster. We consider that the feasibility of cross-carrier roaming arrangements between carriers and the public for basic text, voice and data during the period of emergency in areas directly affected by natural disasters should be explored to maximise connectivity during emergencies.

1.3. COVID-19

1.3.1. How did the use of digital services change for regional consumers and businesses during the response to the COVID-19 pandemic? What insights for future service delivery does this provide?

The COVID-19 pandemic gave an appreciation to residents in urban areas of what it is like to have to operate remotely and be dependent on communications services to do so.

A survey by the Regional Australia Institute found that 95% of respondents said their business or workplace in regional Australia had been affected by COVID-19, where many businesses have had to completely overhaul their service delivery and look at online options.[42] Whilst most people moved to online service delivery, not everyone was satisfied with their internet connection. The survey asked respondents about their internet speeds. 61% of respondents rated their internet speed as either good or excellent, however 26% of respondents rated their internet speed as fair (download speed is fair and connection is sometimes unreliable) and 13% rated their internet speed as poor (download speed is slow and connection is unreliable).

In response to the COVID-19 pandemic, NBN implemented an additional 45GB of download data for each standard Sky Muster plan until July 2020. This was done to support the higher volumes of traffic due to people working from home and conducting schooling remotely.

Two key areas where regional consumers shifted to online service delivery in response to the COVID-19 pandemic are explored below.

---

[41] Infrastructure Australia, 'Reforms to Meet Australia's Future Infrastructure Needs. 2021 Australian Infrastructure Plan'.

[42] 'COVID-19: First Gauge Survey Results', Regional Australia Institute, 19 August 2020, http://www.regionalaustralia.org.au/home/covid-19-first-gauge-survey-results/.

Education

As the pandemic progresses, and with it various lockdowns and restrictions, households with school aged children continue to struggle with remaining connected to education because of poor telecommunication services. For example, a community in South Gippsland has experienced intermittent phone services for weeks following the storms which hit Victoria in July this year:

"It breaks my heart to see my son in year 12 have to try study without internet. We've been offered an internet dongle by Telstra and his school, but we don't have service or internet, so a dongle doesn't work at all" [43]

In the Hunter region in New South Wales, schools were concerned about holding online exams because some remote students have poor internet access.[44] ACCAN has also heard from tertiary students who struggled with accessing enough data to continue learning from home due to the data limitations of Sky Muster Plus which meters video streaming and VPNs access. These are both applications which are regularly used in online learning.

Furthermore, during the first nation-wide COVID-19 lockdown ACCAN was contacted by members working in remote Indigenous communities regarding the challenges that digital exclusion posed to First Nations young people's education. With internet access unreliable or unavailable in schools and homes, many students had to access classes via radio and Indigenous Community TV, and some ceased engaging in education altogether.[45] ACCAN received reports that students from remote Indigenous communities attending boarding school in metropolitan areas were encouraged to return to their communities during the first national COVID-19 lockdown. This meant that these students lost access to schooling for weeks at a time, due to a lack of in-home connectivity.

Health

During lockdowns the mental health system had to quickly adapt and reduce face-to-face service delivery. A report by the Queensland Alliance for Mental Health found people accessing mental health services during this time noted more positive experiences than negative, with virtual connection and continued support being key themes identified. The report notes improved access to mental health services in some cases, as barriers created through travel time or physical disability could be removed. However, the report notes that the main barrier to mental health care during COVID-19 restrictions was access to technology, including limited or no access to devices, the internet and data, and poor IT skills. The cost of internet access and poor connections, particularly in regional areas, were highlighted as additional barriers to care.[46]

The experience of providing mental health care during the pandemic shows that there is a space for innovation in previously accepted models of care to provide flexibility, allowing service providers to

[43] 'Pleas For Better Phone Service - South Gippsland Sentinel-Times', accessed 16 September 2021, https://sgst.com.au/2021/08/pleas-for-better-phone-service/.

[44] Helen Gregory, 'Hunter Schools Amend Student Assessments as Lockdown Is Extended', Newcastle Herald, 21 August 2021, https://www.newcastleherald.com.au/story/7395227/hunter-schools-amend-student-assessments-as-lockdown-is-extended/.

[45] The Australian Literacy and Numeracy Foundation and World Vision, 'Connecting on Country', 2021, https://www.worldvision.com.au/docs/default-source/publications/government-submissions/connecting-on-country.pdf.

[46] Queensland Alliance for Mental Health, 'Mental Health Service System Changes: Experiences of COVID-19 Project. Final Report', 2021, https://www.qamh.org.au/wp-content/uploads/Project-ID-77034_Final-Report.pdf.

adapt to individual needs and preferences. However online service delivery models should be complementary, and not the only option available.

As service delivery shifted to online, it has exposed the digital divide between rural and urban residents. The experience from the pandemic has shown that not everywhere in Australia is able to receive service delivery that is entirely online.

In a submission to the Select Committee on Regional Australia, Anglicare notes on alternative methods of service delivery:

"Some attempts at overcoming geographical disadvantage have included digital solutions (for example, telehealth or videoconferencing). This can be improvement if there are no face-to face alternatives, but it is ineffective when technology is not available or unreliable. Anglicare Australia notes that many regional areas continue to experience inconsistent phone coverage, that some people are unable to effectively use such technology, and others cannot pay for it."[47]

1.4. Telecommunications in Remote Indigenous Communities

ACCAN has long been concerned about digital exclusion in remote Indigenous communities, particularly due to the inadequacy and limited availability of communications infrastructure in these areas. The true extent of digital exclusion in remote Indigenous communities is unclear due to significant data and knowledge gaps. A patchwork of piecemeal policy responses from successive state, territory and Federal Governments have left many of the 1097 remote Indigenous communities chronically underserved by telecommunications infrastructure.[48] Reports indicate that the digital divide facing First Nations people in remote communities – and in other areas – is widening.[49] [50]

Recent and concerning case studies where mobile connectivity has failed in remote Indigenous communities demonstrate the depth and breadth of the need for a new approach to communications infrastructure.[51] Access to vital services like telehealth, emergency services, income support, and online learning is limited and often prevented by poor network reliability and performance. This, exacerbated by the structural inequalities facing First Nations people and the need for improved digital skills support, has created an urgent and pressing need for change.

---

[47] Anglicare, *Submission to the Select Committee on Regional Australia*, 2019, https://www.aph.gov.au/Parliamentary_Business/Committees/House/Regional_Australia/RegionalAustralia/Submissions.

[48] Dr Daniel Featherstone, 'Remote Indigenous Communications Review', 2020.

[49] 'Indigenous Students Face a Digital Divide and Were "unfairly Disadvantaged" during Coronavirus Lockdowns, Says a Report', SBS News, accessed 16 September 2021, https://www.sbs.com.au/news/indigenous-students-face-a-digital-divide-and-were-unfairly-disadvantaged-during-coronavirus-lockdowns-says-a-report/25c70b42-4594-407f-b47a-2aa12c9654bc.

[50] ACCAN, 'Youth Check-In Research Report', 2020, https://accan.org.au/our-work/research/1813-accan-youth-check-in-research-report.

[51] Gary-Jon Lysaght, 'Five-Day 3G, 4G Outage in Remote Town Caused by Rodents Sparks Call for Better Service', *ABC News*, 22 January 2021, https://www.abc.net.au/news/2021-01-23/call-for-better-remote-internet-after-rats-cause-outage/13072896.

Recommendation 30: That the Federal Government invests in local-level, community-informed and co-designed solutions to resolve infrastructure connectivity problems in remote Indigenous communities.

1.4.1. What can be done to improve the access and affordability of telecommunications services in regional, rural and remote Indigenous communities?

Indigenous Digital Inclusion Plan

A National Indigenous Digital Inclusion Plan (IDIP) – recommended by the 2018 Regional Telecommunications Review – is being developed by the National Indigenous Australians Agency in partnership with the Department of Infrastructure, Transport, Regional Development and Communications.[52] The IDIP will focus on communications access, affordability and ability.

A discussion paper has recently been released[53] and will be supported by community roundtables and consultation sessions. Work is now progressing in this area, but the delay in getting to this point has been frustrating for Indigenous consumers and advocates. It is essential that development of the IDIP involves Indigenous representatives from inception. ACCAN's members have expressed concerns that without genuine co-design and co-leadership, government efforts to address digital inclusion for First Nations people will be limited in effectiveness.

Recommendation 31: That the Indigenous Digital Inclusion Plan is developed as a matter of urgency and priority, with meaningful and genuine co-design and co-leadership from First Nations peoples, communities and Indigenous organisations.

Closing the Gap

A new digital inclusion target has been introduced to the National Agreement on Closing the Gap. Outcome 17 of the Closing the Gap Agreement is that Aboriginal and Torres Strait Islander people have access to information and services enabling participation in informed decision-making regarding their own lives.[54] Target 17 is that by 2026, Aboriginal and Torres Strait Islander people have equal levels of digital inclusion.[55] This expansion of the Closing the Gap initiative is a welcome step. Outcome 17 specifies various indicators to assist in measuring the extent to which this target is met; however, ACCAN is concerned that deficiencies in current data available on digital inclusion and connectivity in remote Indigenous communities will make it extremely challenging to measure success and identify changes over time, as there will be no adequate baseline against which to assess progress.

---

[52] National Indigenous Australians Agency, 'Indigenous Digital Inclusion Plan (IDIP)', 20 April 2021, https://www.niaa.gov.au/indigenous-affairs/economic-development/indigenous-digital-inclusion-plan.

[53] National Indigenous Australians Agency.

[54] '7B. Table B: Outcome 17', Closing the Gap, accessed 16 September 2021, https://www.closingthegap.gov.au/national-agreement/national-agreement-closing-the-gap/7-difference/b-targets/b17.

[55] '7B. Table B: Outcome 17'.

Recommendation 32: That, within the year, the Federal Government collects baseline data and reports on digital inclusion for First Nations people in Australia, including those living in regional and remote areas, in accordance with the data development areas under Outcome 17 of the National Agreement on Closing the Gap.

Community Wi-Fi

ADSL switch off and NBN satellite adoption

ACCAN understands that the ADSL network is being switched off in some Indigenous communities, for example Papunya and Ntaria in the Northern Territory. This has prompted community members and organisations to switch services to NBN Sky Muster, including community Wi-Fi services.

There are community concerns about this switch, particularly concerning the limitations of satellite broadband performance with increased latency affecting the quality of video conferencing and voice calls and data limitations, as well as affordability concerns. While in most cases Sky Muster services theoretically perform better and are more reliable than ADSL services, ACCAN understands some communities have experienced poorer network performance after switching from ADSL services to Sky Muster. In particular, the data limitations for community Wi-Fi are a significant issue, as even with Sky Muster Plus the maximum data available for the community is 300GBs for video streaming and VPN access.

Recommendation 33: That NBN Co works with stakeholders to develop solutions that provide increased capacity and performance on shared community Wi-Fi services over Sky Muster.

Affordability of accessing community Wi-Fi

Concerns have been raised with ACCAN regarding the affordability of community Wi-Fi available in some communities on an individual access basis, purchased via vouchers. There is evidence of apparent price-gouging where communities have been charged approximately $1,000 for accessing 100GB of data. In these instances, pricing calculations are opaque and communities are charged far more than they should be for accessing essential communications services.

Recommendation 34: That the Federal Government consults on and invests in solutions to improve the affordability of satellite broadband services and pay-as-you-go community Wi-Fi.

Public phones

Public phones remain essential pieces of public infrastructure. There is heavy reliance on public phones in many remote Indigenous communities; for some people living in these communities, public

phones are the only way to access voice services and consequently access income support, emergency services and other essential supports.[56]

ACCAN has welcomed Telstra's initiative to remove payment for public phones, making using a public phone generally free of charge for the community. However, ACCAN has identified two issues to be addressed to ensure that consumers are not disadvantaged through this change.

Firstly, given that Telstra will no longer require cash collection at public phone sites, ACCAN is concerned that the physical amenity and maintenance of public phones will be degraded over time due to infrequent servicing. It is important that there is no reduction in service levels, and that Telstra routinely maintains its public phones.

Secondly, the ACMA's Payphone (Assessment of Net Social Benefit) Guidelines will need to be updated in order to assess the impacts of the installation and removal of public phones.[57] The Payphone Guidelines set out a framework for considering the financial and non-financial costs and benefits (i.e. the net social benefit) of payphone installation and removal at a particular site. The Guidelines assist payphone operators to make an on-balance assessment of the impacts of installation and removal on all affected stakeholders. As revenues from the payphones and their commercial viability are incorporated into the Guidelines, it is unclear to what extent amendments to the Guidelines following Telstra's decision to remove charging could result in an overall reduction of payphones.

It is important that the threshold for assessing the impact of payment removal is maintained, and greater weight is given to the benefit of the public phone to the local community, to maintain a balanced consideration of any decision to remove a public phone.

> **Recommendation 35:** That the ACMA Payphone Guidelines are updated to reflect recent changes in public phone call charging arrangements, while maintaining clear guidance for assessing the impact of public phone removal.

ACCC enforcement action against Telstra

In November 2020, Telstra was fined $50 million by the Australian Competition and Consumer Commission (ACCC) for engaging in unconscionable conduct involving irresponsible and misleading sales practices targeted at Indigenous consumers across WA, SA and the NT, including some living in remote Indigenous communities. This significant enforcement action drew attention to the pervasiveness of mis-selling and unconscionable conduct towards communications consumers.

ACCAN continues to be closely involved in advocacy related to mis-selling. Concerningly, our discussions with consumer advocates assisting First Nations consumers indicate that there are recent and legacy cases of mis-selling that have emerged since the ACCC investigation. Additionally, financial counsellors have reported cases of mis-selling by other providers such as Optus and Vodafone, indicating this is not only a Telstra issue. It is essential that identifying, penalising and preventing mis-selling remains an area of ongoing focus for the telecommunications industry and regulators.

---

[56] Featherstone, 'Remote Indigenous Communications Review'.

[57] Australian Communications and Media Authority, 'Payphone Assessment of Net Social Benefit Guidelines' (Australian Communications and Media Authority, 2014), https://www.acma.gov.au/publications/2014-11/guide/payphone-assessment-net-social-benefit-guidelines-2014.

Gaps in digital inclusion and infrastructure programs

ACCAN's Remote Indigenous Communications Review is a review of all current and past major remote Indigenous digital inclusion and infrastructure programs since the 1990s.[58] The report found substantial developments and improvements in broadband access and availability in some states, particularly WA and the NT. Other states, for example SA, have invested minimally in remote Indigenous digital inclusion and infrastructure programs by comparison.

While the rollout of Sky Muster services and the MBSP have been seen to address gaps in the availability of services in remote Indigenous communities, consumers' lived experiences of accessing – or not accessing – services demonstrate that digital exclusion and infrastructure issues persist.[59] Uptake of Sky Muster is slow for a variety of reasons, including affordability, and performance and data constraints. Mobile coverage remains patchy in many locations and in some areas local public phones remain the primary mode for accessing voice services in community.

The Remote Indigenous Communications Review has identified mobile coverage, mobile and fixed-broadband network reliability and performance, and last-mile access to broadband and voice services as remaining gaps yet to be addressed through infrastructure programs. Additionally, as identified by other reviews and community groups, the affordability of devices and services, as well as investment in digital skills, are areas in urgent need of action. For example, programs like inDigiMOB allow community organisations, land councils and corporations to partner and deliver digital capability and cyber safety training to people living in remote Indigenous communities. inDigiMOB is demonstrated to be a highly successful model for program delivery and should be scaled up and funded in perpetuity.[60]

Recommendation 36: That the Federal Government work with Indigenous representatives to develop a digital inclusion program, to enable communities to develop local strategies and place based solutions that enable people living in remote Indigenous communities to access the internet.
Recommendation 37: That demand for faster broadband speeds, increased data, and low latency is met by telecommunications networks servicing remote Indigenous communities, to enable widespread use of high-bandwidth applications and services.
Recommendation 38: That the Federal Government supports communities to identify local solutions to develop digital skills and confidence, including local digital mentors, and vocational education programs.
Recommendation 39: That the accessibility of online services for people with disability, limited English, or text literacy is improved.
Recommendation 40: That service providers working within remote communities are culturally and contextually sensitive in their dealings.
Recommendation 41: That the Federal Government allocate sufficient and ongoing funding to the delivery of digital skills programs for First Nations people, including expansion of the inDigiMOB program.

[58] Featherstone, 'Remote Indigenous Communications Review'.

[59] Ibid. Featherstone.

[60] John Guenther, 'Evaluation of InDigiMob Year 3 Final Report', 2020, https://indigimob.com.au/wp-content/uploads/2020/11/INDIGIMOB_EVALUATION-REPORT_Y3_V1.5_SM.pdf.

2. Opportunity

2.1. Regional Development

2.1.1. How can investment in telecommunications infrastructure work with other programs and policies to encourage economic development in regional Australia?

Investment in telecommunications infrastructure has positive economic outcomes. For example, the take-up of broadband services increases average incomes by 0.85% GDP per capita.[61] However the full benefit of investment in telecommunications infrastructure won't be felt unless additional programs and policies assist in overcoming the digital divide. Whilst telecommunications infrastructure is vital to economic development, being able to afford and use the infrastructure will ensure that the economic benefit is felt by all.

The Australian Broadband Advisory Council (ABAC) is working to harness government initiatives and support the Commonwealth to coordinate planning across all levels of government to optimise the benefits of infrastructure spending. So far, the ABAC has established an Agri-Tech Expert Working Group to consider how connectivity can support productivity across the agricultural sector, and a Health Expert Working Group (HEWG) to examine the digital ecosystem across the health sector. The ABAC has also indicated that they will be looking at construction, affordability and public Wi-Fi, education, and tourism/arts. ACCAN supports this approach and believes that it will help to ensure that investment in telecommunications infrastructure can work with other sectors of the economy to deliver economic development in regional Australia. [62]

2.1.2. What role could innovation, including new models, alternative investors or new ways of doing business, play to encourage investment in regional telecommunications infrastructure? What are the barriers?

Due to the high costs involved, investment in regional telecommunications infrastructure requires scale. Smaller businesses require infrastructure to be in place first before they are able to operate. However, larger businesses and organisations may be able to invest in telecommunications infrastructure themselves, for example in the mining sector, where the private benefit of investing outweighs the private cost. As such, ACCAN considers that the Federal Government continues to have an important role to play in encouraging investment in regional telecommunications infrastructure.

Innovation is a driver of investment in telecommunications in that it creates more use cases and demand for infrastructure. A good example is the Internet of Things (IoT), where everyday items and processes are enhanced by internet connectivity and are likely to create greater demand for

[61] S Greenstein and R McDevitt, 'Measuring the Broadband Bonus in Thirty OECD Countries', OECD Digital Economy Papers (Paris, 2012).

[62] Department of Infrastructure, Transport, Regional Development and Communications, Australian Government, 'Australian Broadband Advisory Council - About the Council', accessed 23 September 2021, https://www.infrastructure.gov.au/media-technology-communications/internet/australian-broadband-advisory-council/members.

telecommunications infrastructure. In 2020, five million Australian households had IoT devices, and the estimated value of the IoT industry is forecast to grow to $20 billion by 2023.[63]

IoT devices require a range of different networks. In some instances, connectivity is provided through general consumer networks, and in others dedicated network infrastructure is required. The growth in private networks is closely linked to the growth in industrial IoT.[64] The need for more connectivity is increasing telecommunication providers' revenues; Telstra is connecting 2,000 IoT devices to their IoT network every day and experienced a 19.4% increase in their IoT business revenue in 2019.[65] As IoT is a growing revenue source within the telecommunications sector, more telecommunications infrastructure providers will invest in the networks.

IoT can be used in industries such as agriculture, where devices and sensors can be used to help farmers make informed decisions to improve farm performance. However adoption of digital technologies in agriculture is constrained by connectivity.[66] It is predicted that digital technology could lift agricultural production values by $20 billion through improving productivity, sustainability, profitability and resilience to weather and climate challenges.[67]

As part of the Victorian Government's $45 million Connecting Victoria initiative to improve digital technology and infrastructure across regional Victoria, the State Government is funding $12 million for an on-farm IoT trial. Under the trial, Agriculture Victoria is supporting the delivery of IoT connectivity to the trial regions. The trial will address connectivity as a barrier to take up by partnering with NNN Co to deliver IoT network connectivity.[68] Outcomes of the trial will drive the Victorian Government's longer-term response to the opportunities of digital agriculture. In this instance, whilst innovation is encouraging investment, funding from different levels of government continues to have a pivotal role.

2.2. Emerging Technologies

2.2.1. To what extent will new technologies enable significant change to the delivery of telecommunications services in regional Australia over the

[63] Australian Communications and Media Authority, 'Internet of Things in Media and Communications', 2020, https://www.acma.gov.au/sites/default/files/2020-07/Internet%20of%20Things%20in%20media%20and%20communications_Occasional%20paper.pdf.

[64] Australian Communications and Media Authority.

[65] Australian Communications and Media Authority.

[66] I Baker et al., 'Accelerating Precision Agriculture to Decision Agriculture: Enabling Digital Agriculture in Australia : Summary Report' (Australia: Cotton Research and Development Corporation, 2017).

[67] Baker et al.

[68] Precincts and Regions Department of Jobs, 'About the On-Farm Internet of Things Trial - Agriculture', text, Agriculture Victoria, 3 December 2020, Victoria, https://agriculture.vic.gov.au/farm-management/digital-agriculture/victorias-onfarm-internet-of-things-trial/about-the-on-farm-internet-of-things-trial.

next 5-10 years? Are there any barriers to accessing these technologies?

5G

5G allows for faster speeds and lower latency than previous generations of mobile networks. This year Telstra switched on 5G services in more than 100 regional towns and cities, reaching a milestone of 75% of Australians having access to 5G. Telstra's T25 Strategy sets the goal of around 95% population 5G coverage by 2025. That said, there will continue to be issues that need addressing in regard to coverage. The extent to which rural and remote consumers will benefit from 5G is difficult to know given that some consumers are struggling to access 4G at the moment. Consumers will require a 5G enabled device to be able to access the technology which may be a barrier for some consumers on limited incomes.

Low Earth Orbit Satellites

Low Earth Orbit (LEO) satellite systems can provide connectivity with low latency and improved speeds. It's likely that many consumers being serviced by NBN Sky Muster Satellite will be drawn to purchasing a LEO service in the future, with some consumers already doing so now. Having an alternative service to Sky Muster will be beneficial to regional and remote consumers, as it increases competition and could take capacity off Sky Muster, reducing congestion.

Currently services such as StarLink are expensive and requires the customer to install the equipment themselves. Therefore affordability and ability to install the equipment will be a barrier to consumers taking up this service.

2.2.2. How can Government better support the rapid rollout of and investment in new telecommunications solutions in regional areas?

As mentioned in section 1.1.3, a Communications Fund designated to supporting the rollout and investment in telecommunications for regional areas is needed. This will allow for continuous funding for the MBSP and RCP which can then support new telecommunications solutions in regional areas, as well as fund any additional recommendations which may come from Regional Telecommunications Reviews.

The findings from the Alternative Voice Services Trials should also be implemented to support investment in telecommunication in regional areas, but only where there has been evidence that the service is equally reliable as current technologies.

2.3. Maximising Outcomes

2.3.1. How can different levels of Government, the telecommunications industry and regional communities better co-ordinate their efforts to improve telecommunications in regional Australia?

A report by the McKell Institute provides a list of programs and policies at the State and Territory level that are not exclusively targeted towards regional, rural and remote areas but may improve

telecommunication service outcomes for these consumers.[69] The different approaches taken by States and Territories could lead to differing outcomes if not overseen by a co-ordinated strategy.

At the Federal level there needs to be a co-ordinated overarching approach to digital inclusion, where a national digital inclusion roadmap is developed, as recommended by the Australian Digital Inclusion Alliance.[70] This will allow for greater co-ordination between the telecommunications industry, different levels of government and regional communities – so they can work towards the same goal. Most states and territories have digital infrastructure plans, but they could be utilised more effectively and align more closely with Federal programs if a roadmap was specified.

> **Recommendation 42:** For the Federal Government to develop a national digital inclusion roadmap.

Whilst an overarching national goal towards digital inclusion is needed, the method in which communities get there will be varied. Place-based connectivity solutions are needed, and therefore more support needs to be given at a local government level to identify the needs of their communities and co-ordinate efforts to improve connectivity, for example in developing regional connectivity plans. Part of this involves having dedicated facilitators for the RCP and MBSP to assist communities seeking to improve connectivity in their area (as referenced in recommendation 10).

2.3.2. What changes to Government investment programs are required to ensure they continue to be effective in delivering improved telecommunications?

Government investment programs aimed at delivering improved telecommunications require appropriate measurement of program outcomes. There is currently no measurement of pre-program and post-program levels of digital inclusion. To ensure that the programs continue to be effective, it's vital that the appropriate data is collected to allow for program evaluation. This will ensure learnings can be incorporated to reiterations of programs and would be able to demonstrate which programs are more effective at meeting their aims.

[69] The McKell Institute, 'Bridging Queensland's Digital Divide'. Table 9

[70] Australian Digital Inclusion Alliance, 'A National Digital Inclusion Roadmap', 19 October 2020, https://www.digitalinclusion.org.au/a-national-digital-inclusion-roadmap.

3. Awareness

3.1. Education

3.1.1. How can regional consumers be better supported to identify, choose and use the best connectivity options for their circumstances, as well as to understand and use their consumer rights?

The gap in digital ability between capital cities and regional, rural and remote areas has fluctuated since 2014. Between 2016 – 2019 the digital ability gap widened, however in the past year it has narrowed. That said, the rural index for digital ability, which covers attitudes, basic skills and activities is currently 8.2 points behind capital cities. This indicates that there is room to enhance the digital ability of people residing outside the capital cities.

ACCAN hears from members that consumers struggle to know how to troubleshoot problems, and that there is a need for more education and upskilling in regional, rural and remote areas when it comes to digital skills. Feedback received on skills workshops has been that they are sometimes beyond what people are capable of, and that it's often difficult to know where to begin. One of ACCAN's recent grant projects outlines regional and rural consumer understandings of smart technologies and their application in North West New South Wales. It also aims to identify consumer engagement with digital infrastructure, the changing nature of development and planning in a digital context and the impact of smart services on social relations. The findings from this research will help regional and rural telecommunications consumers to better understand how smart services can be utilised.[71]

There is an ongoing need for future funding of digital capacity building programs and technical support for consumers in regional, rural and remote areas, including for example the Regional Tech Hub. Regional consumers can also be better supported to identify, choose and use the best connectivity options for their needs through the establishment of an independent price comparison website, as well at the introduction of the Consumer Data Right regime across the telecommunications sector.

Regional Tech Hub

The needs of regional Australians living far away from easy access to technical support can be challenging. The Regional Tech Hub (RTH) has been funded to address this issue. The RTH provides independent, free advice about telecommunications services for regional, rural and remote Australians.[72] It comprises a website, a phone call-back service and online chat function as well as social media engagement, and helps remote Australians navigate the complex landscape of getting and staying connected in the regions, across technologies such as Fixed Wireless, satellite and fixed line internet services.

The experience of the RTH so far is that it is providing a valuable service in bridging the gap in support between what telcos are currently providing, and what regional, rural and remote consumers require.

[71] ACCAN, 'In Progress! Consumer Understandings of Smart Technologies and Their Applications in North West NSW Regional and Rural Communities', 2021, https://accan.org.au/grants/grants-projects/1777-consumer-understandings-of-smart-technologies-and-their-applications-in-north-west-nsw-regional-and-rural-communities.

[72] 'Home • Regional Tech Hub', Regional Tech Hub, accessed 17 September 2021, https://regionaltechhub.org.au/.

That said, the extent to which digital literacy and capacity building is required in the regions is far greater than what the RTH can currently provide. The range of knowledge and technical skills within the regions must be acknowledged and more funding is required to increase capacity for all regional, rural and remote Australians.

> **Recommendation 43:** For the Regional Tech Hub to be appropriately funded on an ongoing basis to provide digital capacity building and troubleshooting services.

Independent price comparison website

In any consumer market, choice and competition are fundamentally undermined by information asymmetries. Information asymmetries are created when one party has more information or knowledge than another party during a financial exchange or transaction. There is consensus that where information asymmetries exist, consumer markets cannot be truly competitive. This is because consumers experience difficulty exercising choice without access to adequate and accurate information and may bear additional financial and nonfinancial costs as the result of a 'poor' decision.

There is a need for an unbiased and independent plan comparison tool for phone and internet products to overcome information asymmetries. Consumers find it difficult to find the cheapest option available to them, particularly in regional Australia where coverage maps differ. Establishing an independent price comparison website with accurate coverage maps will allow consumers to look for the best deal for them, encouraging greater competition in the telco sector. The comparison tool could be similar to Energy Made Easy, a comparison website run by the Australian Energy Regulator.

> **Recommendation 44:** A trusted and independent party should be resourced to develop and maintain a plan comparison website about telecommunications services to support consumer choice.

Consumer Data Right

Treasury is currently carrying out a sectoral assessment to advise Government whether the Consumer Data Right (CDR) should be rolled out in the telecommunications sector. The CDR gives consumers a right to consent to data held about them by Australian businesses being shared with accredited and trusted third parties to help the consumer derive direct benefits from that data. [73] Some of the benefits include being able to make more informed purchasing decisions and access personalised products and services. The idea is that consumers are able to get the most out of the data that is held about them. This can make it easier for consumers to compare products, which should drive competitive pricing and the growth of new products.

There is currently limited transparency of service quality, such as speed of data service, geographical or technology coverage, and reliability of connection. Currently there is no information available to consumers to get an idea of what speeds and service quality they can expect to receive in their area from a particular service provider. Where telcos have data on service quality, this could be made

[73] The Treasury, 'Consumer Data Right Sectoral Assessment Telecommunications' (Australian Government, 2021), https://treasury.gov.au/sites/default/files/2021-08/c2021-182135-tc.pdf.

available to consumers through the CDR to allow them to make better decisions about their connectivity options.

Once introduced, the CDR could be used in conjunction with the free, independent comparison tool mentioned above to ensure that all consumers are able to make decisions regarding the most affordable and appropriate telecommunications services available to them. The independent comparison tool will be an important resource for regional, rural and remote consumers who historically have not always had the option to choose providers. It should be noted that the CDR does not mitigate the need for an independent comparison tool as not all consumers will have existing data needed to use the CDR (and therefore will require a basic comparison website), and there will be consumers who are unable to afford access to enhanced value third party websites or apps which utilise the CDR data.

3.2. Public Information

3.2.1. To what extent is public information on connectivity options, including predictive coverage data and speeds, sufficient to help regional customers make informed decisions? What other information is needed?

Regional communities often contact ACCAN to gain a better understanding of what connectivity options are available for their area. Previously, we have developed a Mobile Black Spot Community Guide.[74] We have also funded a grant project by the Wamboin Communications Action Group to deliver resources that can be applied across regional, rural and remote areas to help communities identify local requirements to achieve better internet connectivity to support their economic and social growth.[75]

However, as mentioned in section 1.1.3, when the Government delivers programs – such as the MBSP and the RCP – it needs to provide resourcing to support communities to apply for that funding. Communities rarely have the technical knowledge of what connectivity option is best for their area, and therefore having a dedicated contact person or facilitator as part of connectivity programs is needed, so that the community can identify the issue, and work together with the telecommunications providers and governments to deliver solutions.

Coverage maps

For individual consumers, there is a need to improve mobile coverage maps currently available as they are predictive, and therefore not always accurate. There needs to be a uniform approach across MNOs and MVNOs, and on the ground testing to confirm accuracy.

Coverage maps are available to consumers however many consumers are not aware of them or know where to find them. Additionally, consumers are sometimes not aware that not all MNOs give MVNOs access to their full network. This can result in situations where consumers purchase a SIM believing that they will have full access to the Telstra network only to find that they don't. Additionally, some

[74] ACCAN, *Mobile Blackspots - Community Consultation Guide*, 2nd ed., accessed 17 September 2021, https://accan.org.au/consumer-information/consumer-resources/mobile-blackspots-community-consultation-guide.

[75] 'In Progress! Achieve Better Broadband for Regional Communities', accessed 17 September 2021, https://accan.org.au/grants/current-grants/1782-achieve-better-broadband-for-regional-communities.

consumers consider that they must purchase from an MNO to be able to get the access that they require when there could be an MVNO available to them, with the network coverage that they need – for example, Boost on the Telstra network. Clearer information at point of sale is needed about the level of network coverage an MVNO has, and clear information about where the consumer is able to find coverage maps.

> **Recommendation 45:** For there to be clearer information at the point of sale regarding the level of network coverage available to Mobile Virtual Network Operators, and increased on the ground testing to confirm the accuracy of mobile coverage maps by Mobile Network Operators.

Measuring Broadband Australia

The Measuring Broadband Australia (MBA) program launched in 2017 and measures broadband speeds on NBN fixed line broadband services. Through increasing competition amongst telcos, the program has resulted in a decline in the number of consumer complaints and improved broadband performance. Additionally, the program has led to enforcement action against RSPs who have made misleading claims about broadband speeds. [76]

ACCAN has been calling for the MBA program to be expanded to measure the performance of service over non-nbn broadband networks as well as nbn Sky Muster satellite services, Fixed Wireless services and services targeted at small businesses. [77]

> **Recommendation 46:** That the Federal Government continue to fund the ACCC Measuring Broadband Australia Program, including its expansion to NBN Sky Muster services, and continued monitoring of Fixed Wireless services.

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

ADSL services

Between 21st June – 27th July 2021, ACCAN ran an online survey to understand consumers' experience of their ADSL service for those who have either Satellite or Fixed Wireless technology available at their premises. The results showed that the majority (62%) of respondents did not intend to switch to either NBN Satellite or Fixed Wireless technology. The top three reasons for not wanting to switch to the NBN was because respondents consider that the NBN is not reliable (49%), the service is more expensive than their current ADSL service (44%) and the NBN service available to them has poor latency (42%). There was a small proportion of respondents (6%) who currently paid for both

[76] ACCC, 'Review of the Measuring Broadband Australia Program - Consultation Paper', October 2020, https://www.accc.gov.au/system/files/Review%20of%20the%20MBA%20Program%20-%20Consultation%20Paper%20-%20October%202020.pdf.

[77] ACCAN, 'Submission to the Review of the Measuring Broadband Australia Program', 2020, https://accan.org.au/files/Submissions/2020/Measuring%20Broadband%20Australia.pdf.

connections (an NBN connection and an ADSL connection) due to the quality of the NBN service being inadequate for their needs.

The results from the survey, alongside the feedback we received from consumers, is that they generally do not consider NBN Satellite or Fixed Wireless connection to be of equivalent quality to their current ADSL service due to reliability, speed, latency and cost issues. There was a sentiment amongst the comments in the survey that despite ADSL being slow, it was the best option available to them and they would like to see the connection maintained as it is an essential service to them.

There needs to be consideration of what options there are for consumers outside NBN's fixed line network who do not view wireless, and particularly satellite services, as an appropriate substitute. These consumers do not want to feel 'forced' off the network onto alternatives which do not provide them the same standard of service.

> **Recommendation 47:** The Federal Government ensure that there are adequate upgrade plans and pathways for regional Australians using ADSL services that provide access to higher quality or equivalent fixed broadband services.

Mobile Roaming

There is growing re-interest from regional, rural and remote consumers in mobile roaming due to frustrations with lack of choice and connectivity. For example, Victorian Central Highlands stakeholders are advocating for regional roaming.[78]

In 2017, the ACCC made the decision not to declare a mobile roaming service due to the likelihood that the declaration would reduce incentives to improve network coverage. At the same time the ACCC released a paper on measures to address regional mobile issues, which called for increased transparency of network quality and coverage information so consumers can make informed choices.[79] Following this the ACCC amended the customer access network and infrastructure record keeping rules so that MNOs are required to report on the extent of mobile coverage by frequency band and to provide information on government co-contribution in the construction of mobile sites.[80] This information will be published in a forthcoming ACCC report. This data will inform consideration of the extent to which mobile networks have expanded their coverage footprint since 2017, both with and without government subsidies, and allow a realistic assessment of the potential impact of greater passive and active infrastructure sharing.

> **Recommendation 48:** For the Regional Telecommunications Independent Review Committee to consider the findings of the forthcoming ACCC report on Mobile Network Operator infrastructure investment, in developing recommendations on future mobile infrastructure sharing.

[78] Infrastructure Victoria, 'Central Highlands Summary'.

[79] ACCC, 'Measures to Address Regional Mobile Issues', 2017, https://www.accc.gov.au/system/files/Measures%20to%20address%20regional%20mobile%20issues.pdf.

[80] Australian Competition and Consumer Commission, '2020 Infrastructure RKR Amendments', 15 May 2020, https://www.accc.gov.au/regulated-infrastructure/communications/monitoring-reporting/customer-access-network-infrastructure-record-keeping-rules/2020-infrastructure-rkr-amendments.

Public Wi-Fi

There is a need to invest in more public Wi-Fi in regional and remote centres and communities. Free access to internet is essential for people on very low incomes, and all weather free public Wi-Fi will allow anyone to access government services as well as apply for housing and jobs regardless of their circumstance.