Flying Minute: Regional Telecommunications Review 2021

By Joanne Burges, Senior Advisor, Intergovernmental Relations & Risk

That the submission to the Regional Telecommunications Review 2021 Committee be endorsed.

RESOLUTION 208.FM/2021   **CARRIED**

Executive Summary

- A Regional Telecommunications Independent Review Committee, established under the *Telecommunications (Consumer Protection and Service Standards) Act 1999*, is seeking submissions from stakeholders to inform a review into telecommunications services in regional, rural and remote parts of Australia.
- A draft submission has been developed based on:
  - unresolved issues identified in a 2019 consultation with Local Governments regarding risks to emergency management capability that arise due to failure of telecommunications services during emergency conditions;
  - strategic and specific issues identified by Local Governments; and
  - matters raised during consultation at WALGA Zone meetings.
- Local Governments identify weaknesses in the telecommunications service:
  - coverage (BlackSpots);
  - capacity (to meet growing and seasonal demands);
  - resilience (specifically during power outages); and
  - cost (lack of price competitive options).
- These issues were found in peri-urban and some metropolitan areas as well as regional and remote parts of the State.
- The submission to the Regional Telecommunications Independent Review Committee identifies 15 recommended solutions that, if effectively delivered, will provide improved equity in the level of telecommunications services delivered across Australia.

Attachment

- Regional Telecommunications Review 2021 Submission

Background

In late 2019, WALGA collated examples and case studies highlighting the long standing issue of telecommunication failures, particularly in regional and peri-urban areas and specifically during emergencies. Matters identified included:

- Blackspots (areas with no mobile phone coverage);
- Battery backup failures (both mobile towers and telephone exchanges);
- Outages (which have led to loss of landlines and mobiles during emergency situations);
- Telstra Notification Systems (that mean the telecommunications carrier is reliant on customers to advise there is no service)

Importantly, these issues identified the inextricable link with power supplies in the provision of reliable telecommunications service.

A Regional Telecommunications Independent Review Committee (the Committee) is established every three years under Part 9B of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (the Act) to conduct a review into telecommunications services in regional, rural and remote parts of Australia.

The Committee for the 2021 Regional Telecommunications Review was appointed on 1 June 2021 and submissions are open until 30 September 2021.

In developing this submission the Association has sought the views of all Local Governments. Submissions were received from eight Local Governments and one Regional Council. Telecommunications issues were discussed at 16 WALGA Zone meetings during August 2021 with five Zones contributing formal resolutions.

WALGA staff attended and contributed three online consultative sessions conducted by the Committee during August and September. Local Government representatives also took the opportunity to provide input to the Committee's consultation sessions.

The Regional Telecommunications Independent Review Committee is particularly interested to hear views on:

- The reliability of local mobile and broadband services
- The role of telecommunications during COVID-19 and natural disasters
- The effectiveness of Government programs like the Mobile Black Spot Program
- How telecommunications can support regional development
- The potential of emerging communications technologies
- Ways to help regional consumers get connected, stay connected and use their connection

Comment

Feedback from members articulated very similar themes across rural, regional and remote WA, and peri-urban Perth.

15 recommended solutions have been provided that address the key issues identified by Local Governments:

1. To ensure the requirements and accountabilities of the Universal Service Guarantee (USG) are met, immediate attention to the capability of Telstra's existing copper and wireless networks is required to address the core issues being faced regionally.

2. Investigate mechanisms to increase competition in the delivery of telecommunication to reduce the current monopoly experienced by a large areas of regional Australia.

3. Partnerships including all levels of government and industry to investigate and trial emerging technologies with the potential to deliver cost-effective mobile communications and power reliability ensuring trials are not constrained by the limitation of funds available via government programs.

4. Ensure that the Security Legislation Amendment (Critical Infrastructure) Bill 2020 expanded scope of the Act includes telecommunications critical infrastructure and that any new technologies that enable significant change to the delivery of telecommunications services in regional Australia need to be cognisant of the ongoing and real threat of cybersecurity on the security of infrastructure, personal and commercial data.

5. When developing funding programs ensure that power supply (including improved back up and Stand Alone Power Systems) is a key consideration to any solution sought, and that a collaborative approach between power and telecommunication providers is essential to any funding application.

6. Guarantee engagement with Local Governments as a pre-requisite for input, particularly in regards to identification of local blackspots and optimum infrastructure locations.

7. Where approved signal boosters or enhanced telecommunication products are recommended by telecommunication carriers as the solution to achieve mobile connectivity, this equipment should be technically evaluated and funded rather than the consumer having to take all of the risks and fund this inequity.

8. A comprehensive community education program is required to ensure it is not assumed that the mobile phone network, land line telephones or Nbnco based internet services can be relied on during or in the aftermath of emergencies. This program should offer solutions such as transistor radios that at least allow the community to receive (although not send) information during emergencies.

9. Leverage major regional road upgrades, such as the Tanami Road, to install fibre optic cable as part of integrated earthworks. This will lower the overall costs, increase accessibility and, in the case of the Tanami Road, potentially provide an alternative from the single line currently servicing northern Western Australia.

10. Broaden both the deployment and application of Nbnco satellite services to all evacuation centres to ensure access to telecommunication not only during an emergency but to provide backup redundancy when fixed lines connections are experiencing outages.

11. Investigate the technology that facilitates quicker service restoration including locally or regionally located generators and the ability to connect them to telecommunications facilities, Cells on Wheels (COWs) and mobile exchanges on wheels (MEOWs). Analyse the transferability for a broader scale, long term solution.

12. Establishment of an independent telecommunications committee to address black spots and telecommunications issues in peri-urban and metropolitan areas.

13. Call upon the Commonwealth Government to:
    a. fund the extension of fibre deeper into regional communities based on products similar to the Nbnco Enterprise Ethernet business product, and
    b. ensure guaranteed prices charged by service providers are equivalent to those in a city CBD.

14. Request the Federal Government to fulfil the commitment of full mobile coverage on the North West Coastal Highway.

15. Request the Federal Government to ensure that the drawdown of data, particularly from autonomous vehicles used by the mining sector, doesn't compromise the quality and reliability of service.

Local Governments have clearly identified that telecommunications infrastructure is fundamental to basic service provision and economic development in all parts of the country. The proposed solutions go some way towards ensuring that choice, equity and sustainability of telecommunications services are provided to rural, regional and remote Western Australia.

FLYING MINUTE OUTCOME

Total invited to survey: 24
Total finished survey: 14

Endorse the Recommendation: 12
Endorse the Recommendation subject to comment below: 2
Do not endorse: 0

First Name	Last Name	Completed Date
Carol	Adams OAM	Not completed
Phillip	Blight	Not completed
Julie	Brown	28/09/2021 15:12
Ruth	Butterfield	29/09/2021 11:44
Karen	Chappel	27/09/2021 11:02
Cheryl	Cowell	Not completed
Malcolm	Cullen	29/09/2021 19:40
Frank	Cvitan	Not completed
Tony	Dean	28/09/2021 12:00
Catherine	Ehrhardt	Not completed
Russ	Fishwick	Not completed
Ronnie	Fleay	29/09/2021 15:26
Logan	Howlett JP	29/09/2021 11:24
Mark	Irwin	Not completed
Paul	Kelly	26/09/2021 14:26
Jenna	Ledgerwood	Not completed
Peter	Long	23/09/2021 12:12
Cate	McCullough	Not completed
Chris	Mitchell JP	28/09/2021 12:57
Les	Price	Not completed
Michelle	Rich	29/09/2021 13:54
Ken	Seymour	28/09/2021 6:20
Stephen	Strange	23/09/2021 8:14
Doug	Thompson	28/09/2021 11:24

Responses

Poll created: 22/09/2021 at 9:48
Poll closed: 29/09/2021 at 23:59

(12) Endorse the Recommendation: Paul Kelly (on: 26/09/2021 14:26), Ken Seymour (on: 28/09/2021 6:20), Peter Long (on: 23/09/2021 12:12), Doug Thompson (on: 28/09/2021 11:24), Tony Dean (on: 28/09/2021 12:00), Chris Mitchell JP (on: 28/09/2021 12:57), Julie Brown (on: 28/09/2021 15:12), Logan Howlett JP (on: 29/09/2021 11:24), Ruth Butterfield (on: 29/09/2021 11:44), Michelle Rich (on: 29/09/2021 13:54), Ronnie Fleay (29/09/2021 15:26), Malcolm Cullen (on: 29/09/2021 19:40)

(2) Endorse the Recommendation subject to comment below: Stephen Strange (on: 23/09/2021 8:14), Karen Chappel (on: 27/09/2021 11:02)

(0) Do not endorse

Comments

Stephen Strange on 23/09/2021 8:14

The information in the flying minute is a result of 2 to 3 years of work through the contributing zones and a power of work from the WALGA team, meetings with politicians, power providers, telcos in conjunction with DFES. Thanks also to the Infrastructure Policy Team and all the best to retiring team members Jenna Ledgerwood and Julie Brown.

Karen Chappel on 27/09/2021 11:02

The submission covers off on vast amount of issues, is it possible to emphasise more the lack of band width with the increased number of travelling public within WA, there are many examples of towers and access but with so many people accessing both voice and internet the capacity becomes crowded and inaccessible. The other one is pushing the dual use towers, currently so many people come out of the city with Optus phones and in fact are at risk as they assume they have communication access and they do not. This is critical.

Secretariat Comment

Cr Strange's comments are noted.

To assist with strengthening the submission as requested by Cr Chappel, the following has been included:

Under 2.1

The need for dual use towers to address the critical issue of metropolitan travellers assuming there will be access to all carriers when on the road regionally. Where infrastructure exists, it does not appear unreasonable for the public to expect that whatever carrier they choose they will have access to a suitable level of service. The current situation places people at risk and it could be easily mitigated through collaboration between carriers.

Under 2.6

Further, with exponential increase in travel within WA due to COVID border restrictions the issues surrounding bandwidth capability have been exacerbated, creating issues around overcrowding of the network and ultimately inaccessibility, further emphasising the need for increased capacity and capability.

The submission was updated with these inclusions and submitted to the RTIRC Secretariat via email on 30 September 2021.

Regional Telecommunications Review 2021
Submission

About WALGA

The Western Australian Local Government Association (WALGA or 'the Association') is the peak organisation for Local Government in Western Australia. The Association is an independent, membership-based group representing and supporting the work and interests of 137 mainland Local Governments in Western Australia, plus the Indian Ocean Territories of Christmas Island and Cocos (Keeling) Islands.

The Association provides an essential voice for more than 1,200 Elected Members, more than 22,000 Local Government employees, and the 2.6 million constituents that they serve and represent. The Association also provides professional advice and offers services that provide financial benefits to Local Governments.

State Council:

WALGA State Council is the decision making representative body of all Member Councils, who are responsible for sector-wide policy making and strategic planning on behalf of Local Government.

- Chaired by the WALGA President
- 24 Members (State Councillors): 12 from country constituencies and 12 from metropolitan constituencies
- Members must be a serving Mayor, President or Councillor in a WA Local Government

Zones:

Zones are groups of geographically aligned Member Councils who are responsible for direct elections of State Councillors, providing input into policy formulation and providing advice on various matters.

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1.0 Background

1.1 Regional Telecommunications Independent Review Committee

A Regional Telecommunications Independent Review Committee (the Committee) is established every three years under Part 9B of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* to conduct a review into telecommunications services in regional, rural and remote parts of Australia.

The Committee for the 2021 Regional Telecommunications Review (the review) was appointed on 1 June 2021.

The 2021 Committee members are:

Hon Luke Harsuyker (Chair)   Ms Kristy Sparrow
Professor Hugh Bradlow   Mr Michael Cosgrave
Ms Sue Middleton

1.2 Process followed for developing this submission

In developing this submission the Association has sought the views of all Local Governments in Western Australia to address the wide range of telecommunications matters outlined by the Committee in the Regional Telecommunications Review 2021 – Issues Paper (the Issues Paper). The following key steps were completed:

i.   advice was provided to members of the appointment of the Committee, the release of the Issues Paper, and that WALGA would be developing a sector wide submission;
ii.   members were requested to provide submissions or information to inform the sector wide submission to the Association to ensure all matters were addressed;
iii.   an agenda item was prepared for consideration at each Zone meeting of WALGA to ensure the whole State at the Local Government level had been provided an opportunity for input into the Association submission.
iv.   as advice was provided on the Committee website regarding consultation, Local Governments of that area being consulted were advised by the Association of the upcoming process and encouraged to participate.
v.   the final Submission was endorsed by the State Council of WALGA.

WALGA staff attended and contributed to the following online consultative sessions conducted by the Committee:

9 August 2021   Kimberley and Pilbara

26 August 2021   Goldfields / Esperance

1 September 2021   Wheatbelt, Peel and South West

Local Government representatives also took the opportunity to provide input to the Committee's consultation sessions.

As part of the Association's engagement process, identified issues and submissions were received from the following Local Governments:

Shire of Carnamah   Shire of Ngaanyatjarraku   Shire of Shark Bay   City of Albany

City of Kalamunda   Shire of Mundaring   City of Gosnells   Shire of Bruce Rock

Further, 16 of the 17 WALGA Zones considered the Regional Telecommunications Review 2021 Agenda item with specific input provided by the:

Kimberley Country (representing 6 Local Governments)

Pilbara Country (representing 4 Local Governments)

Gascoyne Country Zone (representing 4 Local Governments)

Great Eastern Country Zone (representing 16 Local Governments)

Great Southern Country (representing 11 Local Governments)

East Metropolitan Zone (representing 6 Local Governments)

The following section provides comprehensive input to this important review and where appropriate addresses the questions as outlined in the Issues Paper.

2.0 Response to Key Issues Identified by Review Committee

2.1 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?

The Great Southern Zone of WALGA offers the following which summarises the general concerns of the sector:

> 'We all live in a modern world and rely on good internet. Not only on a connection being reliable but also the ability to use that connection. If speeds are too slow, much of the online portion of people's businesses may load but won't work for certain things like bill acceptance and payment, not to mention streaming of online content.'

And further for remote communities;

> 'the Shire of Ngaanyatjarraku is located in a remote Aboriginal community in Warburton, WA. The Shire requires broadband and mobile services for

the community to conduct daily operations outside of the Shire. This level of access is also essential for health and safety as the Great Central Road is the third east / west access across Australia. In the townsite of Warburton we have access to ADSL1 which is totally congested, a Telstra phone exchange that is at its limit and 4G mobile services that is also congested later in the day when school age children and parents are home. Most other communities only have 3G access and Telstra can't tell us what will happen when they switch off that system. In between townsites there is no service, which is very difficult especially given the vast distances and remoteness of the area, and requirements for health and safety.

The following services are required:

- *Basic phone system is provided but an upgrade of the exchanges are required in all locations where it is fully utilised*
- *4G network with appropriate data bandwidths for all locations*
- *Access to the fibre optic which traverses the Great Central Road e.g. Access sits in a pit in Warburton township but can only afford to be accessed by State Government Departments with deep pockets. We would be willing to pay the capex cost of towers and microwave point to point fibre optic but the ongoing monthly access fee by Telstra is prohibitive.*
- *As the fibre traverses this road it could also be accessed to provide telecommunications to users of the road similar to what has been done between Halls Creek and Kununurra using the radio tower network.*
- *NBN Skymuster was ok but of late it seems to also get congested and reception seems much less reliable.*
- *Starlink is a development we are watching as it has potential with less latency, higher bandwidth and reasonable rates for larger data plans.'*

The Shire of Bruce Rock recognised the need for a wider range of internet providers to provide options for residents and businesses to connect to faster, higher quality internet service and committed '*capital funds to bring the broadband service into town in 2019.'*

The need for dual use towers to address the critical issue of metropolitan travellers assuming there will be access to all carriers when on the road regionally. Where infrastructure exists, it does not appear unreasonable for the public to expect that whatever carrier they choose they will have access to a suitable level of service. The current situation places people at risk and it could be easily mitigated through collaboration between carriers.

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

This Shire of Ngaanyatjarraku response outlines the experience of remote WA and importantly cites the very technology that the future holds (e.g.Telehealth) however cannot easily be accessed by those who need it most.

> *'The vast distances and the remoteness is the major barrier experienced in our Shire. Whilst the population to use the services isn't large the requirements of the community for basic services such as telehealth and business connectivity to the outside world is. For example we now sell our aboriginal artists paintings 'online'. The Shire is responsible for the community and wellbeing, and access to better telecommunications will enhance this. The Shire also has many tourists traveling through the Shire which require access to broadband and mobile services.*

> Concerns around reliable connectivity are influencing decisions being made by regional families based on data from RDA Wheatbelt *Wheatbelt Digital Action Plan 2017*:

> *'From an education standpoint with a sizeable proportion of parents indicating that reliable digital connectivity influenced their decision on where their children would complete secondary schooling. Their response suggests the concept that poor connectivity is contributing to the migration of school and post school age youth from the Wheatbelt to the city. Therefore it could be plausible, as participants responses suggested, that better and more reliable connectivity would go some way to reducing the levels of education migration in the region.*

> *RDA Wheatbelt continues to advocate for comparable telecommunication in regard to access, speed and costs for regional residents and businesses to enable a greater uptake of telework options.*

> *The 2017 Plan outlines the biggest issues as:*

- *Reliable connection*
- *Data down / up speeds*
- *Data allowances*
- *High costs'*

In 2021 these issues continue along with reliable power connectivity i.e. issues with planned and unplanned outages, highlighted by the Shire of Bruce Rock:

> *'The lack of choice with telephone services, and also the gaps in the network which cause drop-outs, or simply the lack of any signal to connect with in the first place.'*

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

Concerns around the limitations of the Universal Service Guarantee (USG) have been voiced. The USG updated '*the long standing [Universal Service Obligation (USO)](#), by providing all Australian homes and businesses with access to both broadband and voice services, regardless of their location.*'

The concern lies with the delivery mechanism i.e.: '*The USG will use the National Broadband Network (NBN) to deliver broadband services and will continue to use Telstra's existing copper and wireless networks in rural and remote Australia for the provision of voice services in nbn fixed wireless and satellite areas.*'

This submission outlines the experience of those living, working and visiting rural, regional and remote Western Australia and details the limitations of the nbn and particularly the current capability of Telstra's existing copper and wireless networks. Therefore improvement can be achieved by addressing the core issues around the capability of the existing copper and wireless networks.

Concerns around the eligibility criteria for some Commonwealth funding programs (particularly as it is often the telecommunication carriers applying for the funds) do not provide incentive for carriers to provide services in low population areas notwithstanding the high need:

> '*The government programs are dependent on population volume and commercial viability for the telcos not on remoteness. The Shire is extremely remote, as such the need for good telecommunications is vital. We will never meet population guidelines; however, our need is great.*'
>
> Shire of Ngaanyatjarraku

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

As identified in the Issues Paper '*Access to networks is of limited value if they are not reliable, whether on a day-to-day basis, or in time of particular need, such as COVID lock-downs or natural disasters.*'

To ensure options, equity and sustainability are afforded to rural, regional and remote WA reliability is key. In WA it is acknowledged that a coordinated approach is required to address the issue of reliability and that it is not just the responsibility of carriers.

This was evidenced by issues identified in 2019 where WA Local Governments generously provided examples of their experience of Telecommunication issues. The initial focus of the examples provided centered on:

- Blackspots
- Battery Back Up Failures
- Outages (Planned and Unplanned)
- Telstra Notification Systems

From the Shire of Carnamah located 285km north of Perth and 178km south of Geraldton:

- *The lack of communications in the aftermath of Tropical Cyclone Seroja. We lost power in our LGA and, as a result, we lost our fixed wireless broadband service, as well as our mobile phone service. This was because the back-up batteries at the respective towers only have a very short life before they run down. DFES advised that they were unaware of the destruction in the North Midlands because they hadn't heard from any of us. That was because we had no comms.*
- *Telstra constructed a mobile phone tower on Carnamah-Eneabba Rd in the Shire of Carnamah. Councillors were very keen to understand the reasoning of it being located in a gully rather than in an elevated location where it would have provided greater coverage.*
- *Nbnco is currently offering potential upgrade options to areas e.g. satellite to fixed wireless, fixed wireless to FTTN, FTTN to FTTP. Our district only has an NBN satellite service but we do have an independent fixed wireless service. I have asked Nbnco to identify the location of the fibre optic network within our shire, with a view to upgrading from satellite to at least FTTN. Essentially, if we wanted to stream council meetings like the new Minister has mooted, we could not do so with the satellite service. Every Nbnco employee I have ever spoken to has agreed that the NBN was poorly conceived and has not achieved equality of internet service for all Australians. How can the regions be developed without this principle being followed?*

And from the Shire of Ngaanyatjarraku on their experience:

Reliability is a major issue for the Shire, as we experience outages on a regular basis. Approximately weekly. The speed of the broadband and mobile service is also an issue, as the current speeds aren't fast enough to run basic applications. An example:

In January 2020 the Eyre Highway was closed in WA due to fires, at the same time the Great Northern Highway was closed due to floods in the Kimberley wet season. As the Great Central Road was the only east / west road access available people used it to return to WA after the Christmas break. There was then heavy rain from Kimberley tail end rains that turned the road into soup as it is not bituminised. At the same time the Telstra landline and mobile networks went down in SA as a telephone exchange there had battery backup failures. This also took out the line into parts of

*eastern WA including our Shire on a weekend. So we had no
telecommunications to contact the NT side to tell them to put up road
closed signs to stop directing tourists to get bogged in the soup. You can
imagine how happy they were, that after battling this they arrive for fuel,
food and accommodation to be told we have no phone lines so no Eftpos
for ATM / Credit cards and only cash accepted. Furthermore the phones
were down for weeks, this meant community members could not report to
Centrelink so they get their dole money cut off, prisoners who were out on
good behaviour bonds could not do their phone ins with police now after
them to lock them up again as they are in default of their bail conditions.
The larger populated areas would not stand for this happening to them.*

Additionally from the Shire of Bruce Rock:

*'Outages can have a devastating effect on the whole of the community,
which of course includes local businesses. Until the power supply is back
up and running the community cannot operate "normally", and businesses
cannot conduct their online business or even use EFTPOS payment
systems unless they have an independent power supply (e.g. generators
etc.)'*

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

From the Great Southern Zone of WALGA (incorporating the Shires of Albany, Broomehill-
Tambellup, Cranbrook, Denmark, Gnowangerup, Jerramungup, Katanning, Kent, Kojonup,
Plantagenet and Woodanilling)

*'We all live in a modern world and rely on good internet. Not only on a
connection being reliable but also the ability to use that connection. If
speeds are too slow, much of the online portion of people's businesses
may load but won't work for certain things like bill acceptance and payment,
not to mention streaming of online content.'*

And from the Shire of Ngaanyatjarraku, a sentiment shared by many:

More mobile towers, better infrastructure, and better ongoing servicing.

The Pilbara Country Zone consisting of the Shires of Ashburton, East Pilbara, the
City of Karratha and the Town of Port Hedland suggest the following:

*1. Request the Federal Government to fulfil the commitment of full mobile
coverage on the North West Coastal Highway.*

*2. Request the Federal Government to ensure that the drawdown of data,
particularly from autonomous vehicles used by the mining sector, doesn't
compromise the quality and reliability of service.*

The Great Southern Zones further offers:

- *Investigate partnerships with landholders for access to geographical high points*
- *Higher aerials on towers particularly in low lying areas*
- *Recognise and address anomalies where there is a high percentage of schools on fibre and yet others in the community, including the Shire can't gain access to the fibre e.g. Woodanilling*
- *Listen to the community*

The Great Eastern Country Zone provides the following input:

- *The Zone would like to establish a better policy with the providers on the use of backup generators for better service reliability and delivery.*
- *More engagement with Local Governments for input, particularly in regards to local blackspots and optimum tower locations.*

The Shire of Bruce Rock summarises the core requirements:

'More choice, more supply, greater back-up capability.'

The City of Albany offers:

- *A one stop shop/website, to gain information regarding locations and contacts for infrastructure, during the planning phase of [bushfire] fuel mitigation activities. At the very least, some guidance from industry (guidance note, policy etc.)*
- *Ensuring Communications owners, or maintenance managers, can be contacted. A real person, who is at least regionally based. Contact list for emergency personnel with actual ability to discuss and make decisions.*
- *Communications personnel attending Local Government Bushfire Advisory Council Meetings*

2.6 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?

While COVID-19 demonstrated the social conscience of carriers and nbnco through the provision of increased capacity, sometimes free or reduced pricing for their products and services, it also revealed the carriers' and nbnco's capability. This was welcomed, however, came with the questions 'if we can do this in a time of crisis why not permanently and at a reasonable cost?'

The WA economy has done very well during the COVID-19 period however as people were and continue to be unable to travel overseas they have mobilised locally. As much as WA

communities have welcomed the increased activity, unreliable telecommunications and connectivity have exacerbated the struggle to meet expectations. This in particular related to EFTPOS and accommodation bookings and to a degree getting critical information out about road conditions and communication following natural disasters such as TC Seroja.

This matter is encapsulated by the Shire of Ngaanyatjarraku

> *The Shire still experienced the same difficulties during Covid as this is normal poor level of service for us in the bush.*

Further, with exponential increase in travel within WA due to COVID border restrictions the issues surrounding bandwidth capability have been exacerbated, creating issues around overcrowding of the network and ultimately inaccessibility, further emphasising the need for increased capacity and capability.

Indigenous Australia

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

The Shire of Ngaanyatjarraku requests:

> *More mobile towers using the Radio towers tapped into the Fibre Optic on main roads such as the great central Road. Federal Government to intervene and create Universal Service Obligations with Telstra for us to access the Fibre Optic pit in towns such as Warburton at an affordable rate that makes commercial sense to us not just Telstra. Also USO for Telstra to upgrade its telephone exchanges so they don't always crash when the power goes off and their battery backups don't work as they are fully congested. And what will replace 3G when they close it?*

The Shire of Bruce Rock suggests:

> *Availability of subsidies (dependent on income etc.)*

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

Reliable connectivity is the backbone to economic development in regional WA as has been demonstrated through many examples in this submission and is articulated well by the Great Southern Zone:

> *'We all live in a modern world and rely on good internet. Not only on a connection being reliable but also the ability to use that connection. If speeds are too slow, much of the online portion of people's businesses may load but won't work for certain things like bill acceptance and payment, not to mention streaming of online content.'*

Opportunities are not pursued or given up on once it is established that reliable telecommunications, along with seamless connectivity is not guaranteed. The reports by RDA Wheatbelt, the expectations built by the draft Infrastructure WA Strategy all lead towards an expectation that this seamless technology is available. COVID-19 has demonstrated what is possible, it is now time for reliable connectivity and telecommunications to be planned for, established and most importantly funded to be successful and sustainable. This will require coordination at all levels of Government along with telecommunication carriers and power providers and importantly the community.

The Shire of Ngaanyatjarraku demonstrates the possibilities*:*

> *The Shire has regional tourism with the Great Central Road, and improvements in the telecommunications services and the road network would make the travel more attractive to tourists. The current level is poor so it discourages tourists from making the journey as they do not feel safe without the access to broadband and mobile services which are accessible to other major highways.*

2.9 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?

As outlined above the barriers include a lack of coordination and collaboration. In particular have we got an established understanding that technology such as low earth orbiting satellites are the next 'thing'? If yes, all stakeholders involved need to collaborate to ensure the focus is on what is important to all.

It certainly appears (anecdotally) that commerciality has taken precedent over need. The frustration at the local level is at times overwhelming and Local Government is playing a key role, particularly advocating on behalf of their communities for a better deal.

Local Government would be a willing contributor to innovative approaches and new models if it can be demonstrated that the solutions would provide a reliable service that allows for growth (not just meets current demand) and allows for proactive pursuit of investment in their communities.

In addition the Shire of Ngaanyatjarraku suggests:

> *New investment and new technology will create greater competition and better solutions for remote communities. Currently the major players do not do enough for remote communities and therefore we are always behind in service provision. Elon Musk's 'Starlink' internet is one product which will hopefully improve the services available.*

2.10 To what extent will new technologies enable significant change to the delivery of telecommunications services in regional Australia over the next 5-10 years? Are there any barriers to accessing these technologies?

As identified by the Shire of Ngaanyatjarraku

> *Elon Musks 'Starlink' internet is one product which will hopefully improve the services available. It would improve our business services and open up more technologies to improve community services like telemedicine, ability to communicate with Centrelink, Police, Courts, all the services a normal community has in its town but could be available electronically in the bush if connectivity was better.*

This view has been articulated by many in the sector and is seen as the future for expansion of economic development and would certainly address issues experienced by retail, business, mining and tourism.

By including Local Governments in the early stages of development, some perceived localised barriers could easily be addressed.

Further, the recognition of the risks surrounding cyber security should not be lost in this discussion.

By way of example the Infrastructure WA, State Infrastructure Strategy: *Foundations for a Stronger Tomorrow: Draft for public comment:*

> *'draws attention to the growing cybersecurity risk associated with the increasing convergence of information technology and operational technology'*

In particular:

> *'As infrastructure systems become increasingly digitised, the risk of cyberattack also increases – threatening the availability and uptime of critical services and security of personal and commercial data.'*

Given the recognition of the ongoing focus on cybersecurity, it is heartening that the draft strategy outlines that:

> *The Federal Government's Security of Critical Infrastructure Act 2018 currently applies to specific entities in the electricity, gas, water and ports sectors. The Security Legislation Amendment (Critical Infrastructure) Bill 2020 seeks to expand the scope of the Act to include critical infrastructure entities in a wider range of sectors including: communications …'*

Any new technologies that enable significant change to the delivery of telecommunications services in regional Australia will need to be cognisant of the ongoing and real threat of cybersecurity on the security of infrastructure, personal and commercial data.

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

First and foremost involve those at the local level early, including establishing and ensuring a collaborative and coordinated approach by all who have a stake in the rollout.

And as has been contributed previously, understanding the need for rural, regional and remote communities and not have eligibility driven by population. It is clear that many populations 'grow' during peak seasons due to tourism. At the moment in WA that is all year around. The need is high and by having local knowledge at the table early, eligibility can be ascertained by what is really happening on the ground rather than static population figures that don't provide a clear picture of the local experience including for those that live in, visit and transit the area.

Maximising Outcomes

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

Since December 2020, considerable work has been undertaken by the WA Department of Fire and Emergency Services (DFES) in liaison with WALGA to ensure Local Governments have as much influence as possible around the suitable placement of battery upgrades (as part of the STAND Program) and infrastructure (satellite solutions) within their locales.

In March 2021, WALGA and DFES met with staff from Western Power and the WA Department of Primary Industries and Regional Development (DPIRD) (the agency which administers the Mobile Black Spot Program in WA) to understand the implications of the 2021 election promise by the WA State Labor Party of $218m to deliver 1,000 standalone power systems. At the time it was acknowledged that this is not new money but a confirmation to Western Power and Horizon Power to progress a strategy of providing a more reliable and resilient power solution for many of their regional customers over the next 5 years.

DPIRD plays a key role in ensuring Telstra and Optus provide the right data to the power companies so they can prioritise their scope. DPIRD's involvement also allows carriers to reprioritise other telecommunications hardening and improvement works funded outside the standalone power system scope, which they run separately with Telstra and Optus.

In recognition of the importance of a collaborative approach to ensuring the multiple complexities existing around telecommunications, the Regional Telecommunications Resilience Working Group was established in May comprising key planning/technical staff from Telstra, Optus, Western Power, Horizon Power, WALGA, DFES and DPIRD. This working group will share data more openly to allow robust and coordinated planning which results in better overall service delivery and value for money for all concerned. The working group began its work in June 2021 and have scheduled monthly meetings that increase as Funding programs or issues emerge.

WALGA advocates on specific issues identified by its members at the Working Group, in particular to explore opportunities for sustainable solutions e.g. Stand Alone Power provision, utilising a combination of solar, batteries and generators.

Further, the Shire of Ngaanyatjarraku Shire would like to see stakeholders:

> *'work together in partnership to deliver a coordinated response rather than a commercial response by Telstra who is the only provider in the bush.'*

The Shire of Bruce Rock concurs:

> *'As the level of government that is most connected to their community, local government can serve as the conduit for information between the other agencies, and identify and respond quickly to where the needs are.'*

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

Investment programs need to be bold and far reaching. It is being proven time and again that communities and their demand for telecommunications services (data) are growing faster than communications providers can keep up with.

Examples in the Great Southern demonstrate that innovative trials have had to be constrained to work within the limitations of funding programs rather than being able to explore the full extent of the trial.

Government investment programs will need to consider how they can get ahead of the game when it comes to technology and be a contemporary competitor with the rest of the globe.

The early experience that WALGA has had with the Regional Telecommunication Resilience Working Group has demonstrated that when you get the right people around the table and the discussion is first and foremost about 'what is possible' instead of 'what can we afford' you not only get the benefit of hearing of the innovation of the future but that focussed spend where it can be most effective.

A consideration could be how much investment do you continue to place in large infrastructure when low earth orbiting satellites may well be the future within the next decade or do you invest in 'connecting the existing infrastructure through innovation while the next generation of delivery is being developed and trialled.

In the meantime the Shire of Ngaanyatjarraku asks that eligibility for programs in remote communities not be driven by population.

2.14 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?

Throughout the consultation process it has become clear that not only do consumers (not isolated to regional consumers) lack a level of digital literacy there is a lack of understanding

of options or rights and in most parts of WA a lack of genuine choice. It has been acknowledged that telecommunications is a complex area that provides services to all level of consumers, it is not however marketed in a manner that provides simple and transparent level of understanding. The process has highlighted that regional consumers know what they want, however the translation between the request and what is delivered (or not) results in them believing they don't have access to it, or a viable alternative, particularly where no competition exists. This is articulated well by the Shire of Ngaanyatjarraku:

> *'Currently consumers in remote communities don't have a choice they only get what is available. This is low level and not suitable for a variety of applications. The choices will only improve as more providers enter the industry, and it becomes more competitive.'*

2.15 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?

Input has demonstrated that there is a perception that this information is limited, particularly where there is a reliance on the local Community Resource Centre (CRC) to provide assistance in choice, troubleshooting and facilitating liaison between consumers and providers. For many in the community, Local Governments along with organisations such as CRC's are seen by consumers (in particular seniors) as trusted advisors. In many cases consumers don't question what is on offer they just accept that what they are being told is in their best interest. Information needs to be in simple language, more broadly available and appropriately resourced by telecommunication providers to support their customers.

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

The sentiment of many in the regions can be summarised by the input provided by the Shire of Bruce Rock:

> *"Reliability" refers to the number and duration of service outages. The main cause of this is power outage, the most common causes of which in the Regions are weather events, typically storms (wind, rain, electrical); and also bushfire which can affect infrastructure. It is not so much that these events knock out the power, but more that there is insufficient generator or battery back-up available to cover the time between the mains power going out and being restored. This can literally last for days (in one instance), and for this time the entire district can be without both power and telecommunications while networks are restored.*

The Association has included the following Recommended Solutions for the committee's consideration:

3.0 Recommended Solutions

1. To ensure the requirements and accountabilities of the Universal Service Guarantee (USG) are met, immediate attention to the capability of Telstra's existing copper and wireless networks is required to address the core issues being faced regionally.

2. Investigate mechanisms to increase competition in the delivery of telecommunication to reduce the current monopoly experienced by a large areas of regional Australia.

3. Partnerships including all levels of government and industry to investigate and trial emerging technologies with the potential to deliver cost-effective mobile communications and power reliability ensuring trials are not constrained by the limitation of funds available via government programs.

4. Ensure that the Security Legislation Amendment (Critical Infrastructure) Bill 2020 expanded scope of the Act includes telecommunications critical infrastructure and that any new technologies that enable significant change to the delivery of telecommunications services in regional Australia need to be cognisant of the ongoing and real threat of cybersecurity on the security of infrastructure, personal and commercial data.

5. When developing funding programs ensure that power supply (including improved back up and Stand Alone Power Systems) is a key consideration to any solution sought, and that a collaborative approach between power and telecommunication providers is essential to any funding application.

6. Guarantee engagement with Local Governments as a pre-requisite for input, particularly in regards to identification of local blackspots and optimum infrastructure locations.

7. Where approved signal boosters or enhanced telecommunication products are recommended by telecommunication carriers as the solution to achieve mobile connectivity, this equipment should be technically evaluated and funded rather than the consumer having to take all of the risks and fund this inequity.

8. A comprehensive community education program is required to ensure it is not assumed that the mobile phone network, land line telephones or nbnco based internet services can be relied on during or in the aftermath of emergencies. This program should offer solutions such as transistor radios that at least allow the community to receive (although not send) information during emergencies.

9. **Leverage major regional road upgrades, such as the Tanami Road, to install fibre optic cable as part of integrated earthworks. This will lower the overall costs, increase accessibility and, in the case of the Tanami Road, potentially provide an alternative from the single line currently servicing northern Western Australia.**

10. **Broaden both the deployment and application of nbnco satellite services to all evacuation centres to ensure access to telecommunication not only during an emergency but to provide backup redundancy when fixed lines connections are experiencing outages.**

11. **Investigate the technology that facilitates quicker service restoration including locally or regionally located generators and the ability to connect them to telecommunications facilities, Cells on Wheels (COWs) and mobile exchanges on wheels (MEOWs). Analyse the transferability for a broader scale, long term solution.**

12. **Establishment of an independent telecommunications committee to address black spots and telecommunications issues in peri-urban and metropolitan areas.**

13. **Call upon the Commonwealth Government to:**
    a. **fund the extension of fibre deeper into regional communities based on products similar to the Nbnco Enterprise Ethernet business product, and**
    b. **ensure guaranteed prices charged by service providers are equivalent to those in a city CBD.**

Specific requests from WALGA Country Zones not covered elsewhere in the submission:

14. **Request the Federal Government to fulfil the commitment of full mobile coverage on the North West Coastal Highway.**

15. **Request the Federal Government to ensure that the drawdown of data, particularly from autonomous vehicles used by the mining sector, doesn't compromise the quality and reliability of service.**

4.0 On-going Initiatives and Supporting Information

In late 2019 WALGA collated examples and case studies highlighting the long standing issue of telecommunication failure, in particular, during emergencies and importantly regional WA. At that time Local Governments had escalated these issues through their Local Emergency Management Committees, District Emergency Management Committees, Councils and specifically the WALGA Great Eastern Country Zone (located centrally in the WA Wheatbelt). These issues have been discussed in depth since 2016 and formally since 2017.

In particular, the examples provided highlighted the following issues:

- Blackspots
- Battery backup failures
    - Unreliability/lack of consistency and duration of the battery back-up for the Telstra Exchange in the event of a sustained power outage, and the time it takes for Western Power to deliver and install a generator.
    - The Telstra Exchange is powered by Western Power, and this supply is supplemented by battery back-up which automatically starts in the event of a power outage.
    - The battery back-up is intended to provide support to the Exchange for a period of time, but this is often not the case.
- Outages – which have led to loss of landlines and mobiles
    - This has significant impact on Local Government capability to communicate before, during and after an emergency.
    - Local Government's rely on mobile networks to notify stakeholders of harvest vehicle movement bans, total fire bans, communication with and deployment of volunteers, impacts to day to day operations and community services.
- Telstra Notification Systems
    - Local Government's report that often when they contact Telstra they are advised that Telstra were unaware of the outages. Correspondence indicates that Telstra has an automated notification of outages but this seems to be failing.

Importantly these issues identified the inextricable link between telecommunication and power supply in the provision of a reliable service.

Supporting these identified issues is the RDA Wheatbelt 2013 Wheatbelt Digital Action Plan, which was reviewed and revised in 2017. Interestingly the matters outlined in that document remain current.

The following was identified for business:

- Increasing use of mobile phones
- Increasing access of business related services
- Increasing usage of government services
- Mobile phone coverage was unsatisfactory despite the increase in phone towers
- Internet connectivity and speed remained problematic in many areas, and

- Costs and data allowances remain a constraint.

From a social perspective the report identified growing levels of usage in everyday life:

- Paying accounts, banking, and accessing government services
- Using social media
- Sourcing news and doing research

Page 4 of the document summarised:

> *'Wheatbelt residents have progressed beyond the early adoption stage and are well into the maturation phase. Essentially the use of digital devices and digital connection have moved beyond being a technological novelty and has become a normal and expected means of conducting everyday activities.'*

The findings could have easily have been written last week as in 2017 as the situation and summary remain contemporary.

The issues identified in WALGA's examples were presented to the State Emergency Management Committee (SEMC) on 13 December 2019, and further to Senator Dean Smith on 22 July 2020 for awareness, support and advocacy.

A welcome Commonwealth Government announcement in late 2020, was the $37.1 million through the Strengthening Telecommunications Against Natural Disasters (STAND) package developed in response to the Black Summer Bushfires, to strengthen telecommunications resilience in bushfire and disaster-prone areas so that communities can stay connected during emergencies was well received by the sector.

The package contains four elements:
1) Improving the resilience of regional and remote mobile phone base stations
2) Portable communications facilities to allow quicker service restoration
3) Program to deliver improved communications
4) Enhanced telecommunications for rural fire authorities and evacuation centres

The first element was of specific interest to the issues raised by the sector to the SEMC and included $18 million nationally to be spent on upgrades to enable longer lasting backup power sources, such as batteries and diesel generators for base stations.

Stage 1 of the program announced in December 2020 provided $13.2 million in Commonwealth Government funding to Optus, Telstra and TPG to improve network resilience by upgrading battery backup power at 467 base stations. Western Australia was successful in receiving funding for 108 sites under Round 1 of the Government's Mobile Black Spot Program. These upgrades increased backup operation to at least 12 hours.

At the State Government level, the Department of Fire and Emergency Services (DFES) were able to provide the Commonwealth with data based on Bushfire and Community Resilience Risk Rating. Although telecommunication carriers were funded directly, the DFES continues to ensure close contact with the Commonwealth and WALGA on progress of this project.

In line with the second and third element, Nbnco confirmed with the DFES that a 'Road Muster' satellite truck was to be based at Belmont from early January 2020, and that two (2) portable satellite communications systems had been provided to NBN WA.

Element four progressed, through the DFES who worked with Nbnco and recipient Local Governments to plan and prepare for the installation of satellite communications services to 19 pilot sites.

WALGA supported this process through the provision of key contacts as the pilot sites are predominantly community evacuation centres; it was acknowledged that many of the sites were either owned by, or are situated on, land vested in Local Government.

NBN advised that installation was scheduled to be completed in December 2020, with a further 55 services to be installed by mid-2021 once the pilot site evaluation process is complete. Local Governments were advised the services would operate in 'standby' mode providing limited range WiFi phone calls should power failures result in mobile network outages and will be fully activated by NBN remotely when an emergency is declared.

In early January 2021, DFES were advised by Nbnco that all the pilot satellite sites were operational and on "standby" mode.

An outstanding outcome of the collaborative approach taken to Element four was that Local Governments were invited in March 2021 to apply for the provision of NBN fixed satellite services to facilities such as community evacuation centres, community halls or Local Government offices as part of the STAND Project.

WA submitted 141 applications from 79 Local Governments for the provision of this service. The Commonwealth has since advised that all applications were endorsed and are being assessed by Nbnco for installation suitability based on the data provided by Local Governments. This capability is designed to provide internet access and the ability to make phone calls for 40 community members concurrently using the service during emergency events.

Further, there remained a need to address the issues surrounding planned and unplanned power outages. To this end the following actions were agreed at the SEMC meeting held on Friday 11 December, 2020.

In early 2021, the DFES Commissioner requested all relevant stakeholders across State and Local Government, the telecommunications industry and electricity suppliers to come together acknowledging the interdependencies between community safety, telecommunications and power supply and to:

- Understand the current mitigation work undertaken by stakeholders to reduce the frequency and length of communication outages, and
- Explore and gain a deeper understanding of interdependencies.

Since the December 2020 SEMC meeting, considerable work has been undertaken by representatives from the DFES in liaison with WALGA to ensure Local Governments have as much influence as possible around the suitable placement of battery upgrades and infrastructure (satellite solutions) within their locales.

In addition, in order to build on the collective understanding of solutions, WALGA and DFES met with staff from Western Power and the Department of Primary Industries and Regional Development (DPIRD) in March 2021 to understand the implications of an election promise by the WA Labor Government of $218m to deliver 1,000 standalone power systems. Although not new money, this was a confirmation to Western Power and Horizon Power to progress a strategy of providing a more reliable and resilient power solution for many of their regional customers over the next 5 years.

Western Power and Horizon Power have liaised with Telstra and Optus to gather data on power needs for their base stations that fall into the areas where the standalone power systems are to be planned. DPIRD is playing a key role to help Telstra and Optus provide the right data to the power companies so they can prioritise their scope. DPIRD's involvement will also allow them to reprioritise other telecommunications hardening and improvement works funded outside the standalone power system scope, which they run separately with Telstra and Optus.

A key outcome of the meeting was a recognition of the value of forming a working group be formed comprising key planning/technical staff from Telstra, Optus, Western Power, Horizon Power, Nbnco, WALGA, DFES and DPIRD. This working group now shares data more openly to allow robust and coordinated planning which results in better overall service delivery and value for money for all concerned. The group's recent work led to a greater understanding of future planning, local requirements and a focussed approach to the next round of STAND funding.

WALGA has a weekly update with the DFES with a current focus on the progress of the STAND project and improvements to planned and unplanned outages, to ensure sustainable and reliable communication for all Western Australians.

The input received by WALGA to inform this submission is echoed in the statement below made by Gavin Williams, Nbnco Chief Regional Development Officer, Regional and Remote, in *The Australian* on 27 August 2021, as the sector's desired state. The fact remains that this statement does not reflect the experience for many in rural, regional and remote WA and in fact some metropolitan areas particularly peri-urban Perth.

> *'With more of us living and working outside our cities, a connected regional Australia is more important than ever.*
> *COVID-19 has shown us that reliable broadband is just as important to our way of life as water or electricity as we work, learn, access services and communicate with loved ones from home.*
> *There's a huge opportunity for regional communities and businesses to tap into growth and productivity gains associated with technology investment and adoption, including job creation.'*

This is evidenced by information drawn from the RDA Perth - Perth Hills Strategic Visioning Report; December 2020, particularly:

Key Finding 3.

Telecommunications and power outages are placing people at risk and disrupting business. Telecommunications black spots and dropouts and frequent power outages are one of the compromises residents make in return for the open spaces and natural amenities that characterise life in the Perth Hills. However, they create serious impediments for businesses and significant community safety, health, and bushfire risks during emergencies. Emerging remote area technologies may offer a solution. These technologies combine solar energy, batteries, and mobile communications towers to strengthen mobile signals and stabilise local area power networks through microgrids where high rooftop solar generation is prevalent.

Recommendation 4.

Telecommunications and Power reliability – Partner with government and industry to investigate and trial emerging technologies with the potential to deliver cost-effective mobile communications and power reliability. Build a business case for visitor attraction and business productivity improvements and reduced risks to the community risk during bush fire, safety, and health emergencies.

Both the finding and the recommendation are transferable to the rural, regional and remote setting.

Further, input provided by the Kimberley Country Zone of WALGA acknowledges that access to high speed broadband is of critical importance and that although the focus of their contribution is on the current issues occurring within the Kimberley, some are unique to the region with others are commonly experienced outside of the Perth metropolitan region and include:

- Individual Shires in the Kimberley have actively engaged with both the Commonwealth Government and service providers to address blackspots of various scales. Remote areas are highly reliant on telecommunications to remain in touch however both access to, and the reliability of, telecommunications continues to fall behind demand for speed and reliability and the transition to a digital first approach by government agencies.
- Infrastructure WA noted the telecommunications challenges in their 2021 discussion paper "Pursuing digitisation opportunities and applying a digital-first approach in the sector will need to be balanced so as not to further disadvantage vulnerable Western Australians and those who live in rural and remote areas who experience significantly

limited technology access, including people who live in remote Aboriginal communities with limited digital connectivity." (p.259)

- There is a critical risk for telecommunications infrastructure as there is a single fibre optic cable to the north of the state. If the cable is compromised, all telecommunications infrastructure across the north can be compromised including EFTPOS and ATM equipment. This means that people coming in from remote locations and tourists cannot access food and other vital supplies unless they arrived with cash. The most recent incident in July 2021 also caused considerable delays on the border between WA and NT due to the reliance on telecommunications for the G2G pass. The outage had the added impact of preventing calls to emergency services and hospitals for non-life threatening emergencies and caused delays during flight boarding. A similar incident occurred in August 2019 where the cable was "dug up" accidentally by a third party, impacting on 50,000 people.

- Leveraging major regional road upgrades, such as the Tanami Road, to install fibre optic cable as part of integrated earthworks. This will lower the overall costs, increase accessibility and, in the case of the Tanami Road, potentially provide an alternative from the single line currently servicing northern Western Australia.

- The reticulation of fibre for residents has not occurred routinely even when in close proximity to the cable. This is particularly evident in remote, highly disadvantaged towns. With the increasing reliance on digital communications for business and education, this creates an ever increasing gap between the digital opportunities in larger urban areas and those in regional towns and communities.

- Broadband is not routinely available outside of the strict city limits in regional towns, for example the East Kimberley Regional Airport does not have access to high speed broadband although it is located only a few minutes out of Kununurra.

- Road safety is compromised as there are still significant stretches of road where there is no coverage so access to emergency services is constrained.

- Capacity for broadband and mobile services to cater for both the resident population and the influx of visitors during tourist season which currently sees substantially reduced speeds and in some cases dropping back to the basic 3G without internet.

5.0 Conclusion

In maintaining connectivity of families and the communities they live in COVID-19 experience, in particular, has shown that telecommunication capability is far greater than that on offer via current carrier's products. A strategic and mature conversation needs to be undertaken by those who provide services, innovators, Government of all levels and funders to explore what is actually available to the consumer, how it can be delivered and importantly how and by who it can be funded.

If we are truly committed to not leaving rural and remote Australia behind there needs to be an honest conversation, along with appropriately funded solutions that are affordable and allow equity to all.

Appendix 1 Terms of Reference

1. The Regional Telecommunications Independent Review Committee must conduct a review of the adequacy of telecommunications services in regional, rural, and remote parts of Australia.

2. In determining the adequacy of those services, the committee must have regard to whether people in regional, rural and remote parts of Australia have equitable access to telecommunications services that are significant to people in those parts of Australia, and currently available in one or more parts of urban Australia.

3. In conducting the review, the committee must make provision for public consultation and consultation with people in regional, rural and remote parts of Australia.

4. In conducting the review, the committee is to have regard to:

    a. the impact of the Government's policies and programs for improving connectivity, competition and digital literacy in regional, rural and remote areas, including rollout of the National Broadband Network, the Mobile Black Spot Program, the Regional Connectivity Program and the Regional Tech Hub;

    b. insights from COVID-19 on consumer access to and usage of broadband and mobile technology in regional, rural and remote areas;

    c. emerging technologies that could lead to significant changes in how telecommunications services are delivered in regional, rural and remote parts of Australia in the next 5-10 years;

    d. service reliability and impacts on customers and communities in regional and remote areas;

5. Taking into account Term of Reference 4, the committee is to consider:

    a. whether changes are warranted to existing Government policies and programs to ensure they continue to be effective, fit for purpose and are maximising the social and economic potential from existing and emerging technological advances;

    b. policy settings that might be needed to support more rapid rollout of and investment in new telecommunications technologies in regional areas;

    c. ways in which improvements in digital connectivity could support the Government's broader regional development policies and priorities, such as decentralisation and the development of Northern Australia;

    d. ways in which State, Territory, and Federal programs to support regional connectivity could be further coordinated.

6. The report may set out recommendations to the Australia Government

7. In formulating a recommendation that the Australian Government should take a particular action, the committee must assess the costs and benefits of that action.

8. The committee must prepare a report of the review by 31 December 2021 and give it to the Minister for Regional Communications.