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To Whom it May Concern

I write to make a submission on behalf of Regional Development Australia Central West in response to the Regional Telecommunications Review 2021.

Improved and reliable regional communication in the Central Western region of NSW has been identified as a priority outcome by RDA Central West. A diverse region with many towns, villages and regional cities, the telecommunications needs and challenges for our people and our local businesses are complex and varied. One of the biggest barriers to future growth is the continued lack of reliable telecommunications in many areas.

Digital connectivity and mobile phone technology is the way of the future and we seek a level playing field with our urban counterparts. Without immediate improvements to mobile phone technology within regional Australia the future for our regional towns and villages will be severely compromised.

There is a need for fast, reliable, cost effective and competitive connectivity to allow regional and rural areas to grow and survive.

A principle of Regions at the Ready and the Government's decentralisation agenda is the facilitation and securing of sustainable economic development. Driving investment in regional areas is often hampered by the cost and unreliability of connectivity. In addition to attracting new business to the area, key areas of economic activity in many regional centres are around the industrial areas and livestock exchanges. These are typically located away from the Central Business Districts and often suffer from poor connectivity, both mobile and fixed internet services.

Business and industry can face a large front loading cost to set up and establish digital networks, which often are not to the standard found in urban areas, thus dissuading potential investors. This leads to a negative impact on regional growth and industry as the disincentive to investment can outweigh any potential gain to invest, relocate or establish in regional areas.

Often traditional access to services is not the best way forward in rural and, particularly, remote areas. Accessing NBN broadband satellite via Skymuster is expensive and unsustainable for many small business operators. The Central West has seen an increase in tourism over the recent years.



However, there is an expectation that services are 'up to scratch'. Tourists do not wish to stay longer in areas with poor connectivity or no service and are unlikely to return. An option could be to review the Skymuster rates and provide better options for small businesses.

Agriculture is evolving and introducing more innovative and efficient ways to improve pasture, animal production and cropping but farmers are unable to access these Farm Apps from the paddock. Farmers and graziers need to adopt technology and move with the future if they are to increase food production for export and improving quality to our own Australian supermarkets. However, it is vital that the digital infrastructure is in place to allow this.

The inconsistency of telecommunication coverage within and between communities continues to have negative impacts. It is not unusual to find that streets within a suburb have been missed by the NBN rollout or have data access issues, while those around them can access a much faster speed. While this has been amplified during the COVID-19 restrictions and, the move to remote learning and work from home, the inequality is an ongoing issue in daily life. Schools, for example, can experience difficulties with access and connectivity that effect normal day to day operations. Limited and expensive internet services and poor connectivity have been amplified in the current environment.

A neutral, unbiased telecommunications business advisor could be deployed in order to help individuals and communities learn and know what options are best for their family and business. The NSW Department of Planning, Industry and Environment (DPIE) conducted a business energy program whereby an independent expert was able to review individual energy issues and advise on potential solutions. This could be replicated for telecommunication infrastructure and solutions.

The online Regional Tech Hub is not seen as user friendly as there is too much information, and it is difficult to understand and navigate. The Hub needs to be accessible to the larger general public and cognisant of the end users' needs. Face-to-face delivery and personal assistance with the wealth of information could enhance this service and make it a viable resource for communities. People are feeling frustrated because they cannot get connected, pay too much or have to wait lengthy periods for call backs.

RDA Central West has worked closely with the Central NSW Joint Organisation and representatives of local government across our region over the past 18 months to develop the Mobile Blackspot Priority locations across the Central West. In many cases there appears to be disparity between the Mobile Blackspot mapping programs and what occurs in reality.

Connectivity along highways and major inland roads connecting regional cities like Dubbo, Orange, Forbes and Parkes is problematic with large outage rates. There are more business people travelling and working remotely, and higher movement of traffic on these roads. This is unlikely to change and there needs to be a focus on keeping these main roads connected. Telco providers cannot be unaware of the frequent drop out zones and there is a strong need for these weak points to be rectified so that our regional highways stay safe and connected.

Goobang National Park in the Central West has high fire danger with high lightning strike prevalence along mountain ranges as shown by storm tracker and lightning radar data. There is also poor connectivity and coverage of the area. This presents high danger for fire fighters, tourists travelling and families living in that area when there is no phone service. A telecommunications tower on highest hill in Goobang National Park would be a solution that covers Baldry, Tomingley and surrounding farming areas, as well as the Parkes-Dubbo Newell Highway and Parkes-Wellington Renshaw McGirr Way. All National Parks should have accessible telecommunication.

The impact of poor telecommunications is wide and varied depending on the economic makeup of the community. Some examples from recent consultation across the Central West region are provided below. This is by no means exhaustive, however provides a range of different regions, sectors and impacts.

1. Carcoar, Blayney Shire

Carcoar is a major tourism hot spot in the Blayney Shire and is famous for the annual Carcoar Running Festival, the Australia Day Fair and the Carcoar Garden and Plant Expo. With a resident population of around 200 a small but picturesque village the population can surge for specific tourism events. However currently mobile coverage is nonexistent on the main street which is difficult for business the community and visitors.

2. Goolagong, Forbes Shire

Australia's largest dairy is based in the Central West at Goolagong. Moxey Farms is a major employer who provides jobs and opportunities to around 250 people through their integrated milking operation of 7,000 cows. As technology advances and robotics becomes an increasingly important aspect of the Moxey Farms operation, the need for greater digital connectivity increases exponentially. In this small geographical area, an innovative solution is required to allow this major regional business to grow and remain competitive.

3. Oberon Shire

Oberon is a small LGA of just over 5,000 people but encompasses the rolling high country of the Central Tablelands. With a number of small communities in the area, such as Black Springs, Burruga and O'Connell. There are significant mobile black spot areas across the LGA.

Lack of digital connectivity including mobile phone coverage within the LGA is a significant constraint to the continued economic and social development of agricultural businesses, the state significant forestry industry and to the tourism industries within the LGA. Poor mobile phone coverage in agricultural areas possess a safety risk to the community as it makes it difficult for the community or people travelling through the LGA to contact emergency services in emergencies such as fire or farm and motor vehicle accidents.

4. Weddin Shire

Agriculture, Forestry and Fishing employs 511 people (2016 census) across the Weddin Shire, and is Weddin's largest industry. Connectivity is a massive barrier to the productivity of local agricultural operations, which are a major component of the local economy.

5. Lachlan Shire

Covering an area of over 15,000 square kilometres with a population of around 7,000 agriculture is the cornerstone of the local economy. The towns and villages in the Lachlan Shire capture the essence of life in the bush. Condobolin is the largest town in Lachlan followed by Lake Cargelligo and Tottenham then the villages of Tullibigeal, Burcher, Derriwong, Albert and Fifield. Please see at **Attachment B** further feedback from the Lachlan Shire Council regarding some of the telecommunication challenges across their region.

General Comments

RDA Central West has engaged with the local business community through the NSW Business Chamber and representatives of local government from across our region through our partners at the Central NSW Joint Organisation in the formulation of this submission.

Cases studies are attached as part of this submission (Attachment A) that outline connectivity issues and barriers to business, as a result of telecommunications issues. A summary of the Mobile Blackspot Priority locations is also provided (Attachment C).

RDA Central West appreciates the opportunity to make comment on this issues paper, and welcomes the Federal Governments ongoing focus on improving regional, rural and remote telecommunications.

If you have any questions or require any additional information, please don't hesitate to contact me, on [REDACTED] or email [REDACTED]

Regards

[REDACTED]

Ruth Fagan
Chair
RDA Central West

Attachment A:

Case Study One

██████████ owns a 4500-hectare mixed farming operation across three properties in the west of Weddin Shire. ██████████ has 30 years' experience as a farm manager. The business employs four full time and two part time staff and complies with single touch payroll.

Economic Benefits of Ag Tech

Precision agriculture allows ██████████ to maximise productivity, increase profitability and improve the sustainability of his business. 'I save 72% on Lime and Gypsum, 50% on Phosphorus, 15% on Sulphur and 25% on Nitrogen.' 'Connectivity is crucial to conducting my business at this level of precision; I need confidence in my data.' ██████████ began collecting grain yield data 16 years ago and introduced variable rate technology five years ago.

Connectivity

██████████ is motivated to invest in connectivity enabling technology, by the economic benefits of precision agriculture. ██████████ manages his business from a home office serviced with Optus wireless broadband supported with an aerial and Wi-Fi booster. These are necessary to obtain consistent reception; however, latency is an issue. Through the use of a mobile phone booster there is mobile reception in the house. Mobile coverage is extremely patchy across the three properties with many areas receiving no coverage.

All of ██████████ precision agriculture software is cloud based; he can only access it from the home office, as such the office requires high upload and download speeds. 'I use the office late at night or early morning to avoid peak periods.' ██████████ simply cannot do precision agriculture without accessible and reliable internet.

Barriers to Business

██████████ struggles to make phone calls at many parts of the farm. ██████████ requires consistent 4G reception before he can meaningfully run his business from the paddock. ██████████ harvester and tractors are capable of uploading information to the cloud, however they cannot upload data consistently because of patchy coverage. Within three years ██████████ wants to fully utilise this John Deere platform. 'It's crazy to think of a business trying to operate cloud-based programs without decent coverage and yet that's our reality.'

'Data is very expensive in the bush as we only have the option of satellite or mobile broadband.' People in the city receive unlimited data for a similar price that ██████████ pays for 200GB (\$68/month). Brett would like to collect more real time data from moisture probes and rainfall gauges to improve the precision of decisions. In the future ██████████ 'would love to introduce precision agriculture to my livestock enterprise and remotely weigh sheep to track growth rates.'

Case Study Two

██████████ owns a 3100-hectare mixed farming enterprise 20km north-west of Grenfell. Rob has 31 years farming experience, employs four staff and complies with single touch payroll.

Economic Benefits of Ag Tech

██████████ experiences significant returns on his investment in precision agriculture; 3% reduction in inputs as a result of guidance technology minimising overlap during sowing, spraying and harvest and a further 5% reduction in inputs from variable rate application of lime, gypsum and urea. The economic benefit of precision agriculture motivates ██████████ to navigate the barrier of poor connectivity.

Connectivity

■■■■ has a landline, patchy 4G/3G Telstra mobile and Sky Muster Satellite in the office. The business is constrained by speed (upload and download) and data. Tasks such as end of month banking are undertaken at 2 am to avoid periods of peak demand. Despite attempts to improve it, poor connectivity is a barrier to economic opportunity 'What we have is not good enough to do what we want in our business.'

■■■■ installed seven mobile repeaters to address concerns of working in isolated locations. He can now make mobile calls across the farm. ■■■■ has a mobile router and aerial to hotspot his mobile in the office. This was purchased as backup for when the Satellite reaches its data limit.

Barriers to Business

■■■■ practices precision agriculture. On farm connectivity varies widely; as such the areas of poorest connectivity dictate the upper limit of precision agriculture on farm. Even where there are areas of good connectivity, it is not fully utilised.

All of ■■■■ machines have the capacity to upload data to the cloud however poor coverage means the data is not consistent enough for precision agriculture maps. ■■■■ technician travels from Wagga Wagga quarterly to download data to a USB. Variable rate input maps are then generated by a consultant and transferred back to ■■■■ on a USB. 'Transferring my data currently involves someone transporting a USB; 100km/hour in a ute is quicker than my internet!'

■■■■ cannot access large data files in the paddock; ■■■■ overcomes this by printing hard copies of maps and carrying these in his ute.

■■■■ has three soil moisture probes across his farm which requires constant 3G service to upload every 9 minutes. ■■■■ cannot collect moisture data from one soil type because it experiences insufficient mobile service.

'I invite you to visit and experience the challenge of poor connectivity and see the lengths I go to overcome it.'

Case Study Three

■■■■■ manages a 2,600 hectare mixed farming enterprise 8km west of Grenfell. ■■■■ has 35 years' experience as a farm manager. The business has three full time employees and complies with single touch payroll.

Economic Benefits of Ag Tech

■■■■ experiences significant return on investment from precision agriculture. There has been a 13% cost saving on fertilizer as a result of using variable rate technology (VRT) at sowing. Similar savings are made on other inputs. VRT increases production, reduces inputs and results in a more profitable and sustainable business. ■■■■ introduced guidance technology 15 years ago and precision agriculture six years ago. Economic benefits mean ■■■■ continues to identify and introduce technology.

Connectivity

■■■■ manages his farm from a home office serviced by a landline and wireless broadband; there is no mobile coverage in the office. There is mobile coverage across all but 30 hectares of the farm. The office internet connection is slow and regularly drops out in late afternoons particularly if multiple windows are open, as such ■■■■ spends early mornings in the office, when it is most reliable.

■■■■ has learnt to manage around his connectivity challenges. The internet is a business tool: it's too slow and frustrating for entertainment or social activities. ■■■■ states 'I wouldn't know what good

was, we are so accustomed to it being bad.’ A recent speed test in the office on a weeknight at 6.30pm indicated download speeds of 1.34 Mbps.

Barriers to Business

Within five years [REDACTED] will implement precision agriculture across his livestock enterprise and the 30 hectares of pasture without connectivity will become a barrier, demonstrating connectivity as economic enabling infrastructure. Mobile phone calls are a core communication method and poor coverage affects [REDACTED] business daily. ‘I don’t get to stop running my business just because I travel through a location with no mobile reception.’

Australia’s reputation for poor rural connectivity means international precision farming companies do not offer their best technology to the Australian market, meaning [REDACTED] cannot use his platform of choice. [REDACTED] worries that even when this new technology eventually makes it to Australia, that he won’t have sufficient connectivity on farm to support it. ‘I just want the technology to make better decisions for my business.’

‘I welcome you to come and see what we do with what we have.’

Case Study Four

[REDACTED] lives in the Belgravia/Mullion Creek area close to Orange, a large regional city. She moved to this property in April 2003, and Telstra internet and mobile phone reception were good.

Connectivity

In March 2021, via several text messages, she was informed by Telstra, that their service may be temporarily disrupted due to maintenance. Since then Internet connectivity has been intermittent, - one time having no Internet for 10 days, and her mobile phone drops out or breaks up constantly.

Barriers to Business

[REDACTED] retired in April with plans to continue work as a family mediator, working privately. She has been unable to do this due to the poor Internet and mobile phone connectivity, and has had to cancel clients.

She is also at risk of losing her professional registration due to not being active for the required number of hours. This has a significant potential financial impact.

‘Telstra informed me there was nothing they can do, that I live in a patchy area and I should try installing a Smart Aerial (cost to me of \$1800 to \$2000) but there is no guarantee that will help. My response to that was that I haven’t moved my house and from April 2003 to March 2021, it wasn’t patchy.

‘This situation ‘may’ be due to disconnecting the 3G network but I have had different information from various Telstra conversations, so not sure about this. I believe that the 4G or 5G networks are better, but have less coverage, so they are only better for fewer people and have a lower coverage. If Telstra disconnects one service it should ensure what is available to customers is as good as, or better. Decisions by the Telstra Business Manager that ignore the needs of a large number of customers are not a good look and create mistrust of the Company and difficulty for customers.’

Attachment B:

Lachlan Shire Council currently utilises:

- Telstra Based Mobile Telephones.
- UHF CRS (CB) Radios in vehicles.
- The Land Mobile Radio System.

Even utilising the three systems the LGA does not currently have sufficient access across our Shire which impacts on worker safety and efficiencies in the way we conduct our business activities (e.g. not able to use smart devices in field operations, etc.).

The mobile phone system does not cover the entire Shire (even with the use of cell fi boosters). Key transports routes are not sufficiently covered (e.g. poor coverage between Condobolin and Forbes on the Lachlan Valley Way, etc).

The Shire's community acknowledges and appreciates that benefits that a secure / stable mobile phone network can bring to not only their everyday lives, but also to the ongoing prosperity of our towns and villages. It is essential in attracting businesses to our local government area and to attract ongoing investment. It appears that urban areas are moving forward in terms of mobile phone coverage whilst regional Australia is moving further behind. Businesses in our Shire want to take advantage of the technological developments that urban areas are experiencing, but are limited by poor mobile phone coverage, creating an uneven playing field for investment. Today the majority of businesses (including farming enterprises) require a fixed-line service, access to high-speed internet and a mobile phone/data service to fully engage in the digital economy. These services are either non-existent or are limited within our Local Government Area.

We understand that there are commercial viability concerns for telco providers in providing and maintaining new infrastructure in regional locations. However, it is beyond our Councils (and the community's) capacity to fund the extension of the mobile phone network on its own. The benefits to regional areas, however, need to be recognised. The broader benefits include improved access to government services, ease of communications for emergency services, improved access along major transport routes which benefits economic growth as well as public safety, improved safety for farmers and coverage for visitors to the area.

Given the benefits of improving mobile coverage, Council is open to consider partnering with carriers to improve mobile phone coverage. Council is aware that it may need to consider making substantial capital improvements to improve the mobile phone coverage within our Shire which will impact upon our operating budget and the levels of service we can provide to our community, whilst enduring difficult economic conditions including one of the worst droughts on record. Given our small operating budget we are likely to also require financial assistance from the Federal Government to fund the infrastructure required within our LGA, which may cost in the order of \$350,000 to \$500,000 for each new tower (notwithstanding the ongoing maintenance costs).

Mobile phone technology is the way of the future and all we ask for is a level playing field with our urban counterparts. Without immediate improvements to mobile phone technology within regional Australia the future for our regional towns and villages will be severely compromised.

Attachment C:

Mobile Blackspot Priority locations across the Central West. This list was collated with direct feedback from Local Government.

The sites in yellow were rectified in the last round of the Federal Government's Mobile Black Spot Program.

Federal Identifier	LocationName	Electorate	Lat	Long	LGA
NSW-0342	Carcoar	Calare	-33.61608088	149.1403467	Blayney
NSW-1686	Wattle Flat	Calare	-33.13944156	149.6936607	Bathurst Regional
NSW-0158	Black Springs	Calare	-33.84779051	149.7422671	Oberon
NSW-1220	Obley	Calare	-32.70420749	148.5524775	Cabonne
NSW-1485	Sunny Corner	Calare	-33.38074527	149.8857339	Bathurst Regional
NSW-2428	Ganbenang	Calare	-33.754081	150.129016	Oberon
NSW-0201	Boona Mount	Parkes	-32.62901213	147.204345	Lachlan
NSW-0904	Lewis Ponds	Calare	-33.27051578	149.2673089	Cabonne
NSW-2931	Ophir	Calare	-33.169287	149.239044	Cabonne
NSW-0640	Glen Davis	Calare	-33.12219843	150.2795154	Lithgow
NSW-2487	Goonumbla	Riverina	-32.996043	148.125226	Parkes
NSW-0013	Albert	Parkes	-32.3520184	147.5074569	Lachlan
NSW-1088	Mount Olive	Calare	-33.6151777	149.9444709	Oberon
NSW-3059	Rock Forest	Calare	-33.356334	149.402222	Bathurst Regional
NSW-0430	Cooks Myalls	Riverina	-33.03410148	147.9984082	Parkes
NSW-2836	Mount Rankin	Calare	-33.351629	149.477767	Bathurst Regional
NSW-0298	Burruga	Calare	-33.94780466	149.5306656	Oberon
NSW-0530	Duckmaloi	Calare	-33.69023958	149.9633763	Oberon
NSW-1173	Newbridge	Calare	-33.58506711	149.36386	Blayney
NSW-0948	Lowther	Calare	-33.61960747	150.1041856	Lithgow
NSW-0502	Dargan	Calare	-33.4896502	150.2523579	Lithgow
NSW-2017	Belgravia	Calare	-33.10972	149.024448	Cabonne
NSW-0273	Bumbaldry	Riverina	-33.90892775	148.4434281	Weddin
NSW-0591	Fifield	Parkes	-32.80798257	147.4570176	Lachlan
NSW-0650	Glenelg	Riverina	-33.73082409	148.08831	Weddin
NSW-2537	Hartley Vale	Calare	-33.534936	150.238007	Lithgow
NSW-2532	Hampton	Calare	-33.645936	150.047837	Lithgow
NSW-0458	Corinella	Riverina	-33.45435181	147.5216876	Forbes
NSW-2544	Hazलगrove	Calare	-33.665769	149.892776	Oberon
NSW-0637	Glen Alice	Calare	-33.04683412	150.219996	Lithgow
NSW-0908	Limekilns	Calare	-33.25859818	149.7482362	Bathurst Regional
NSW-3371	Wisemans Creek	Calare	-33.623863	149.719629	Oberon
NSW-0387	Clear Creek	Calare	-33.31190534	149.694602	Bathurst Regional
NSW-1723	Wiagdon	Calare	-33.18391849	149.6829993	Bathurst Regional
NSW-1059	Moorilda	Calare	-33.61664512	149.330498	Blayney
NSW-1937	Wolgan Valley	Calare	-33.240061	150.155897	Lithgow

Federal Identifier	LocationName	Electorate	Lat	Long	LGA
NSW-2072	Bocobra	Calare	-33.086768	148.537795	Cabonne
NSW-2573	Isabella	Calare	-33.95364	149.666876	Oberon
NSW-3244	Triangle Flat	Calare	-33.757706	149.47349	Bathurst Regional
NSW-0056	Baldry	Calare	-32.86400254	148.5024567	Cabonne
NSW-0314	Byng	Calare	-33.34644109	149.2554183	Cabonne
NSW-0291	Burcher	Parkes	-33.51491253	147.2531711	Lachlan
NSW-2127	Bruie Plains	Riverina	-32.818476	147.865048	Parkes
NSW-2579	Jenolan	Calare	-33.816084	150.02147	Oberon
NSW-0586	Fairholme	Parkes	-33.28266036	147.3997385	Lachlan
NSW-0772	Hobbys Yards	Calare	-33.69436711	149.3276863	Blayney
NSW-0836	Kiacatoo	Parkes	-33.04995516	146.765279	Lachlan
NSW-1077	Mount David	Calare	-33.82115912	149.5945644	Oberon
NSW-1279	Paling Yards	Calare	-34.17847042	149.7431121	Oberon
NSW-1280	Palmer's Oaky	Calare	-33.1958241	149.859917	Lithgow
NSW-1750	Wollangambe	Calare	-33.27196923	150.4667136	Lithgow
NSW-1991	Bald Ridge	Calare	-33.936983	149.422719	Oberon
NSW-2190	Caloola	Calare	-33.609017	149.435712	Bathurst Regional
NSW-2280	Cow Flat	Calare	-33.568447	149.531876	Bathurst Regional
NSW-2385	Essington	Calare	-33.71813	149.681543	Oberon
NSW-2628	Kerrs Creek	Calare	-33.050016	149.092493	Cabonne
NSW-3064	Roseberg	Riverina	-33.863988	149.068458	Cowra
NSW-1017	Milkers Flat	Calare	-33.2810986	149.3971689	Bathurst Regional
NSW-1604	Turondale	Calare	-33.07999016	149.6096358	Bathurst Regional
NSW-1856	Errowanbang	Calare	-33.524499	149.039455	Blayney
NSW-1285	Parkes Airport East	Riverina	-33.109682	148.302595	Parkes
NSW-1251	Orange Road	Riverina	-33.122984	148.405775	Parkes