Regional Telecommunications Update, Murraylands and Riverland, SA

By

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EXECUTIVE SUMMARY

The RDA Murraylands and Riverland in conjunction with The Murraylands and Riverlands Local Government Association, has sought a review of the status of regional telecommunications across its region, from Optimi Digital, in support of a planned submission to the Regional Telecommunications Independent Review Committee 2018. The following summary has been prepared to support this submission.

Optimi Digital has worked with the RDA Murraylands and Riverland, along with a number of the regional Local Government Authorities (LGAs), to support improvements in regional telecommunications since 2015. In this time the region has experienced significant improvements in mobile coverage and access to broadband. Much of this has occurred because of formalized development programs, largely led by the Commonwealth Government. These include the Mobile Black Spots Program (rounds 1 and 2) and the rollout of the National Broadband Network.

On face value, the region has fared far better than many other areas across the country, in addressing the impact of poor mobile coverage on its communities and key industries. There remain large gaps in coverage however, these are now mainly confined to the remote areas of the region, with sparse population and industry. The deployment of the NBN has also proven to be better than average when compared to other regions across Australia.

Most towns across the region are serviced by NBN Fixed Wireless or better. There are very few small isolated locations that rely on NBN satellite. None of these sites involve significant social or economic infrastructure and align with the limitation in mobile coverage.

The main emphasis on continued development in regional communications should now be redirected towards the needs of key industries across the region. This is expected to involve some additional mobile improvements but will more than likely be achieved through a range of narrowband wireless technologies associated with the emerging trend in the Internet of Things (IoT).

There also remains a need for a focus on digital literacy and inclusion as well as skills development, to support the digital transformation occurring across most of the key industry sectors, including Tourism, Agriculture and Transportation. Public and Community services also remain an important area where digital transformation is expected to be noticed and will demand improved literacy and inclusion. This is expected to be met through several emerging national training and support programs, aimed at digital inclusion.

MOBILE COVERAGE

In the past three years, the region has seen a vast improvement in mobile coverage and access, despite limited support from the previous State Government. Some of this can be attributed to new mobile sites funded under the Commonwealth Government's Mobile Black Spot Program (see figure 1) however, most improvements have come because of local engagement and lobbying with the main carriers, proving that when armed with sufficient evidence (local digital profiles) it is possible to generate investment and development on reasonable terms.
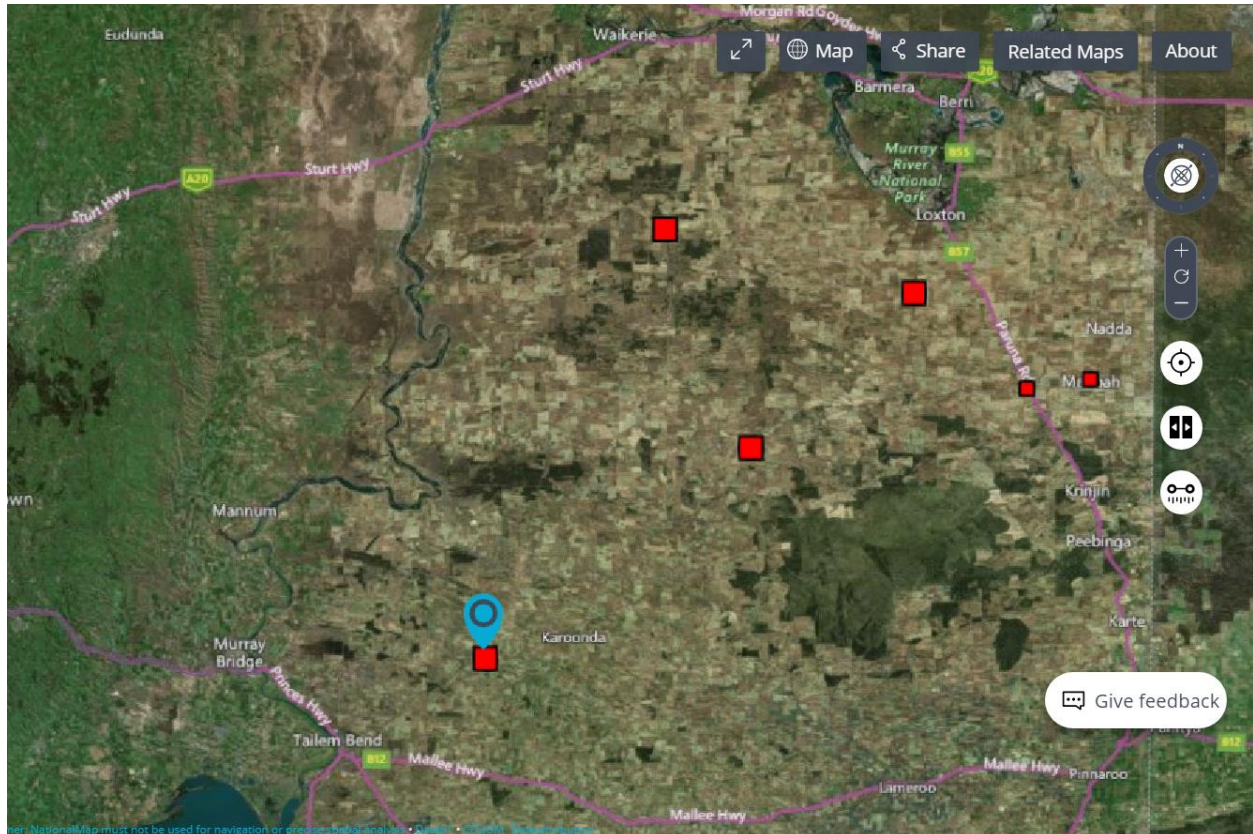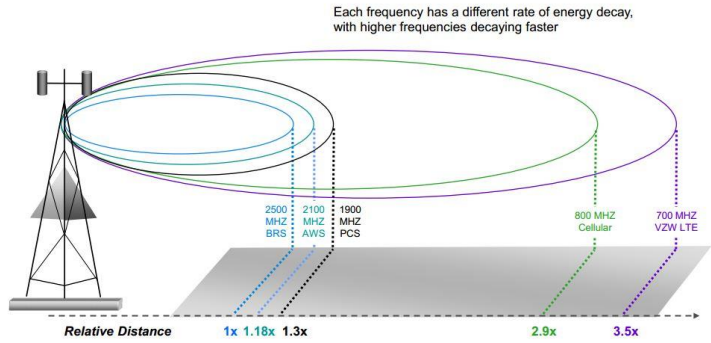

Figure 1: MBSP funded sites – Rounds 1&2

TELSTRA & OPTUS COVERAGE

Telstra has undertaken significant improvement to its mobile coverage across the region over the last three years (see figure 3). Whilst this includes some new sites funded under MBSP, most of the improved coverage has come from the upgrade of existing sites from 3G to 4G and then 4GX. The 4GX technology offers between 12% to 15% increased coverage footprint to that of 3G, using the same tower site (see figure 2).

700 MHZ Coverage Comparison — verizon

Each frequency has a different rate of energy decay, with higher frequencies decaying faster

2500 MHZ BRS | 2100 MHZ AWS | 1900 MHZ PCS | 800 MHZ Cellular | 700 MHZ VZW LTE

Relative Distance — 1x 1.18x 1.3x | 2.9x | 3.5x

700 MHz delivers superior coverage

18

Figure 2: 3G compared to 4G

Regional stakeholders need to continue to lobby Telstra and Optus to expedite the upgrade of all remaining 3G sites in the region. **It is also recommended that the RTIRC be advised of this important requirement and as such Commonwealth Government pressure be placed on the carriers to upgrade all remaining 3G sites, as part of terms for funding under the MBSP and any future such programs.**

| Palmer, South Australia, AUS | × | Q |

Map View — Standard

High Contrast — OFF

Transparency

View coverage disclaimer

Map Data © 2011 MapData Services Pty Ltd (MDS), PSMA

■ 4GX device only typical download speed 2 to 75Mbps | ■ 4G device only typical download speed 2 to 50Mbps | ■ 3G device only | ■ 3G external antenna
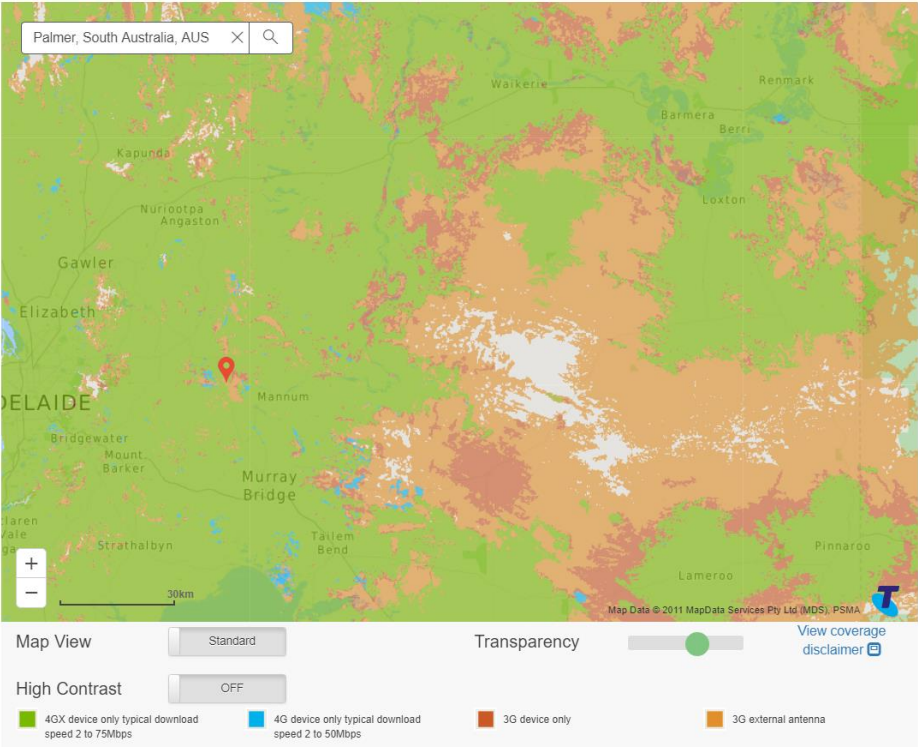
Figure 3: Telstra Mobile Coverage, as at July 2018

Whilst not as extensive as Telstra, the Optus coverage also has seen significant improvement over the past three years (see figure 4). Optus has deployed a number of new macro mobile sites in the region as part of its strategic plans to compete directly with Telstra. They have also explored the option for several micro cell sites as well.
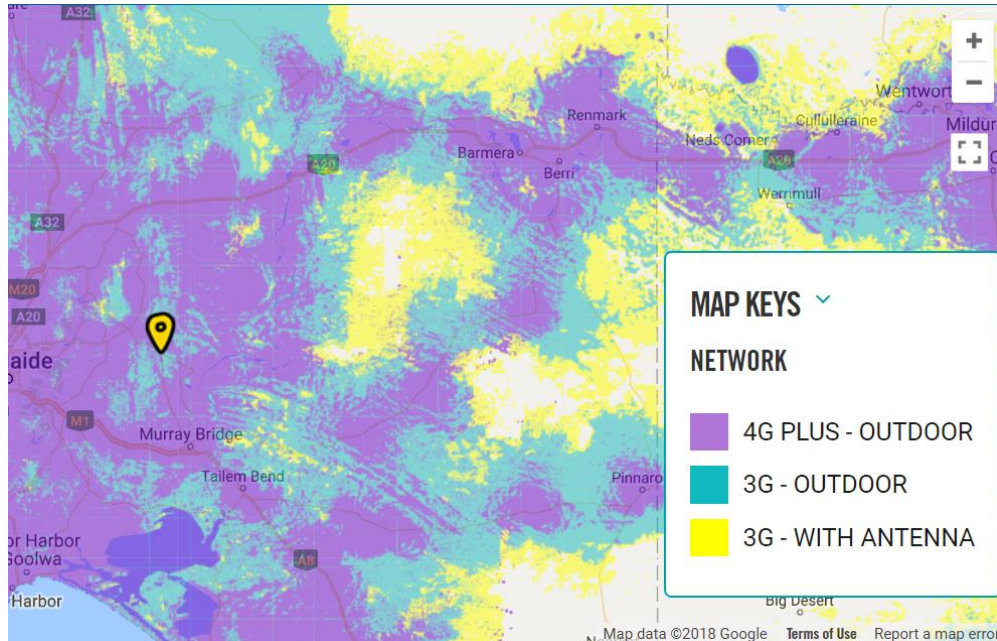

Figure 4: Optus mobile coverage as at July 2018

Summary

Overall, the region has seen significant improvements to the mobile coverage and the RDA Murraylands & Riverland can take real pride in its part to achieve this. Other regions could learn from the way this has been achieved and the value in building evidence and justification for improvement, rather than simple complain about the situation.

BROADBAND

In the past three years, the region has also experienced a transformation in broadband access, through the roll out of the NBN (see figure 5). Whilst other regional areas across the country have experienced unusual levels of satellite access for many of small towns, this region has been fortunate to receive an unusually high level of fixed wireless deployment. This has placed the region on a strong footing in relation to the number of local businesses with access to quality broadband.

This is further demonstrated with continuing infrastructure deployment underway in and around Caloote, Tepko and Wall Flat, to fill coverage gaps from earlier deployment of fixed wireless in the area. Such gaps in other regional areas would see local homes and businesses

required to seek access to the NBN via the SkyMuster satellite technology (a step down in capability).
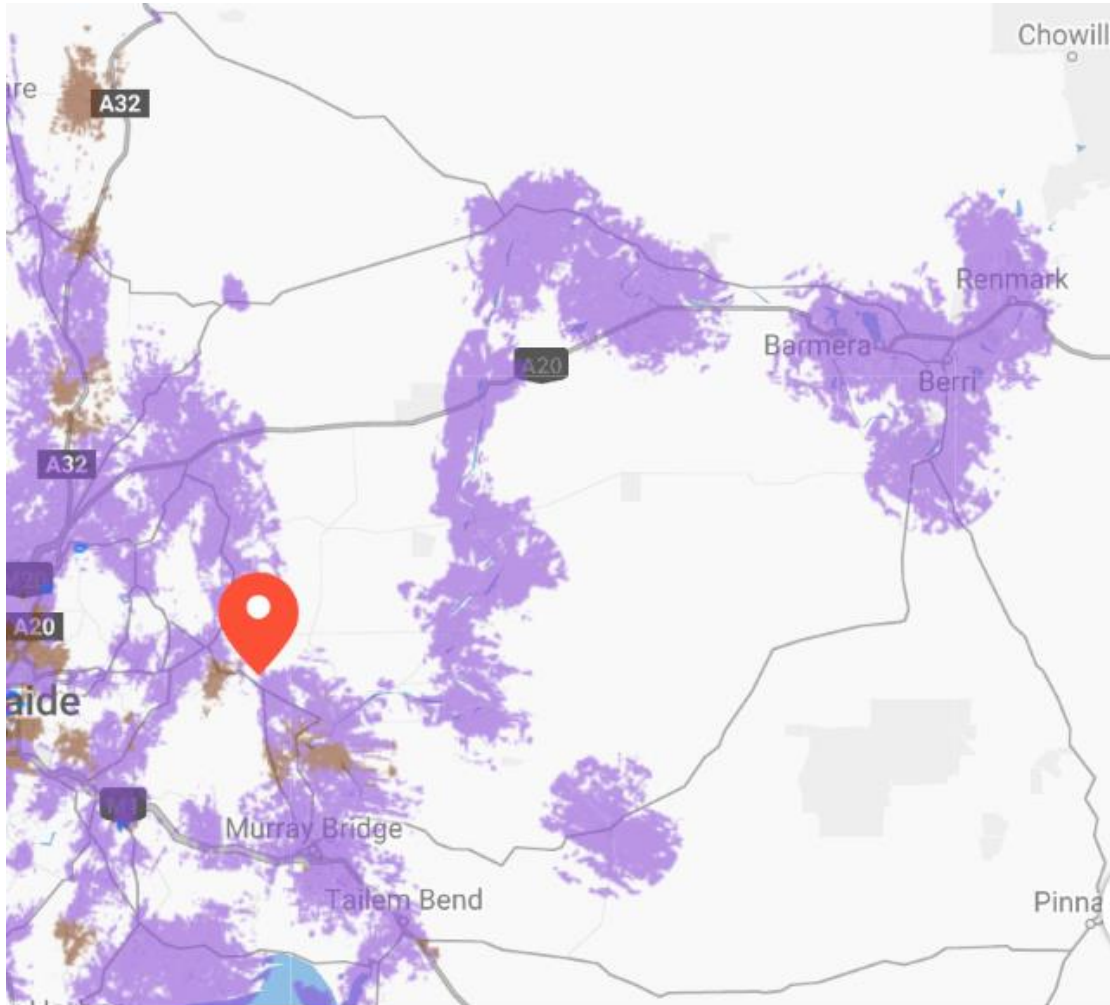

Figure 5: NBN deployment across the region

As can be seen in figure 5, most major towns across the region have either NBN Fixed Line or Fixed Wireless services. Most are also now operational (as shown by areas in purple) with a few still under construction (in brown) the remaining areas in white indicate NBN is provided via Skymuster Satellite.

Figure 6 provides a closure assessment of the NBN deployment in the northern part of the region. There are no significant towns (with reasonable social or economic infrastructure) that have been connected to the NBN via satellite as shown on their rollout map. This is a major advantage for the region.
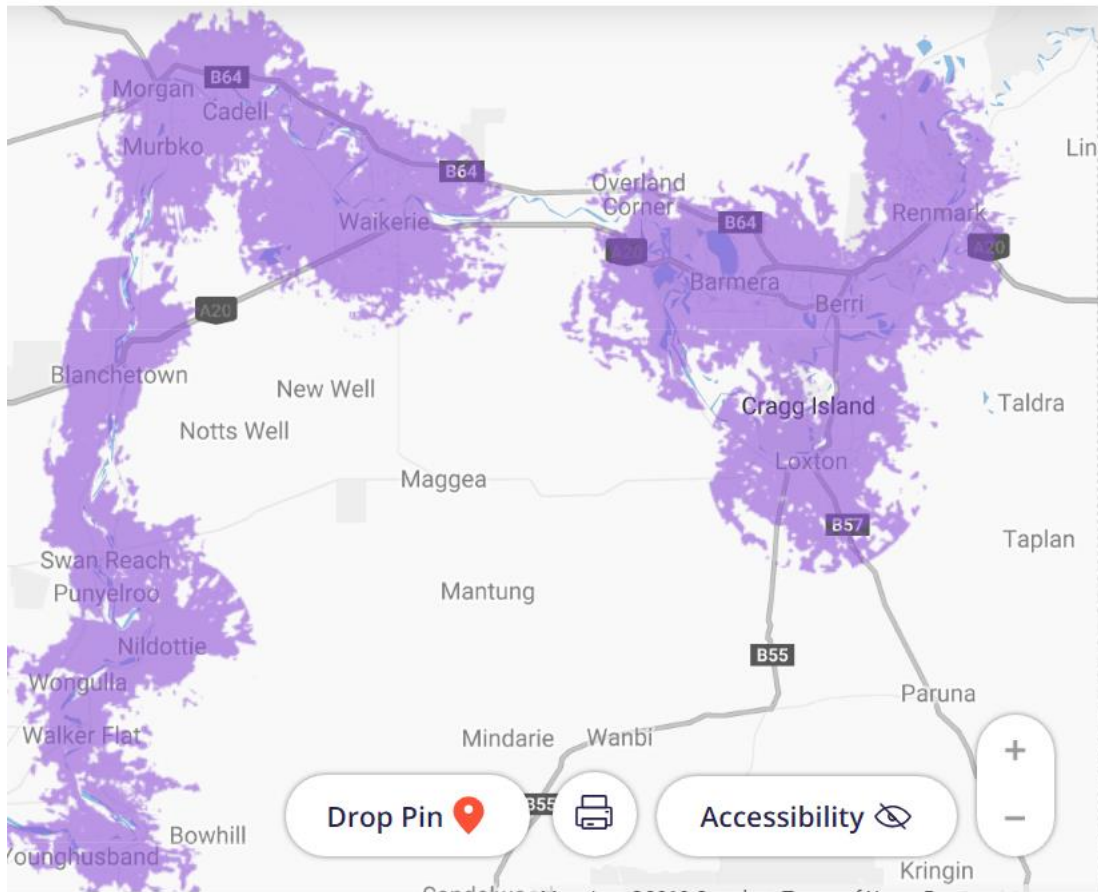
Figure 6: NBN deployment in the northern region

Figure 7 provides a closure assessment of the NBN deployment in the southern part of the region. The decision to connect Pinnaroo to the NBN via satellite is a major concern and one that should be addressed with the RTIRC. It is clearly a significant town, with reasonable social and economic infrastructure and should be serviced using Fixed Wireless at the very least.

A similar circumstance exists for the town of Lameroo. This should also be taken up with the RTIRC. It is likely that continued pressure will be placed on the local mobile data services, to provide a substituted broadband service in both towns, reducing the overall capability to support mobile requirements.
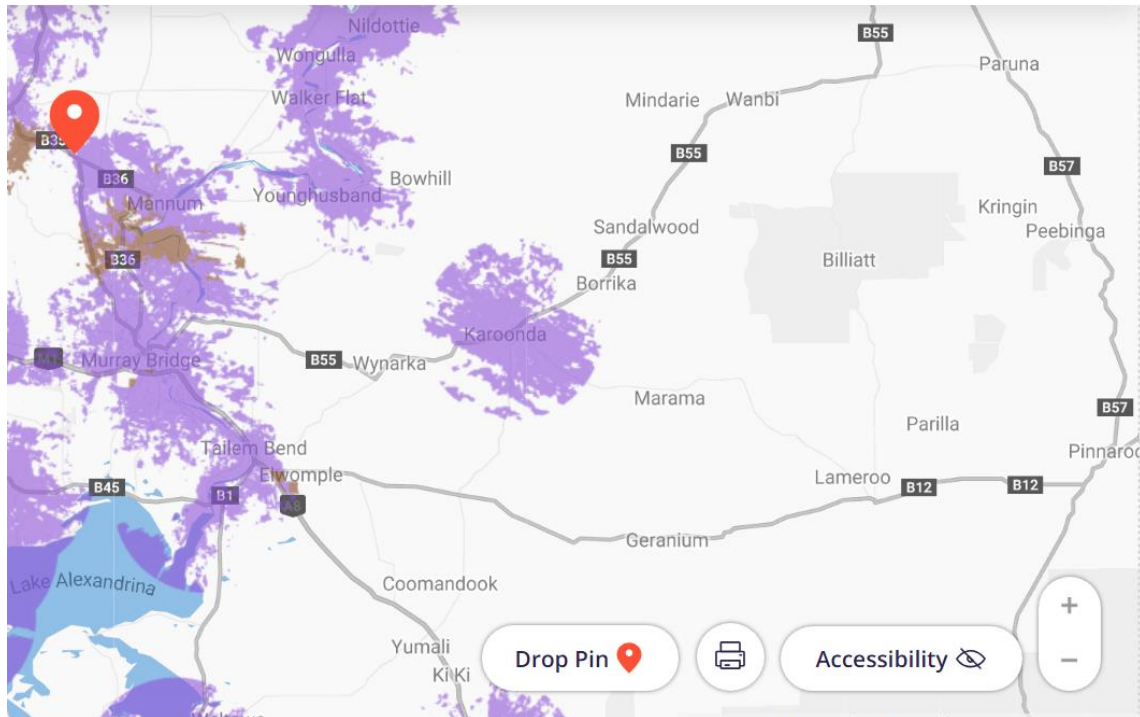
Figure 7: NBN deployment in southern regional area

KEY OBSERVATIONS

Optimi Digital has drawn the following key observations from its review of the regional telecommunications developments in the Murraylands & Riverland regional area:

1. Significant improvements have been made in mobile coverage and services across the region. There remain small pockets requiring further improvement however, much of this is expected to be addressed with continued upgrade from 3G to 4GX technology.

2. A similar improvement has been achieved across the region for broadband as a result of the NBN roll out. The region has been treated significantly better than many other regional areas across the country.

3. There is a significant issue with the decision to deploy the NBN using satellite technology to the towns of Pinnaroo and Lamaroo.

4. Digital inclusion and literacy continue to remain a major focal point for the region now that services and connectivity have been addressed.

5. Future digital development should now shift to fit for purpose technology, to support digital transformation across the major industry sectors and operations, located throughout the region. A focus on agriculture (intensive horticulture and livestock).

RECOMMENDATIONS

Based on the key observations Optimi Digital recommends that the RDA Murraylands & Riverland address the following with the RTIRC.

1. Provide the RTIRC with a summary of the work carried out over the past three years and how this has dramatically shifted the state of regional telecommunications across the region. A case study in how to achieve impact and outcomes base on local engagement, activity and cooperation.

2. Advise the RTIRC that an emphasis must remain on digital literacy and inclusion, or the investment and efforts made to improve connectivity and access will be wasted.

3. Advise the RTIEC that continued support and focus needs to be aimed at regional businesses and their ability to take full advantage of the digital age and economy. This includes a focus on fit for purpose technology, to drive smart farming, e-transport and digital enabled tourism.

4. Lobby the RTIRC to intercede with the Commonwealth Government and the NBN, to have towns like Lameroo and Pinneroo upgraded from satellite to fixed wireless connectivity.