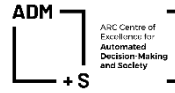


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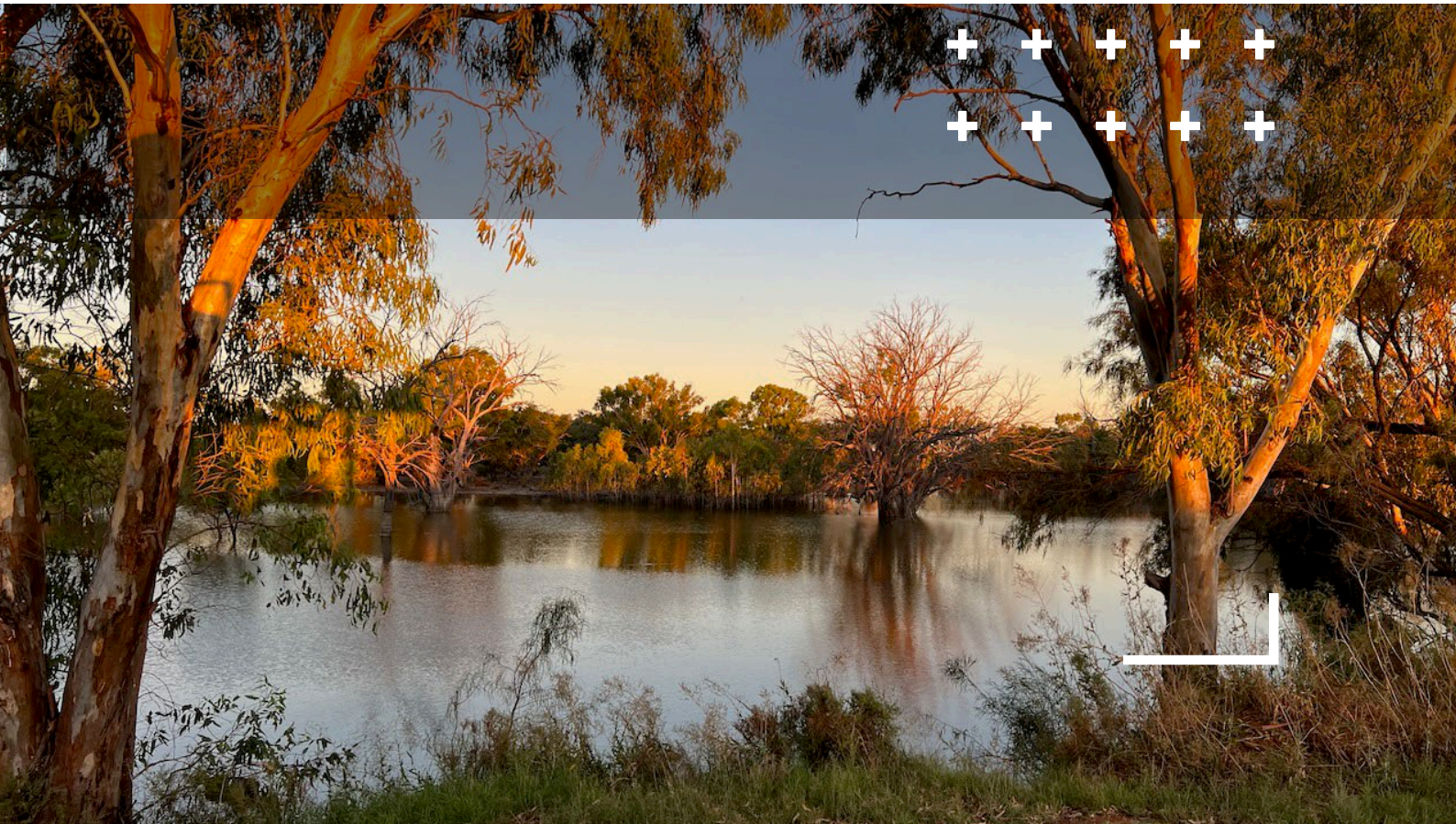


MAPPING THE DIGITAL GAP

Measuring Digital Inclusion and Media Use in Remote Aboriginal and Torres Strait Islander Communities 2021-24

Wilcannia, NSW

2023 Community Update Report



Acknowledgement of country

We respectfully acknowledge the Baarkandji people, the traditional owners for Wilcannia, and pay our respect to their Ancestors and Elders, past and present. We also acknowledge the Traditional Custodians and their Ancestors of the lands and waters across Australia where we work, live and undertake our research.

About the Mapping the Digital Gap research project

Mapping the Digital Gap is a 4-year research project working in partnership with local organisations in 12 remote First Nations communities, to generate a detailed account of digital inclusion and uses of digital services including news and media, track changes over time, and inform appropriate local strategies and services enabling informed decision making by remote Aboriginal and Torres Strait Islander people. It is a supplementary project to the Australian Digital Inclusion Index, coordinated within the RMIT University node of the Centre of Excellence for Automated Decision Making and Society in partnership with Telstra.

Contact

Dr Daniel Featherstone
Project Lead



E: mtdg@rmit.edu.au
M: 0437 798 076
W: mappingthedigitalgap.com.au

The 'Mapping the Digital Gap' project received funding support from Telstra and the Australian Research Council Centre of Excellence for Automated Decision-Making and Society (CE200100005).

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Suggested citation: Featherstone, D, Ormond-Parker, L, Hawkins, L, Thomas, J, Parkinson, S, Kennedy, J & Clayton, R (2023) Mapping the Digital Gap: Wilcannia NSW Community Update Report 2023. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne.
DOI: 10.60836/tqyt-v573

Acknowledgements and thanks

We would like to thank the following key contributors to this research:

Community research partner

Regional Enterprise Development Institute (REDI.E),
Dubbo – <https://redie.org.au/>

REDI.E Site Manager Wilcannia: Robert Clayton

REDI.E Chief Executive Officer: Peter Gibbs

Community co-researchers 2023

Shaylin Whyman, Katelyn Whyman, Sheldon Hunter

Research participants and stakeholders

Thank you to all the community residents and local agency staff who generously participated in the surveys and interviews, providing the personal experience to make this research meaningful. We conducted 84 surveys with First Nations community residents in 2023 (67 in 2022). During 2022 and 2023 research visits, we undertook interviews with community leaders, residents and the following stakeholder agencies:

- + Regional Enterprise Development Institute (REDI.E)
- + Centrelink office (managed by REDI.E)
- + Central Darling Shire
- + Shire Services Depot staff
- + Wilcannia Central School
- + Wilcannia Police Station
- + Maari Ma Health
- + Wilcannia River Radio
- + Safe House- Domestic Violence NSW
- + Cultural Solutions employment enterprise
- + Community Restorative Centre
- + Wings Youth Drop-in Centre
- + Emu Heart - cultural planning consultancy
- + nbn Local
- + Family and Community Services
- + Wilcannia TAFE
- + Cooee Cafe

Wilcannia research trip dates

6-10 February 2023; 6-12 February 2022

RMIT University researchers

Dr Daniel Featherstone

Dr Lyndon Ormond-Parker

Design: Leah Hawkins

Editing: Lucy Valenta

Photography: Daniel Featherstone

Cover: Sunset on Lagoon of Baarka (Darling River)

CONTENTS

1. Executive Summary	4
Wilcannia at a glance	5
Key survey findings.....	5
What is digital inclusion? How is it measured?	6
ADII 2023 report findings	7
2. Introduction.....	8
3. Media and Communications in Wilcannia.....	11
4. Key Findings From Data Analysis.....	14
Communications access.....	14
Access to IT devices, Wi-Fi or shared facilities	18
Service delivery and use of online services	20
Access to media and news services	24
Affordability.....	25
Digital Ability.....	26
5. Considerations for Local Digital Inclusion Plan	29
Appendix 1: Summary of Survey Results	33
Appendix 2: Community Communications Audit.....	39
Appendix 3: Photos of Research Activities	43



Figure 1:
 Research team
 (Left to right):
 Robert Clayton,
 Sheldon Hunter,
 Katelyn
 Whyman, Shaylin
 Whyman,
 Lyndon Ormond-
 Parker and
 Daniel
 Featherstone



1. EXECUTIVE SUMMARY

This report outlines updated findings from our second research visit to Wilcannia, situated on the banks of Baarka (Darling River) in western New South Wales. Located in Central Darling Shire, Wilcannia is about 200 km from Broken Hill, 260 km from Cobar, 500km from Dubbo and 970 km from Sydney. The traditional owners are the Baarkandji river people.

The population of the Central Darling Shire is approximately 2,000 people, with this population geographically dispersed over 53,000 square kilometres. The Shire includes the remote towns of Wilcannia (population 745, 61.2% Indigenous), Menindee (population 200, 50% Indigenous), Ivanhoe (population 200), 50% Indigenous), and White Cliffs (population 250), as well as the hamlets of Sunset Strip and Tilpa, and pastoral properties. Like many remote First Nations communities, Wilcannia has typically low household incomes, overcrowded housing, and faces significant digital inclusion barriers including limited affordable access to quality communications services.

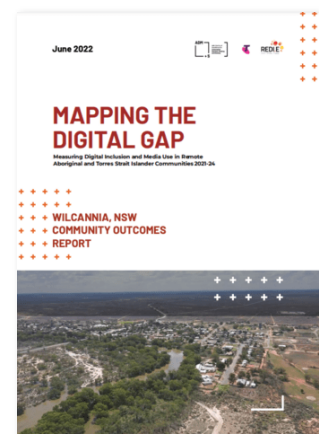
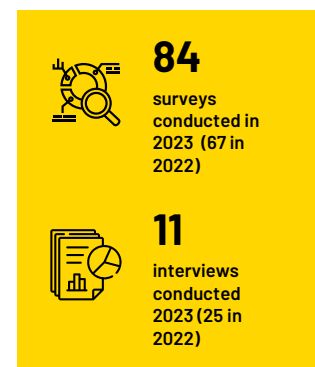
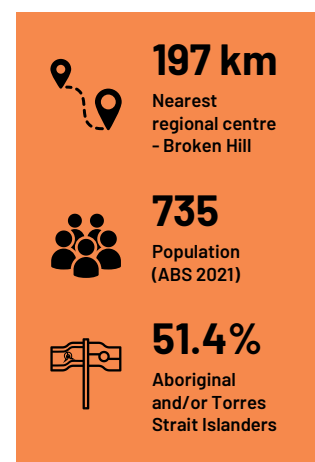
Our first research visit in February 2022 identified substantial challenges for Wilcannia residents and service providers in terms of access to quality mobile and telecommunications services, with low levels of digital inclusion for First Nations residents compared with other Australians (see next page).

Our second visit to Wilcannia, undertaken 6–10th February 2023, was another highly productive week. Our sincere thanks to community research partner Regional Enterprise Development Institute (REDI.E), Team Leader Robert Clayton and co-researchers Shaylin Whyman, Katelyn Whyman and Sheldon Hunter, for their collaboration and guidance in the research. Thanks also to all who participated in the research, with 84 surveys undertaken with First Nations residents and 11 interviews with community leaders and local stakeholders.

Building on the [2022 Community Outcomes Report](#), this Update Report is intended to assist community agencies, leaders and residents to better understand the barriers to digital inclusion, develop local strategies to address these barriers, and support planning and partnerships with government and industry stakeholders.

This report presents combined research findings to date, comparing 2023 survey results with 2022 results, outlining any changes in communications and media services and usage, and adding new findings and quotes from interviews to the analysis section. The proposed Digital Inclusion Plan has been updated based on community input and any progress to date, including current or planned activities.

The report also provides 2023 Australian Digital Inclusion Index scores for Wilcannia relative to national averages and key findings from our first round of visits to 10 remote towns, communities and homelands in 2022.



Wilcannia at a glance

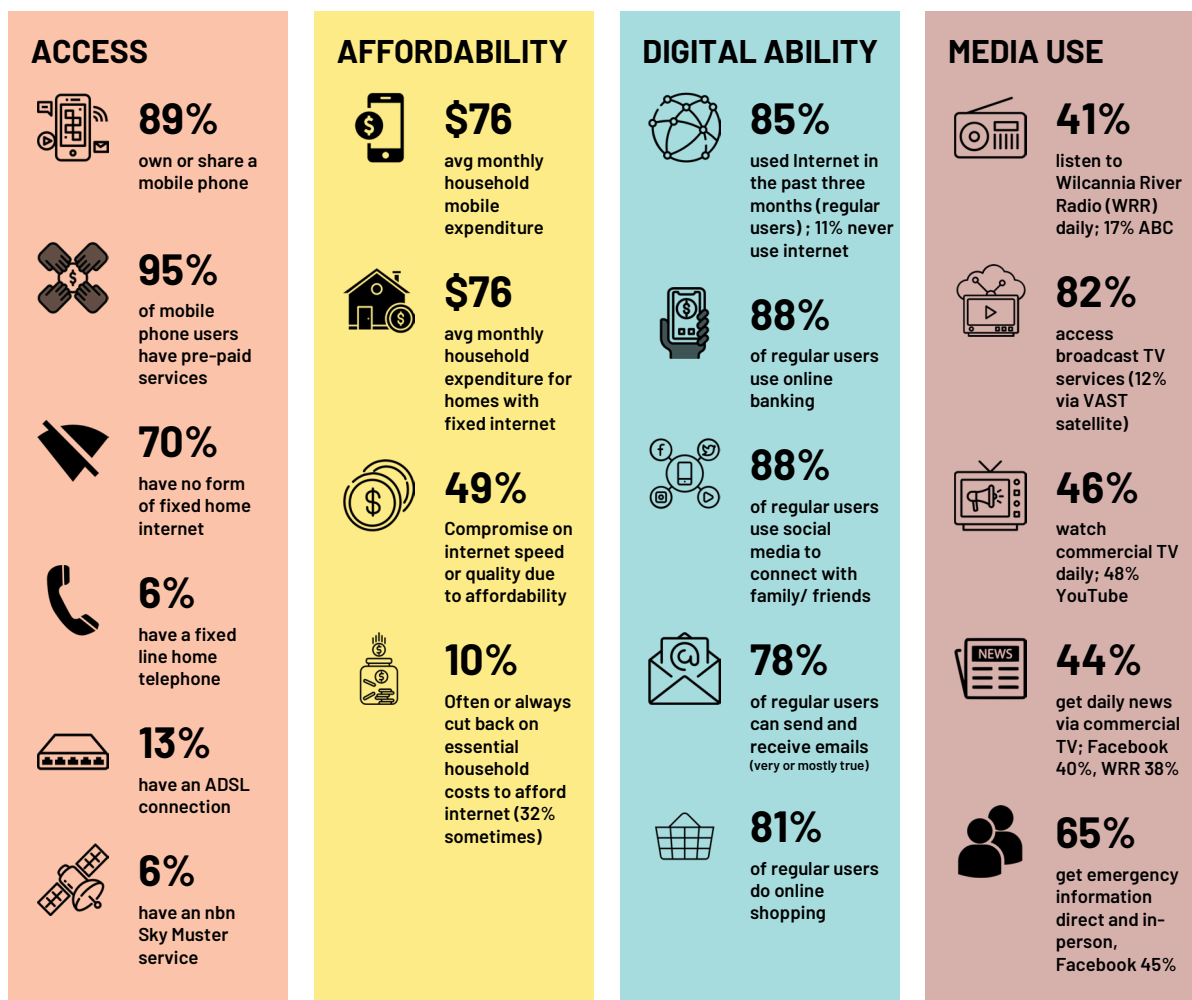
Distance	985 km	to nearest capital city (Sydney)
Dwellings	331	private dwellings
	2.8	people per ATSI household
Language	3.8%	% of people who speak an Aboriginal language
Income	\$442	median ATSI income



Figure 2: Aerial photo of Wilcannia (Credit: NITV)

Key survey findings

Below is a summary of unweighted 2023 survey results.



Full 2023 survey results are available in Appendix 1, with comparison to 2022 results. An updated audit of demographics and communications and media services available in Wilcannia is provided in Appendix 2.

ADII 2023 report findings

The 2023 ADII found a digital gap of 7.5 points for First Nations people compared with other Australians. This gap widened substantially for people living in remote (24.4) and very remote Australia (25.3), where contributing factors include limited access to digital infrastructure and services, high internet costs relative to income, climate, geography and cultural context.

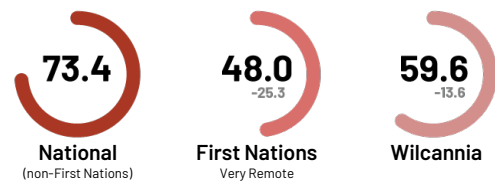


Figure 4: Wilcannia ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores, based on 2022 surveys.

Based on our 2022 survey results, the average Australian Digital Inclusion Index (ADII) score for Wilcannia was 59.6, a gap of 13.6 points below the national average for non-First Nations Australians (Figure 4).

The key element of this gap was in the Access score of 42.3, which was 29.7 points below the non-First Nations average, owing primarily to limited household internet access, patchy and slow mobile coverage in parts of town, and high reliance on mobile devices. The Index scores (see Figure 3) shows small gaps for Affordability (-3.7) and Digital Ability (-1.0). However these gaps vary widely for different demographic groups as outlined below.

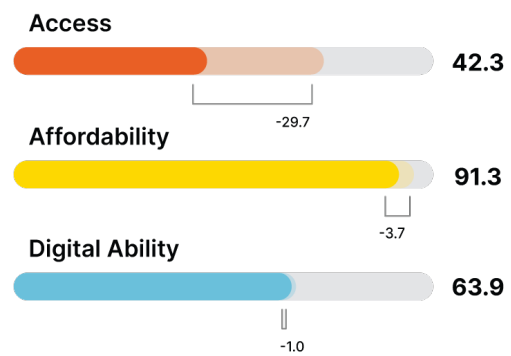


Figure 5: 2023 ADII scores for Wilcannia, with gap against national non-First Nations averages.

Demographic gaps in Wilcannia:

The 2022 survey results found significant gaps in digital inclusion for some demographic groups. These results demonstrate that targeted digital support activities would benefit these demographic groups in Wilcannia.

<p>Disability gap</p> <p>14.1</p> <p>People who live with disability had average digital inclusion scores of 48.5 compared to 62.6 for those without disability. The gap was primarily in the areas of Digital Ability (45.1 compared with 69.0) and Access (33.9 compared with 44.6).</p>	<p>Gender gap</p> <p>8.2</p> <p>Women had lower average digital inclusion scores than men – 55.5 compared with 63.7. This gap was across all dimensions but was particularly high in the Affordability score (87.6 compared with 95.2) due to lower relative income levels.</p>
<p>Education gap</p> <p>32.9</p> <p>Those who did not complete secondary school had an average digital inclusion score of 40.0 compared to those who completed up to Year 10, who averaged 61.6. The biggest aspect of this gap was in Digital Ability (28.2 compared with 68.8) and Access (24.6 compared with 42.5).</p>	<p>Employment gap</p> <p>14.8</p> <p>The average digital inclusion score for unemployed people was 51.6 compared to 66.4 for those employed (full-time or part-time). The gap was across all areas - Digital Ability (54.0 compared with 73.2), Access (35.4 compared with 48.1) and Affordability (88.2 compared with 93.3).</p>
	<p>Age gap</p> <p>49.9</p> <p>Those aged 55–64 had an average digital inclusion score of 45.1, with those aged 75+ averaging 21.6, compared with a score of 71.5 for those aged 18–34 years. The gap was most pronounced in the area of Digital Ability (34.6 for 55–64 / 0.0 for 75+ compared to 85.4 for 18–34 age group). The was also a big gap in Access scores for people aged 75+ (10.7 compared with 50.8) and affordability a key factor for the 55–64 age group (83.3 compared with 91.4).</p>

2. INTRODUCTION

The Mapping the Digital Gap project seeks to track changes in digital inclusion and media and communications use in each research site over three years. This report provides an update from our second visit to Wilcannia in February 2023, comparing the survey and interview results to our findings from the first visit in February 2022. It also seeks to track any progress on the suggested strategies for a local Digital Inclusion Plan and update the plan with any newly identified strategies or activities.

2022 findings

During our first visit in 2022, we heard multiple reports that the mobile service was patchy and unreliable, congested in peak periods, with low penetration inside buildings. We heard the significant frustration from residents and service providers with the quality and reliability of mobile and fixed line (ADSL) services.

Most First Nations residents primarily use prepaid mobile services for voice and data use, with very few households having home internet connections. The high cost of pre-paid data resulted in affordability challenges, especially with increased use of streaming services, social media, gaming and other high-bandwidth applications during and post COVID-19 restrictions.

The ongoing transformation of government services to online delivery had increased the importance of affordable internet access and digital skills. Reduced face to face services and limited community access facilities meant that access to critical services, such as health, employment, welfare and finance, was increasingly user-pays. Vulnerable groups — including elderly, unemployed, those with disabilities or facing domestic violence — risked exclusion from the very services aimed at addressing these barriers.

The 2021 COVID-19 outbreak drew stark attention to Wilcannia's inadequate communications services. The influx of health and emergency service agencies led to the installation of a temporary Telstra Cell on Wheels mobile tower and a temporary booster. nbn also installed a Wi-Fi network to 91 houses to enable home schooling. These solutions were removed following the outbreak. A 4G small cell tower was installed near the hospital, however a community-wide solution is yet to be implemented.

In the 2022 Community Outcomes Report, we grouped key findings under the following headings:

- + Predominantly mobile, and predominantly prepaid
- + Very few households have home internet connections
- + Affordability is a significant concern
- + The 4G network is congested, unreliable and patchy
- + Although access measures put in place during COVID-19 helped, they have not been retained
- + COVID-19 restrictions resulted in increased use of digital technologies and online services
- + Although community agencies have access to better coverage and deals than community residents, all spoke of need for improvements
- + Respondents report relatively high levels of basic operational skills, however are limited in developing more advanced capabilities due to reliance on mobile devices
- + There is demand for community access computers and free Wi-Fi, and mentors to provide IT support and skills in accessing online services
- + Cyber safety is a significant concern
- + While residents report high use of basic online services, unreliable access prohibits high-bandwidth applications
- + Local media is critical



Figure 6: 4G small cell tower near hospital

2023 findings

During our second visit to Wilcannia, we heard of recent upgrades to mobile services in Wilcannia, with some improvement in speed, coverage and penetration inside houses. There are plans for further Telstra upgrades to 5G during 2023. Also, NSW Government-funded new multi-carrier mobile towers in Wilcannia and Brewarrina, due for completion by late 2023, will return an Optus mobile service to Wilcannia. This addresses concerns raised about lack of competition and the tourism impacts of a single provider.

Residents acknowledged improvements in the quality of mobile coverage and penetration into houses, with some respondents saying they can now use their mobile phones inside the house. However, for the most part, the community sentiment was that not much had changed since our 2022 visit to improve digital inclusion for First nations residents, with some interviewees expressing frustration:

- + “It’s a right today to have access to internet. We’re paying for it [so] at least give us quality service for our money. [We need a] proper service out here. For crying out loud, we’re not in the dark ages anymore.” (Monica Kerwin, Wilcannia resident, 2023)
- + “We’re living in Australia in 2023 and the [mobile] service and internet should be a lot better than what it is now.” (Anthony Schembri, REDI.E / Centrelink, 2023)

Residents and some service providers told us they are still waiting to get the quality and speed of mobile and fixed internet services that they need. Mobile services remain patchy in some parts of town and, while improved, many homes and buildings still have poor signal penetration. There were numerous comments about reliability, with a recent example being a four-day outage in the weeks prior to our visit, and power supply issues impacting on communication services.

ADSL services were highly congested and slow with regular dropouts, insufficient for most business or household needs. This led to a small increase in uptake of Sky Muster services as well as rapid adoption of Starlink low earth orbit satellite services by agencies and staff, but not by First Nations households.

Wilcannia residents argued that improved communications services are critical to social and economic development in the community, including reliable access to essential services.



“Digital inclusion and mobile [services are] essential ingredients for our community success [and] our businesses. [Lack of communications] damages the economy [and limits employment opportunities for] young people. [When] young people are employed their confidence is up, [it can] change their lives. In this day and age, our internet and digital inclusion is a must.”

- *Brendon Adams, Wilcannia resident, 2023*

Access to, and affordability of, communications services continue to be key barriers to First Nations digital inclusion in Wilcannia. There was still primary reliance on pre-paid mobile services for voice and data access, with no sign of an increase in use of post-paid mobile or home internet services. With increased cost of living pressures across groceries, fuel, and bills, and costs for data increasing with streaming, gaming and other household use, affordability was an even greater concern.

Most Wilcannia residents have a relatively high level of digital literacy and online safety awareness. However, we found lower digital ability levels in some cohorts — the elderly, people living with disability, those who did not complete high school, and people who are unemployed. While service providers assist with online services, there is demand for more community access computers and digital mentor support.

This 2023 Update report incorporates the results of 84 surveys undertaken in 2023, in comparison to the 2022 results, and updated interview analysis based on 11 interviews and a community meeting.

Updates to proposed digital inclusion plan

The 2022 Outcomes Report included a proposed digital inclusion plan, outlining a list of potential strategies to improve digital inclusion based on input from research participants. We recognise the challenges in implementing a local digital inclusion plan, with no agency having the specific remit to lead communications and digital support programs, and limited capacity within already stretched agencies. Communications tends to be a state or federal government responsibility, with upgrade decisions and timeframes often determined by telecommunications services providers or funding programs. This can leave communities feeling disempowered.

However, Wilcannia has a strong history of advocating for improved services. Ongoing advocacy by Central Darling Shire, along with loud calls by service providers and residents for improved services during the COVID-19 outbreak have had impact. The strong engagement with the Mapping the Digital Gap project has shown the community urgently want further improvements and will continue to advocate. While there was a great deal of frustration expressed at the speed of change, there is a sense that their calls for improved communications is at last having some impact.

There has been some progress on media and communications services which align to actions outlined in the digital inclusion plan. These include the upgrades to the 4G mobile service with a 5G upgrade planned and a new tower being installed, bringing Optus service to Wilcannia. A new public Wi-Fi hotspot was installed at the REDI.E office, courtesy of nbn, building on existing services at the Centrelink agency and Wings Drop-in Centre. REDI.E are planning to set up a computer room for community access and digital skills training for workforce preparation, with Wings Drop-in centre also planning to install three access computers. Starlink services are being trialed by Central Darling Shire, including to provide public Wi-Fi access at the caravan park. Construction has now begun on the \$9.5 million Baaka Cultural Centre, creating opportunities for digital media production, archiving and cultural tourism.

Data collected through this project is provided within this report to support community-led and place-based planning and decision making.

- + “[This] data and evidence [helps us with] local decision making and ownership. ... Other communities [also need this type of data to support their] decision making and planning ... Because what might work really well here in Wilcannia doesn't mean it will be the best option somewhere else.” (Brendon Adams, Wilcannia resident, 2023)

The digital inclusion plan in Section 5 has been updated with new strategies proposed by residents and agencies, as well as a summary of progress or planned activities for each item listed.



Figure 7: The mighty Baaka (Darling River) and bridge entry into Wilcannia

3. MEDIA AND COMMUNICATIONS IN WILCANNIA

Existing telecommunications services



Mobile coverage

Mobile coverage to Wilcannia is currently provided from four towers:

- + MacCullochs Range, 46 km south-east of Wilcannia near the Barrier Highway, 3G/4G (ACMA Site ID 11185);
- + Netallie Trig, 11 km west of Wilcannia, 3G/4G/5G (ACMA Site ID 132137);
- + a 4G small cell at the Telstra exchange (27 Cleaton St Wilcannia); and
- + a 4G small cell tower (10m) near hospital (1-7 Ross Street; installed November 2021 primarily to support health services).

See Figure 8 below for locations. The 4G signal is weak in other parts of town, particularly Mallee and the centre of town near the post office and police station. There is low penetration inside most buildings. A 5G upgrade of MacCullochs Range tower was planned for 2023 (see page 13).

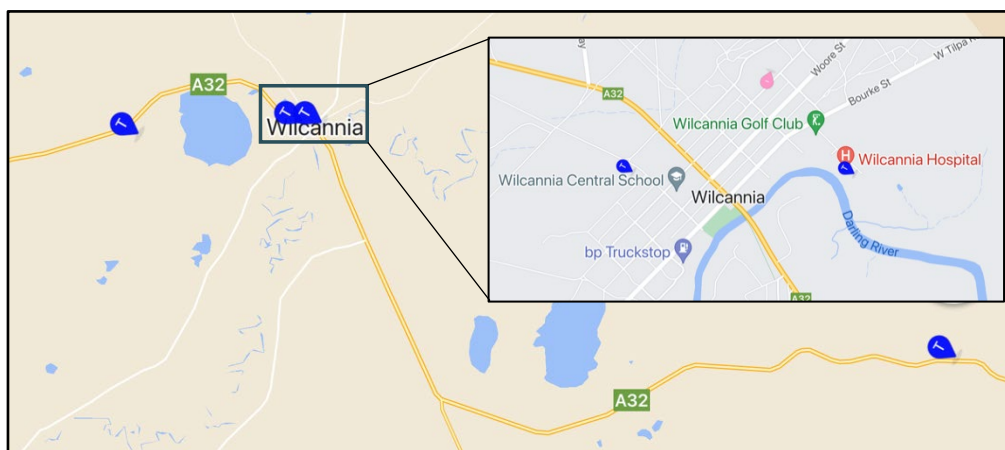


Figure 8: Location of mobile towers servicing Wilcannia (Source: Aus Phone Towers app)



Backhaul to community

There is Telstra fibre optic to the community.



Landlines

Landlines are available to most agencies and residences, however few First Nations residents surveyed have landline accounts. Central Darling Shire use only mobile and online communications.



Fibre to the premises

There are Telstra fibre connections to the Shire office, hospital, Wilcannia Central school and police station and possibly other facilities.



ADSL access

All other community agencies and residences rely on ADSL via copper network or mobile data, which has low penetration in most buildings.



Public Phones

There are two working public phones – one near the police station on Reid Street, and one in Mission area. Despite being free to use, our survey results indicate low use of these public phones due to 4G availability and their location.



Low Earth Orbit (LEO) satellite services

Central Darling Shire have set up Starlink LEO satellite services at some facilities in Wilcannia (staff houses, caravan park). There is growing take-up of Starlink by non-Indigenous staff but no First Nations households to date.



nbn services

Wilcannia is designated as a satellite delivery zone under nbn planning. However, due to having 4G coverage, there has been low household take-up of Sky Muster services in the community, even by service providers.



Public Wi-Fi

There is free Wi-Fi available 24/7 at the Centrelink office and Wings Drop-in Centre. An nbn co public Wi-Fi hotspot is at the new REDI.E office (available 9am-9pm daily), with a possible second Wi-Fi service planned for Wilcannia Land Council.

Media services



Radio services:

- + Wilcannia River Radio 103.1FM
- + ABC radio (regional - Broken Hill) on FM and ABC national on AM
- + 2WEB FM (Bourke)
- + Vision Radio (Christian service)



TV services

Wilcannia has digital TV broadcast covering the community (tower located behind Central Darling Shire workshop), providing 16 Freeview channels including NITV. ICTV is not available.



Newspaper

The Wilcannia News has changed from weekly to monthly and is popular in the community. No other newspapers are available locally, including Koori Mail.

Planned upgrades or changes

Telstra had advised Central Darling Shire of plans to upgrade its external towers to 5G. Netallie Trig tower is listed as providing a 5G service on the ACMA website, however the upgrade to the MacCullochs Range tower does not yet appear to have been undertaken (as at 24/11/23).

Telstra are currently preparing for a services closure of all 3G services by June 2024, with 3G only devices no longer working after that time. Telstra have provided assurances that they will provide equivalent 4G coverage before the 3G network is switched off. More information is available at: telstra.com.au/business-enterprise/support/3g-service-closure

In February 2023, NSW Government announced a project to install new mobile towers in Brewarrina and Wilcannia enabling multi-carrier mobile services. The Wilcannia tower, which will provide over 90 square kilometres of 4G and 5G coverage, is expected to be ready for service by late 2023.

More than 800 homes and businesses in Brewarrina and Wilcannia will benefit from the NSW Government's \$5.5 million agreement with OneWiFi and Pivotal. The agreement will deliver two new mobile towers offering 4G and 5G voice and data services, and covering 1,350 square kilometres and bring mobile tower and network infrastructure sharing into reality in regional NSW. The Regional Digital Connectivity program is leading the way nationally by pushing for government-funded telecommunications infrastructure to be shared, and the network made available for use by multiple carriers.¹

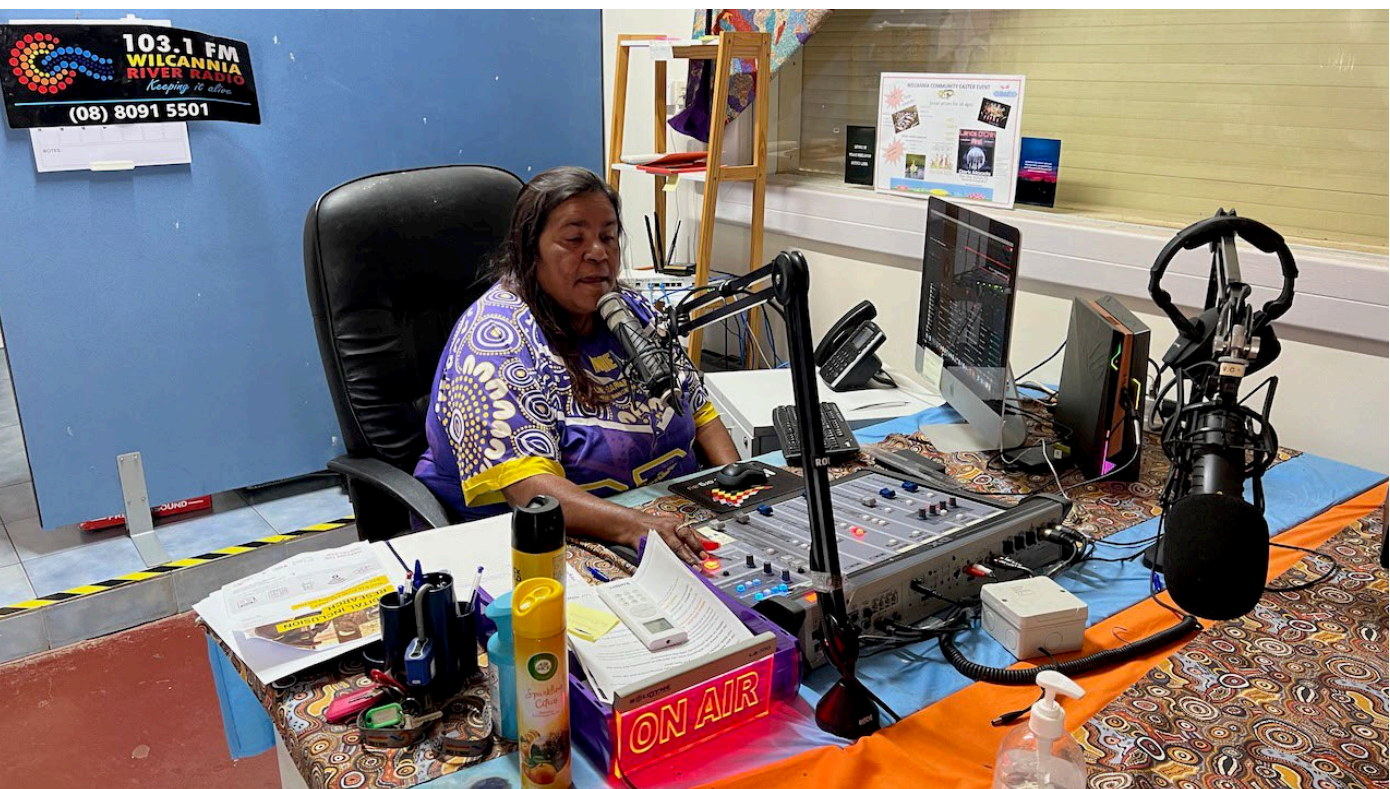


Figure 9: Radio broadcaster Rhonda Hynch on Wilcannia River Radio



¹ nsw.gov.au/departments-and-agencies/departments-of-regional-nsw/news-updates/mobile-boost-for-brewarrina-and-wilcannia#

4. KEY FINDINGS FROM DATA ANALYSIS

This section provides key findings from the 11 interviews undertaken in 2023 and 25 interviews in 2022 with community members and stakeholders, as well as observational data and survey results.

See Appendix 1 for the full set of unprocessed survey results from 2022 and 2023. As outlined in the Executive Summary, the finalised results published in the [2023 Outcomes Report](#) and on the [First Nations dashboard](#) of the Australian Digital Inclusion Index website can differ slightly from raw survey results following data cleaning and weighting against ABS data.

Communications access

Predominantly mobile, and predominantly prepaid

- + 89% of respondents are mobile only users for voice and data services. This is compared to 10.5% of the Australian population in 2023 (Thomas et al., 2023).
- + 89% of respondents own or share a mobile phone, with 84% of these being smartphones. Only 6% of households have fixed line telephones.
- + 95% of respondents with a mobile phone use pre-paid service. Respondents cited low and unreliable income and risk of excessive costs in shared households for why they preferred prepaid services.
- + Wilcannia has two public phones, however only 12% of respondents reported using the public phone despite phone calls now being free of charge.

The 4G mobile network has improved but is still described as unreliable and patchy

4G mobile remains the primary means of access to voice and data services for most First Nations residents in Wilcannia. During our visit in February 2022, we heard numerous reports from community residents of frustrations about limited or unreliable mobile reception with patchy coverage across town and poor signal penetration inside houses. We also heard about high costs of pre-paid mobile data impacting on their ability to access online services, develop IT skills, undertake home schooling, and conduct business or work needs. We heard many of the same frustrations during our 2023 visit.

However, there had been recent upgrades to the 4G mobile services. We undertook some mobile speed tests around the community, which found that speeds have increased significantly since 2022. The strongest signals were near the 4G small cell towers at the hospital and at the Telstra exchange by the oval. Several interviewees reported improved signal penetration inside houses.

- + “[Mobile] reception has certainly improved You can be inside a house and you can get reception whereas previously when I arrived here you could only stand in a certain corner of the household.” (Sarah Donnelly, Wilcannia resident, 2023)

However, there was still variability in the signal strength in different parts of the community, with low signal in the centre of town near the post office and in the Mallee and the ‘Mission’, where people reported still having to go outside to make calls.

- + “The 4G service has improved, but still is patchy at times ... [Telstra] have done upgrades to the MacCullochs [tower and] the other tower to the west of us but there is still black spots in the town.” (Greg Hill, CEO, Central Darling Shire, 2023)

- + “The ‘Mission’ [still has] a big problem with their phone [signal so people] need to get in the middle of the road to make a call ... it's pretty dangerous.” (Anthony Schembri, REDI.E / Centrelink, 2023)

Some people have installed mobile boosters at their homes to improve the reception.

- + “We still have a lot of black spots ... If you want to have improved service, you got to buy yourself a booster.” (Brendon Adams, Wilcannia resident, 2023)
- + “[Because] the signal [is weak inside] the house [some people have] put a booster in the front part of the house and [another] booster in the back of the house, so [they can use] their mobile or their laptop or whatever. Not good signals, but boosters do help.” (Rossi Morris, Wilcannia resident, 2023)

Interviewees argued that another tower is needed within the community to address these issues.

- + “Where I [live in the Mallee area, there's] hardly any service. But when I go down this end of town, I'm ... logged on with no issues. [We need] the towers closer to community [so] everyone can access it properly and no one has that issue.” (Monica Kerwin, Wilcannia resident, 2023)

Some residents and agencies reported still having to go outside their buildings or to particular locations to get adequate mobile coverage, making some emergency and on-call services unreliable. There is particularly low penetration inside many older buildings which are made of sandstone.

- + “Our offices are sandstone buildings so we have to put up a signal booster [to get signal] inside the building.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

There were repeated calls for a second tower to be located within the town to address dead spots in coverage and improve penetration inside houses. While we were in Wilcannia, a Telstra technician advised residents that 5G coverage is coming in April 2023 (outlined in Section 3 above). This upgrade will be beneficial if the 4G service is also improved, as few residents currently have 5G phones.

Residents also expressed a desire to have alternate mobile services available in Wilcannia to provide competition as well as ensure that tourists or visitors with non-Telstra phones can access services.

- + “Telstra don't have competition here. We used to have Optus but they left and now we've only got Telstra. We want other options.” (Monica Kerwin, Wilcannia, 2023)

While the NSW Government-funded tower planned for Wilcannia is described as multi-carrier and will likely provide Optus coverage, it is not clear if this will be also used for Telstra mobile services.

Power outages impact on communications service reliability

Power outages were described as impacting reliability of fixed internet and mobile services in Wilcannia.

- + “Reliability is an issue, especially around power outages and breakdowns.” (Greg Hill, CEO, Central Darling Shire, 2023)

The power supply for Wilcannia, along with other small communities such as Menindee, comes via power lines from Broken Hill, with no backup power generation in Wilcannia. A recent power outage in January 2023 that lasted 2–3 days due to lightning strike damage to a pole resulted in power loss throughout the community. As well as having no mobile and communications services, households had no cooling or fridges, with food having to be thrown out.

- + “We need to fix up the problem of electricity. You can have broadband but if you don't have power, you don't have anything.” (Monica Kerwin, Wilcannia, 2023)

Demand for improved services across the Central Darling region

Central Darling Shire acknowledged the recent upgrades but said that more is needed to improve mobile services throughout the region, especially on connecting roads.

- + “[While] connectivity in the town is improving, I wouldn't say the connectivity between towns by road is improving. Our mobile phone service has still gotten quite a few black holes when you travel from Wilcannia to Ivanhoe or Menindee even up to White Cliffs, Tilpa, it's still patchy.” (Greg Hill, CEO, Central Darling Shire, 2023)
- + “The communications between Broken Hill and Wilcannia ... there's no coverage.” (Rossi Morris, Wilcannia resident, 2023)

Communications are needed for safety and emergency response on the roads.



Figure 10: Truck driving through Wilcannia town centre

- + “[If you] drive from here to Cobar, you break down, you've got no phone signal. You're stuffed unless [a] good Samaritan [pulls] over and gives you a hand ... We had an incident out here before Christmas, a very young fellow lost his life on a motorbike. Of course we've got no phone reception [so the] ambulance got there too late.”

(Anthony Shoveller, Manager Cooee Café, 2023)

Very few households have home internet connection

80% of survey respondents have no form of fixed internet. Only 13% reported having an ADSL connection. Furthermore, these are legacy services, with no new ADSL services available for connection.

While Wilcannia is designated as a satellite delivery zone by nbn co, only 6% of survey respondents indicated having an nbn Sky Muster service. The low uptake was attributed to a lack of pre-paid options and low data allowances to meet household needs. The low level of home internet uptake has not changed since 2022.

- + “A very small portion of community have like ADSL access or wi-fi access at home ... when we're talking about the digital divide and community members' access to regular and consistent internet, it's probably been no real change [since pre-COVID].” (Sarah Donnelly, Wilcannia resident, 2023)

ADSL services were described as slow and unreliable

Many of the agencies in Wilcannia are still reliant on ADSL services for internet access. However, the ADSL was described as being slow and unreliable.

- + “Internet [is] still really terrible. Even our office drops in and out all the time which makes it hard for us to send emails, do reports, send files and that. [Now] I use my phone for emails and sending files and research and even meetings [on Zoom because 4G] is actually faster than me connecting into the Wi-Fi at work. [To upload] big files, it takes like a week [so] we just put it on a thumb drive and send it down to Dubbo.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

- ✦ “The hardest part [of my job is] trying to work on the computers [because the ADSL] is very slow ... that's a big problem I have.” (Anthony Schembri, REDI.E/Centrelink, 2023)

In 2022, residents with ADSL connections described the service as slow but more reliable indoors than 4G. However, in 2023 we heard numerous accounts of ADSL services not meeting household needs.

- ✦ “You've got families, there's four or five in the house [or more]. Dad's on the internet, Mum's on it [but if the kids also] want to get on it ... ‘Dad can you get off the internet because I need to get on [to finish my course].’” (Anthony Schembri, as above)
- ✦ “[At] my daughter's house, she's got one of them smart TVs ... I can't go on my phone while the kids are on the TV and my husband on his phone, that's three gadgets open.” (Monica Kerwin, Wilcannia resident, 2023)

With Wilcannia zoned by nbn as Sky Muster delivery, there are currently no plans to upgrade the fixed line network in the community. Some residents have been advised that ADSL services are no longer available when applying to have ADSL installed.

There is some uptake of Starlink LEO satellite services but not by First Nations households

There has been some take-up of Starlink Low Earth Orbit (LEO) satellite services by local agencies and staff, with advantages over other technologies of being high-speed, low latency and offering unlimited data. However, only one survey respondent reported having a Starlink service.

2022 interviewee Charles Vu, who described the inadequate data speeds via ADSL for online media and gaming, has since installed a Starlink service.

- ✦ “After our last conversation, I pretty much jumped onto the Starlink service [and] it's worked out amazing. [With ADSL] everything takes forever to load, [it's] like you're 10, 20 years backwards [but now I can play online games] ... [I've] been recommending it around town, and [there's] a lot of people ordering it. [I've] had a lot of good feedback from it.” (Charles Vu, Wilcannia, 2022).

Central Darling Shire have installed Starlink in some staff houses and at the caravan park caretaker's house, to enable shared Wi-Fi access. Staff feedback was positive:

- ✦ “[We've put] Starlink on staff accommodation [and] the Caravan Park [to provide access for] our staff and the tenants or occupancies we get in the Caravan Park ... What I'm hearing is very good. A lot better than Sky Muster, a lot easier to negotiate and to give connection, easy to install and the quality [and] download speed, upload speeds are very good.” (Greg Hill, CEO, Central Darling Shire, 2023)

Other agencies we spoke to are considering transferring to Starlink. However, the cost of Starlink, at \$139/month plus up-front equipment costs, was described as prohibitive for household use.

- ✦ “[While non-Indigenous staff] can afford it ... not too many [residents] would be getting it installed because of the costs.” (Greg Hill, CEO, Central Darling Shire, 2023)

There was a suggestion of a trial using Starlink services networked to clusters of residential housing, with a cost-sharing arrangement.

- ✦ “[Maybe a Starlink service could be shared to a] group of flats [or houses] and they just charge for the usage for people that are using it.” (Anthony Schembri, REDI.E / Centrelink, 2023)

Mobile and internet outages can have a significant impact

Several interviewees told us a recent outage in January 2023 reduced mobile access to 3G for 3–4 days.

- + “[The] week before [last] one of the towers went down, a router burnt out and we lost communications for at least three, four days ... We were back to 3G, very narrow bandwidth, and couldn't really support the users ... [Normally we] have troubles just getting someone out here to repair it [but luckily there were] technicians in the town [who could] go and look at it, find out what the problem was, and then chase up the parts. [Otherwise] we could have been at down to 3G for at least a two week period.” (Greg Hill, CEO, Central Darling Shire, 2023)

Unreliable internet and mobile services can also impact local business. Small business Cooee Café is impacted by regular dropouts in their ADSL internet and mobile service.

- + “The [internet] drops out quite a bit and because we are card only, it can really put a dent in our pocket [because] our EFTPOS runs off that, we have to stop business because we don't take cash. [Our] phone service drops out quite a bit too, especially when I'm making orders, it's a bit of a pain ... We drop out at least two to three times a week and we could be down for five minutes [or up to] three hours. So yes, it can be quite an impact.” (Anthony Shoveller, Manager, Cooee Café, 2023)

Access to IT devices, Wi-Fi or shared facilities

Public Wi-Fi access has increased since 2022

There is basic public Wi-Fi available in Wilcannia. A free full-time Wi-Fi service has been available from the Centrelink office for about five years. The Wings Drop-in Centre, run by Maari Ma health, has also provided public access Wi-Fi for for about five years, however this is very slow due to running off ADSL connectivity shared with the office network. There are plans for the internet service to be upgraded (possibly to Starlink) to improve Wi-Fi speed and to separate public access from the workplace network.



Figure 11: Public Wi-Fi at REDI.E office

Prior to our 2023 visit, nbn co had recently installed a public Wi-Fi hotspot at the newly refurbished REDI.E office in Reid Street under its Strengthening Telecommunications Against Natural Disasters (STAND) program (available 9am–9pm daily), with plans of a possible second Wi-Fi hotspot at Wilcannia Land Council.

- + “That went in about three or four months ago. [nbn] came in and put the satellite up, set the modem up. [The] radio station [internet] is down at the moment [so] we've been tapping into that, but that's only [available] from nine to nine [so] there's no internet, until after nine [AM]. But the community ... only uses it when they're down in this area.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

The REDI.E Wi-Fi hotspot is getting well used by young people. However, there were concerns raised that public Wi-Fi access is only available outside.

- + “Wi-Fi is on. But you have to sit outside in 43 degrees to use it.” (Jenelle King, Wilcannia Safe House, 2023)

- + “No one wants to come down and sit in the hot park all day trying to get access to internet to send emails or catch up with family online and that. It makes it a bit hard.”
(Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

Some other agencies share Wi-Fi after hours, however elders expressed concern about young people being on streets late at night to access Wi-Fi. The 9.00pm switch-off of the REDI.E hotspot is intended to ensure young people do not stay up late and it does not affect school attendance.

There was demand for free Wi-Fi services to be provided in the Mallee and Mission residential areas where mobile services are very patchy and limited.



“[We need] free Wi-Fi for our community especially [where] the social housing is, the Mallee and the mission in those areas, because it's just affordability, [if they don't have mobile credit] they can still do the basic services, Centrelink and all those types of things. If kids can do schoolwork, do research and that type of stuff, that's important.”

- *Greg Hill, CEO, Central Darling Shire, 2023*

There are plans underway for more community access facilities

Previously the only access computers were in the Centrelink agency (operated by REDI.E) which has two computers in the foyer. While these are primarily intended for use for Centrelink and MyGov services, they can be used for banking or other purposes.

There was demand for more community access computers, with some suggesting that the Shire play a role by providing some kind of library facility.

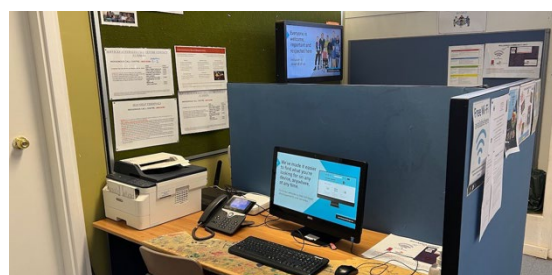


Figure 12: Access computer at Centrelink agency

- + “We need a centre, like a library, where people can go in and access computers.”
(Anthony Schembri, REDI.E / Centrelink, 2023)
- + “A lot of people who are unemployed [have] to use their own mobile data to access Centrelink and online services. [If] you want to do online shopping or banking and don't have the data, you need a computer. [We] can access computers in other agencies but they are in a public area [so we need a space] with dividers to enable privacy. We don't want everyone knowing your business.” (Monica Kerwin, Wilcannia, 2023).
- + I think a community hub with computer access would be really helpful because ... I often get [requests] to use my laptop [to] create pamphlets for funerals [or] applying for things, writing letters. People don't have the technology at home. Because we don't have a public library, [a] little computer hub within one of the organisations would be really beneficial [and could be a space for study or videoconferencing].”
(Sarah Donnelly, Wilcannia resident, 2023)

There are plans to provide more public access computers. REDI.E have allocated a space for access computers in their newly refurbished offices in Reid Street where the Centrelink office will be relocated. These computers will also be available for workforce training programs. The Wings Drop-in Centre are getting three second-hand computers for community access and learning, including youth access. The Wilcannia Safe House are planning to set up a new Courthouse Café, which may include access computers.

Service delivery and use of online services

Local agencies spoke of need for reliable fixed line services to use online communications

Unreliable ADSL fixed line services undercut the benefits of digital technologies such as remote engagement in meetings, accessing services, home schooling, work, and business. All agencies in the community spoke of the need for improved communications for work purposes, employment opportunities, business development, tourism, use by visiting agencies, and entertainment such as video streaming and other daily use.

Service providers described the ADSL services as insufficient for some applications such as online meetings, with some agencies finding the 4G network more reliable:

- + “[I] use my phone for emails and sending files and research and even meetings sometimes because I’ve got Zoom on my phone ... Sometimes using my phone, even on the 4G now, is actually faster than me connecting into the [ADSL] Wi-Fi at work.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

Despite the poor ADSL service, there is limited take-up of nbn Sky Muster services by service providers, even as a backup service. The main government facilities have Telstra fibre installed to the premises (Shire, police, hospital, school), which provides a more reliable business-grade service, albeit more costly.

As outlined above, some agencies are now using Starlink LEO satellite services as a primary broadband service as this provides the speed and unlimited data use needed for day-to-day business operations, including videoconferencing and file transfer, as well as low latency needed for telehealth and connecting to remote servers or cloud-based databases.

Since COVID, most agencies now use MS Teams or other videoconferencing tools for meetings with colleagues, clients and other regionally dispersed agencies, professional development, and online conferences or events. This is reducing some need for travel.

- + “What COVID did was highlight how useful Teams is, and has stopped some of the need for travel that two hours to Broken Hill, five hours to Dubbo. The businesses and government agencies have realised what a great tool Teams is, and how we can use it. That is being used more now rather than people getting in cars.” (Andrew Mensforth, Inspector, Wilcannia Police Station, 2022)

Residents’ use of online services

There is quite high uptake in personal use of internet banking and online services such as Centrelink and MyGov in Wilcannia. Our 2023 survey found that 88% of respondents access government services online compared with 84% in 2022. Similarly, 88% use online banking, compared with 87% in 2022.

However many residents are still reliant on support services such as the REDI.E Centrelink agency. Staff estimate that about 50 of the 130 clients prefer to come into the agency, where they can access the online computers and phone lines and get support when needed.

- + “[Most people are] pretty good at [using Centrelink online and MyGov] now and starting to do it on their own. But when they have trouble [we] sit with them [to help them with] their MyGov.” (Anthony Schembri, REDI.E / Centrelink, 2023)

Centrelink agency staff also assist clients to set up email addresses or source identification certificates needed to set up online services.

- + “[We help] get them an email and make sure they've got their birth certificates [or] ID ... Medicare, license if you've got one ... all that stuff [you need to] open myGov.” (Anthony Schembri, as above)

The Centrelink agency also holds files on behalf of clients with copies of birth certificates and other identification documents, tax file numbers and other records to assist people if they lose them.

Limited English literacy can also be an obstacle to using online services and forms. Maari Ma Health staff often help clients with low literacy to complete online forms for NDIS, Centrelink or other support services.

- + “There's a fair few people that probably can't read and write particularly well [so we] do a [lot] of that work to help people out. [And] the Centrelink agent would do a lot of that sort of stuff as well.” (Jason Gowin, Registered Nurse, Maari Ma Health, 2023)

The post office previously operated as a Service NSW agency for licensing and other State government services. While this function was being upgraded, a roving Service NSW bus was delivering these services during our visit.

- + “The Service NSW bus goes to all the regional towns [about] twice a month [doing everything] from driving to renewals and regos, driving tests, number plates, gun licence.” (Charles Vu, Wilcannia Post Office, 2023)



Figure 13: Service NSW bus set up outside post office

Health services rely on communications for telehealth and records, but there are issues

Most patient records are now held on online database systems. However, different health agencies use different systems. The shift to a single My Health records system is yet to happen, creating challenges for First Nations provider Maari Ma Health when working with the same clients.

- + “[A] big challenge for us here is we've got three different organisations that work very closely together with New South Wales Health, Flying Doctors and Maari Ma [but they have] three separate systems that don't talk to each other. So trying to keep track of where people are up to with their care and their medication is quite time consuming. [There is] a lot of talk around Medicare and really trying to get people's My Health records up to speed [so that] when someone goes anywhere for care, the doctors, the GPs, the pharmacists, there's actually an up-to-date record of what medication people are on ... That's one part of technology that really needs looking at out here.” (Jason Gowin, Registered Nurse, Maari Ma Health, 2023)

Maari Ma Health arranges regular visits by specialists including podiatrists, optometrists, endocrinologists, dentists and so on. However, telehealth is being increasingly used to reduce the need for specialists to travel to remote communities or towns. Yet some clients find telehealth confronting, especially if they do not have an existing relationship with the specialist.

- + “A psychiatrist [who] has been coming around here for years [does a lot of telehealth consults] and people are comfortable to do that. [Most people won't do telehealth] with a person that they don't know. And [a specialist] sitting in a tertiary hospital in Sydney, [will struggle] to understand the context of that person's life [in] Wilcannia, [so we] have health workers with that person [to help] advocate or describe the situation a bit better.” (Jason Gowin, as above)

Reliable internet and mobile services are critical for health service delivery, but this wasn't the case at the Wilcannia hospital prior to COVID and the 4G tower being installed in 2021.

- + "One good thing about COVID was that we ended up with really good internet coverage here, because this hospital used to be [in] a dead spot, [it] was always dropping out ... If you got a phone call on your mobile in this building, you'd have to walk out on the street [to find] a spot where your phone works. Which is pretty shameful for a hospital. [Now] it seems a whole lot better." (Jason Gowin, as above)



Figure 14: Maari Ma Health service at Wilcannia Hospital

Communicating with clients without mobiles can be a challenge

Service providers use a range of communications technology for engaging with First Nations clients and stakeholders, including mobile, email, text and Facebook, depending on the client's means of access.

Contacting clients can be difficult if the client doesn't have a consistent phone number, can't afford a phone or credit, or has limited digital literacy, impacting the providers' ability to deliver care.

- + "Another big challenge is that people with chronic illness often don't have phones, or if [their phone doesn't] last for very long. [So] it's easier for us [to] see people face-to-face. [If they] end up in hospital [and need follow-up] and that's their phone number on record ... the hospital will say 'we tried ringing that person three times and there was no answer so we gave up' ... Another issue is that people's phones are all sketchy and so that's also a barrier for people getting good follow-up care." (Jason Gowin, Registered Nurse, Maari Ma Health, 2023)

There can also be privacy issues in contacting clients when phones are shared by couples or between family members.

- + "If I ring [up I] often don't get the person [I rang, so] I don't tend to leave messages on people's phones. [So we don't send a message] to say that your sexual health check is due [because] somebody else is probably going to see it." (Jason Gowin, as above)

Online learning is used extensively by the school but with mixed experience

During COVID-19 restrictions in 2021, schools had to quickly pivot to online schooling. Like many remote schools, Wilcannia Central School (WCS) struggled due to limited home internet or computers, along with low digital literacy. As outlined in our 2022 report, teachers hand-delivered workbooks, broadcast lessons on radio and used other innovative solutions to keep students engaged.

However WCS, which has reliable broadband via a fibre optic connection, was already quite experienced in online learning delivery. WCS is part of the Wilvandee Access Program with Ivanhoe and Merindee schools, which uses 'ICT for Connected Learning Spaces' to deliver Year 11 and 12 subjects.

- + "Students [are] able to choose subjects that they want to have. [These subjects are delivered by teachers spread across] the three schools. [So] in terms of day to day school operation, our Year 11 and 12 students were already using that sort of video conferencing style of class before COVID interrupted it and we had to move to technology." (Sarah Donnelly, Wilcannia resident, 2023)

Former Year 12 students said they found online learning challenging at times, but gradually got used to it.

- + “At first it was a little frustrating because you are not face to face with the teacher and having to go through the video conference was a struggle for me. [We sometimes had a] communication barrier [with some teachers with strong accents but] others were really good. I just kind of toughed it up and got through it.” (Katelyn Whyman, Wilcannia resident, co-researcher, 2023)

A range of technical and logistical issues also affected the online learning experience.

- + “Sometimes our PC wouldn’t work [and] we couldn’t turn on our camera or our microphone wasn’t working. [Sometimes] we didn’t know if our teacher was there to get on and we were waiting there for an hour ... [Or if] they don’t know how to share their screen [or] are writing on the board and we can’t see it, we’re like, can you zoom in.” (Katelyn Whyman, as above)

During the COVID travel restrictions, staff used the opportunity of online learning to create new connections with people and organisations outside the community.

- + “[It] opened all these doorways. All of a sudden excursions were being run online and you had access to booking professionals and scientists and different people to speak to our kids [which we still do now]. ... We [also] participated in a really successful online tutoring system [giving students] access to teachers and tutors who are in the metropolitan areas [for] extra support.”

- Sarah Donnelly, as above

Lack of local technical support increases cost and repair times

Several interviewees raised the challenge of getting technical or IT support in Wilcannia.

- + “Demand for IT skills [is] a big issue ... There's no one here in any of our towns who has got an IT background [and] we don't even employ IT specialists here anymore. We've gone to all remote services ... Basically everyone's self-taught how to repair things.” (Greg Hill, CEO, Central Darling Shire, 2023)

With no local technicians, there are high costs and time delays for technicians coming from Broken Hill or Dubbo. There was discussion around training up local people to provide first-in technical and IT support.

- + “We’ve got trouble with our internet and phonelines [but the techs are busy so we’ve waited] two weeks now and it still hasn’t gotten done ... If we could train [local people to be IT techs] that would be so much better, and have all of the [tools and spares] they need here.” (Robert Clayton, Wilcannia Site Manager, REDIE, 2023)

Technicians often do not turn up when they have advised, causing frustration.

- + “Sometimes they will tell you they’ll be on this day and then you don’t hear from anyone ... which is incredibly frustrating. [One resident has] been paying for four months of internet but [it’s still not fixed].” (Sarah Donnelly, Wilcannia resident, 2023)

Residents can have challenges communicating with service providers or technicians when they have technical problems, which can prevent them seeking support.

- + “We spend a long time on the phone [to internet providers but] sometimes there is a communication breakdown [because technicians speak] almost another language [so] people just shut down [and] don’t want to deal with it ... It’s a shame they don’t

have an Aboriginal worker that could [help address that] communication breakdown.”
(Sarah Donnelly, Wilcannia resident, 2023)

Access to media and news services

Local media and information channels

Effective modes of communication are critical to ensure residents are aware of local news or activities. Several organisations use Facebook to communicate their activities, as it is a primary means of communication for many residents. These include REDI.E, Central Darling Shire, Wilcannia Central School and Maari Ma Health. However, some interviewees referred to high levels of misinformation spread via social media.

Other local channels used for sharing relevant and up-to-date news and information in Wilcannia include Wilcannia River Radio and the now-monthly newspaper Wilcannia News.

Wilcannia River Radio provides locally relevant and trusted news and information

Many participants highlighted how Wilcannia River Radio provides locally relevant and trusted news and information services.

- + “It’s the only radio station we listen to here. And they are amazing in the way that they do partner with local organisations. I can drop down there if I need to say something and ... jump on air, have a chat.” (Sarah Donnelly, Wilcannia, 2022)



Figure 15: Wilcannia River Radio station

Wilcannia River Radio played an important role during the COVID-19 outbreak in 2021 with up-to-date information from local health agencies, delivery of home schooling lessons via radio (due to lack of home internet access), and to counter misinformation spread over social media.

- + “We did a lot of stuff through home learning and we’ve had teachers going there every day doing story time, delivering stories. You know, it was our way of thinking about what people who did have home learning [but no] internet connectivity ... how we could do that over the radio because we didn’t have the other. And then, in the same way, using that newspaper, that old school media of being able to put photos in there and show what was going on.” (Sarah Donnelly, Wilcannia, 2022)

Local businesses use Wilcannia River Radio to promote their services locally.

- + “We use the radio station a fair bit [to promote the café and] hairdresser that comes up once a month from Mildura.” (Anthony Shoveller, Manager, Cooee Café, 2023)

Wilcannia River Radio is expanding its coverage and programming, with training in radio broadcasting and other media forms such as digital photography, video production, social media and news gathering. However, its progress has been hindered by poor internet access.

- + “[The broadcasters are doing] some more training [and] coming up with whole new shows and programs [for] the community ... But internet has kind of slowed us down a little bit ... Once we get the internet sorted then we are going to be back online on indigiTUBE ... We’re now covering all REDI.E sites, so whenever there’s a good news

story, [WRR will] cover that, get photos, interviews, videos ... The photography [provides a record of] good things that happened in the past.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

The new Baaka Cultural Centre will benefit from local media content production and archiving

In 2022, we heard calls for more local content production capacity to share local stories and support language and cultural identity, and to provide content for use in the upcoming Baaka cultural centre. There are also plans by Central Darling Shire for increasing cultural tourism with interactive displays highlighting sites of cultural and historical significance in the town.

Construction is now underway on the new \$9.5 million Baaka Cultural Centre. According to the Shire website:²

- + “The Baaka Cultural Centre project will accommodate a range of activities (public exhibitions, performances, workshop, training and events) while also functioning as a visitor information centre, and meeting/gathering place for the community and a keeping place for artefacts.”

The Cultural Centre provides an opportunity to present locally produced media content showcasing Baarkandji language, culture and oral histories from elders.

- + “I’d love to see that in there. Like a media library based on Wilcannia, based on stories from our elders.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

Affordability

Affordability is a significant concern

With most residents on low incomes, the affordability of internet access and digital devices are a serious concern. 10% of survey respondents often or always cut back on essential household costs to afford internet, with 32% sometimes cutting back. 49% of respondents said they compromise on speed and or quality to prioritise affordability.

As outlined in the Executive Summary, the ADII Affordability scores based on our 2022 surveys found specific demographic groups have relatively low scores for Affordability. These include elderly, with those in the 55–64 year age group scoring 83.3 points compared with 91.4 for 18–34 age group, women (87.6 compared with 95.2 for men) and unemployed people (88.2 compared with 93.3 for employed). Special attention needs to be given to these groups to avoid the compounding factor of affordability on digital inclusion and access to relevant services and support.

Interviewees said that using pre-paid mobile rather than post-paid services was the easiest way to manage costs on a low income.

- + “At the moment all I can afford is \$30 [each fortnight] because I’m on a Carer’s [pension. I don’t use many apps because] of how much data [they use] so I can’t stay on the internet on my phone.” (Monica Kerwin, Wilcannia resident, 2023)

The lack of options for more affordable internet services was raised by some residents.



Figure 16: Site of future Baaka Cultural Centre

² centraldarling.nsw.gov.au/Projects-in-the-Shire/BAAKA-Cultural-Centre-Wilcannia

- + “[There are] telecommunication services in Broken Hill that offer you all these great deals [but those options are not available in] Wilcannia and the smaller regional towns ... Low income earners [like me can’t] afford a thousand dollar booster on their roof [or a post-paid] service.” (Rossi Morris, Wilcannia resident, 2023)

Increased demand for data adds to household expenses

With increased data usage for media streaming services, gaming, or other data-hungry applications, and multiple family members using devices, household costs for data can add up quickly.

- + “There is a lot of streaming of movies now [especially] during summer when it's hot, and you can't get out and do anything. [And] a lot of people stream music ... More and more now with technology, everything's streamed. So you have to have that connectivity to access those services.” (Greg Hill, CEO, Central Darling Shire, 2023)

These concerns were reiterated by some interviewees who expressed concern over pre-paid data costs.³

- + “[With] prepaid ... the amount of data you do get for your dollar [is] a bit ridiculous. We need extra data, considering where we are and the coverage out here is still a bit [slow and patchy]”. (Monica Kerwin, Wilcannia resident, 2023)

However, we found that very few First Nations residents have post-paid mobile or home internet, with the closest Telstra shop to purchase a plan in Broken Hill. There appears to be limited awareness about the difference in data costs between pre-paid and post-paid services, or recent changes to post-paid plans to month-by-month and removal of excess data fees (speed slows down once cap reached).

Centrelink agency staff said that if clients were to set up a post-paid mobile or internet service, they could arrange for payments to be deducted from their Centrelink payments.

- + “Getting the money taken out of their payments, like \$30 a fortnight, they wouldn't miss it. And they're paying for something that they need. [We can help arrange regular bill] payment.” (Anthony Schembri, REDIE / Centrelink, 2023)

Affordability of mobile devices can be an issue for some especially due to high turnover

The cost of mobile devices at the Wilcannia Post Office started at \$59 (Telstra Lite 3) for a basic voice-only phone, with smart phones ranging from \$109 (Telstra Smart 4) up to \$379 (Vivo 5G). The post office sells about 10–12 phones a week, with popular models being Telstra smart phones (\$150–\$200 range), and young people preferring Oppo or Samsung phones at about \$300–350.

Post Office staff reported that many customers replace their phones multiple times a year, due to phone or screen damage, theft or giving away to family members. Some residents we spoke to had replaced their mobile phone three to four times in the last year.

Digital Ability

Digital ability levels

With services increasingly moving online, digital literacy is becoming a necessary life skill. Our 2022 surveys found relatively high levels of digital ability in Wilcannia, with average ADII score of 63.9 compared to the average 45.7 across the ten remote communities visited. Most people scored highly for basic digital skills (average 66.0) and social skills (69.2), but slightly lower for creative skills (60.0).

³ Most residents paid approximately \$3/GB on \$30 prepaid cards compared with under \$1/GB for most post-paid services. Telstra pre-paid data rate were changed in July 2023 to \$35 for 15GB.

However as outlined in the Executive Summary, there are specific demographic groups that had significantly lower digital skills, particularly the elderly (34.6 for 55–64 age group, 0 for 75+), those who did not complete Year 10 at high school (28.2), those living with a disability (45.1), and unemployed people (54.0). These groups would benefit from targeted digital support.



"I'd say [digital ability is] a life skill now just because everything's going digital."

- Charles Vu, as above, 2023

While most survey participants have good skills in using social media, entertainment apps and online services, support is often needed by some cohorts when undertaking tasks such as accessing MyGov, doing online banking or completing a form. These are particularly elderly people, people living with disability, and those with limited education levels or written English literacy. While some basic support in the use of online services is provided at Centrelink, the post office and other agencies, there are currently limited options for general digital skills training.

Service providers reported being asked by elders for help with setting up or using online services, including mobile phone activation or adding recharge vouchers.

- + "[We help] two or three regulars [with online processes, mostly] the elders in town, {to} pay for the voucher, print it out, get the little code, type in the phone number, type in the voucher, and then they're done." (Charles Vu, Wilcannia Post Office, 2023)

In general, digital literacy levels remain high in Wilcannia, especially among younger people and those who are employed. Most respondents are able to download and open a file (76% said 'very true' or 'mostly true'), find and install apps (78%), complete online forms (74%), use an internet browser (75%), set secure passwords (88%), connect to a Wi-Fi network (89%), and send and receive emails (78%).

However, primary use of mobile devices for online access (92% of users compared to 41% who also use a computer or laptop) limits skills development in computer-based tools needed for work and schooling.

Workforce digital training is a specific priority

With many jobs now requiring a level of digital ability to undertake common workplace activities, REDI.E have identified the need for workforce digital skills training.

- + "A lot of stuff now is done online ... It's always scan onto your computer, then email. [Knowing] how to upload a document onto Microsoft or Google, Gmail, or anything like that, you still need to learn how to open it, attach it. [We're working] on bridging the gap with that side of it." (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

Centrelink staff encourage clients to do digital skills training to help in applying for jobs. The TAFE NSW campus in town provides basic digital training as part of various vocational education courses.

- + "They do have that digital training [as] part of the other courses. Depends on what courses they want to do and what they want to get into ... They'll get a laptop each if they have to do face-to-face [training]." (Shirley Williams, REDI.E / Centrelink, 2023)

While some online training is offered by the TAFE, face to face training has proven to be more effective.

- + "[TAFE does some online training but] mainly the [trainers] come out [here. Online learning] could be hard for them because they haven't got the computer basic skills. ... They really like to work with people face-to-face." (Shirley Williams, as above)

REDI.E are planning to set up a computer access and training room within their refurbished office space.

- + “We do want to set up an area [in the new REDI.E building] where we can have a few computers [and offer] free online training. [REDI staff will show people] how to write up a document, [do] layouts [or] creating a spreadsheet ... basic stuff like that can get them that one step further to the job that they want.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

Social media is a primary communications tool, however cyber safety is a significant concern

There is high use of social media platforms by Wilcannia residents, including Facebook, TikTok, and Instagram. Our survey found that 88% of respondents use social media to keep in touch with family or friends and 75% to meet new friends or reconnect with old friends online.

- + “Social media is very big out here. It keeps everyone in the loop and connected.” (Monica Kerwin, Wilcannia resident, 2023)

However, concerns were raised about online scams, personal data protection and cyber-safety issues associated with social media use. While social media platforms now have monitoring systems intended to block scams and offensive or racist content, this often results in blocking posts by First Nations people.

- + “With Facebook, they kind of limit ... what you can post and say, they’re keeping an eye. [But] we’re still getting hammered [by] scammers ... they can get through when we can’t.” (Monica Kerwin, as above)

Many people described not using Facebook or being wary of the misinformation or potential conflict caused by social media use.

- + “During the COVID [lockdown] when everyone was locked in their homes, we tried to encourage people to stay off of Facebook or all the social medias ... If you’re constantly looking at the negative and then people start posting up stuff ... bullying people and stuff like that.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

Perhaps because of these concerns, online security and cyber-safety awareness was reasonably high amongst survey respondents. Most respondents know how to set privacy settings (79%), check if information is trustworthy (78%), decide what personal information to share online (76%), add or remove friends or followers on social media (79%).

Wilcannia River Radio broadcast messages to inform residents about scams and cyber-safety issue.

- + “We do put out awareness of [scams and cyber-safety] through our radio station of if you get a message [and] you don’t know who sent it and it’s got a link to it, don’t touch it ... little stuff like that, we’ve got ads and awareness of [online scams and] bullying.” (Robert Clayton, Wilcannia Site Manager, REDI.E, 2023)

There is demand for digital mentors to provide IT support and awareness

The preferred model for digital training and support is for one-on-one support with a digital mentor as needed rather than doing workshops. Peer learning occurs within families, particularly by young people and those with digital skills helping others to use phones and online services.



“[We need] someone on hand here in this community that can give the elderly people, or some people advice on how to use social media platforms, and how to use the internet, because I know a lot of the elder people would not have that knowledge, so someone [in Wilcannia] that can help, and [give] advice ... instead of going to Broken Hill.”

- *Anthony Wiltshire, Wilcannia, 2022*

5. CONSIDERATIONS FOR LOCAL DIGITAL INCLUSION PLAN

A local Digital Inclusion Plan would enable a coordinated approach to addressing some of the challenges outlined in this report. It provides a useful tool for planning, advocacy and fundraising to improve communications services and digital inclusion in Wilcannia.

The proposed Digital Inclusion Plan below has been updated based on community input in 2023 and any progress to date, including current or planned activities. Strategies outlined are suggestions only and are not intended to be prescriptive, nor are they listed in order of priority.

Identified Issue	Possible Actions	Potential Stakeholders	Progress / Next Steps
Access			
Lack of public access IT facilities and support (currently two in Centrelink office for government / banking use only).	Establish an Internet Access facility with online computers, printers, scanner, videoconferencing, and a support / digital mentor role.	REDI.E Wings Drop-in Centre (Maari Ma Health) Wilcannia Safe House/ Courthouse Café (in planning) Post Office	REDI.E planning to set up computer access/ training space in refurbished office 2023–4. Wing Drop-in Centre getting three second-hand computers for youth access and learning. Planned Courthouse Cafe to include access computers (date TBC).
Limited public Wi-Fi in town centre for use by residents, visiting agencies and tourists without Telstra phones. Demand for Wi-Fi in Mallee and Mission residential areas to enable affordable online service access.	Establish more free Public Wi-Fi for community. (Notes: Existing public Wi-Fi at Centrelink and Wings Drop-in Centre via ADSL; nbn co Wi-Fi network provided to 91 homes in 2021 (as COVID-19 response) removed late 2021).	REDI.E Wings Drop-in Centre nbn co Central Darling Shire NSW Government agencies Telstra Wilcannia Land Council	Nbn co have set up free Wi-Fi service at new REDI.E office for public access (under STAND program ⁴). There are possible plans for a second Wi-Fi at Wilcannia Land Council. Wings Drop-in Centre is aiming to upgrade its internet service to improve Wi-Fi speed, and separate public access from the staff network.

⁴ Strengthening Telecommunications Against Natural Disasters program

Identified Issue	Possible Actions	Potential Stakeholders	Progress / Next Steps
<p>Patchy and congested 4G coverage in town and on main traffic routes, with regular dropouts.</p> <p>Demand for second tower to address dead spots in town centre, low penetration in residential areas.</p> <p>Demand for Optus mobile service to improve competition and tourist access.</p>	<p>Advocate to Telstra and NSW Government for upgrades to 4G/5G coverage and/or boosters.</p> <p>Apply for Mobile Black Spots program funding for expanded coverage on road to Cobar and Broken Hill.</p>	<p>Central Darling Shire</p> <p>Telstra</p> <p>NSW Government</p>	<p>Telstra upgrades undertaken of McCulloch tower (north) and tower to west with improved 4G speeds but dead spots remain as at February 2023; 5G McCulloch tower upgrade planned May 2023 (Source: CDS).</p> <p>NSW Government \$5.5 million funding provided to OneWiFi and Pivotal to improve multi-carrier 4G/5G services in Brewarrina and Wilcannia⁵ (completion by late 2023).</p>
<p>ADSL very slow; Lack of reliable fixed line broadband options</p>	<p>Seek upgraded nbn delivery options via terrestrial (fibre to the premises, fixed wireless)</p>	<p>Central Darling Shire</p> <p>nbn co</p>	<p>Telstra upgrades planned.</p>
<p>Need for fast, low latency broadband services with unlimited data for business use.</p>	<p>Trial of Starlink satellite service for business and/or residential – including trial of sharing between premises.</p>	<p>Central Darling Shire</p> <p>REDI.E</p>	<p>Central Darling Shire have set up Starlink to four staff houses and Caravan Park for tourist/public access; REDI.E considering Starlink for office use.</p>
<p>Impact of power outages on mobile and communications services, especially in emergencies.</p>	<p>Review mobile battery duration, back-up power supply, and options for redundancy for key services.</p> <p>Develop contingency plan to address impact of extended power outages on services.</p>	<p>NSW Government agencies</p> <p>Emergency services</p> <p>Central Darling Shire</p> <p>Telstra</p> <p>nbn co</p>	<p>Starlink on CDS buildings provides redundancy.</p> <p>Telstra mobile upgrades underway.</p> <p>nbn Wi-Fi installed at REDI.E under STAND program.</p> <p>Planned upgrades under NSW Government funding (outlined above).</p>

⁵ Source: nsw.gov.au/departments-and-agencies/department-of-regional-nsw/news-updates/mobile-boost-for-brewarrina-and-wilcannia#

Identified Issue	Possible Actions	Potential Stakeholders	Progress / Next Steps
Affordability			
Primary use of pre-paid for data; limited awareness of lower data costs on mobile plans and reduced risk of bill shock.	Arrange materials from Telstra outlining pre-paid vs post-paid costs / options / changes to month-by-month billing and no excess charges (just speed shaping) available in IGA and post office.	REDI.E Telstra Post office Wilcannia Community Grocer	Post office to put up information about pre-paid mobile services and data allowance.
Digital Ability			
Lack of IT training / support to use computers, applications, and online services.	Employment of digital mentor/support roles for improving digital skills and support to access to government services.	REDI.E DSS / Centrelink NSW Government agencies TAFE NSW Wings Drop-in Centre Wilcannia Land Council	TAFE NSW provides training in basic digital skills as part of several VET courses, with Centrelink participants encouraged to enrol. TAFE Coordinator provides digital skills support.
Demand for IT skills for workforce readiness and use of online services.	Digital literacy and workforce readiness training workshops covering MS Office, keyboard skills, file management, search and online tools, preparing a CV, letter writing, email use, job search etc.	Centrelink REDI.E TAFE / School	TAFE course was scheduled for basic digital workplace skills in February 2023. REDI.E are planning to provide workplace readiness digital training when the new access facility is set up.
Concerns around cyber-safety issues especially on social media.	Arrange cyber-safety awareness workshops (including in schools and workplaces) as well as posters and radio promos to build awareness.	REDI.E Wilcannia River Radio TAFE Wilcannia Central School ACCAN Office of e-Safety	Wilcannia River Radio broadcast information on scams and e-safety messages. The School to provide cyber-safety awareness for students.

Identified Issue	Possible Actions	Potential Stakeholders	Progress / Next Steps
Media production and archiving			
Demand for cultural, language and media production for Baaka Cultural Centre, cultural tourism and inter-generational knowledge sharing.	<p>Training and support for photography, multi-media production, recording of oral histories and cultural stories.</p> <p>Establish multi-media recording and production facilities.</p>	<p>REDI.E</p> <p>Wilcannia River Radio</p> <p>Baaka Cultural Centre</p> <p>AFTRS</p> <p>TAFE NSW</p> <p>Community Media Training Organisation</p>	<p>Baaka Cultural Centre construction contract signed 15/8/23.⁶</p> <p>REDI.E planning photography and multi-media training for WRR staff.</p>
Archiving of locally produced content, cultural and historic content.	<p>Setup of archiving system for multi-media content (local content, language and cultural recordings, historic content.</p> <p>Training in use of archive system.</p> <p>Repatriation of materials from NSW State Library, AIATSIS and other collections.</p>	<p>Baaka Cultural Centre</p> <p>REDI.E / Wilcannia River Radio</p> <p>NSW State Library</p> <p>AIATSIS</p> <p>First Nations Media Australia</p>	<p>No archive system currently in place. REDI.E to seek advice from FNMA and AIATSIS.</p>
Other issues			
Lack of local IT and technical support.	<p>Arrange IT technical services company to service multiple agencies in community, with IT support logging system.</p>	<p>Central Darling Shire</p> <p>REDI.E</p>	<p>Central Darling Shire use remote support company FX.</p>
Need for local technical support to reduce maintenance costs / delays.	<p>Training program for local workers to develop basic technical and IT skills.</p>	<p>REDI.E</p> <p>TAFE NSW</p>	<p>No action as yet. REDI.E to discuss options with TAFE.</p>

⁶ Source: centraldarling.nsw.gov.au/Projects-in-the-Shire/BAAKA-Cultural-Centre-Wilcannia

Appendix 1: Summary of Survey Results

Note: Surveys undertaken in 2022 included 9 of 67 non-First Nations respondents, whereas 100% of the 84 respondents in 2023 were First Nations people. Please note this difference when making comparisons between the two sets of results.

Demographics	2022 (67 respondents)	2023 (84 respondents)
Gender	61% female; 39% male	67% female; 33% male
% Aboriginal and /or Torres Strait Islander	86.5%	100%
Education	15% year 12 or above 50% year 10 or below	8% year 12 or above 70% year 10 or below
Employment	58% employed (55% full-time) 15% unemployed 9% on home duties	33% employed (57% full-time) 36% unemployed 12% on home duties
Welfare	58% received Centrelink	76% received Centrelink
Housing	53% in multi-generational or shared households (3.5 people per house)	35% in multi-generational or shared households 27% in single households 3.8 people per house
% of people with long-term disability or health condition	31%	22%
Language other than English spoken	13% at home	6% at home
ATSI Languages spoken (multi-choice question)	N/A	55% Aboriginal English 11% Paakantyi / Paakantji / Barkindji 2 others
Understanding of English (very and quite well)	N/A	Written English: 96% Spoken English: 99%
Average weekly household income	N/A	\$825
Income breakdown	N/A	10% no income 30% \$1-\$399 32% \$400-\$999 23% \$1000-\$1999 8% above \$2000
Phone use	2022 (67 respondents)	2023 (84 respondents)
Device used for phone calls (multi-choice question)	88% own mobile phone 65% shared mobile phone 42% phone in community office or workplace 12% fixed line telephone in home	89% mobile phone (own or shared) 23% phone in community office or workplace 6% fixed line telephone in home
% using public phone	16.4%	11.9%
Rate of mobile phone ownership	87% own or share (92% of these smartphones)	89% own or share (84% of these smartphones)

% of phone owners on prepaid services	85%	95%
Average data allowances	38% use up to 10 GB/month 43% 11–40 GB/month 12% 41–60 GB/month 7% over 60 GB/month	33% use up to 10 GB/fortnight 42% 11–40 GB/fortnight 6% 41–60 GB/fortnight 5% over 60 GB/fortnight 4% none
Household mobile expenditure	63 responses Average household cost of \$146/month 40% pay up to \$100/month 40% \$101–\$200/month 14% \$201–\$300/month 6% over \$300/month	78 responses Average household cost of \$76/fortnight 81% pay up to \$100/fortnight 12% pay \$101–\$200/fortnight 6% paid \$201–\$300/fortnight 1% pay over \$400/fortnight
Media use	2022 (67 respondents)	2023 (84 respondents)
Radio Access (multi-choice question)	79% listen via car 55% listen to a radio at home 37% listen via streaming (phone/tablet) 1.5% never listen to radio	77% listen via car 57% listen to a radio at home 15% listen via streaming (phone/tablet) 6% never listen to radio
Primary radio stations listened to (multi-choice question)	Wilcannia River Radio (60% listening daily) Commercial radio (18% daily) ABC Radio (12% daily)	Wilcannia River Radio (41% listening daily) Commercial radio (21% daily) ABC Radio (17% daily)
TV Access (multi-choice question)	Via local broadcast (78%)	82% via local broadcast 12% via VAST satellite 29% via phone 4% never watch TV
VAST TV Access	N/A	15% have VAST installed 31% of these VAST services not operational
Most popular sources of TV and online content (multi-choice question)	Commercial TV (7,9,10)(63% daily) YouTube (46%) Streaming services (36%) NITV (34%) SBS TV (30%) ABC TV (23%)	Commercial TV (7,9,10)(46% daily) YouTube (48%) NITV (37%) Streaming services (35%) ABC TV (25%) SBS 23%
Primary sources of news and information (multi-choice question)	Commercial TV (64% daily) Wilcannia River Radio (52%) Direct / in person communication (49%) NITV (30%) Facebook (27%) ABC TV (24%)	Commercial TV (44% daily) Facebook (40%) Wilcannia River Radio (38%) Direct / in person communication (36%) SBS TV (29%) ABC TV (26%)

Primary sources of emergency information (multi-choice question)	Direct / in person communication (75%) Wilcannia River Radio (73%) Commercial television (61%) Facebook (48%) ABC Radio (45%) ABC TV (42%)	Direct / in person communication (65%) Facebook (45%) Commercial TV (43%) Wilcannia River Radio (38%) Text message (from police/emergency services) (33%) Newspapers (30%)
Internet use	2022 (67 respondents)	2023 (84 respondents)
Latest internet use	82% used internet in past week 7% in past month 7% never used the internet	73% used internet in past week 10% in past month 11% never used the internet
Regular internet users (The following indented sections refer to respondents who had used the internet within the last six months)	91%	86%
Rate of internet use	41% use internet almost constantly 33% several times a day	62% use the internet almost constantly 23% several times a day
Primary online devices (multi-choice question)	Smartphone (90%) Smart TV (61%) Laptop computer (49%) Tablet (42%)	Smartphone (92%) Laptop computer (41%) Smart TV (37%) Tablet (30%) Games console (18%)
Use of internet provided by others (multi-choice question)	66% at houses of friends or family 48% at place of work or education 26% in public space with free Wi-Fi	54% at houses of friends or family 46% at place of work or education 23% in public space with free Wi-Fi
Reasons given for not using the internet more (multi-choice question)	"The internet is too expensive for me" (48%) "I do not have convenient access to the internet" (27%) "I am concerned about privacy or scams" (27%)	"I do not need to use the internet more often" (58%) "The internet is too expensive for me" (23%)
Concern about amount of time spent online	6% extremely concerned 59% not at all concerned	13% extremely concerned 33% moderately to slightly concerned 49% not at all concerned

MAPPING THE DIGITAL GAP



Low internet users	9%	14%
Reasons given for not using the internet more (multi-choice question)	"No need to use the internet" (67%) "Lack of confidence in using the internet" (67%)	"I have no need to use the internet" (67%) "The internet is not a priority for me" (50%) "I am not confident using the internet" (33%)
Fixed broadband services	80% did not have any form of fixed internet 7% had ADSL 0% had nbn Sky Muster	70% did not have any form of fixed internet 13% had ADSL 6% had nbn Sky Muster 1% (one household) had Starlink
Respondents with fixed broadband	20% (21 people)	29% (24 people)
Data allowances	43% had less than 50 GB/month 24% between 50–200 GB/month 33% unlimited	12% had less than 50 GB/month 46% between 50–200 GB/month 8% between 300–500 GB/month 33% unlimited
Average cost	\$62.50/month	\$76/month
Mobile broadband services	33% used a 4G modem for data sharing (55% of these prepaid)	25% used a 4G modem for data sharing 11% used a sim card or other mobile broadband device (80% of these prepaid)
Data allowances	23% had less than 20 GB/month 23% between 21–40 GB/month 55% above 40 GB/month	37% had less than 20 GB/month 37% between 21–40 GB/month 27% above 40 GB/month
Frequency of exceeding data limits	27% exceeded their monthly data limit between 1–11 times in the last year 9% every month.	23% exceeded their monthly data limit between 1–11 times in the last year 10% every month.
Affordability	2022 (67 respondents)	2023 (84 respondents)
Cut back on essential household costs to afford personal or household internet	N/A	10% often or always 32% sometimes 58% rarely or never
Compromise on speed and/or quality to prioritise affordability	N/A	49%

Digital Ability	2022 (67 respondents)	2023 (84 respondents)
Regular internet users (The following indented sections refer to respondents who had used the internet within the last six months)	91%	86%
Basic digital ability metrics (very true or mostly true of me)	<ul style="list-style-type: none"> Able to download and open a file (79%) Find and install apps (80%) Complete online forms (82%) Use an internet browser (79%) Connect to a Wi-Fi network (93%) Send and receive emails (85%) 	<ul style="list-style-type: none"> Able to download and open a file (76% said 'very true' or 'mostly true') Find and install apps (78%) Complete online forms (74%) Open a new browser tab (75%) Connect to a Wi-Fi network (89%) Send and receive emails (78%)
Online security and cyber-safety awareness (very true or mostly true of me)	<ul style="list-style-type: none"> Set secure passwords (85% said 'very true' or 'mostly true') Set privacy settings (80%) Check if information is trustworthy (80%) Decide what personal information to share online (82%) Add or remove friends or followers on social media (90%) 	<ul style="list-style-type: none"> Set secure passwords (88% said 'very true' or 'mostly true') Set privacy settings (79%) Check if information is trustworthy (78%) Decide what personal information to share online (76%) Add or remove friends or followers on social media (79%)
Online content creation (very true or mostly true of me)	<ul style="list-style-type: none"> Create websites (21%) Produce online content (59%) Post videos (72%). Awareness of online copyright law (74%) 	<ul style="list-style-type: none"> Create websites (56%) Produce online content (64%) Post videos (76%). Awareness of online copyright law (69%)
Smart devices (e.g. smart TV) (very true or mostly true of me)	<ul style="list-style-type: none"> Connect smart devices (e.g. smart TV) to the internet (79%) Adjust privacy and security settings (64%) 	<ul style="list-style-type: none"> Connect smart devices (e.g. smart TV) to internet (85%) Adjust privacy and security settings (81%)
Primary online activities (activities undertaken in past six month)	<ul style="list-style-type: none"> Online banking (87%) Accessing government services (84%) Accessing health information (77%) Comparing prices (69%) Online shopping (66%) 	<ul style="list-style-type: none"> Online banking (88%) Accessing government services (88%) Online shopping (81%) Online buying / selling (68%) Online learning / study (65%) Tracking packages (65%) Accessing health information (60%)

<p>Social media use (activities undertaken in past six month)</p>	<p>Keeping in touch with family or friends (89%) Meeting new friends or reconnecting with old friends online (77%).</p>	<p>Keeping in touch with family or friends (88%) Meeting new friends or reconnecting with old friends online (75%) Engaged with community (75%)</p>
<p>Online entertainment (activities undertaken in past six month)</p>	<p>93% used online entertainment services</p>	<p>85% used online entertainment services 81% played online games 47% attended an online music, arts, or cultural event online</p>
<p>Online navigation and transport (activities undertaken in past six month)</p>	<p>N/A</p>	<p>54% had navigated a route via maps on a smartphone 40% used a public transport app</p>

Comments:

Access issues

- + No phone - shared mobile between 4 people need Access to free TV
- + We need Wi-Fi near the Mallee

Mobile service quality / signal penetration

- + Certain areas of my house I can't get service
- + Service is really slow and in certain areas of my house I don't get any service and when I have to make calls I have to go outside
- + The internet is very slow and also it's hard to make phone calls in my house because of the service. I have to walk outside to make a call
- + In the house you can only get service in certain rooms
- + Service is a bit slow
- + Need more mobile coverage in the Mallee and Mission area. Signal not strong enough inside house, drops out
- + The mobile is OK but you need to go outside to use the phone

Digital skills /support needs

- + I would like more training in digital skills to help get a job
- + Would be good to have a place to learn to use computers and get digital support

Affordability issues

- + Need a more affordable satellite internet service with more data
- + Would like to learn to use phone and internet with local trainer

Appendix 2: Community Communications Audit

About the community	
Community Name	Wilcannia, NSW
Alternate name	N/A
Traditional owners / Language group	Barkandji (Paakantyi/ Paakantji / Barkindji)
Location (Coords)	31.5590° S, 143.3784° E
Region	Murdi Paaki
LGA / Shire / Regional Council	Central Darling Shire
Land Council	Wilcannia Land Council
Regional Service Centre, distance	Dubbo 557 km; Broken Hill 197 km
Remoteness (ABS)	Very Remote
Population data – ABS 2021	
ABS 2021 Census All persons QuickStats	abs.gov.au/census/find-census-data/quickstats/2021/SAL14307
ABS 2021 Census Aboriginal and/or Torres Strait Islander (ATSI) people QuickStats	abs.gov.au/census/find-census-data/quickstats/2021/ILOC10300506
Total population	735 (51.4% ATSI / 22.4% not stated)
ATSI population	367
Gender breakdown (ATSI)	49.7% male / 50.3% female
Median Age / breakdown (ATSI)	Median age 27, children 0–14 29.5%, 15–34 31.6%, people aged 65 years and over 6.3%
% ATSI people who speak an ATSI language	2.7%
% ATSI people who speak English at home	95.9%
Employment levels	20% participation in the labour force. Of these 41.5% were employed full time, 32.1% were employed part-time and 18.9% were unemployed.
Education levels – No of people reached	Of people aged 15 and over in Wilcannia, 1.9% reported having completed Year 12 as their highest level of educational attainment, 7.5% year 11, 21.5% year 10, 41.9% Year 9 or below; 6.8% had completed a Certificate III or IV, and 3.7% had completed a Diploma, Advanced Diploma or Bachelor Degree.
Number of dwellings, people/household	361 private dwellings. Average 2.8 people per dwelling (3.3 for ATSI households)
Housing over-crowding	18.90% ATSI households require one or more extra bedrooms
Median Weekly ATSI household income	\$1,020
Median Weekly ATSI personal income – over 15 year	\$419
Average weekly rent	\$175

Community services and plans	
Community map	See: wilcanniatourism.com.au
Agencies in community – community council, shire council, store, school, art centre, police, clinic	Central Darling Shire, NSW Police, Wilcannia Land Council, Wilcannia hospital, Maari Ma Health Service, Wilcannia Central School, Regional Enterprise Development Institute (REDI.E), Wilcannia River Radio, Centrelink, St Therese Community School, Community Restorative Centre, Women's Safe House, NSW Government Family and Community Services, Centacare, Wings Youth Drop-in Centre, Wilcannia Courthouse
Business / other stakeholders	Wilcannia Community Grocer (operated by REDI.E / Outback Stores), Roadhouse, hotel, pharmacy, two caravan parks, Wilcannia Motel, several small businesses
Community Development Plan	Central Darling Shire Wilcannia and District Improvement Plan 2022-2032
Power supply/type in community (eg local generator or delivery from elsewhere, back-up, battery storage or redundancy options)	Power supply from Broken Hill; mobile tower and exchange have limited backup power; so power outages have resulted in telecommunications outages
Use of power cards in households – monthly expenditure	No
Basics card site?	No
Communications services available	
Public phones – number / location	2 - near police station and in old mission
Home phones – number	Unknown
Mobile – 3G, 4G, 5G, small cell (satellite backhaul), provider, location of base station	Telstra towers: MacCullochs Range 46 km south-east of Wilcannia near Barrier Highway, 3G/4G (ACMA Site ID 11185); Netallie Trig 11 km west, 3G/4G/5G (ACMA Site ID 132137); a 4G small cell at the Telstra exchange (27 Cleaton St Wilcannia); and a 4G small cell tower (10m) near hospital (1-7 Ross Street).
Coverage description	Coverage across community has improved but still poor coverage in some parts - near post office and Mallee and Mission residential areas; lack of coverage on roads to Broken Hill, Cobar and Ivanhoe; See: https://www.telstra.com.au/coverage-networks/our-coverage
ADSL – number of connections	Most businesses/ agencies (REDI.E office, Centrelink, store) and some staff residences have legacy ADSL; no new ADSL services provided by Telstra due to being in nbn satellite footprint
Business grade services – number of connections	Fibre to premises services at Shire, police station, hospital, school
Fibre to community	Yes + internal fibre to hospital and to airstrip
nbn Sky Muster Satellite services	Post office has Sky Muster satellite service; only a few residences have nbn satellite services
Starlink satellite services	Central Darling Shire staff houses, caravan park caretaker house (shared for public use by tenants/ visitors)

UHF or HF Radio	UHF used by Shire
Status of services – faults, issues, speeds during peak use time etc	Reports of regular outages on mobile services, sometimes related to power outages and limited battery backup. ADSL services described as slow and unreliable.
Communications Programs History (Mobile Black Spots Program, Regional Connectivity Program etc)	Had Wi-Fi trial under Indigenous Communications Program by Easyweb Digital in 2015-16
Any planned upgrades?	Unknown
Media services available	
Radio services broadcast – AM or FM	ABC- AM only; Wilcannia River Radio - 103.1 FM, 2WEB Bourke FM
TV services – local broadcast, number of DTH services, number working	All 16 digital TV + radio channels available on local broadcast
RIBS radio station – location, staff, roles	Wilcannia River Radio 103.1FM , 39 Reid St, Wilcannia. Station Manager Robert Clayton.
RIMO – regional provider	N/A, WRR is local station for Wilcannia, expanding to provide broadcast service in Menindee and Ivanhoe
Other media services – newspaper etc	Local paper published monthly, used to be weekly
Community access facilities	
Internet access facility (location, number of computers, server, printers, other facilities, videoconferencing)	No public access facility as yet. Two computers in Centrelink office for accessing online government services with staff support.
Other computers or facilities available	REDI.E, Wings Drop-in Centre and Wilcannia Safe House (setting up Courthouse Café) have plans for community access computers. TAFE have 10 computers for training purposes
Public Wi-Fi availability, free or voucher system, agency, RSP, monthly download limit	Free public Wi-Fi at Centrelink (provided by REDI.E) and Wings Drop-in centre; New REDI.E office provided by nbn co under STAND program 9am-9pm daily; Some government agencies allow Wi-Fi access, but mostly turned off after hours
Training / support	
Number of community members that have undertaken digital training	No details
Nature and provider of training programs?	TAFE may provide basic training
Training options available (e.g. at school, TAFE, CDP, other)	TAFE, School
Any workplace digital skills training (e.g. rangers, art centre, media, store etc)	Shire train staff in use of applications. Little other workplace digital training mentioned
Staff / resources to support digital skills	No dedicated staff, limited resources available in community

Use of online services / applications	
Apps or digital tools in use – archive, media server, SAM database	Cloud-based services used by government agencies and NGOs, no language or cultural maintenance software being used currently, but aspiration to do so
Use of MyGov, government services, banking	Used by most community members but most require some level of support
Number of people using social media	Used broadly but people very wary about Facebook due to misinformation and conflict
Number of people using email	Use by most workers in government agencies, community services, local business etc
Number of people using streaming services	Used widely but limited 4G bandwidth leads to quality loss
Telehealth usage	Yes, in Maari Ma health clinic and hospital - cameras set up to enable remote monitoring and clinical support
Online education or training	Only via Teams or Zoom
Online court hearings or prison visits	Not possible to due to limited connectivity to courthouse

Appendix 3: Photos of Research Activities



Figures 17 and 18:
Wilcannia River
Radio broadcaster
Rhonda Hynch;
Interview with
Robert Clayton and
co-researchers
Shaylin, Katelyn and
Sheldon



Figures 19 & 20:
co-researchers
Sheldon Hunter and
Shaylin Whyman
with Valerie Bugmy;
Wings Drop-in
Centre



Figures 21 & 22:
Daniel doing
interview with
Centrelink workers
Anthony Schembri
and Shirley Williams;
Access computers
at Centrelink



Figures 23 & 24:
Most surveys were
done in the new
REDI.E office; co-
researcher Sheldon
Hunter doing survey
with resident
Maureen King