

May 2024



MAPPING THE DIGITAL GAP

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



Yuelamu, NT

2023 Community Update Report



Acknowledgement of Country

We respectfully acknowledge the Anmatyerr people, the traditional owners for Yuelamu, 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.

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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, Langdon, M (2024) *Mapping the Digital Gap: Yuelamu NT Community Update Report 2023*. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne. DOI: 10.60836/3b0g-s164.

Acknowledgements

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

Community Research Partner

Pintubi Anmatjere Warlpiri Media and Communications (PAW Media)

facebook.com/pawmedia.com.au

General Manager: Chris Tait (formerly Jeff Bruer)

Operations Manager: Tess Foxworthy

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Mel Langdon

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 55 surveys with First Nations community residents in 2023 (37 in 2022). During 2022 and 2023 research visits, we undertook 21 interviews with community leaders, residents and the following stakeholder agencies:

- + Central Desert Regional Council
- + Yuelamu Community Development Program
- + Yuelamu Sport and Recreation (CDRC)
- + Alpirakina Store
- + Central Land Council
- + PAW Media and Communications
- + Yuendumu School
- + Yuendumu Community Health Centre
- + Yuendumu Women's Centre
- + Child and Family Centre Yuendumu
- + Central Australian Youth Link-up Service (CAYLUS)
- + First Nations Media Australia / inDigiMOB

Yuelamu research trips dates

15–20 May 2023; 5–10 May 2022

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Cover photo: Aerial photo of Yuelamu community with new mobile tower (awaiting activation at time)



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Figure 1: Research team in Yuelamu - Daniel Featherstone, co-researcher Mel Langdon and Lyndon Ormond-Parker

01. EXECUTIVE SUMMARY

This report outlines updated findings from our second research visit to Yuelamu community, a small community located in the Central Desert region of the Northern Territory (NT), about 43km west of the major community of Yuendumu, and 300km north-west of the regional centre of Alice Springs.

The traditional owners of Yuelamu are the Anmatyerr (Anmatjere) people. According to the 2021 Australian Bureau of Statistics (ABS) Census, the population of Yuelamu is 149 with 95% identifying as Aboriginal people (Yapa). Of these, 99% speak an Aboriginal language, primarily Anmatyerr (92%) and Warlpiri (3%). There are approximately 35 residential dwellings.

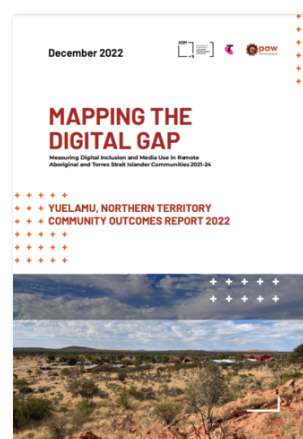
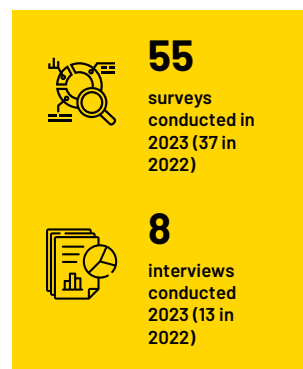
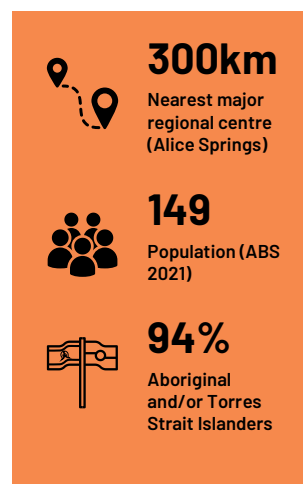
Our second research visit to Yuelamu was undertaken 15–20 May 2023. The RMIT University team worked with community research partner Pintubi Anmatjere Warlpiri Media and Communications (PAW Media) and co-researcher Mel Langdon, with support from local Central Desert Regional Council and Community Development Program staff. The team had a very productive week, undertaking 55 surveys with residents and conducting 8 interviews with agencies and community leaders. We thank all residents and agency staff who participated in the research and made us feel very welcome.

Building on the 2022 Yuelamu [Community Outcomes Report](#), this Update Report is intended to assist local and regional 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 research findings to date, compares survey results from 2022 and 2023, outlining changes in communications and media services and usage, and renewing the analysis section with 2023 findings and quotes. The proposed Digital Inclusion Plan has been updated based on community input and progress to date, as well as planned activities.

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

This report is part of our commitment to Indigenous data sovereignty, providing data and research findings to the participating communities to use for their own analysis, planning and advocacy. We will publish another update report following the final research visit in 2024.



Yuelamu at a Glance

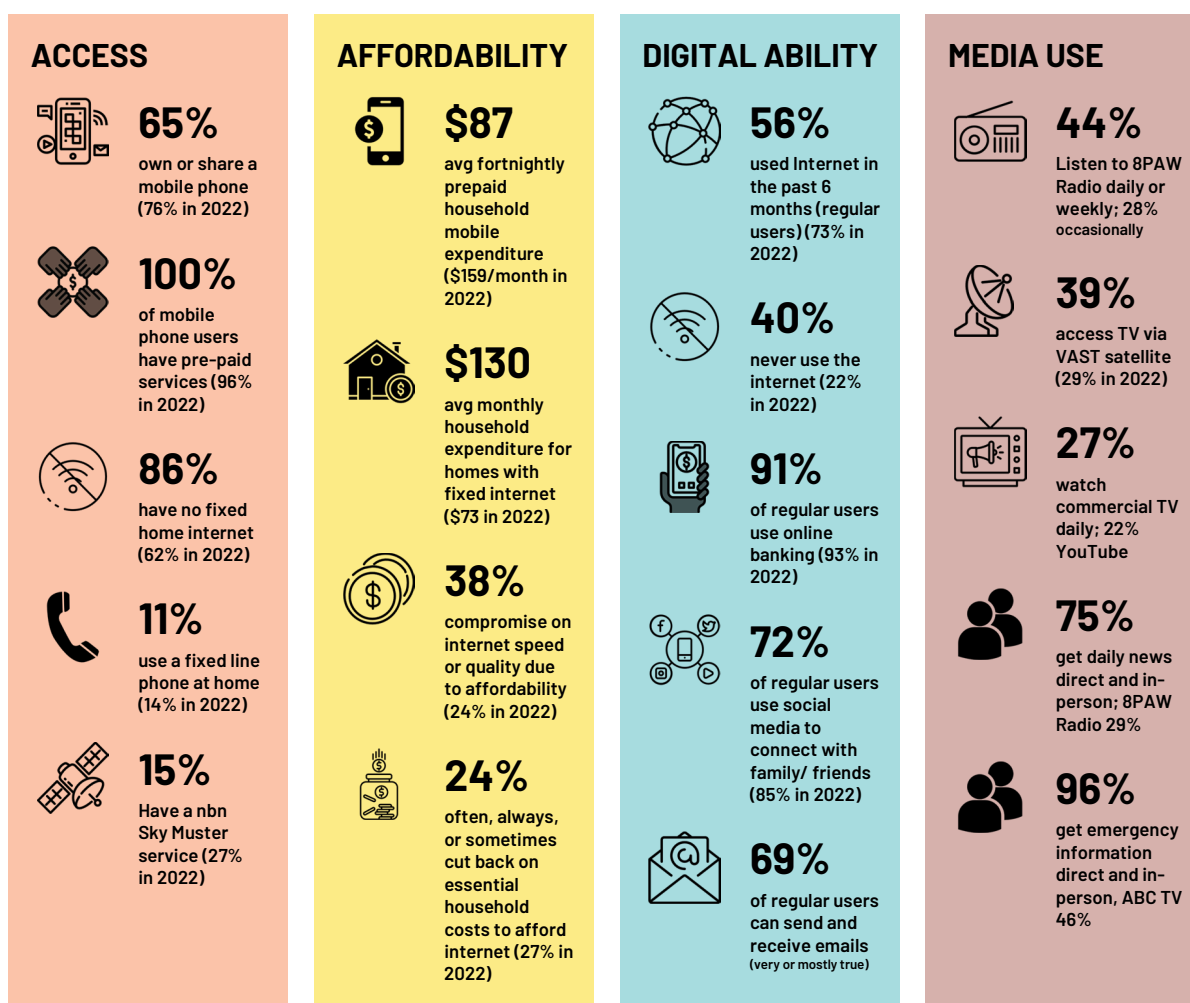
Distance	1,585 km	to nearest capital city (Darwin)
Dwellings	35	occupied dwellings
	4.8	people per ATSI household
Language	99%	ATSI people who speak an Aboriginal language
Income	\$254	median ATSI personal income



Figure 2: Alpirakina Store in Yuelamu

Key Survey Findings

The figure below provides a summary of 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 Yuelamu is provided in Appendix 2.

What is Digital Inclusion? How is it measured?

Digital inclusion refers to equitable and reliable access to and use of information and communication technologies for participation in social and economic life.

The Australian Digital Inclusion Index (ADII) is an annual national survey that measures three dimensions of digital inclusion – Access, Affordability and Digital Ability. ADII scores range from 0 to 100. The higher the score, the greater level of digital inclusion. ADII scores are relative, enabling comparisons across demographic groups and geographic areas over time.

The Mapping the Digital Gap project uses an amended version of the ADII survey to collect digital inclusion data. This enables us to compare results for the participating remote communities, towns and homelands with the national results collected by the ADII, and track changes in digital inclusion between and within these sites.

In 2021, Closing the Gap Outcome 17 was introduced for access to information and services enabling participation in informed decision making regarding their own lives. Target 17 includes a target of equal levels of digital inclusion for Aboriginal and Torres Strait Islander people by 2026.

Combined with ADII data collection, the Mapping the Digital Gap project is helping to track progress against Target 17 for remote, regional and urban First Nations people for the first time.

DIGITAL INCLUSION

ACCESS

- Reliable access to phone and internet
- Access to IT devices and/or facilities
- Access to trusted media, news and information

AFFORDABILITY

- Affordable phone and internet services
- Affordable devices

DIGITAL ABILITY

- Ability to use digital devices, software and online services
- Awareness of cybersafety, scams, and viruses

ADII First Nations Data Dashboard

The [First Nations dashboard](#) on the ADII website provides interactive charts and community-specific results for the ten research sites in 2022. The Mapping the Digital Gap [2023 Outcomes Report](#) provides summary findings across all sites.

View dashboard using the QR code below:

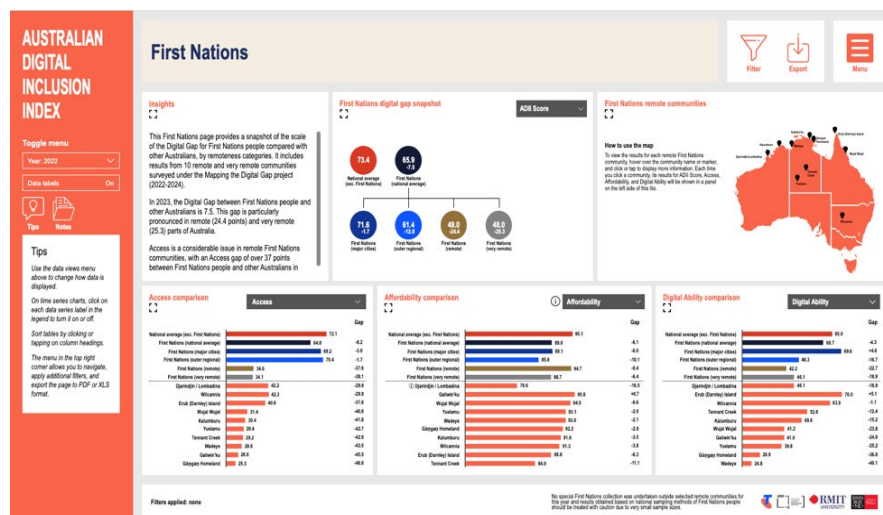


Figure 3: First Nations dashboard on ADII website: digitalinclusionindex.org.au/dashboard/firstnations.aspx

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.

Based on our 2022 survey results, the average Australian Digital Inclusion Index (ADII) score for Yuelamu was 45.2, a gap of 28.0 points below the national average for non-First Nations Australians.

The key element of this gap was in the Access dimension score of 29.4, which was 42.6 points below the non-First Nations average, owing primarily to lack of mobile coverage in Yuelamu, limited household internet access, and high reliance on mobile devices. The Index scores (see Figure 4) show a small gap for Affordability (-1.9) and a larger gap for Digital Ability (-25.1). However these gaps vary widely for different demographic groups as detailed below.

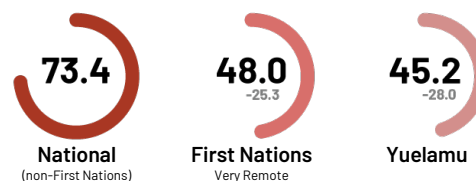


Figure 4: Yuleamu ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores, based on 2022 surveys

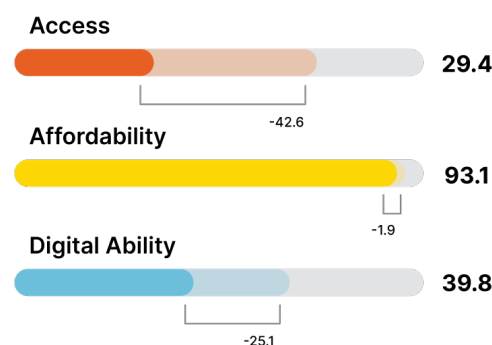


Figure 5: 2023 ADII scores for Yuelamu, with gap against national non-First Nations averages

Demographic gaps in Yuelamu:

The 2022 survey results found significant variations in digital inclusion between certain demographic groups. These results demonstrate that targeted digital support activities would benefit these demographic groups in Yuelamu.

Gender gap Women had higher average digital inclusion scores than men (49.9 compared with 43.1). The gap was primarily in the areas of Access (35.7 compared with 26.6) and Digital Ability (49.9 compared with 43.1).



Disability gap People with disability had average digital inclusion scores of 18.2 compared to 49.8 for those without disability. The gap was primarily in the areas of Digital Ability (0.0 compared with 46.6) and Access (5.7 compared with 33.4).



Employment gap The average digital inclusion score for people engaged in Community Development Program (CDP) activities was 40.7 compared to 55.0 for those employed (full-time or part-time). The gap was greatest in the areas of Digital Ability (31.5 compared with 51.8) and Access (26.7 compared with 40.2).



Education gap Those who did not complete secondary school had an average digital inclusion score of 17.4 compared to those who completed secondary school (Year 12), who averaged 50.6. There was a zero Digital Ability score for those who did not complete secondary school (compared with 48.3) and very low Access score (2.6 compared with 33.8)*.



Age gap Those aged 55–64 had an average digital inclusion score of 20.4, compared with a score of 56.4 for those aged 35–44 years (36.0 gap). The gap was even greater for 65–74 age group (41.4 gap) and 75+ (38.1). Digital Ability scores were 0.0 and Access scores were 2.5 for all over 55s.



A demographic gap also exists for people living in large shared housing, with those living in multi-generational family households scoring lower than households with a couple with no children (44.9 compared to 63.0).

- Note that low sample sizes may play a significant factor in some of these results.

02. INTRODUCTION

The Mapping the Digital Gap project tracks 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 Yuelamu in May 2023, comparing the survey and interview results to our findings from the first visit in May 2022. The report also tracks 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

With no mobile service yet, there were uneven levels of broadband and phone access in Yuelamu, with most broadband services in community agencies and staff houses. After years of advocacy, at the time of our visit a mobile tower had been funded but installation was still a year away. Due to limited household connectivity, residents had found a range of creative solutions for phone, internet and online service access.

There were a number of public internet access solutions in place – including Wi-Fi at the Centrelink office, store and recreation hall, and the CfAT mobile hotspot¹ (see Figure 7) – to enable basic access to online services. Along with a relatively high take-up of Sky Muster satellite services by about a third of *Yapa* (Warlpiri word for Aboriginal people) households, Yuelamu residents were surprisingly well connected and digitally literate. Consequently, we found that mobile phone ownership, expenditure and use of online services were marginally lower than results in similarly-sized communities with mobile coverage.



Figure 6: An array of satellite dishes on the CDRC office show the changes in communications technology over time.



Figure 7: 2023 co-researcher Mel Langdon using the CfAT mobile hotspot

Public Wi-Fi services were available at the Centrelink office, sport and recreation hall (via a voucher system), and an Activ8me Wi-Fi service at the Alpirakina community store. However, the Activ8me pre-paid vouchers were very costly at \$10 for 500 MB of data. Phone access was primarily via two working public phones (one in store), the CfAT mobile hotspot, the Centrelink agency phone, or using a mobile phone to call via Wi-Fi from a household Sky Muster service. Some people described driving towards Yuendumu community (43 km away) to access mobile signal from high points on the road.

There had been efforts for many years to have mobile installed in Yuelamu, one of two major communities in the region without a service. With macro-cell mobile services requiring high-capacity backhaul, the lack of fibre optic cable to Yuelamu had constrained progress. To improve backhaul capacity in the region, Telstra upgraded the optic fibre link between Alice Springs and Yuendumu in May 2021.² Telstra was in the process of completing a microwave repeater network to enable 4G macro cell services at Yuelamu and Willowra (switched on in October 2022),

¹ Designed and installed by Centre for Appropriate Technology (CfAT) HotSpot, the mobile hotspot is a passive signal concentrator dish which enables limited access to the 4G service from nearby Yuendumu for calls and basic data use.

² The fibre upgrade increased backhaul capacity on the line from 2.5 GB to 10 GB, and sought to improve broadband and mobile services to in Yuendumu and across the Tanami region while providing increased capacity for new mobile services in Laramba, Willowra and Yuelamu. Source: Email correspondence with NT Government 28/11/22.

however the Yuelamu connection was delayed by land use negotiations. The community were looking forward to having mobile, however we heard concerns about the potential impacts on the community, including cyber-safety issues, scams, affordability issues and excess use by youth, especially at night.



“They’ve been fighting for years for this 4G mobile coverage. They’re still waiting on it ... Everyone has a phone [that they use in] Yuendumu and Alice Springs [or] Ti Tree. [When] the 4G coverage comes [everything is] going to change, a big change.”

- Dennis Charles, Broadcaster / Archive worker, Yuelamu, 2022

During the COVID-19 pandemic travel restrictions in 2020–21, Yuelamu’s limited on-site services were further restricted by a lack of reliable and accessible communications or videoconferencing facilities to enable online delivery. Service providers in health, education, training and disability struggled to support Yuelamu residents, leaving the community highly excluded during this period. A case study in the 2022 report outlines how the lack of mobile communications continues to limit the ability of National Disability Insurance Scheme (NDIS) providers to arrange on-site visits with clients.



“Connectivity is increasingly crucial for access to education [and] services as more and more services go online. It’s become an essential service, particularly for remote mob.”

- Jennifer McFarland, CAYLUS / DotCom Mob, 2022

This demand for online services has been exacerbated by limited free-to-air TV access, due to VAST direct-to-home satellite services not working in 57% of surveyed households. Consequently, there is greater reliance on online entertainment services via Wi-Fi, adding to the cost burden on households. There is only one radio service, 8PAW Radio, broadcasting locally in Yuelamu, with ABC available only as a weak AM signal from Alice Springs. Despite low home radio ownership, 43% of survey respondents said they listen to PAW Radio daily or weekly, mostly via the car radio. PAW Radio is a primary source of emergency information and news and information, second only to face-to-face communications, delivering in-language health messages and updates throughout the pandemic.

Our surveys found a relatively high level of basic IT skills among the people surveyed, with 73% of survey respondents having used the internet in the last three months. However, we heard demand for community access facilities and support to develop digital skills, particularly for the elderly, people with disability and those limited English literacy, as well as for workplace readiness skills. While some digital support is provided by CDRC staff at the Centrelink and CDP offices, there were calls for a funded digital mentor role to provide more general training and support, including setting up and using online services, activating phone SIM, creating documents such as CVs, and downloading and using mobile applications. Without a dedicated space for people to seek assistance, there is demand on all service agencies to provide this support.



“[Online access is now] as crucial as running water, for people’s information needs ... Fresh air and data, in this life, if you’re stifled for either of those, you’ll perish fairly quickly.”

- Jeff Bruer, General Manager, PAW Media, 2022

Beyond limited access to communications services, affordability was a further barrier with personal incomes averaging only \$254 per week (ABS 2021) amid high costs of food, fuel and other services. While the 4G service will provide much needed access, it will likely increase household expenses for data and devices, with ongoing need for free public Wi-Fi services and other measures to alleviate ‘digital poverty’.

2023 Findings

During our May 2023 visit, we found that little had changed in Yuelamu since 2022. While a new mobile tower had been constructed at the top of the hill, after numerous delays, the community was still waiting for it to be activated. A range of concerns were raised about the potential impact of the 4G when it is switched on, including increased social media use leading to conflict, increased scams, disengagement and late-night usage by young people, and general disruption to the peaceful community. While Telstra had commissioned Centre for Appropriate Technology (CfAT) to deliver consumer awareness training in Yuelamu prior to the mobile switch-on, there were calls for more training and support in navigating scams, cyber safety issues, and selection of products and plans.

The mobile tower was finally switched on on 30 June 2023, so we will review usage and community feedback during our third visit in 2024.

The range of media and communications services available remained much the same, however there had been some recent uptake of Starlink satellite services on several agency buildings including the CDRC office. The number of Yapa households with Sky Muster services had reduced from 27% to 14% of those surveyed. While this may be due to anticipation of having mobile coverage, it may also be a result of affordability issues. With high household demand for data, combined with shared use of the Wi-Fi by family and neighbours from other houses, we heard of high monthly bills up to \$200 per month including excess data costs (Note: newer Sky Muster plans shape the speed rather than charge for excess data).

Community access options remained limited. There was still regular use of the one working public phone and the CfAT mobile hotspot, and reports of an intermittent mobile signal from Yuendumu enabling some access. There were several Wi-Fi options available, including access at the Centrelink office, CDP office and school library (limited access) and the sport and recreation hall, although this was awaiting repairs. We heard that young people were accessing the CDRC office Wi-Fi after hours, with this being switched off each night as a result. The high price of Activ8me pre-paid Wi-Fi vouchers remained unchanged, despite recommendations for this to be reviewed, with most use by visiting agency staff with very limited connectivity options. This led to calls for more free Wi-Fi options on the south side of Yuelamu.

We found that most residents have a mobile phone for phone and internet use via Wi-Fi, as well as for use when travelling to Yuendumu, Alice Springs or other communities. However, there are very few computers or laptops at home, with few community access computers, other than in the Centrelink agency and CDP training room. The CDP office has a training room and one laptop and is the most likely space for people to access computers and support in the community. The school is also providing some support, with free Wi-Fi available in the library.

There was low use of traditional media modes for several reasons. Household access to VAST satellite television services had reduced since our 2022 visit, with 65% of those surveyed not having VAST TV services working in their home (57% in 2022). This was primarily due to VAST set-top boxes or satellite dishes not working, with a high cost to replace set-top boxes and significant challenges in activating the smart cards. A digital broadcast solution was proposed as an option for Yuelamu to improve free-to-air TV access and reliable news and information sources. The PAW Media radio service was working, with RIBS broadcaster Judith Dixon doing occasional radio shows over the network. 44% of respondents reported listening to PAW Media weekly but only 9% listened to the weak ABC AM service. People are more likely to source news and information via television, social media, noticeboards or face-to-face.

With cost-of-living pressure increasing with high costs for food, fuel and power cards, affordability is a key barrier to digital inclusion. 52% of regular internet users surveyed reported cost as a key reason for not using the internet more often (up from 41% in 2022). Household expenditure for pre-paid mobile services was \$87/ fortnight in 2023, but we expect this to have increased substantially with the mobile

service now active. The store in Yuelamu was only set up to sell low-priced recharge vouchers (\$20 and \$30), limiting the option of higher priced but better value vouchers for heavy data users. The high cost of devices and regular turnover due to damage or transfer is a further affordability issue.

Our 2023 survey found a lower level of internet use than in 2022, with 58% of those surveyed having used the internet in the last six months, down from 73% in 2022. This was largely due to a broader survey sample including more older residents,³ however access and affordability factors may have contributed. As outlined on page 7, our survey found stark differences in digital ability between demographic groups, particularly according to age, education levels, and disability, as well as between women, and men doing CDP or labouring roles. Despite limited connectivity options, young people were highly digitally engaged, though primarily using social media, games, and content streaming.

Among regular internet users, there was a reasonable level of capability with basic online services such as banking and My Gov applications as well as online searching, social media use and apps. However, there was more limited use of more complex applications due to limited household access to computers or laptops. The 2023 ADII found that the overall level of digital ability in Yuelamu was lower than the very remote communities average (39.8 compared to 46.1), indicating a clear link between communications access and digital ability.

With the upcoming activation of the mobile service, there was increased demand for digital training and support, including awareness about scams and cyber-safety risks, especially for elders. We suggest the employment of local digital mentors to provide on-demand peer support, ideally located in the sites where computers are available such as the CDP office or Centrelink agency. Other workplace skills training could be done on the job using the specific tools or applications needed for the role.

Updates to Proposed Digital Inclusion Plan

Telecommunications in remote communities is typically a state or federal government responsibility, with decisions and timeframes often determined by funding programs and industry players. This can leave residents and agencies feeling they have limited input to ensure technology and services are fit for purpose. The proposed digital inclusion plan in Section 6 is intended as a tool to assist communities to determine local needs and priorities. builds upon the plan in the 2022 Outcomes report, including new strategies proposed by residents and stakeholders during our 2023 visit, as well as a summary of progress to date or planned activities for each item listed.

We recognise the challenges in implementing a local digital inclusion plan, with multiple agencies involved in delivering media, communications and digital support programs. However Yuelamu community, with support from CDRC, Central Land Council and NT Government, has been proactive in advocating for a mobile service over many years. We hope that this draft plan can assist in planning and advocacy for other services and digital inclusion activities needed by Yuelamu residents and service providers.

As part of our ongoing research work with the Yuelamu community in 2024, the Mapping the Digital Gap team can assist with further development of this plan.

³ The average (mean) age of survey respondents in 2023 was 43 compared with 37 in 2022.

03. MEDIA & COMMUNICATIONS IN YUELAMU

Existing Telecommunications Services



Mobile coverage

The Telstra mobile service was not yet active during our 2023 visit. The closest coverage was at Yuendumu, 43km to the west. Residents could access this signal via the Centre for Appropriate Technology (CfAT) HotSpot,⁴ a passive signal concentrator dish located near the store. The Telstra 4G macro-cell was finally activated on 30th June 2023, with coverage reaching about 10–20 km around the community (see Figure 7). Backhaul for the mobile service is via a high-capacity microwave repeater network, which also services nearby Willowra.

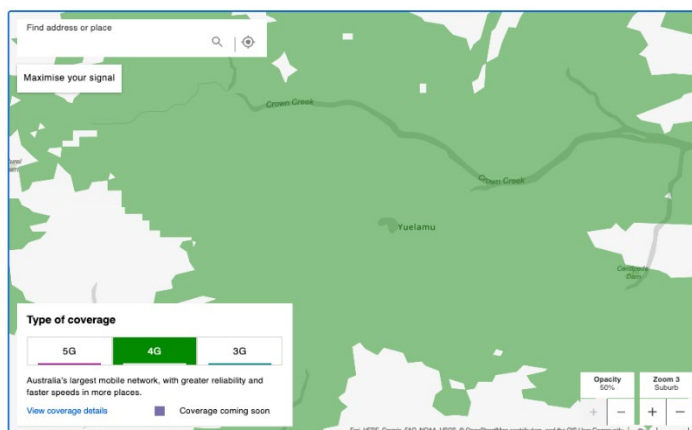


Figure 8: Telstra coverage map for Yuelamu. Source: <https://www.telstra.com.au/coverage-networks/our-coverage>

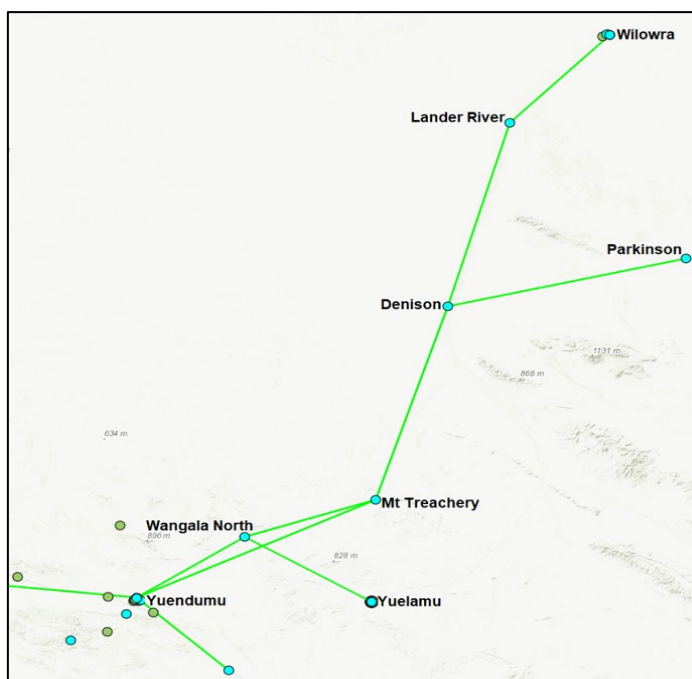


Figure 9: Microwave repeater network providing backhaul for mobile services in Yuelamu and Willowra (Source: NT Government)



Mobile phones and recharge sales

A basic range of smartphones and flip phones (calls only), and Telstra recharge vouchers, are available from the Alpirakina store. Activ8me Wi-Fi vouchers are also available.

⁴ The CfAT hotspots are a passive mobile signal concentrator, using a satellite dish to focus the signal to enable basic reception. NT Government have funded the installation if these in some small communities, homelands and roadside stops located beyond standard mobile range. See: <https://cfat.org.au/telecommunications-1>



Backhaul to community

Backhaul for basic telephony is via the HCRC microwave repeater network. All internet backhaul is via satellite, with the mobile backhaul outlined above.



Landlines

The copper network provides phone services to most agencies and staff houses in the community, with 10% of residents surveyed using a fixed line telephone at least some calls.



Public Phones

There is a Telstra public phone opposite the community office as well as a free public phone in the Alpirakina store foyer, with both getting regular use. There are also two Telstra phone boxes in the northern residential area, however these were not working during both our 2022 and 2023 visits.



Wi-Fi services

There is an Activ8me Wi-Fi hotspot available full-time at the Alpirakina community store using a voucher system.⁵ Free CDRC-run public Wi-Fi is provided via vouchers to youth at the recreation hall at set times. The Centrelink office has 24/7 free Wi-Fi for government and online services.

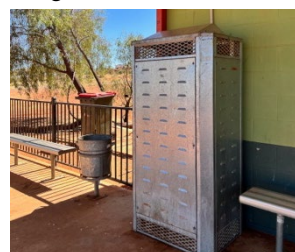


Figure 10: Activ8me Wi-Fi hub at the Alpirakina store



nbn services

Kalumburu is designated as a satellite delivery zone under nbn planning. An estimated 14% of residents surveyed had household nbn Sky Muster in 2023, alongside most agencies and staff houses.



Starlink services

Two CDRC-run agencies had installed Starlink services in 2023, including the main CDRC office and meeting room (shared via microwave link to CDP office and aged care facility), and the Kwermap Day Care Centre.



Telemetry

PowerWater is the NT Government agency responsible for transmission and distribution of electricity as well as water and sewerage services in NT communities. PowerWater use System Control telemetry for monitoring, operation, and control of regulated power systems,⁶ supported by on-site personnel.



HF / UHF Radio

The CDRC and municipal services staff use UHF radio for staff communications. The Rangers use UHF radio when undertaking land management work on country. Police, emergency services and aircraft also use VHF radio.

⁵ The cost of data is relatively high using the vouchers – \$5 for 200 MB; \$10 for 500 MB; \$20 for 3 GB

⁶ Source: PowerWater Corporation <https://www.powerwater.com.au/market-operator/system-control>

Media Services



Radio services

PAW Media's 8PAW Radio is the popular regional First Nations radio service, broadcasting from Yuendumu, with FM retransmission at Yuelamu. There is a local Remote Indigenous Broadcasting Service (RIBS) studio in Yuelamu, with broadcaster Judy Dixon doing live shows over the network. An ABC radio service (Alice Springs) can be picked up as a weak AM signal.



TV services

All houses in Kalumburu require Viewer Access Satellite Television (VAST) direct-to-home satellite for free-to-air TV services. However, our survey found that over 65% of households did not have TV services working, mostly due to set top boxes not working or dish / cabling requiring maintenance.



Newspaper

There is no regular newspaper access. However, the Land Rights News, produced by Central Land Council three times a year, is distributed to Yuelamu.



Local and regional news

Local news is primarily shared via word of mouth and noticeboards at the CDRC office and store. This includes upcoming events, meetings, health updates and training and jobs information. Regional news is shared via 8PAW radio, PAW Media's Facebook page, Central Desert Regional Council and Central Land Council website and Facebook pages.

Access and Support Facilities



Community Access facilities

There are two community access computers in the Centrelink office for using Centrelink and banking services, with two computers also available in the CDP office on the north side. The computer room at the sport and recreation hall was no longer operating.



IT Support

Support in accessing and using online government services is available from CDRC staff at the Centrelink office, with basic digital support also provided at the CDP office.



Figure 11: Aerial view of Yuelamu from the north-west

04. KEY FINDINGS FROM DATA ANALYSIS

This section provides key findings from the 21 interviews conducted in 2022 and 2023 with community leaders and stakeholders, as well as observational data and survey results. The analysis builds upon the findings in the 2022 Community Outcomes Report, with new topics labelled with 2023 after the heading.

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

Communications have changed from traditional modes to HF radio to digital modes

A range of communication modes were used by Anmatjere people prior to colonisation. As well as verbal communication, these included hand signs, iconography or symbols drawn in ochre or engraved on rock or wooden message sticks, song, dance, and smoke signals, among others. Even in contemporary times, smoke signals are still used to indicate if someone is broken down in the bush.



“I used to learn with the old people. When the old people were coming [from another place] we used to know the smoke or the bush fire is burning North, West or South ... we knew the signs. When someone stuck up there, the bush fire goes up, then we know the smoke, “Oh, someone's stuck up there” ... That's the signal.”

– David Japanangka McCormack, traditional owner / leader, Yuelamu, 2023

Prior to Yuelamu community being established in 1980, the primary mode of long-range communications for the Mt Allan cattle station was via HF radio, which was initially set up by the Royal Flying Doctor Service. While VHF radio use is still used by RFDS, aircraft and police and emergency services, UHF radio is more commonly used for closer range communications.

- + “When it was a station, [before] we start the community, we had [HF] radio systems [to] contact someone out there at Yuendumu or anywhere in the trucks driving across ... They were just picking up on the radio. [Now] the Toyotas they use them [UHF] radios.” (David Japanangka McCormack, as above, 2023)

The Digital Radio Concentrator System (DRCS) microwave repeater system was rolled out by Telecom Australia in the 1980s to provide basic telephony across remote and rural Australia. Local exchanges and copper networks were installed in remote communities. The DRCS system was later upgraded to Higher Capacity Radio Concentrator (HCRC) in about 2002, with speeds of up to 19.2 kbps enabling use for voice, fax and basic data connections. This has remained the primary means of backhaul for telephony in many remote communities to date, with fibre optic rolled out to larger communities such as Yuendumu in the late 1990s to 2000s, enabling delivery of ADSL and mobile services. Satellite technology has provided the primary means of internet access since the 1990s. 4G mobile connectivity is the next wave of communications technology now available in Yuelamu.

- + “[Then they were] bringing in the phones here, the Telstra started ... Somewhere there from 1990 it started. [Now] the kids today, the technologies now, they know what to do [to use mobile and internet].” (David Japanangka McCormack, as above, 2023)

Yuelamu had been waiting two years for mobile coverage to be installed

At the time of our 2022 visit, Yuelamu and Willowra were the only two communities in the Central Desert region that did not have 4G coverage, with a mobile service provided to Laramba in 2021. After lengthy delays due to COVID travel restrictions and arranging land use agreements Telstra installed a 4G mobile tower on the central hill in Yuelamu in October 2022. During our second visit in May 2023, residents and agency staff were still awaiting the mobile service, with advice from Telstra it would be activated in June.



“People are talking about it. They can’t wait for that Telstra to come online, especially for emergencies, when you break down. That’s a handy way of communicating to families and the community, and outside of community ... I think it’s been eight or nine months [we’ve been waiting] now.”

- Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023

- + The fellows from the Telstra centre [tell us] ‘We’ll be there next month’, which turns out to be for the next few months. We’ve waited, waited, still nothing. Now they said they’re coming out next month. Hopefully that’s true because it’ll make life easier out here. [It will help] people [to] stay in contact with families, friends, pass on emergency messages instead of having [to] walk or drive over to the other end just to tell them that there’s [an] emergency or something had happened or someone’s looking for you.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)
- + “I think most of the community are really keen to get that tower happening. That seems to be a big need at the moment ... A lot of people ask me almost daily about when that will be happening. I think a positive thing will be it will provide locals with more access to communication and technology. It will also help with the older generation to be exposed to technology and fill in some of those gaps where there’s been no exposure.” (Taylor Whitbread, CDP Site Manager, CDRC, Yuelamu, 2023)

The Yuelamu community has been actively seeking to establish mobile coverage for several years. In 2019, following a proposal from Telstra to install small cell mobile technology with a community co-contribution towards infrastructure and installation costs, Yuelamu’s GMAAAC committee⁷ had agreed to contribute using royalty funding. However, Telstra subsequently advised that it would install a macro-cell as part of the NT Government / Telstra Remote Telecommunications Co-investment Program 2018-22.

- + “[We’ve been] fighting for the Telstra [mobile]. We nearly had it for one year and I was still pushing [at] CLC meetings, and GMAAC and the Shire. [We were going to get a little tower but we’ve ended up with] the big tower up on the hill.” (David Japanangka McCormack, traditional owner / leader, Yuelamu, 2023)

Telstra installed the 40m tower on the hill in Yuelamu in October 2022, with microwave backhaul from Yuendumu via a series of repeater towers (see Figure 9). Central Land Council were assisting with negotiations of land use agreements for the location of the new repeater towers, with a final negotiation underway with a pastoral station nearby Yuelamu at the time of our visit. The Willowra 4G service, which also connects via the microwave network, was switched on in October 2022, but the Yuelamu community were still waiting when we visited in May 2023.

⁷ The Granites Mine Affected Area Aboriginal Corporation (GMAAAC) has been set up to distribute the compensation payments (royalties) from the Granites gold mine for us on locally decided projects. Central Land Council (CLC) supports the elected Granites Mine Affected Area Aboriginal Corporation (GMAAAC) committees in Yuelamu and Yuendumu with the planning, decision-making and management of the projects they support.

- + “We still don't know when the tower's going to get connected. It's just waiting for power, that's what I got told. [We were told it would] happen in November, then December, then January, then March and [now] May's nearly gone. So we'll wait and see.” (Mark Gray, Night Patrol and Youth, Sport & Recreation, Yuelamu, 2023)

The Yuelamu mobile service was finally activated on 30 June 2023. Interviewees described how the service would improve emergency communications when hunting or travelling in the bush.

- + “[It will be] good for emergency communications. [For] people that goes out hunting, [if they break down] they can call back [so] we know where they are when they're stuck up somewhere in the scrub ... This is the new way because we can connect it to the mobile ... I just got to find out myself how far can I go with the mobile.” (David Japanangka McCormack, traditional owner / leader, Yuelamu, 2023)



Figure 12: The new 40m 4G tower in Yuelamu, awaiting backhaul connection. The other towers are for HCRC microwave links (left of mobile tower) and radio broadcasting (right).

While most Yuelamu residents use a mobile phone to make calls, this requires connectivity via Wi-Fi or the CfAT hotspot, which has no shelter. The mobile service will enable people to call from their homes.

- + “[People are] sick of standing [at] the public pole [CfAT hotspot]. But in the mobile it'll be good because you can ring it from their own home for the Centrelink, because Centrelink takes us ages, like an hour. They can sit down there, watch and put them with a speaker, watch TV ... That's more easier way from before. [We don't need to rely on someone in the office], we can do ourselves at home. [And we can find out about] work meetings like Shire [business], which community [and] what day, what time? ... We can contact [people who are] coming in now.” (David Japanangka McCormack, as above, 2023)

Concerns were raised about potential impacts of mobile coverage and the need for awareness

In the leadup to the mobile service switch-on, Telstra arranged initial consumer awareness in Yuelamu.

- + “Two people from ... Centre for Appropriate Technology [came to] educate people [on] how to use phones and how to activate phones. So once the Telstra tower goes online, they'll come and educate people [more], both on the computer and on the phone as well.” (Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023)

Another training session by CfAT was planned prior to the mobile service being activated. While residents and agencies were eagerly anticipating the mobile service, we heard concerns about its potential impacts on affordability, cyber-safety and behavioural issues, with calls for more training and awareness.

- + “I think it would be very important to have an education program prior to [the mobile activation] around internet safety and awareness and how to use internet. What is the internet, what goes on the internet, how it all works, because it can be a bit of a mine field, especially for people that don't know how to use it.” (Taylor Whitbread, CDP Site Manager, CDRC, Yuelamu, 2023)

Potential cyber-safety issues are outlined further in the Digital Ability section starting on page X. There were also calls for strategies to enable elders to establish authority in the digital space to help reduce potential impacts.



“Once the tower goes online, [we need to] have a community meeting with Telstra and talk about the problems it’s going to cause in the future [and work out ways to address these. We need] the elders talking to the community, especially the young people [so] we don’t have problems with people fighting [or] talking to strangers online, [to] make sure they use it wisely.”

- Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023

- + “[The mobile will] be a good thing but [also] a bad thing ... we’ve got to watch out for the kids maybe running amok. [If] people are texting each other, they’ve got to be careful. Problem[s] can come up with the family ... Sometimes young kids fighting [so we] tell the parents to stop their kids. [And] you’ve got to think about for school. Because not much going to school, all the kids, they sleep in ... People might [stop] doing anything, they just sit back at home. There’ll be plenty of jobs in our community, but they can’t even wake up [after staying up all night]. They’re all the things we worry about.” (Anthony Briscoe, Resident, 2023)

With no mobile coverage, public phones and Wi-Fi Calling provided primary phone access

Phone access was still restricted in Yuelamu during our 2023 visit, prior to the mobile service being activated. Most fixed line telephone access was limited to the free Telstra public phone opposite the office (with two others on the northern side not working during our two visits), the blue public phone in the store, two Centrelink agency phones and work phones in agency offices. The public phone gets regular use in Yuelamu, with 10% of respondents saying they used the public phone for calls and 14% using the phone at a community office or workplace (down from 49% and 35% respectively in 2022).



“[Communications here are] not good because we’ve got no mobile services out here. We just pretty much rely heavily on hotspots, like Wi-Fi mostly, and Sky Muster stuffs.”

- Mel Langdon, Resident / Co-researcher, Yuelamu, 2023

Despite there being no mobile coverage in Yuelamu at the time of our visit, and the nearest coverage being from Yuendumu 43km away, 97% of survey respondents said they used a mobile phone to make calls (up from 62% in 2022). This was primarily by utilising public Wi-Fi hotspots or household Sky Muster services with Wi-Fi calling or apps such as WhatsApp or Messenger.

- + “[Some people] have a Wi-Fi Calling if they’ve got internet at home with a Sky Muster. [When] I was in Alice Springs, one of my family called me from Yuelamu from the Wi-Fi Calling. I was amazed about that.” (Dennis Charles, Broadcaster/ Archive Worker, First Nations Media Australia, 2022)

Phone calls and texting could also be made via the CfAT mobile hotspot located near the store, which enabled limited 4G access from Yuendumu (43km west). The CfAT hotspot was getting regular use for making calls and texts, with reports of a line of people waiting to use it at times.

- + “It gets used a lot every day and night. Pretty much at night there's mostly young kids hanging around there using that area ... I'd use it in an emergency, but [not] now since I've got my own Wi-Fi connected at my place.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)
- + “[We used the hotspot] before we got Wi-Fi on ... But sometimes there's a line there, you have to wait [your turn]. You have to set one phone [at the right] spot [to get a signal].” (Mark Gray Night Patrol and Youth Sport & Recreation, Yuelamu, 2023)

However, the signal strength from Yuendumu could be affected by weather conditions.

- + “It takes a while for [the mobile hotspot] to come online; you have to stand there and move the phone around, especially when it's windy, it doesn't work actually.” (Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023)

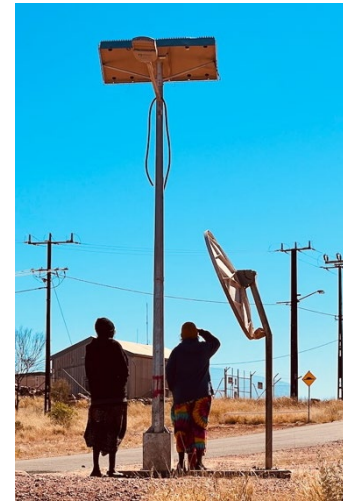


Figure 13: The CfAT mobile hotspot is regularly used for calls and internet access

We also heard that residents occasionally drive out of town towards Yuendumu to access a weak signal from a hill along the road.

There was reduced household Sky Muster uptake in 2023

In 2023, 86% of survey respondents reported not having any form of fixed home internet (up from 62% in 2022). While our 2022 survey found a relatively high uptake of nbn Sky Muster satellite services, with 27% of respondents having a Sky Muster service at home, this had reduced to 14% in 2023. There were also Sky Muster services on most agency buildings and the 14 staff houses in Yuelamu.

- + “I've got a Sky Muster dish with the Activ8me crew. [I pay] about \$100 a month [but] if I spend more time on using the data [then] that costs me extra money. Say maybe extra \$50 or \$20, something like that. It depends on how much I use ... I mostly use it for Netflix, calling, messaging, pretty much everyday stuff [we need] in a place where we've got no services.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)

There is high shared use of Wi-Fi in households with Sky Muster by other local residents and young people.

- + “If one house has [Wi-Fi, young people hang around and connect] on mobile phone. They [are] clever, the young people ... Sometimes they'll just give them the password [or] the other one will ask them 'Show me the password'.” (Anthony Briscoe, Resident, 2023)

Our survey found that some households pay up to \$200 per month for Sky Muster services. These high costs are likely due to being on basic Sky Muster plans that charge for additional data use.



Figure 14: Mel Langdon at his home with Sky Muster (white) and VAST satellite (grey) dishes on the roof

- + “I have an Activ8Me [Sky Muster service at home]. I just use it mainly for work issues, and checking banks, and doing MyGov. [It costs about] \$140 [a month for] like 500GB or something. [Most] people have been installing ... Activ8Me dishes in the house. [They spend] sometimes \$200 monthly, depending on how much data you use.” (Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023)

However, our 2023 survey found Sky Muster use had reduced significantly to 14%, suggesting some residential households no longer have a Sky Muster service. While we lack definitive reasons for this movement away from Sky Muster, likely reasons include affordability issues and anticipation of having mobile access. The lack of a pre-paid option was cited as a key reason for not getting a Sky Muster service, with low-income households concerned about not being able to afford monthly bills and having the service disconnected.⁸ However, Sky Muster services are significantly more affordable for heavy data users than pre-paid mobile data.

- + “I will [keep my Sky Muster service] because if I rely on the mobile network, it costs more money and [I’ll have to] walk down to the shop and get more prepaid recharges ... I’ll probably exceed it a lot then I’ll have to pay more as well.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)

The recent introduction of the Sky Muster Plus Premium service, with an unlimited data allowance and options of speeds from 25 / 5 Mbps to 100 / 5 Mbps, would provide a more sustainable option for large households with high data use.

Of those using Sky Muster services, there were mixed reports about the performance with users describing dropouts during cloud cover, the need for higher data limits to meet household needs, and latency affecting the quality of Wi-Fi phone calls (a common use due to lack of phone access).



“The internet could drop out [in the store when its cloudy or raining]. If you have no internet here, you’ve got no ATM, no EFTPOS, all you can do is cash only. [With most people on] the basics card, you can’t do anything. [We] close the shop because most [people] use some sort of card. [It happens] probably ten times a year, [mostly] just short periods.”

- Debra Teese, Manager, Alpirakina Store Yuelamu, 2023

- + “We’re lucky we’ve got Wi-Fi, so we just use that for our phone calls and [online] stuff. [But] sometimes you ring, they’re delayed and you can hear yourself and [there is] feedback coming back to you ... So you hang up and then you ring up again and it’s not too bad. It’s just like a delay. I’ll start talking and they start talking, then you both stop and you’re waiting. Then you both start talking again ... so it makes it hard.” (Mark Gray, Night Patrol and Youth, Sport & Recreation, Yuelamu, 2023)

One user reported a recent reduction in quality for their household Sky Muster services.

- + “[Our] home internet [has] been pretty atrocious [in the last few months]. We used to do Messenger [to talk to] our family [but] we’ve got to just speak on the home phone now. We don’t even get to see our grandkids. They can’t see us. It’s all blurry ... It just breaks up all the time ... We do it at different times, even later at night.” (Debra Teese, Manager, Alpirakina Store Yuelamu, 2023)

It is unclear whether the poor service is due to increased congestion or technical issues with the satellite equipment. We recommend reporting issues of this nature to the retail service provider as it may require equipment maintenance. This can be challenging for staff who do not have the account in their name.

There was some initial uptake of Starlink services by agencies [2023]

Starlink low-earth orbit (LEO) satellite services have been available in central Australia since 2022, providing high-speed, low latency internet access with unlimited data usage. We heard of several central

⁸ Most retail service providers offer Sky Muster products with no lock-in contracts, however these are different to a true pre-paid option which allow more flexibility of the timing and amount of payments.

Australian agencies transferring from Sky Muster to Starlink services, including health services, schools and regional councils, as well as some agency staff for household use. However, the fixed monthly cost of \$139/month, and upfront equipment cost of \$399, make the Starlink service relatively unaffordable for most Yapa households.

During our 2023 visits, we found that a Starlink service had recently been installed at the Yuelamu CDRC office and meeting room, with the service shared via microwave link to the CDP office and aged care facility on the northern side of the community.



“We’ve got the Starlink [dish] installed last month ... we use that for Zoom meetings, [videoconferencing, and] on work computers ... I think [the internet is] quicker [now]. Before it was a bit slow [with Sky Muster], but now it’s more faster.”

- Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023

The Kwermap Day Care Centre had also recently installed Starlink, with reports of improved services. There was no evidence of Starlink use at the clinic or school.

While there were no First Nations households in Yuelamu with Starlink services during our 2023 visit, we heard of some uptake in Yuendumu.

- + “I’ve got my cousin at Yuendumu, my little nephews who showed me, they got the little dish, the little white square thing ... the Starlink. But you can travel around, wherever you’re going to go, you can just take it and plug it in. [\$139 a month is expensive but] he’s still paying it. It’s really good.” (Anthony Briscoe, Resident, 2023)



Figure 15: Videoconferencing equipment in the CDRC meeting room

Most reports of Starlink use were positive, however we did hear of some concerns.

- + “[There may be] long term sustainability issues [with] Starlink, [which is] starting to get more congested [with] significant dropouts. [Also] the domestic level dishes are only rated to 50 degrees ... The commercial grade dishes are probably more robust and more highly rated than the domestic ones ... There’s also the complete lack of backup ... you can’t call anyone if something goes wrong with your equipment.” (Jennifer McFarland, CAYLUS, Alice Springs, 2023)

Telstra have recently released a Starlink product, which costs \$125/month plus upfront equipment costs of \$599. While slightly cheaper than the domestic Starlink product and offering back-up support (after 15 months), this product has slower broadband speed (50Mbps download / 10 Mbps upload) and the monthly rate would still be challenge for most low-income households.⁹

Despite lack of mobile coverage, smartphones are the primary means of internet access

Of the 58% of respondents who had used the internet within the last three months, 100% said they use their smartphone as a primary means of internet access. Given the lack of mobile coverage this suggests that people are accessing internet via a Sky Muster or Wi-Fi service, the CfAT hotspot or mobile services

⁹ See: <https://www.telstra.com.au/internet/starlink>

in other communities such as Yuendumu. Some people also use a desktop computer (52%), primarily in the Centrelink office or CDP office, or a tablet (13%).

There are typically very few households with computers or laptops across the region, even in the nearby major centre of Yuendumu.

- + “[There are no] Aboriginal workers that I know that have laptops, other than school staff who are doing training at the moment.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Mobile devices tend to be shared among family members, often resulting in a limited lifespan.

- + “If you do have a mobile phone ... everyone in the family wants it so your phone is quickly passed around [and then] their data’s running out, kids have got their phones, phones are dropped or broken. And so you’re then in this cycle of poverty begets more people who are information poor and are more in poverty.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

With a high turnover of mobile phones, phone numbers also change regularly with people typically getting a new SIM without transferring their existing number. This can create issues for online records and contact by service providers.

- + “It’s not so easy ringing people on mobile phones because they just get a new [number or a] child [is] playing games on grandma’s or mum’s phone. So I keep saying to them, just get simple ones, don’t buy the real fancy expensive ones, the kids will take them straight away.” (Cheryl North, Yuendumu Women’s Centre, 2022)

To reduce demand on their phone, some people opt to get non-smart phones.

- + “I’ve seen more and more people, even in their 50s, like people who are quite able to use internet on their phone choosing to have a phone that ... [is non-smart] because their phones aren’t stolen, their phones aren’t broken, and they can keep them for longer.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Community Wi-Fi provides public internet access, but needs management

With no 4G coverage in Yuelamu prior to June 2023, public Wi-Fi services provided an affordable means of internet access. Our 2023 survey found that 28% of regular internet users reported using a public space with free Wi-Fi for internet access (down from 41% in 2022). There is free Wi-Fi available 24/7 from the Centrelink office for accessing government and banking services, at the CDP office during office hours, and in the school library during school hours.

Central Australian Youth Link-up Service (CAYLUS) have supported the installation of Wi-Fi hotspots in a number of central Australian communities including Yuelamu. These are primarily co-located with youth services to provide diversionary activities for youth, but are also intended to provide affordable internet access for other community residents. Once the Wi-Fi is established, CAYLUS hand over control of the Wi-Fi management to local agencies such as CDRC to determine hours of operation and content filtering decisions.



Figure 16: CDRC provide free Wi-Fi access for youth via vouchers at the sport and recreation hall

CDRC youth workers manage the Yuelamu sport and recreation hall on the north side of the community, with Wi-Fi access available via free vouchers during youth program hours. However, with few upgrades for several years, the Wi-Fi was awaiting repairs at the time of our 2023 visit.

- + “I've got a new router coming ... so hopefully [it'll] be up and going again and I'll give out Wi-Fi tickets to the kids who attend school [and as] recognition that you've been doing a good job [and have] been respectful to others ... Anyone who has phones [can] get on it, they get on [to Facebook], Tik Tok, Instagram and all that stuff, and they talk to their friends on social media.” (Mark Gray, Night Patrol and Youth, Sport & Recreation, Yuelamu, 2023)

There is a pre-paid Activ8me Wi-Fi hotspot at the Alpirakina store using pre-paid vouchers. While this gets used, the vouchers are costly with a \$10 voucher allowing only 500MB data use¹⁰.



“A lot of them use that [Activ8me Wi-Fi] but it's a bit expensive, buying prepaid data from the store [for] \$20 [or] \$30. It's too much, really ... it's going to make it a bit hard for them to spend it on shopping instead of spending it on data every day.”

– Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023

- + “We'd probably sell half a dozen a day of those [Activ8me vouchers]. It's quite expensive ... unless you buy the \$20, which I think is three gigabyte[s]. Anything under the \$20, it's crap value.” (Debra Teese, Manager, Alpirakina Store Yuelamu, 2023)

PAW Media are concerned that a pre-paid voucher system creates an obstacle to internet access.

- + “I'm not a great fan of the voucher model. It is only because communities are really so financially poor. While vouchers would offset some of the cost, it would still be a potentially discriminatory way to provide a service.” (Jeff Bruer, General Manager, PAW Media, 2022)

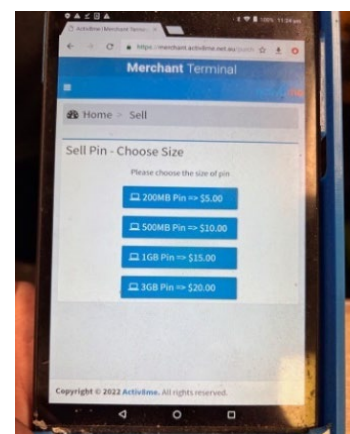


Figure 17: The merchant terminal for the Activ8me Wi-Fi vouchers

The only free Wi-Fi the south side of Yuelamu was the Centrelink DHS service, which is restricted to government and online services. As a result, young people often log into the CDRC office Wi-Fi at night.

- + “They have Wi-Fi [at the CDRC office but] everyone knows [the password so] the kids are hanging around there and generally at night make a lot of noise [and] upset a lot of stakeholders. So [our staff] turn the Wi-Fi off [at] 12 o'clock so the kids can't get on [after that].” (Mark Gray, as above, 2023)

There were requests for a free public Wi-Fi service on the south side of town to supplement the existing Centrelink Wi-Fi and Activ8me service. nbn have installed free public Wi-Fi hotspots in about 106 communities under its Communities in Isolation program, however Yuelamu is not one of these sites. Other upcoming programs may provide an opportunity for an additional Wi-Fi hotspot in Yuelamu. However, operating a Wi-Fi network requires ongoing operational funding for the internet service, network management and maintenance.

¹⁰ Activ8Me vouchers cost \$5 for 200MB of data, \$10 for 500MB, \$20 for 3GB.

- + “The use, or the value, of a free Wi-Fi service would be enormous there. People would be able to get online, for very little cost, if the maintenance and servicing of that network [is] supported. It’s too easy for a government to [provide funding to set up a Wi-Fi network] but when it comes to supporting that and maintaining it [operational funding] is crucial, otherwise that system will go down too.” (Jeff Bruer, General Manager, PAW Media, 2022)

CAYLUS argue that free Wi-Fi is essential to ensure affordable access. The CDRC sites use a voucher system as a means of distributing limited satellite data, but this requires local staff management.

- + “With 150gigs of useful data a month, then [had] to have quotas. [In] places where there weren’t data limits, all the data got used in the first two weeks [and] everyone was offline after that. [So] youth workers [give out 500MB vouchers to] distribute the data more fairly.” (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

Unlimited data is now available on some satellite services, including Sky Muster Plus Premium and Starlink. While Starlink is an option for addressing limited speed or data limits, and has higher speeds and capacity, the high monthly cost is an obstacle for most community organisations without funding.¹¹

In 2023, CAYLUS was seeking funding to to upgrade its five Central Australian community Wi-Fi hotspots, as well as some previously managed by NT Library and WYDAC. They found that Regional Connectivity Program funding preferenced Sky Muster over Starlink for Wi-Fi backhaul. As a result, CAYLUS is continuing to use Sky Muster or 4G backhaul for public Wi-Fi services.

- + “[Backhaul] options are still pretty limited. We heard some pretty good stuff about Starlink, but I think it’s still too unaffordable. The government have made it fairly clear that under the RCP funding that Starlink is at the bottom of the list. [While Starlink] could be part of the mix in the future, [they] need to look at coming up with a more specific product for remote communities and for essential service needs and requirements.” (Jennifer McFarland, CAYLUS, Alice Springs, 2023)

Service Delivery and Use of Online Services

The mobile service will improve efficiency and safety for local service providers

The CDRC Council Services team provide municipal services in Yuelamu including rubbish and waste collection and managing parks, roads and the landfill site. With no mobile coverage yet, Council Services Coordinator Norman Hagan was reliant on a mix of direct contact and UHF radio to communicate with the team working around the community.

- + “Because of no mobile coverage in the community, I drive in and check on the fellas, what they’re up to, or otherwise we use two-way radio to communicate with the fellas.” (Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023)

The lack of mobile communications can make the work of service providers very time consuming.



“We’ve still got no communication network up here [to contact residents]. People in the city think it’s just a phone call [to contact someone, but] it could take you an hour and a half by the time you find them and have that conversation and come back and print it all up. Then you have to go and find them again so they can sign it and then take it back ... It takes a long time [and] gets very frustrating.”

– Mark Gray, Night Patrol and Youth, Sport & Recreation, Yuelamu, 2023

¹¹ The business grade service costs \$750 a month (plus \$3240 up-front equipment cost).

The mobile service will improve the efficiency and effectiveness of contacting clients or staff.

- + “[The mobile service will] make [my job] a lot easier because [I’ll] be able to ring them and say, “Look, we need to do this report or something. Can we meet up?” [It will save a lot of time] if you’ve got ten staff members under you, you have to do them all ... I reckon it’s going to make life easier.” (Mark Gray, as above, Yuelamu, 2023)

With staff travelling to and from Alice Springs, Norman was looking forward to arrival the mobile service to improve communications and staff safety.

- + “It’s going to make it more easier to communicate, especially when we’re travelling outside of the community, like Yuendumu or into Alice, make sure we arrive safely and let the fellas know.” (Norman Hagan, as above, 2023)

Challenges with use of banking and other online services

Our 2023 survey found that 91% of regular internet users had used banking websites or apps in the previous six months (93% in 2022). While this shows familiarity with basic online banking, Norman Hagan described the challenges people encounter in accessing other bank services remotely.

- + “Most of them do know how to log in, log off [but] the big problem [is trying] to order a new card or open internet banking ... A lot of them don’t have ID card, licensing or birth certificates [or] an email address or [consistent] mobile number. And we don’t have a mobile [service yet so] when the bank sends a code number to your phone to log into your internet banking [we don’t get it]. We have to ring up the bank, but the best way is to do a 300 kilometre drive [to] the Alice Springs main branch and sort that out.” (Norman Hagan, Support Administration Officer, CDRC 2022)

There are numerous assumptions made by banking services, including that people have access to a range of identification records.

- + “If someone’s having trouble with their key card, banks are notorious for saying ‘give us all your ID’ on the phone. [If there are language or verbal communication issues] there’s not a match of that data, there’s this long laborious process [of emailing documents to print, sign, scan, email back] so they can access their account again.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

There is often an assumption that clients have access to IT facilities and digital support.



“That whole set of technology assumptions that people have access to internet, scanners, [a mobile] phone [or] a service provider [to support] you to do really basic functions like banking, it’s really, that’s part of the digital divide. [So] people are opening up three bank accounts because they don’t know how to close the other bank account or change the password.”

– Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022

Yapa rely primarily on phone-based services due to lack of home internet access. However, there are often lengthy delays in getting to speak to someone, with messages directing people to online services.

- + “[The long] wait times [are] a strategy to push people away from person-to-person service. For those people who don’t have internet access [or] 4G and where very, very few homes have an internet connection, like Yuelamu, [people rely on] government agencies [for help].” (Jeff Bruer, General Manager, PAW Media, 2022)

Yuendumu Child and Family Centre said that, while previously there was better understanding of the lack of digital services in remote communities, service providers like banks and Centrelink now assume that clients have mobile and internet access and use email.

- + “There’s an assumption that everyone’s on the same platform and that’s really disadvantaging Aboriginal people ... They’re assuming everyone’s got an email account [but] so many people don’t have email account, don’t access one and don’t remember the password.” (Fiona Jolley, as above, 2022)

The requirement for two-factor authentication to log in to online services is also an obstacle for many Yapa. This is impacted by regularly changing phone numbers due to lost or broken phones, limited access to internet or mobile reception, and low use of email. The inability to authenticate restricts access to critical online services and continues the dependency on face to face services or helplines.

CDP require connectivity for Centrelink and client communications, and for digital skills support

The Community Development Program (CDP) office, operated by CDRC and located near the clinic on the north side of the community, had 91 clients at the time of our 2023 visit. CDP runs a range of community work activities and training for men and women, including community gardening and maintenance activities, an art and culture program, and weekly cooking groups in a commercial kitchen.

CDP Site Manager Taylor Whitbread described the need for reliable internet is needed to connect with the Centrelink cloud-based reporting system, with telephony needed to call prospective employers and for client communications. The office is reliant on fixed telephone lines and nbn Sky Muster, which was described as reasonably reliable other than in heavy cloud or rain. However, with no mobile coverage and a lack of home phone access, client communications is often face-to-face and can require driving around the community to find people.



Figure 18: The Yuelamu CDP Activity Centre has community access laptops and Wi-Fi

The CDP training room has community access computers, with staff providing digital skills support to clients and community members. This is outlined in the Digital Ability section.

Limited connectivity in Yuelamu impacts on health services

The Yuelamu clinic is operated by staff from Yuendumu clinic as outreach support one day per week. According to CDRC staff, if there is an emergency, they have to ring Yuendumu clinic. However the travel policy is to only travel during daylight hours.

There are no home phones and limited Wi-Fi mobile coverage in the community. This impacts health service providers’ ability to confirm appointments prior to traveling from nearby Yuendumu. Health staff regularly have to call the Yuelamu community office to find out if people are in the community before they can come to see them. If people are unable to be contacted, this may mean bookings are cancelled and health services not delivered. This includes NDIS providers of disability services, who are unable to arrange on-site delivery of services if unable to contact clients to arrange appointments (see Case Study in section 5 of 2022 report).

Access to media and new services

Most households no longer have working TV services in Yuelamu

The VAST satellite service, required for free-to-air TV access, was no longer working or not installed in about 65% of households of those surveyed in 2023 (up from 57% in 2022). This was primarily due to set-top box failure (58% of those with VAST not working) or damage to satellite equipment or cabling (22%). In 2023, only 39% of survey respondents reported watching TV via VAST (down from 45% in 2022), with 33% watching TV via a mobile phone.

- + “Right now I got no TV, only on my phone. I’ll just watch TV on the little screen but I’ve got no movie.” (Anthony Briscoe, Resident, 2023)



“I haven’t got a TV [in] my new house ... because where they built [the new] houses out here [they didn’t put on] the dish [to] connect them to the TV.”

– David Japanangka McCormack, traditional owner / leader, Yuelamu, 2023

The VAST direct-to-home satellite TV service was installed on all premises in remote communities by the Australian Government in about 2013, replacing local television broadcasting, with ongoing maintenance deemed a householder responsibility. However, there was no planning or funding allocation for maintenance of VAST equipment in remote First Nations communities.

- + “[Since the VAST rollout] there’s been no ongoing support, which means that if a satellite dish gets knocked off alignment by wind or kids with rocks ... [or the LNB on the satellite dish] fails or the cable gets eaten by birds, any number of things, there’s no way of easily getting a repair crew out, without paying thousands of dollars for someone to come out from Alice Springs, or if you were more remote, it’s so expensive you just can’t do it.” (Jeff Bruer, General Manager, PAW Media, 2022)

The rooftop VAST satellite dishes can be impacted by severe weather conditions.

- + “[Soon after the VAST rollout in 2013 there was] a really significant storm, and some of the satellites were damaged at that time. And over time, things like VAST boxes broke or children take the [smart cards] or things happen, [so now most households] don’t have a box that’s working.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Where VAST services are available, television remains popular. The preferred services were commercial TV (38% of respondents watch daily), NITV and ICTV (24% watch daily) and ABC (22% watch daily).

- + “[If] you don’t know what’s happening ... you switch on your TV and you see what’s [happening in other parts of the country or overseas]. I turn to ICTV and see the local people maybe doing a corroboree or local news ... it’s an interesting channel to watch ... That’s the one that most people watch, the ICTV and the NITV, [the Indigenous] channels.” (Norman Hagan, Support Administration Officer, CDRC 2022)

In nearby Yuendumu community, Jeff Bruer from PAW Media estimated that over 70% of households no longer have VAST TV services working, with a similar failure rate in other communities in the region.

- + “[There is an urgent] need for support for communities that are reliant on the VAST network for television [services]. The failure rate of satellite dishes and satellite set-top boxes is really high, and there’s nothing local people [can] afford to do about it. It’s a real scandal, given how important those national communications are.” (Jeff Bruer, General Manager, PAW Media, 2022)

This increases household expenses, with mobile data used to access news and entertainment.

- + “All the set top boxes have stopped working [so] people are accessing their entertainment on 4G, which they’re paying through the nose for pre-paid plans, really expensive. The most poor and vulnerable people in Australia are paying the most. They’re having to pay for services that are basically free to anyone that’s got a device anywhere else in Australia.” (Jennifer McFarland, CAYLUS, Alice Springs, 2023)

A 2021 survey of Yuendumu households’ lockdown preparedness by Yuendumu Child and Family Centre¹² similarly found that a majority of households didn’t have televisions or working VAST services, leaving them with limited free access to news and entertainment.

The cost of satellite technicians, including travel, is prohibitive for individual households. With the nearest technical support being in Alice Springs 300km away, Yuendumu residents regularly ask PAW Media for assistance to fix their TV services.

- + “[Unfortunately] we have very limited ability to go out and fix those problems. [It would be] a full-time job going around communities as a TV technician [but] we don’t have the funding to employ someone to do that. We would love to train [local people] up [so a few] people knew how to do it, had working at heights certificates, and were able to fix their own or offer that service to their own community or other communities. Would be a thriving little business, huge demand.” (Jeff Bruer, General Manager, PAW Media, 2022)

A common problem with VAST set-top boxes is damage by surges in the community electricity grid. These power surges can even impact commercial-grade broadcast equipment.

- + “We’ve had surge protection devices fail because of the size of the surges ... These are big, heavyweight, industrial units that cost \$2,000 apiece to buy [so] I hate to think of what problems that’s causing people at home.” (Jeff Bruer, as above, 2022)

VAST set top boxes were provided following install in 2013, with the cost of replacement now another household expense. VAST boxers are available at the Yuelamu store for \$442.

- + “I have the VAST satellite setup [at home but] it's all up to you to look after [the set top box]. You break it, it's going to cost you, because those things cost [over] \$400 around here.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)

The storekeepers suggested a government subsidy is needed to reduce cost, as with some whitegoods.

- + “They are expensive. [We’ve] probably sold about six or eight since we’ve been here ... They’re quite expensive for us to buy, to supply. [They should be subsidised], like the washing machines. They [Government] do all these different incentives, why not do something like that, because [households] need that for communication.” (Debra Teese, Manager, Alpirakina Store Yuelamu, 2023)

Beyond the set top box cost, activating the smart card is challenging without phone and internet access.

- + “So the cost of getting a VAST box is quite high. And if someone got a VAST box, they’re not necessarily confident their satellite’s gonna work anyway. [And to activate the smart card is] difficult unless you’re quite skilled ... You need a mobile, you need internet [to get Optus to activate] the card.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

¹² Yuendumu Child and Family Centre undertook a survey of about 50 of 148 Aboriginal households in Yuendumu during the COVID-19 pandemic to see how prepared they were for quarantine or lockdown.

- + “Some of them are having problems activating the VAST TV box. [It’s hard] especially when you have no Wi-Fi at home [to activate the smart card]. Sometimes they go to family’s Wi-Fi [in another house] to activate their VAST TV box.” (Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023)

This points to the need for a review of television service delivery in remote communities. There was strong interest in a return to a broadcasting model for television services in Yuelamu.

The First Nations radio service is a primary source of local news and information

The regional First Nations radio service is 8PAW Radio, which broadcasts programming in three languages – Warlpiri, Anmatyerr and Pintubi. 8PAW is popular in Yuelamu with with 43% of survey respondents listening to PAW Radio daily or weekly. In comparison, 19% said they listened to ABC radio daily or weekly, which is only available as a faint AM service from Alice Springs.

- + “We do [listen to PAW Radio], especially on work days. When we’re driving around doing work, our radio is always switched on. [ABC Radio is] blurry because it’s away from our signal area.” (Norman Hagan, Support Administration Officer, CDRC 2022)

Pintubi Anmatyerr Warlpiri (PAW) Media (formerly Warlpiri Media) has provided radio and other media services across the region since its origin in 1984, supporting 12 Remote Indigenous Broadcasting Service (RIBS) communities.

- + “Our charter is to service and protect the media interests and promote the identity of Warlpiri, Anmatyerr and Pintubi people. We started in TV [and] then migrated into radio. [and now] online and print media to a lesser degree. [We also run] the 8PAW radio network, [a] community broadcast network across the Greater Tanami, which is a region about twice the size of Ireland.” (Jeff Bruer, General Manager, PAW Media, 2022)

8PAW is a full-time regional radio service providing locally relevant news and information in different formats. This includes upcoming information about services and events such as doctor or dentist visits, community meetings, sports or church events, as well as sponsored government campaigns, including health, anti-smoking and safe driving messages.

- + “Then there is the mainstream news service [provided by the] community radio network news, not specifically with an Indigenous focus, although they try to build that in. We subscribe to it [to] have news breaks every hour [so] people listening to radio get their news information through that.” (Jeff Bruer, as above, 2022)

8PAW includes programs contributed from up to 12 RIBS communities. Yuelamu has a RIBS radio studio, with local broadcaster Judy Dixon doing occasional shows on the network.

- + “We broadcast programs from Yuendumu and from some of the other communities [like Yuelamu] when we have broadcasters there ... Supporting people is difficult when we don’t have staff living here full-time. The radio presenters are only part-time or casual.” (Jeff Bruer, as above, 2022)

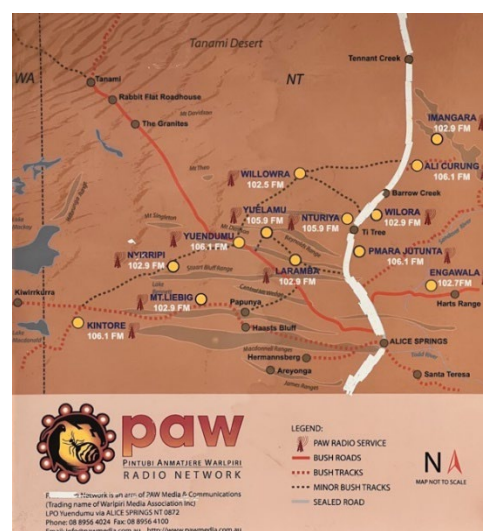


Figure 19: PAW Media supports 12 RIBS communities across the central desert region.

ABC Northern Territory used to produce a daily Warlpiri language version of their daily news bulletin which PAW Media would play, but this is no longer produced. While 8PAW Radio is popular across the region, the survey undertaken by the Yuendumu Child and Family Centre found that most Yuendumu households have limited access to radio within the home.

- ✦ “[Most people listen to] PAW Radio [but] very few people have a radio [at home]. So the way that people are getting information ... is to go into the car and listen to the radio.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

PAW Media acknowledges that Yapa are increasingly getting their news and information from online sources nowadays.

- ✦ “I don’t think [radio] is the main source of news anymore. For older people it is, and in communities where there’s no mobile coverage, it still would be. Elsewhere, it’s online, it’s all online news services, Facebook, ABC Online news services are well, there’s strong interest in that in communities. Also NITV and SBS News, which tends to have a predominance of Indigenous interest stories ... In the communities where there’s 4G, I feel it’s through their mobile devices ... through news feeds and social media.” (Jeff Bruer, as above, 2022)

Local information sources are critical for news sharing and addressing misinformation

Local news and information sources in Yuelamu include:

- ✦ PAW Radio
- ✦ CDRC and CLC websites and Facebook pages
- ✦ Noticeboards and distribution of flyers
- ✦ Face to face communications.

These sources provide relevant information about meetings and events, service provider visits, news and weather or emergency situations. Our 2023 survey found that the most popular source of news and information was direct and in person (75% daily).



Figure 20: Community noticeboards are a primary means of sharing information

- ✦ “Bush Telegraph, I call it. Yeah. They just have to go and see each other over the hill or back over this way [to share the news].” (Mark Gray, Night Patrol and Youth, Sport & Recreation, Yuelamu, 2023)

The next most popular sources of news and information were PAW Radio (29% daily), commercial television (18% daily), and community noticeboards (13% daily / 22% weekly). The most common sources of emergency information were direct and in-person (96%), PAW Radio (55%), noticeboards (44%) and commercial television (27%). These results are typical of other communities including Yuendumu.

- ✦ “In remote Aboriginal communities, people get the information through word-of-mouth, [mostly through] their family groups ... Around half [of the 50 households we surveyed] referred to radio as one of the sources of information ... A lot of people still look at Facebook and also Instagram as their source of information [but for others it’s mostly] radio and word-of-mouth.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Understanding of communicative modes is important when distributing critical information, such as during the COVID-19 pandemic. COVID-19 vaccination rates in Yuelamu and Yuendumu were among the lowest

in the NT, largely due to online misinformation about potential side effects and efficacy. Health staff used a range of modes to deliver accurate information – in person, via flyers and through daily radio messages:

- + We were getting a lot of misinformation being spread [about] COVID [so we found] word-of-mouth is the fastest way to [convey messages but] not always the most accurate. We were using posters at the shop [and] had public meetings and public conversations and [a PAW Radio] campaign to [convey] accurate information.” (Fiona Jolley, as above, 2022)

PAW Media played an important role in distributing health information during the pandemic. As most public health messaging was in English language and targeted towards mainstream populations, PAW Media was commissioned by Northern Territory Health to produce short video messages by trusted local people and jingles in local languages (Warlpiri, Pintubi, Gurindji and Luritja). These were played on radio and on Indigenous Community TV and distributed widely via PAW Media’s social media channels.

- + “Messages really needed to be simplified. [For instance], we stuck a whole lot of matches in some plasticine, and showed that if the matches were far apart, you could light one, the others wouldn’t catch fire. If you crowded them together, boof, they’d all go off. [That 20-second clip got] thousands of shares [on] TikTok, Facebook, Instagram ... anywhere we could get some likes.” (Jeff Bruer, as above, 2022)

Vaccination uptake increased rapidly once COVID-19 began to spread across the region in late 2021.

ABC radio services are no longer available in most Central Desert communities

ABC radio is considered a self-help retransmission service in remote First Nations communities nationally, meaning the community is responsible for the cost of maintaining the transmission equipment. However, since the amalgamation of communities under regional councils in the NT in the late 2000s, and transfer of apparatus licenses, ABC services have typically not been seen as a council responsibility. Further, with no funding available for equipment or technician costs to maintain these services, Remote Indigenous Media Organisations (RIMOs) do not have the capacity to maintain these services.

- + “[There should be] financial support to ensure that the ABC is [being] broadcast in these remote communities. [Our organisation cannot maintain ABC] equipment [with] no budget. As a result, ABC radio services to most of our communities have failed ... it’s not a service we can replicate.” (Jeff Bruer, General Manager, PAW Media, 2022)

Given ABC’s critical role in broadcasting news and emergency information, dedicated funding is needed to maintain ABC radio services in remote communities.

Affordability

There are very low household incomes and high cost of living in Yuelamu

According to ABS, the average First Nations weekly household income in Yuelamu is \$833 and the average personal income is \$254, with most residents living well below the poverty line. On top of this, there is a high cost of living in Central Australian communities due to the freight costs to deliver supplies and lack of bulk buying power.

- + “In remote communities around here, the decile on the index of socioeconomic disadvantage is one ... Alice Springs is eight, probably because we have a reasonably high Aboriginal population [and] in Darwin, it’s nine ... Aboriginal people pay more for everything, not just connectivity. The lack of connectivity options means that people are actually excluded from participation [and] accessing essential services.” (Jennifer McFarland, CAYLUS, Alice Springs, 2023)

Jennifer McFarland has long argued that installing free Wi-Fi services is the most sustainable solution way of enabling affordable access to online services by people on very low incomes.



“In remote communities [communications] should be a service model, not a business model. It’s not about the bottom line, it’s about providing a basic essential service ... 50% of Aboriginal people in this region, between 16 and 64, have no income because they can’t navigate Centrelink, or they get [constantly] breached by Centrelink. [So] they’re further impoverishing their families who are on benefits ... That’s 50 percent of the population [who can’t] afford to buy connectivity. When you’ve got to make a choice between getting mobile phone data or [feeding] your kids, it’s a bit of a sad situation.”

- Jennifer McFarland, CAYLUS / DotCom Mob, 2022

The increased cost of fuel makes good connectivity in remote communities more important.

- + “[Fuel costs up to] five dollars a litre [so people] really need good connectivity, because if you want to check out what’s happening with auntie in the next community, you can’t afford to jump in your car and drive there.” (Jennifer McFarland, CAYLUS, Alice Springs, 2023)

Affordability of mobile data and devices is a significant concern

The Alpirakina Store is already set up for mobile pre-paid sales, with many residents already topping up mobile phone data regularly. This is needed when visiting Yuendumu or other communities with mobile services, when using the CfAT mobile hotspot, and for using Wi-Fi Calling via Sky Muster. We expect that mobile data use has increased significantly since the mobile service was switched on in Yuelamu in June 2023.

- + “There’ll be a lot [more] data usage in this community. Because mostly when these people get into a place where it’s got mobile services ... they tend to go straight into their social media stuff, and right now they [have] no internet access whatsoever.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)

We heard concerns in 2023 about the added affordability pressures on top of existing high living costs.

- + “[Affordability is] going to be another problem, people spending money on buying prepaid data instead of spending money on food; now they’ll be spending it on [mobile credit. And the kids will] be humbugging parents to buy them new phones, and paying them prepaid data, so that’s going to cause a bit of problem with the family.” (Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023)

The store was only set up to sell low-cost Telstra recharge vouchers (\$20 and \$30). With data costs higher on low-cost vouchers compared with \$40 or \$50 vouchers,¹³ high data users can pay large amounts as a result.

- + “The \$30 value for their internet [10GB data] really wasn’t fantastic. [In Papunya] the majority would probably buy three or four a week maybe, which is a lot of money. [But] we’re only set up to sell \$20 and \$30 vouchers.” (Debra Teese, Manager, Alpirakina Store Yuelamu, 2023)

The Activ8me Wi-Fi vouchers were more expensive again, with the data cost of the \$5 voucher being \$25/GB and the \$10 voucher being \$20/GB (See the Wi-Fi section on page 22).

¹³ A \$30 voucher provided 10 GB of data. Since 4 July 2023, Telstra pre-paid prices have changed. Data amounts on 28-day expiry vouchers are now 2GB for \$12 vouchers, 15GB for \$35, 25GB for \$45, \$35GB for \$55 and 70GB for \$65.

The cost of internet access was a significant barrier to usage. The second most common reason given by regular internet users for why they don't use the internet more often was "The internet is too expensive for me" (52%, up from 41% in 2022). Our 2023 survey found that 24% of respondents said that they have had to cut back on essential household costs in order to afford personal or household internet within the past six months (27% in 2022), however this was prior to the mobile switch-on.

Our 2023 survey found that average household mobile expenditure was \$87/fortnight (up slightly on \$160/month in 2022). There was an average of 2.3 mobile phone services per household. 77% of respondents indicated their household paid up to \$100/fortnight, 16% paid \$101–\$200/fortnight, and 7% paid between \$201–\$300/fortnight. Given the lack of 4G coverage in Yuelamu at the time, these costs are likely to increase significantly once 4G arrives.

The cost of mobile devices is also challenging with high turnover and sharing or transferring of devices within households. The 2021 Yuendumu household survey found that the cost of mobile devices can also be a cost burden to low-income households:

- ✦ "People who worked had more resources to buy things [like] mobile phones that have internet capability. [For households with] less income ... there might be a mobile phone in the house that has internet, but the children might be the ones accessing it, not so much the parents. Or the whole family would use that as a resource." (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

There is a strong preference for pre-paid services over post-paid

Despite pre-paid data being much higher cost per gigabyte than post-paid rates, 100% of Yuelamu residents use pre-paid services for mobile phone use. This enables people to pay what they can afford, rather than committing to a monthly billed service which they may not be able to pay when due.

- ✦ "Prepaid is just so much easier to manage. ... It's the most expensive way of buying data that you can get, but people know where they're at with it ... It just gets used up very, very rapidly." (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

The reluctance to take up billed services is largely due to unreliable incomes and prior experience with excess bills, especially with large households sharing data. While mobile plans have now changed to month-to-month contracts and excess data charges replaced by shaped plans, there is currently limited information available on plan options. Also, post-paid sales are only available at Alice Springs or online.

With 4G coming to Yuelamu, there was a need for information about options including pre-paid and post-paid plans, types of phones, satellite services and providers, and strategies to manage data use and costs.¹⁴ This consumer awareness is needed to help people understand their options when the 4G service arrives in Yuelamu.



"[Pre-paid data is] a high cost ... I'm on an \$80 plan for internet and I get 400 gigs [but] people don't know how to access those other plans ... we talk about the digital divide and that [cost] divides people further. Because people don't have regular incomes, or their money's more uncertain, so they're caught into needing to use the pre-paid which is a safer way, but they get less access."

– Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

¹⁴ Telstra had contracted CfAT to visit Yuelamu to provide awareness about mobile phones and plan options, with posters promoting a visit on 19th May 2023.

Having household internet is a way of reducing cost for household use. 14% of households use NBN Sky Muster satellite services in Yuelamu, however 88% of these were standard Sky Muster 25/5Mbps services which have limited data and no unmetered use as with Plus or Premium options. The average household cost for fixed broadband in 2023 was \$130/month (up from \$73 in 2022), with some households paying up to \$200/month due to excess data costs.

There appears to be little awareness of the option to upgrade to Sky Muster Plus or Premium services, which would provide significant savings for households with heavy data usage. While it is not in the interest of RSPs to promote better value services, an awareness campaign for First Nations households about plan options would help reduce affordability impacts.

Digital Ability

Digital literacy levels

Digital literacy is increasingly becoming a necessary life skill for accessing online information and services independently, undertaking online learning and using digital technologies at home and in the workplace. It also helps to build people's world view and opportunities to learn.

- + “So when people have IT, that opens up more of a world for people's knowledge and skills ... but when you don't have access you don't have that larger world view. And that really does affect people's ability to participate, learn, engage, train.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Our 2023 survey found that only 58% of respondents had used the internet in the previous six months (down from 73% in 2022). However, of the 58% of regular users most had good basic IT skills, with 69% able to send and receive emails (responded 'very true' or 'mostly true', up from 63% in 2022), 84% could find and install apps/software (up from 81%), 75% could open a new internet browser tab (96% in 2022), and 59% could complete online forms (down from 78% in 2022). Of the regular users, 91% reported using online banking in the last six months (93% in 2022), 81% accessed government services (78% in 2022), 47% did online shopping (67% in 2022) and 34% did online learning or study (59% in 2022).

CAYLUS have found that, despite barriers, remote First Nations people often find creative ways to adapt digital technologies to their needs.



“[People have] become very savvy about using technologies in ways that suit them. There are cultural specificities to the way people use their data. There are also areas where their expertise is off the scale, they are so clever with it, but there are other areas where they don't venture into at all.”

- Jennifer McFarland, CAYLUS / DotCom Mob, 2022

Digital literacy tended to be lowest among people over 50 years of age, people with disability, and those who have limited English literacy. In Yuelamu, 100% of people surveyed spoke an Aboriginal language at home, with 69% indicating that they understand spoken English very or quite well.



“One of the obstacles is not just the lack of infrastructure or bandwidth, it’s the [lack of] support [for] people who’ve grown up without English as a first language, older people particularly, who aren’t digital natives. The challenges they face in logging on the internet, getting onto a bank account, getting onto government services online, is just impossible!”

– Jeff Bruer, General Manager, PAW Media, 2022

- + “If English is your third or fourth language, then navigating some of those websites, particularly the government ones, is a mission ... People need help with that kind of thing. [But] people are able to extend the skills that they’ve developed on Facebook, or TikTok [or] multimedia [applications] to interacting with [online services].” (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

Of the 42% of respondents who never or rarely used the internet, the most common reasons for not using the internet were lack of access (86%), the internet not being a priority (45%) and not having confidence in using the internet (30%).

Children are increasingly using mobile phones and online content from an early age. However, one interviewee warned that giving access to devices too early can be detrimental to development.

- + “Children learn through play-based learning and through relationships ... families give a lot of kids YouTube to watch to keep them quiet [but] it doesn’t actually help a child develop.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Need for ICT access facilities in Yuelamu

There are two community access computers in the Centrelink office (adjacent to the community office) for community use for Centrelink, MyGov, banking, licensing and other online services, as well as free Wi-Fi. CDRC staff support residents to use online services, both on the Centrelink computers or their own devices connected to the Wi-Fi. Administration Officer Norman Hagan also helps people address problems with banking or Centrelink, including translation support when speaking to customer services.

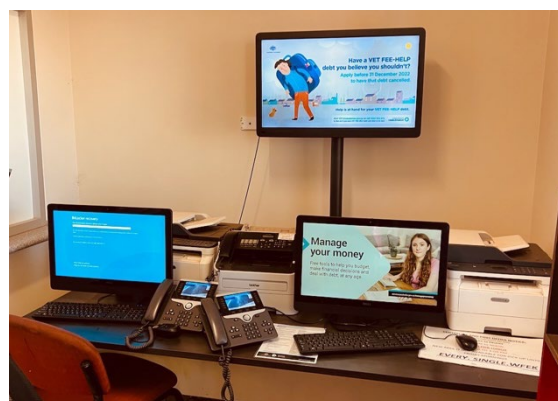


Figure 21: Computers in the Centrelink agency

The CDP training room is the only space in Yuelamu other than the Centrelink office with community access computers for adults, and informal digital skills support as needed.

- + “We’ve got laptops available here at CDP [and we provide basic digital support to job seekers]. A lot of the time they might have trouble even putting the password in or understanding what the keyboard means. [We can help] with a word document, creating a resume, supporting someone to use Centrelink or sign into MyGov. A lot of people don’t have MyGov accounts or don’t know how to use them. Having a MyGov account can make a lot of things more convenient for people when they’re using that service. That can be a big barrier if they don’t actually have that account.” (Taylor Whitbread, CDP Site Manager, CDRC, Yuelamu, 2023)

A computer room was previously set up by CAYLUS at the sport and recreation hall for youth, but was no longer in use due to missing equipment, lack of capacity of CDRC youth workers to supervise the facility, and the building being inadequately sealed.¹⁵ There are hopes to re-establish the facility in the future.

- + “[The computer room has] been shut down. [There were] one or two computers there [previously]. Hopefully we get funding and we can get more computers in there for the kids.” (Mark Gray, Night Patrol and Youth, Sport & Recreation, Yuelamu, 2023)



Figure 22: Yuendumu Child and Family Centre

There were calls for more digital training and support, including workplace training

Family and peer support is currently the primary means of digital skills development.

- + “Some family members may be able to help them [learn] how to open up your phone, or searching [or online] banking on the phone.” (Norman Hagan, Support Administration Officer, CDRC, 2022)
- + “We need someone [to help us learn to use] the phone ... the young people [who are] clever [with] technology [help] some of the old people who don't know about it.” (David Japanangka McCormack, traditional owner / leader, Yuelamu, 2023)

While Yuelamu has some digital support at the Centrelink and CDP centres, a funded digital mentor position would help to improve digital ability and use of online services. This would also reduce demand on local agencies, enabling them to focus on core business.

Limited digital skills were also described as a barrier for job seekers in finding employment options.

- + “I think it can be [a barrier] for jobseekers that want to work out of community to source [job opportunities], for example using Seek, even just to see what employment opportunities are out of the community. A lot of people without those skills wouldn't have that information.” (Taylor Whitbread, CDP Site Manager, CDRC, Yuelamu, 2023)

In both Yuelamu and Yuendumu, there are currently limited opportunities to develop more advanced capabilities and workplace readiness skills due to reliance on mobile devices and limited bandwidth.

- + “[People can do] online shopping [and banking and other basics] but it certainly doesn't prepare them for [using] a computer and the larger programs [used in workplaces] like Outlook and calendars and emails. [So] they're not necessarily developing that skill ... You end up doing a lot of peer mentoring with people in the workplace [to] show people how [to] do a basic email or to do a Word document or try to do an Excel, the basic skill level is quite low.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Community access facilities and digital support has reduced in the region in recent years [2023]

In nearby Yuendumu, the Warlpiri Youth Development Aboriginal Corporation (WYDAC) previously operated a learning centre with community access computers and training facilities. However, the centre closed in November 2021, with funding since withdrawn by Warlpiri Education and Training Trust (WETT).

¹⁵ Email correspondence Jennifer McFarland, CAYLUS 17/11/22.

Batchelor Institute have also run a learning centre in Yuendumu and several other larger communities in the Central Desert region, with a coordinator available to provide some digital support. However, the Batchelor learning centre in Yuendumu also closed in 2023.

PAW Media previously delivered digital skills support through the inDigiMOB Digital Mentors program.

- + “[inDigiMOB] was a tremendous initiative [to support the] community [with] digital mentors, Warlpiri people [helping] others to learn the basic skills and be able to pass them on, and to be able to help their families and friends. [People found it] great [to have] someone who you knew and trusted [to] help get you online and show you the ropes with solving those problems. That’s what inDigiMOB was set up [for].” (Jeff Bruer, General Manager, PAW Media, 2022)

However, with the learning centres in Yuendumu closed and the inDigiMOB contract concluded, there is increased demand on local agencies for help with online banking, mobile phones and other IT needs.



“[There is] demand for all the service providers to help people with online passwords and accessing key cards ... because there’s no one else doing it for them ... People come in all the time asking us to help do it, recharge, or even transfer money so they can buy a recharge. [Most] service providers [here] help people.”

- Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022

- + “[Now] people come to PAW ... saying, “Oh, my bank’s not giving me any money! Something’s happened to my card! Can you help me with my bank account? I don’t know my password. I don’t know my email address.” We like to help [but] there needs to be someone dedicated in each community [to] support people in that way.” (Jeff Bruer, General Manager, PAW Media, 2022)

Yuendumu Child and Family Centre called for reinstatement of IT access facilities or learning centres.

- + “{To support Yapa to become digitally} independent [they] need mentoring and training, they need skills to lift up, they need a lot more available access public facilities because people can’t be [expected to use] their private facilities to do these things.” (Fiona Jolley, as above, 2022)

There were also calls for funding for training programs and digital mentors to provide peer support.

- + “[Those with digital] skills and knowledge [need] access to [a] computer and Wi-Fi [to support others to] become more independent in doing it themselves down the track.” (Fiona Jolley, as above, 2022)

The lack of services in communities is seen as a cause of the drift into regional centres like Alice Springs.

- + “There’s a general drift into town from remote communities ... to access services mainly. But [in] town they’ve got nowhere to live, they end up homeless. But the infrastructure in general, in remote communities, is so run down [now].” (Jennifer McFarland, CAYLUS, Alice Springs, 2023)

Appropriate applications and content are the key to digital engagement

CAYLUS have set up computer rooms across Central Australia, including Yuelamu, and have found that the ‘winning’ applications for engaging people in using digital technologies are social media and creative software, such as Garageband for music recording, video production, photo manipulation and design.

- ✦ “Facebook’s [popular] because you can communicate with your network ... TikTok is the current craze [for young people]. Young fellas really like Garageband, because they all want to be rock stars, and [they] stream community football ... Anything multimedia is really engaging, and it’s easier for the older people ... visual [media] is where they get their info.” (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

Due to limited connectivity in many sites, CAYLUS use computer-based offline applications rather than cloud-based systems, including loading archive collections onto the computers.

- ✦ “[We use software] that’s accessible offline where we can. For instance [we gave] computers to the Purple House with the Pintupi Luritja photo archive on it because people, while they were getting dialysis, they’re sitting in a bed for five hours with a tube in their arm and they would flick through the photos ... It’s a really good resource.” (Jennifer McFarland, as above, 2022)

PAW Media’s former General Manager said that there is demand for First Nations and local content online.

- ✦ “IndigiTUBE, ICTV Play ... Any platform that has an Indigenous-branded, focused content preference tends to be very popular.” (Jeff Bruer, General Manager, PAW Media, 2022)

Facetime and videoconferencing applications are also particularly suited to Yapa modes of communication, enabling use of language, body language and facial gestures as part of communication. Media pioneer and former CLC Chairperson Francis Jupurrurla Kelly described how videoconferencing is popular among Yapa for meetings, as people can talk freely in language and ‘kardiya’ [non-Indigenous people) are less likely to interfere.

- ✦ “Kardiya might be using the email and writing the words in English [but] they can’t communicate in language so Yapa still have control in the videoconference.” (Francis Jupurrurla Kelly, media pioneer / former CLC Chairperson, 2022)

Cyber safety and scams are a significant concern with training and awareness required

Yuelamu community is made up of primarily of Anmatyerr people, with strong social and cultural cohesion. While there is overwhelming support for 4G to come into the community there is concern about the impact it will have, based on experiences from other communities in the region experiencing social media incited conflict as well as scams.

Some local residents and agency staff raised concerns about potential impacts on community cohesion once the mobile service arrives, based on the experience of other communities in the region.

- ✦ “We have to be prepared for all the cyber bullying [and] stuff that goes with having connections [once the 4G is switched on]. Because there’s a bit of that going on now. [When kids] go into Alice they bring back all these messages from other people and it causes a few problems. [I’m] just letting the kids know about it’s a powerful tool [but] it can do a lot of damage ... If they just send some text about some girl or some boy and that then it goes to someone else, [then] someone else ... it can snowball big time.” (Mark Gray, Night Patrol and Youth, Sport & Recreation, Yuelamu, 2023)
- ✦ “There’ll be a big problem especially with Facebooking and TikToking. Probably kids not attending school, playing games all night on the phone. [Facebook can] cause jealousy, fights, people swearing at one another, texting. So I reckon maybe stay off Facebook and try to do other things ... Maybe look for news or what’s around the world [or] look at [local archives to] learn things, look at old ways of learning, new ways of learning, bush trips and old photos of family members.” (Norman Hagan, Support Administration Officer, CDRC 2022)

Norman repeated these concerns during our 2023 visit, saying that greater awareness was needed relating to cyber-safety issues and scams.

- + “There may be a bit of a problem, like Facebooking ... with kids going online, or who knows who they’ll be talking to, like scammers ... I think Yuendumu are having problems with people swearing online, and getting ripped off by scammers.” (Norman Hagan, CDRC Council Services Coordinator, Yuelamu, 2023)

With an increase in scam calls, texts and online messages, there is generally a need for more cyber-safety awareness and resources to inform people how to discern and avoid them. CDRC staff, GMAAAC Committee and Yuelamu elders have discussed the potential impact of cyber-safety issues and the need for more awareness around scams and cyberbullying particularly, with more support for young people.

- + “[There] should be a bit more education [and resources] like posters, [and] schools should have a meeting about the damages that social media can do mentally. [There’s a high number] of suicides in teenagers and kids because of social media bullying and it’s just snowballing. [We have] to help the kids just to make sure they’ve got the tools to know what they’re doing [and] understand it.” (Mark Gray, as above, 2023)

The Office of e-Safety have developed specific resources for First Nations people including in several First Nations languages (www.esafety.gov.au/first-nations). Office of e-Safety staff visited Yuendumu in 2023 to discuss local challenges and identify targeted resources and support needed.

A range of cyber-safety issues and scams had impacted residents in nearby Yuendumu

Yuelamu elders’ concerns are partly based on negative experiences of social media in Yuendumu, as reflected by elders and agencies based in Yuendumu.

- + “Facebook is really worse. We’re trying to cut that one out because Facebook are trouble in our society. [It’s] hurting families, breaking families away too.” (Francis Jupurrurla Kelly, media pioneer/ former CLC Chairperson, 2022)
- + “[While] Facebook and a few of the other social platforms have been great in terms of people sharing photos and family keeping connected across different communities, [it has also] instigated fights and bullying ... it’s been used for people swearing and intimidating each other. So it’s been quite a negative use as well.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

The Yuendumu Child and Family Centre gave examples of recent experiences of scams, including a staff member having their Facebook account cloned and requesting money from their friends. We also heard about someone from Nigeria scamming people for money on Facebook.

- + “[It’s] opened up Aboriginal people to that worldwide vulnerability to be scammed for money, dating scams ... ‘I want to visit you but I’m in jail in Sydney, can you send me money’ ... And they did send them money [so] there is openness for the exploitation ... people are starting to understand scams, especially the texting scams [but] before that, people were exposed to that.” (Fiona Jolley, as above, 2022)

There are also reports of financial fraud occurring within families.

- + “Young people are [digitally savvy but that’s leading to] a level of fraud within families too, people taking money from their grandparents’ bank accounts, changing passwords on people’s accounts. So in this realm of ability within a community, there’s people who are knowing really well to make it work for themselves and others that are getting quite powerless.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Local Digital Media Content Production, Archiving and Sharing

Local music production and sharing

There is interest in having more training and support for music production in Yuelamu. There is a small music recording studio on the school grounds but this has limited access for adults, including after-hours.

- ✦ “They’ve got a little studio here right now. It’s a good little setup but it’s too small [so they are getting another room] renovated. [The bands] haven’t been [doing much music] lately because I think all the equipment’s gone missing, or broken or whatever.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)
- ✦ “We’re still waiting for music [studio] because there’s nothing happening ... That’s why all the young fellas, they’re just wandering around ... We love music so [we want] help from PAW just for recording and all them things. [We’re] waiting for that studio but they’ll take a long time.” (Anthony Briscoe, Resident, 2023)

Following a scope study by PAW Media, GMAAAC have funded construction of a new music studio in Yuelamu. PAW Media will manage the fitout of the studio with music equipment. Due to lack of staff accommodation in Yuelamu, PAW Media is unable to position a staff member in Yuelamu.

Demand for digital production for language and cultural maintenance

PAW Media, formerly Warlpiri Media, has a 40-year history of media production, broadcast and archiving to help maintain the region’s language and cultural heritage. PAW Media has a video production arm which produces community videos, such as meetings, sports matches, cultural events, as well as commissioned projects such as health awareness, financial literacy, education and so on. PAW Media also has a history of producing high quality animation films of cultural and community stories using claymation techniques. PAW have also produced television series, including the well known Bush Mechanics series, and documentaries including the 2016 production Coniston about the 1928 Coniston massacre, co-produced with Rebel Films and made with the Yuelamu community.

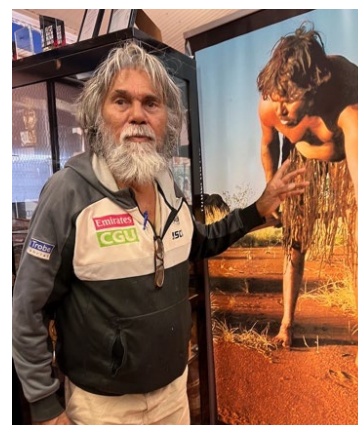


Figure 23: Film-maker and actor Francis Jupurrula Kelly with the Bush Mechanics poster

Dennis Charles grew up in Yuelamu and has worked as broadcaster, video producer and translator with PAW Media. Recently, he translated COVID-19 health messages to Anmatyerr language for radio and social media. He has also recorded oral history projects.

- ✦ “So [I record stories from] old people ... just amazing stories and thinking that what they did [stockmen] in their long life, working or whatever they did was amazing ... [walking hundreds of kilometres with] their horses. ... I [also] do research on myself ... on the internet and try to find out where I’m from, but mostly with PAW and on the Anmatyerr side ... everything might change in the future [but I really want to] keep running our media in the future.” (Dennis Charles, Broadcaster/ Archive Worker First Nations Media Australia, 2022)



Figure 24: Dennis Charles with Lyndon during 2022 research visit

Elders also called for more recording and documentation of oral histories and cultural stories.

- + “Some of [us got] stories from the old grandfathers ... I know the songs, song lines and everything [for] this place. [I pass] the stories [to] next generations. [Some stories can be told], some don't, [so the] TO's got to come first and record them.” (David Japanangka McCormack, traditional owner / leader, Yuelamu, 2023)

The rangers are also starting to document local sites, animals and plant species around Yuelamu.

- + “[We] go out bush, seeing different animals, taking photos [of] the kangaroo or anything [and put it on iTracker on the iPad. Rangers] from Kiwirrkurra and Kintore, they're taking the photos of all the little animals.” (Anthony Briscoe, Resident, 2023)

There were calls for more training in digital media production to create local language content.

- + “We need a more training [to make] video ... with the mobile phone [and show people how to tell their] own stories [in] language ... We need PAW to come to Yuelamu to teach young people [and] interview [people about] what we do [here]. We need more talking, we need more voices.” (Anthony Briscoe, Resident, 2023)

Audio-visual archiving and community access

PAW Media has an extensive archive of locally produced audio-visual recordings since 1983, including photos, community records, video and audio recordings at its hub in Yuendumu. It also holds many older Warlpiri films and documents produced by others, including items from 1933. PAW media has digitised much of this collection and has a dedicated room for community access to the digital collection, with cultural management to ensure appropriate access to sensitive and cultural materials.

There is strong community interest in having access to the PAW Media collection.

- + “[People here] like old stories [and videos], especially when the old people are telling the stories ... They hold it at the PAW office at the archives department [so] we don't have to lose anything and still hang onto them. [They even hold items] that aren't [recorded by] PAW Media.” (Mel Langdon, Resident / Co-researcher, Yuelamu, 2023)

PAW Media have been working towards providing online access to the archive collection.

- + “You've got to [digitise the old videos and compress into] small files, upload and then catalogue [so people can find what] they're looking for ... We have well over 1,000 hours of material [so it's] a huge job. [With high-speed connectivity] we could share those files far more easily.” (Jeff Bruer, General Manager, PAW Media, 2022)

PAW Media has recently received GMAAC funding to re-establish its archive collection on the Keeping Culture platform, which contains thousands of historic photographs and audio-visual items. The Keeping Culture platform is a cloud-based cultural archive management system developed for First Nations communities, originating as the Ara Irititja archive project in the APY lands of South Australia.

First Nations Media Australia (FNMA) and AIATSIS are supporting many First Nations media and community organisations in central Australia to digitise their vast audio-visual collections. Yuelamu resident Dennis Charles works as an Archive Officer at FNMA. He described the importance of this work.

- + “[I] digitise [about] four videos a day ... While I digitise, I just write down what's going on about the video [for the catalogue]. Some were from Congress back in the nineties [or] PY Media back in the eighties ... I'm so happy [to be] digitising all of [the old videos] at First Nations Media. And coming across one of my family when I was a child that I saw all those years ago came back to life on a video [and see old people back] when they were young. I'm so happy [to keep those videos alive for the next generations] of Anmatyerr and Warlpiri ... I love it.” (Dennis Charles, Broadcaster/ Archive Worker First Nations Media Australia, 2022)

05. CONSIDERATIONS FOR LOCAL DIGITAL INCLUSION PLAN

Developing a local Digital Inclusion Plan enables a coordinated place-based approach to address some of the challenges outlined in this report. It also provides a useful tool for advocacy to government, industry, and for fundraising efforts. The strategies below are based on input from community stakeholders and are possible options for local planning to improve communications services and digital inclusion in Yuelamu. These are not intended to be prescriptive, nor are they listed in order of priority.

Based on our 2023 interviews and discussions, the proposed Digital Inclusion Plan has been updated with new strategies and a column for Progress / Next Steps, to track progress on the actions over time.

Identified Issue	Possible Actions	Potential Stakeholders	Progress/ Next Steps
Access			
Wi-Fi access: Ongoing need for Wi-Fi access beyond 4G installation	<p>Continue provision of free Wi-Fi and computers at CDP office and Centrelink for affordable online service access beyond installation of 4G service</p> <p>Upgrade Wi-Fi facilities at recreation hall and change to nbn Sky Muster Premium or Starlink backhaul</p> <p>Provide clear visual guides to connect to Wi-Fi services, and maintenance instructions and contact details</p>	<p>Central Desert Regional Council (CDRC)</p> <p>nbn</p> <p>CAYLUS/ DotCom Mob</p>	<p><i>Wi-Fi services being continued</i></p> <p><i>CDRC were awaiting replacement equipment for Wi-Fi in May 2023</i></p> <p><i>Guide provided for Centrelink Wi-Fi only</i></p>
Need fast, low latency broadband for CDRC community office and meeting room	Consider trial of Starlink satellite service for CDRC office, Centrelink and meeting room for video-conferencing	<p>CDRC</p> <p>Centrelink</p> <p>NT Government</p>	<i>Starlink at CDRC office in 2023, enabling improved connectivity</i>
Computer access: Demand for online computers (beyond those in Centrelink and CDP office) for digital skills development, virtual meetings/ training, MS Office, design applications and creative or cultural use	<p>Review use of existing community access computers and unmet demand. Seek additional computers to support demand, especially by elders, CDP participants and students</p> <p>Identify appropriate space/s for community access computers, videoconferencing, printers, scanners and other IT equipment</p>	<p>CDRC</p> <p>Central Land Council (CLC)</p> <p>PAW Media</p> <p>CAYLUS/ DotCom Mob</p> <p>inDigiMOB</p>	<i>Yet to do</i>

Identified Issue	Possible Actions	Potential Stakeholders	Progress/ Next Steps
Affordability			
<p>High cost of pre-paid mobile data:</p> <p>High cost of pre-paid Optus mobile data as a proportion of household income. Likely same issue when Telstra mobile service installed</p> <p>Awareness needed on costs of data use, and ways to reduce costs</p>	<p>Optus and Telstra to develop more affordable pre-paid plan for remote low-income residents</p> <p>Provide easy-to-read materials (posters, brochures) on options for affordable mobile and broadband services, as well as data usage of key applications (e.g., video/ audio streaming) and ways to reduce data use</p>	<p>Optus</p> <p>Telstra</p> <p>KAC</p> <p>Uraro store</p> <p>NIAA</p> <p>CfAT</p>	<p><i>Yet to do</i></p>
<p>Limited free public Wi-Fi: All available Wi-Fi is via a voucher system or limited to government services only; Activ8me pre-paid vouchers are high-cost and time-consuming to issue</p>	<p>Request Activ8me to increase data allocation for Wi-Fi vouchers to be more affordable, or seek an alternate service</p> <p>Enable larger data capacity on vouchers, or remove need for vouchers</p>	<p>APN</p> <p>WA Government</p> <p>KAC</p>	<p><i>Yet to do</i></p>
<p>High device turnover:</p> <p>Replacement of devices multiple times a year is common due to phone or screen damage</p>	<p>Provide rubber phone cases as standard with new phones, especially high-priced models (Note: Opel supply a dual-SIM phone with standard rubber case)</p>	<p>Alpirakina Store</p> <p>KAC</p>	<p><i>Yet to do</i></p>
Digital Ability			
<p>IT training and support: Need for more regular IT and mobile use training, and cyber-safety awareness, particularly for seniors and other target groups</p>	<p>Provide more regular training opportunities</p> <p>Run culturally informed and targeted cyber-safety awareness campaign (including on radio and social media, in schools, and for elders)</p>	<p>CDRC</p> <p>NIAA</p> <p>Office of e-Safety</p> <p>CAYLUS</p> <p>inDigiMOB</p>	<p><i>Yet to do</i></p>
<p>Digital mentors: High demand on service providers for support in setting up and using online services, banking, sourcing identification, SIM activation, etc</p>	<p>Employment of a digital mentor, possibly based at Centrelink office, to support people to use online government, banking and other services and apps, phone SIM activation/recharge, ID requirements etc</p>	<p>DHS / Centrelink,</p> <p>CDRC</p>	<p><i>Funding for Digital mentor roles recommended by First Nations Digital Inclusion Advisory Group in 2023, but no funding program as yet</i></p>

Identified Issue	Possible Actions	Potential Stakeholders	Progress/ Next Steps
Workplace digital skills: Demand for IT skills for workforce readiness and use of online services	Incorporate digital skills training into workforce readiness training and on-the-job training by local agencies as needed	CDRC / CDP DHS / Centrelink Batchelor Institute Other agencies	<i>Yet to do</i>
Access to media services			
TV services failure: VAST direct-to-home satellite TV services not working in about 65% of homes; high cost for households to repair equipment and replace set-top boxes; Challenges with activating smart cards for set-top boxes	Consider cost-benefit of switching to local TV broadcasting to improve reliability and reduce ongoing maintenance costs (1.8 m satellite dish may reduce rain fade impact) Advocate for funding to upgrade or install residential VAST satellite services, replace set-top boxes where not working and install power surge protection	Kalumburu A.C. PAKAM WA Government, Australian Government (DITRDCA)	<i>No funding program as yet for communities to switch to local broadcast model or VAST equipment repair program</i> <i>Note: DITRDCA have an Audit Group for remote and regional TV services reviewing VAST service delivery in remote communities</i>
ABC Radio not working: No ABC radio service in Yuelamu	Advocate for funding to re-establish and maintain an ABC radio service in Yuelamu (and other central Australian communities)	CDRC NIAA ABC PAW Media	<i>No funding as yet</i>
Music and digital media production: Demand for space for music recording / production and multi-media production	PAW Media could set up training studio for music and digital media production, and Yuelamu-based trainer / producer if staff housing available	PAW Media Yuelamu School	<i>Space allocated; awaiting staff accommodation for PAW Media trainer</i>



Figure 25: Daniel and co-researcher Mel Langdon (right) with local leaders (left to right) Anthony Briscoe, Joseph McCormac and Norman Hagan

Appendix 1: Summary of Survey results

Note: Surveys undertaken in 2022 included 1 of 37 non-First Nations respondents, whereas all 55 respondents in 2023 were Yapa (First Nations people). Please note this difference when making comparisons between the two sets of results. Not all respondents answered all questions, so percentages are based on the number of respondents to that question.

Demographics	2022 (37 respondents)	2023 (55 respondents)
Gender	43% female; 57% male; 0% non-binary / genderfluid	46% female; 55% male; 0% non-binary / genderfluid
% Aboriginal	97%	100%
Education	30% up to year 12 54% year 10 or below 3% with tertiary education (certificate, diploma, degree)	13% up to year 12 75% year 10 or below 6% with tertiary education (certificate, diploma, degree)
Employment	41% employed or on CDP (27% of these full-time) 27% unemployed 27% looked for work in past month	58% employed or on CDP (0% of these full-time) 20% unemployed 9% retired / on a pension 7% unable to work due to disability 36% looked for work in past month
Welfare	86% received Centrelink (primarily Family Tax Benefit and JobSeeker / Youth Allowance)	95% received Centrelink (primarily JobSeeker / Youth Allowance and Parenting Payment)
Housing	78% in multi-generational or shared households (5.4 people per house)	80% in multi-generational or shared households (6.8 people per house)
% with long-term disability or health condition	14%	13%
% who speak a language other than English at home	82%	24%
ATSI languages spoken (multi-choice question)	86% Anmatyerre / Anmatyerr 46% Warlpiri 3 other languages	89% Anmatyerre / Anmatyerr 50% Warlpiri 3 other languages
Understanding of English (very and quite well)	Spoken English: 62% Written English: 68%	Spoken English: 69% Written English: 55%
Average weekly household income	\$1,019.09	\$804.05
Income breakdown	0% \$1-\$399 68% \$400-\$999 32% \$1,000-\$1,999 0% above \$2,000	11% \$1-\$399 60% \$400-\$999 29% \$1,000-\$1,999 0% above \$2,000

Phone use	2022 (37 respondents)	2023 (55 respondents)
Primary devices used for phone calls (multi-choice question)	62% mobile phone (own) 49% public phone 35% phone in community office or workplace 14% fixed line phone in home 3% without phone access	64% mobile phone (own or shared) 36% phone in community office or workplace 50% public phone 11% fixed line phone in home 3% without phone access
Reliability of public phone	5% don't use a public phone 35% said it was reliable 59% said it was not or sometimes reliable	0% with no access to public phone 73% said it was reliable 4% said it was not reliable 24% don't know
Rate of mobile phone ownership	76% own or share 96% of these smartphones	65% own or share 92% of these smartphones
% of phone owners on prepaid services	96%	100%
Average pre-paid data allowances	7% no data 54% pay for up to 10 GB/month 29% 11-40 GB/month 11% 41-60 GB/month 0% over 60 GB/month 0% unlimited	3% no data 47% pay for up to 10 GB/month 50% 11-40 GB/month 0% 41-60 GB/month 0% over 60 GB/month 0% unlimited
Average number of prepaid services per household	N/A	2.3
Household pre-paid mobile expenditure	33 responses Average household cost of \$159 / month 30% pay up to \$100 / month 48% pay \$101-\$200 / month 15% pay \$201-\$300 / month 6% pay over \$300 / month	44 responses Average household cost of \$87 / fortnight 77% pay up to \$100 / fortnight 16% pay \$101-\$200 / fortnight 7% pay \$201-\$300 / fortnight 0% pay over \$300 / fortnight
Media use	2022 (37 respondents)	2023 (55 respondents)
Radio access (multi-choice question)	95% listen via car 24% listen to a radio at home 5% through VAST/ TV 5% via phone/tablet 5% never listen to radio	89% listen via car 25% listen to a radio at home 6% through VAST/ TV 0% never listen to radio
Primary radio stations listened to	8PAW Radio (43% listening daily or weekly, 46% occasionally) ABC Radio (19% listening daily or weekly, 30% occasionally)	8PAW Radio (44% listening daily or weekly, 33% occasionally) ABC Radio (9% listening daily or weekly, 46% occasionally)
TV access (multi-choice question)	29% on TV via VAST satellite 23% via phone 12% only via USB/DVDs on TV 12% only watch TV outside of home 10% via computer or tablet 13% never watch TV	39% on TV via VAST satellite 33% via phone 17% only watch TV outside of home 14% via computer or tablet 7% never watch TV

VAST TV access	43% have VAST service working 41% VAST not working (42% due to set-top box not working, 26% didn't know) 16% do not have VAST installed at house	35% have VAST service working 42% VAST not working (58% due to set-top box not working, 22% due to a damaged dish or cabling) 24% do not have VAST installed at house
Most popular sources of TV and online content (multi-choice question)	Commercial TV (7, 9, 10)(38% daily, 14% weekly) YouTube (30% daily, 11% weekly) Streaming services(24% daily, 5% weekly) NITV (24% daily, 19% weekly) ICTV (24% daily, 16% weekly) ABC TV (22% daily, 24% weekly) SBS TV (14% daily, 11% weekly))	Commercial TV (7, 9, 10)(27% daily, 7% occasionally) YouTube (22% daily, 11% occasionally) Streaming services (11% daily, 0% occasionally) ABC TV (9% daily, 2% occasionally) SBS TV (9% daily, 6% occasionally) ICTV (7% daily, 9% occasionally) NITV (7% daily, 7% occasionally)
Primary sources of news and information (multi-choice question)	Direct / in-person communication (57% daily, 11% weekly, 8% occasionally) 8PAW Radio (33% daily, 8% weekly, 44% occasionally) Local noticeboards(30% daily, 32% weekly, 22% occasionally) Commercial TV (27% daily, 19% weekly, 30% occasionally) Facebook (22% daily, 14% weekly, 16% occasionally) Online news service (19% daily, 11% weekly, 14% occasionally)	Direct / in-person communication (75% daily, 6% weekly, 16% occasionally) 8PAW Radio (29% daily, 11% weekly, 35% occasionally) Commercial TV (18% daily, 7% weekly, 27% occasionally) Local noticeboards (13% daily, 22% weekly, 36% occasionally) Facebook (9% daily, 9% weekly, 16% occasionally)
Primary sources of emergency information (multi-choice question)	8PAW Radio (51%) Direct / in-person communication (46%) ABC radio (43%) Facebook (43%) ABC TV (35%) Commercial TV (35%) First Nations TV service (24%)	Direct / in-person communication (96%) 8PAW Radio (55%) Local noticeboards(44%) Commercial TV (27%) ABC TV (25%) Newspaper (25%)
Internet use	2022 (37 respondents)	2023 (55 respondents)
Latest internet use	62% used internet in past week 8% in past month 22% never use the internet	47% used internet in past week 6% in past month 40% never use the internet
Rate of internet use (of respondents who had used the internet within the last three months)	26% use the internet almost constantly 26% several times a day 37% about once a day or several times a week	16% use the internet almost constantly 26% several times a day 16% about once a day or several times a week

Regular internet users (The following indented sections refer to respondents who had used the internet within the last six months)	73%	58%
Primary online devices (multi-choice question)	Smartphone (100%) Desktop computer (26%) Smart TV (19%) Portable laptop or notebook computer (15%) Tablet (19%)	Smartphone (100%) Desktop computer (23%) Smart TV (19%) Portable laptop or notebook computer (12%)
Use of internet provided by others (multi-choice question)	41% at houses of friends or family 41% public space with free Wi-Fi 26% community or Shire office 19% at place of work or education	42% public space with free Wi-Fi 39% at houses of friends or family 15% at place of work or education
Reasons given for not using the internet more (multi-choice question)	'The internet is too expensive for me' (41%) 'I do not have convenient access to the internet' (30%) 'I do not need to use the internet more often' (22%) 'I am concerned about privacy or scams' (22%) 'I do not have access to content in my own language' (15%)	'The internet is too expensive for me' (42%) 'I do not have convenient access to the internet' (31%) 'I do not need to use the internet more often' (23%) 'I am concerned about privacy or scams' (23%) 'I do not have access to content in my own language' (15%)
Concern about amount of time spent online	4% extremely concerned 11% moderately concerned 37% slightly concerned 44% not at all concerned	0% extremely concerned 19% moderately concerned 22% slightly concerned 56% not at all concerned
Low internet users	27%	42%
Reasons given for not using the internet more (multi-choice question)	'I have no need to use the internet' (60%) 'I am not confident using the internet' (50%) 'I do not have access to the internet' (40%)	'I have no need to use the internet' (60%) 'I am not confident using the internet' (50%) 'I do not have access to the internet' (40%)
Fixed broadband services (e.g. nbn Sky Muster, ADSL, Starlink)	62% did not have any kind of fixed home internet 27% on Sky Muster service 5% other form of fixed internet	86% did not have any kind of fixed home internet 15% on Sky Muster service
Respondents with fixed broadband	38%	15%
Data allowances	50% had less than 49 GB/month 36% between 50-199 GB/month 14% above 200 GB/month 0% unlimited	0% had less than 49 GB/month 50% between 50-199 GB/month 50% above 200 GB/month 0% unlimited
Average cost	\$73.21/ month	\$130.10 / month

Mobile broadband services (e.g. 4G modem or dongle)	95% without any mobile broadband device 3% used a Wi-Fi dongle / device 3% other mobile broadband device (50% of these pre-paid)	100% without any mobile broadband device
Respondents with mobile broadband	5%	0%
Data allowances	50% had less than 10 GB/month 0% between 11–40 GB/month 0% between 41–100 GB/month 0% above 100 GB/month 0% unlimited	N/A
Frequency of exceeding data limits	50% exceeded their monthly data limit between 1–5 times in the last year 0% 6–11 times 0% every month	N/A
Affordability		
	2022 (37 respondents)	2023 (55 respondents)
How often respondents cut back on essential household costs to afford personal or household internet	5% often or always 22% sometimes 73% rarely or never	2% often or always 22% sometimes 76% rarely or never
Respondents who compromise on internet speed and/or quality to prioritise affordability	24%	38%
Digital Ability		
	2022 (37 respondents)	2023 (55 respondents)
Regular internet users (The following indented sections refer to respondents who had used the internet within the last six months)	73%	58%
Basic digital ability metrics (very true or mostly true of me)	Open a new browser tab (96%) Download and then open a file (93%) Connect to a Wi-Fi network (93%) Use a mobile device as a Wi-Fi hotspot (92%) Find and install apps (81%) Complete online forms (78%) Send and receive emails (63%)	Connect to a Wi-Fi network (94%) Use a mobile device as a Wi-Fi hotspot (94%) Find and install apps (84%) Open a new browser tab (75%) Download and then open a file (75%) Send and receive emails (69%) Complete online forms (59%)
Online security and cyber-safety awareness (very true or mostly true of me)	Set/manage secure passwords (93%) Set/adjust privacy settings (85%) Identify which apps/software are safe to download (74%) Add or remove friends or followers on social media (67%) Check if information is trustworthy (67%)	Set/manage secure passwords (66%) Set/adjust privacy settings (62%) Identify which apps/software are safe to download (55%) Check if information is trustworthy (50%) Decide what personal information to share online (48%)

	Decide what personal information to share online (63%)	Add or remove friends or followers on social media (48%)
Online content creation (very true or mostly true of me)	Produce online content (44%) Post videos (63%) Create websites (22%) Awareness of online copyright law (41%)	Produce online content (31%) Post videos (31%) Create websites (21%) Awareness of online copyright law (28%)
Smart devices (e.g. smart TV) (very true or mostly true of me)	Connect smart devices (e.g. smart TV) to the internet (63%) Adjust smart device privacy and security settings (59%)	Connect smart devices (e.g. smart TV) to the internet (47%) Adjust smart device privacy and security settings (36%)
Primary online activities (activities undertaken in past six months)	Online banking (93%) Accessing government services (78%) Online shopping (67%) Online learning / study (59%) Comparing prices of products or services (56%) Looking for work (56%) Online buying / selling (52%) Accessing health information (52%) Tracking packages (48%)	Online banking (91%) Accessing government services (81%) Comparing prices of products or services (50%) Online shopping (47%) Accessing health information (44%) Looking for work (41%)
Social media use (activities undertaken in past six months)	Keeping in touch with family or friends (85%) Meeting new friends or reconnecting with old friends online (70%) Engaging with community (70%)	Keeping in touch with family or friends (72%) Meeting new friends or reconnecting with old friends online (66%) Engaging with community (56%)
Online entertainment (activities undertaken in past six months)	78% used online entertainment services 48% attended an online music, arts, or cultural event online	84% used online entertainment services 72% attended an online music, arts, or cultural event online 31% played online games
Online navigation and transport (activities undertaken in past six months)	44% had navigated a route via maps on a smartphone 19% had booked a taxi service via app	53% had navigated a route via maps on a smartphone 38% had booked a taxi service via app

Comments:

Mobile and TV access:

- + Need more mobile network services. (x 4)
- + I can't wait for the mobile service to come. I'll be able to get internet and phone at home for the first time. I want to start my own business so I will be able to do it then. We also want TV fixed up here. It hasn't worked for years.
- + We still wait for mobile to work to check how internet banking and my gov and YouTube. I want help to learn to use internet.
- + Look forward to have Telstra turn on in Yuelamu.
- + The mobile will help me keep in touch with family away from community, like my son on dialysis. The cost of Sky Muster is too much \$200 per month so I'm worried about mobile cost too.
- + We need the mobile to start up, we've been waiting for years. We need TV fixed up. When mobile comes we will keep the SkyMuster. It works well.
- + When the mobile comes it will make a big difference. We can keep in contact with family, access services from home, getting a job.
- + I am still waiting for mobile. I use the phone for emergency mainly. We go to the CAT hotspot to get signal from Yuendumu.
- + We want the mobile to startup. It will be good for contacting family and friends. It might make trouble for the young ones. Might be lot of humbug for phones and vouchers.
- + We want the TV and the mobile working
- + We're waiting for the mobile.
- + We want the mobile tower switched on. We need more help to learn to use computers and online services. I find it hard to read so it makes internet hard. We will be able to get more movies and streaming when mobile comes.
- + We still wait for mobile to work to check how internet banking and my gov and YouTube. I want help to learn to use internet.
- + Need telephone in town.

Internet access:

- + Need internet. (x 9)

Digital ability:

- + Need to learn how to use internet. (x 4)
- + It will be good to get the mobile. People need more help to learn to use internet and computers here, but there's low English literacy which makes it hard. We need the TV fixed up.
- + I don't know how to use internet or online services, I only did bush school. I need help to learn.

Social media concern:

- + Telstra good to be turned on but could be trouble – social media trouble.
- + Still waiting for the mobile. I only use mobile for emergency calls. I don't use Facebook because it makes too much trouble.
- + We're still waiting for the mobile. We need it, we've been waiting a long time. I don't want Facebook here it's a troublemaker. My daughter helps me to use internet but I want to learn how to do it. We need a dish to get TV at my house.

Appendix 2: Community Communications Audit

About the community	
Community name:	Yuelamu
Alternate name	Mt Allan
Traditional owners/ Language group	Anmatyerr (Anmatjere)
Location (Coords)	22.2564° S, 132.2075° E
Region	Central Desert
LGA/Shire/ Regional Council	Central Desert Regional Council
Land Council	Central Land Council
Regional service centre, distance	43 km east of Yuendumu; 277 km north-west of Alice Springs
Remoteness (ABS / ARIA+)	Very remote
Demographic data – ABS 2021	
ABS link – All persons QuickStats	https://abs.gov.au/census/find-census-data/quickstats/2021/SAL70300
ABS link – Aboriginal and/or Torres Strait Islander people QuickStats	https://abs.gov.au/census/find-census-data/quickstats/2021/IARE709016
Total population	149
Aboriginal and/or Torres Strait Islander (ATSI) population	142 (95.3%)
Gender breakdown	53.3% male / 46.7% female
Total population	26
Families	37 families (34 ATSI families)
Language groups – numbers of speakers	Central Anmatyerr - 137 (92%); Warlpiri - 3 (2%)
% ATSI people who speak an ATSI language	99%
% who speak only English at home	9 (6%)
Employment levels	Worked full-time - 4 (11.4%); Worked part-time - 7 (20%); Away from work- 8 (22.9%); Unemployed- 15 (42.9%)
Education levels	Certificate III - 4 (3.5%); Year 12- 14 (12.4%); Year 11- 13 (11.5%); Year 10 - 13 (11.5%); Year 9 or below - 24 (21.2%); No educational attainment - 16 (14.2%); Not stated - 24 (21.2%)
Number of buildings	45 private dwellings
Housing suitability for ATSI households	The average household size was 4.8 people, with an average 1.7 people per bedroom
Median ATSI household income	\$833 (\$866 whole population)
Median personal income – over 15 years	\$254/week for ATSI population
Average weekly rent	\$75
Average motor vehicles per dwelling	Approx. 1.2

Community services and plans	
Community Layout Plan	See Bushtel website for planning and projects in Yuelamu: https://bushtel.nt.gov.au/profile/197
Agencies in community	Central Desert Regional Council (Community office, Sports and Rec, Centrelink/CDP program, Night Patrol, Childcare, Aged Care, Essential Services); Mt Allan School; Clinic operated 1 day/week by Yuendumu Clinic; Power and Water
Visiting agencies	CAYLUS, NDIS, Centrelink, CLC, NAAJA
Community Development Plan	See https://bushtel.nt.gov.au/profile/197 for all community plans and services
Power supply/type in community	Generator power from Yuendumu
Use of power cards	Yes
Types of communications available	
Public phones – number/ location	3 - opposite CDRC office, 2 on other side (not working)
Home phones – number	Unknown
Mobile coverage	Telstra 4G mobile tower in place, activated 30 June 2023; CfAT hotspot near store picks up 4G signal from Yuendumu
Coverage description	N/A
Fibre to community	No
ADSL – number of connections	No ADSL services (HCRC does not support ADSL)
Fibre-to-the-premises connections	None – all internet access via satellite services
Satellite services – number, locations, provider	14% of residents surveyed in 2023 had household Sky Muster services; Most agencies plus 14 staff houses have Sky Muster; Starlink services now at CDRC office and day care
UHF or HF Radio	UHF used by Rangers, CDRC staff and municipal services; Police, emergency services and aircraft also use VHF radio
Communications funding history – Mobile Black Spots, Regional Connectivity Program, state government investment etc	4G small cell service provided under NT Government Remote Telecommunications Program; CfAT mobile hotspot (funded by CLC); Activ8Me Wi-Fi service originally funded under NIAA trial program in mid 2010s
Any planned upgrades?	None known
Emergency information system	Kalumburu Police, clinic, KAC office and Uraro Store have satellite phones; Lights on water tank for cyclone warning codes (operated by police) with other emergency communications face to face
Telemetry network	All generators, pumps, water chlorination etc monitored via telemetry; Power and Water have a communications network that enables remote phone calls 5 km from shed to enable remote diagnostics and support

Media services available	
Radio services broadcast – AM or FM	8PAW Radio (FM) only local radio service; ABC radio only via faint AM signal from Alice Springs
TV services – local broadcast, number of DTH services, number working	VAST DTH; all houses have had VAST installed, but under 50% working
RIBS radio station – location, staff, roles	PAW Media RIBS site, broadcaster away
RIMO – regional provider	PAW Media
Other media services – newspaper etc	Land Rights News (CLC)
Community access facilities	
Public access facilities (computers, printers, videoconferencing or other facilities)	Centrelink office – two computers; Computer room at recreation hall for use during opening hours (Tuesday to Saturday 3- 8 pm); CDRC meeting room has videoconferencing facility
Public Wi-Fi availability, free or voucher system, agency, RSP, monthly download limit	Free DHS Wi-Fi at Centrelink office 24/7; Activ8Me Wi-Fi hotspot at store via vouchers; Free Wi-Fi provided by CDRC youth program at the recreation hall with daily data limits per device
Access computers in other facilities	None known
Any programs running to support community access	CAYLUS provide training and support for youth digital activities; WYDAC previously provided IT access and support in Yuendumu with some outreach activities up to 2021; PAW Media were also delivering inDigiMOB digital skills workshops and support until 2021, looking to set up music production workshops in Yuelamu.



Figure 26: View of northern side of Yuelamu from the hill

Appendix 3: Photos of Research Activities



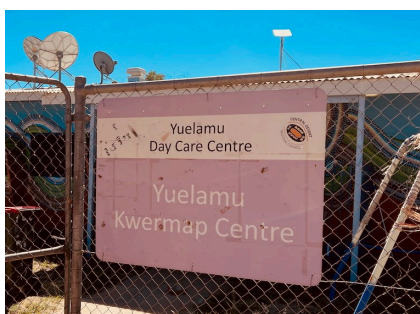
Figures 27 & 28:
Daniel doing an interview with Anthony Briscoe; Mel doing a survey with Ned Wilson



Figures 29 & 30:
Yuelamu School sign; Mel doing a survey with resident Raymond Leo



Figures 31 & 32: Sky Muster dish at the clinic; Sign for Yuelamu CDP Activity Centre



Figures 33 & 34:
Yuelamu Day Care Centre with Starlink dish; Alpirakina Store, which offers pre-paid Wi-Fi