

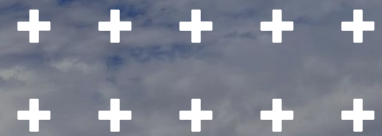
December 2022



MAPPING THE DIGITAL GAP

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

+ + + + +
+ + + YUELAMU, NORTHERN TERRITORY
+ + + COMMUNITY OUTCOMES REPORT 2022



Acknowledgement of Country

We respectfully acknowledge the Anmatyerr (Anmatjere) people, and pay our respect to their Elders, past, present and emerging. 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 being undertaken through RMIT University as part of Centre of Excellence for Automated Decision Making and Society, in partnership with Telstra.

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Community Co-Researchers

Stephanie Lynch

Dennis Charles

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. As well as 37 community residents surveyed, we undertook 2 interviews with local residents and 11 interviews with stakeholder agencies including:

- + Central Desert Regional Council
- + Central Land Council
- + PAW Media and Communications
- + Yuendumu School
- + Yuendumu clinic
- + Yuendumu Women's Centre
- + Child and Family Centre Yuendumu
- + Central Australian Youth Link-up Service (CAYLUS)
- + First Nations Media Australia / inDigiMOB

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1. EXECUTIVE SUMMARY

Yuelamu community is 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%).**

Our first research visit to Yuelamu was undertaken from 5th to 7th May 2022, with additional stakeholder interviews conducted in Yuendumu and Alice Springs on the 9th and 10th May. The RMIT University team worked with community research partner Pintubi Anmatjere Warlpiri Media and Communications (PAW Media) and co-researchers Dennis Charles and Stephanie Lynch, with support by PAW Media General Manager Jeff Bruer and local Central Desert Regional Council staff. The team had a productive week undertaking surveys with residents and conducting interviews with agencies and community leaders in the three locations. We thank all residents and agency staff who participated in the research and made us feel very welcome.

Based on 37 surveys and 13 interviews, this report outlines the initial findings from our 2022 visit and highlights the current access and use of media, telecommunications and online services, as well as the digital inclusion and service delivery challenges in Yuelamu and across the Central Desert region.

This report is intended to assist local and regional agencies, including PAW Media, Central Land Council Central Desert Regional Council, as well as Northern Territory Government, to better understand the key barriers to digital inclusion in Yuelamu and the region and community aspirations for the future. It is designed to provide a basis for a local digital inclusion plan. This report will assist in identifying infrastructure and program needs to enable a targeted approach for advocacy with government and industry stakeholders. The report will be updated following research visits in 2023 and 2024.

This report is also part of our commitment to Indigenous data sovereignty, to ensure data collected and research findings from this project are available to the participating communities to use for their own analysis, planning and advocacy. Please note that, in line with our commitment to Indigenous data sovereignty, this report provides initial findings from the raw survey data collected during our fieldwork. It is likely that, following data cleaning and weighting, the final results may differ slightly from that presented here. All Mapping the Digital Gap survey results, including Yuelamu, will be made available via the Australian Digital Inclusion Index website and data dashboards, and it is this data that should be treated as authoritative.

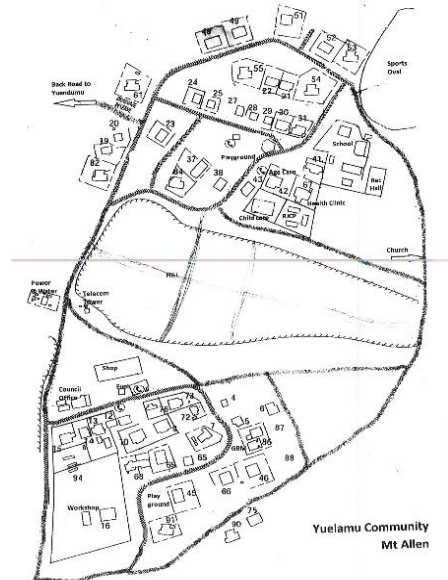


Figure 1: Map of Yuelamu Community



Key Findings

The following key findings are based on the initial analysis of surveys with 37 residents and 13 interviews with community leaders and service providers.

With no 4G in Yuelamu yet, there is limited phone access but high use of Wi-Fi for phone calls

- + There is currently no mobile coverage, with a 4G mobile small cell due to be installed in late 2022.
- + Phone services in Yuelamu are delivered via Higher Capacity Radio Concentrator (HCRC) microwave backhaul¹. No survey respondents had a home phone.
- + Despite the lack of 4G coverage, 76% of survey respondents own or share a mobile phone. 62% reported regularly using a mobile phone for calls, primarily using Wi-Fi Calling over public or residential Wi-Fi.
- + 49% of respondents reported using the public phone for calls, however only one of the three public phones was working during our visit. 35% use the phone at a community office such as the Centrelink office, run by Central Desert Regional Council.
- + There is also regular use of the Centre for Appropriate Technology (CfAT) mobile hotspot², a passive signal concentrator dish which enables limited access to the 4G service from nearby Yuendumu for calls and basic data use.

Despite lack of mobile coverage, there is high smartphone ownership.

- + 96% of those with mobile phones had smartphones as their main mobile phone. There is an average of 2.9 mobile phones per household.
- + 96% of those with mobile phones use pre-paid mobile services.

There is relatively high uptake of Sky Muster, with public Wi-Fi also a primary means of access.

- + There is relatively high uptake of NBN Sky Muster satellite services with an estimated 14 of the 43 residential Yapa households in Yuelamu, plus 14 staff houses and agency buildings.
- + 38% of respondents reported having an NBN Sky Muster service at home. 62% of respondents do not have any form of fixed home Internet.
- + 62% of survey respondents had used the Internet in the previous week, with a further 11% within the previous 3 months. Given limited home Internet, this suggests a high reliance on public Wi-Fi for access.
- + Public Wi-Fi services are available at the Centrelink office 24/7, at the sport and recreation hall through a voucher system managed by youth workers, and via an Activ8me Wi-Fi service at the Alpirakina community store with pre-paid vouchers available at the store.
- + All agencies in Yuelamu, including the Central Desert Regional Council (CDRC)³ office, store, school, clinic etc) use NBN Sky Muster services, with a lack of redundancy options in the case of signal loss during heavy cloud coverage.
- + In Yuendumu, where there are 4G mobile, ADSL and Sky Muster services available (Starlink also now available), agencies described issues with speed and reliability of services, especially during peak hours.

¹ Higher Capacity Radio Concentrator, a microwave repeater system used throughout remote Australia to reach locations without fibre optic cable, with throughput speeds of up to 19.2kbps.

² Centre for Appropriate Technology (CfAT) HotSpot - See description page 7.

³ Central Desert Regional Council is the key service provider in Yuelamu (<https://centraldesert.nt.gov.au/our-services>)

There is a moderate level of digital ability in Yuelamu, despite limited access.

- + Of the 73% of survey respondents who had used the Internet in the last three months:
 - o 67% used the internet at least once a day, with 26% saying they used it almost constantly.
 - o 93% had used online banking in the previous six months, 78% had accessed a government service online, 67% had done online shopping and 59% had done online learning or study.
 - o 85% had used the Internet to keep in touch with family or friends in the previous six months, and 78% had used online entertainment services (e.g., streaming video/music, playing online games).
 - o 63% said that the statement 'I know how to send and receive emails' is 'very true' or 'mostly true' of them; 96% chose 'very true' or 'mostly true' to the statement 'I know how to open a new internet browser tab', and 78% chose 'very true' or 'mostly true' to 'I know how to complete online forms'.
- + The primary reasons given by the 27% of low Internet users surveyed for not using the Internet was having no need to use it (60%), low confidence (50%), and not having access (40%).

Affordability constrains Internet access and use of digital services, and costs are likely to increase.

- + 41% of those who used the Internet within the last three months indicated that the main reason they do not use the Internet more often is because "The Internet is too expensive for me".
- + 27% reported sacrificing essential household costs, such as food and bills, to afford Internet access within the past six months, with 24% compromising on connection speed and/or quality to prioritise affordability.
- + Of the 33 responses on household mobile expenditure, the average household cost for mobile services is \$160/month, with 21% paying over \$200/month. These rates are similar to sites with full-time access, suggesting that monthly household expenditure will likely increase once 4G is available in Yuelamu.
- + Those households with Sky Muster fixed broadband services are paying an average monthly cost of \$73.21.

The full survey results are available in Appendix 1. A detailed audit of community demographics, relevant information, and communications and media services available in Yuelamu at the time of this research 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, Thomas et al., 2021) 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 the level of digital inclusion. ADII scores are relative: they allow comparisons across different social groups and geographic areas, and over time.

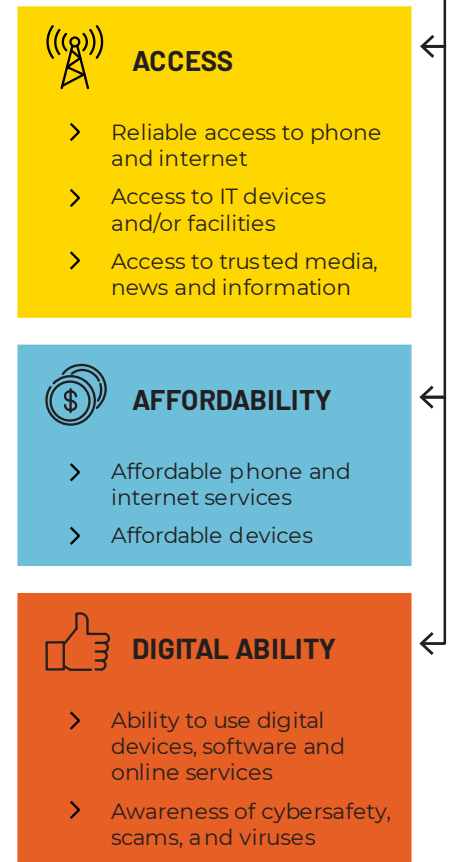
People living in Australia’s 1100 remote Indigenous communities are likely to be among the most digitally excluded Australians. The ADII has previously found that people in remote communities often have extremely limited access to digital infrastructure and services and encounter very high costs for Internet access, especially in relation to their income (Thomas et al., 2018; Thomas et al., 2019).

The Mapping the Digital Gap project uses an amended version of the survey that underpins the ADII (the Australian Internet Usage Survey) to collect digital inclusion data. The Mapping the Digital Gap survey results will be available on the ADII website, with interactive charts that will provide insight into community-specific results as well comparison with other participating communities and national results collected by the ADII.

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

The Mapping the Digital Gap project is targeted at remote First Nations communities and does not include digital inclusion of First Nations people living in urban and large regional centres. However, it is hoped this project will provide data that will help in measuring the scale and nature of this digital gap over time, as well as insights into strategies to address key obstacles and reduce the digital gap for all First Nations people.

DIGITAL INCLUSION



2. INTRODUCTION

Yuelamu community is a small community of 140 primarily Anmatyerr people. While there is currently no mobile access and limited household communications access, residents have found creative solutions to access phone, Internet and online services. Yuelamu is located 43km from the larger centre of Yuendumu, where primary services including the health clinic and secondary school are located.

There are a number of public Internet access solutions in place - including Wi-Fi at the Centrelink office, store and recreation hall, and the CfAT mobile hotspot – to enable basic access to online services. Along with a relatively high take-up of Sky Muster satellite services by about a third (about 14 of 43) of Yapa (Aboriginal) households, Yuelamu residents are surprisingly well connected and digitally literate. Consequently, our survey results indicate that mobile phone ownership, expenditure and use of online services are only marginally lower than results in similar sized communities that have mobile coverage.

Yuelamu community has been actively pushing for several years to get mobile coverage in the community, including offering to self-fund a service using Granites Mine Affected Area Aboriginal Corporation (GMAAAC) royalty funds. Most communities with similar population sizes already have mobile coverage in the Northern Territory, thanks to a range of NT Government co-investment programs. However, Yuelamu and nearby Willowra, two of several major communities in the Central Desert region without 4G coverage⁴, had been constrained by a lack of fibre optic cable to provide the backhaul needed for a mobile service. Through co-investment from Telstra and NT Government, Telstra have now installed microwave repeaters to enable a 4G macro cell service to be installed at both Willowra (switched on in October 2022) and Yuelamu (due for activation 31st March 2023). The project was delayed by land use negotiations for the repeater towers on nearby station properties.

There was also an upgrade of the optic fibre link between Alice Springs and Yuendumu in May 2021 as part of NT Government's Remote Telecommunications Co-investment Program with Telstra, to provide improved services in Yuendumu and backhaul capacity for mobile services in nearby communities - Laramba, Nyirripi, Willowra and Yuelamu⁵.



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

- *Dennis Charles, Broadcaster/ Archive Worker, First Nations Media Australia, 2022*

Yuelamu residents and service providers are looking forward to the arrival of 4G in the community (see Survey comments on page 43). However, there is some concern about the impact that the service may have on their community, based on experience from other communities of cyber-safety issues, scams and on affordability issues of increased data use on pre-paid mobile rates. There is some demand for

⁴ Laramba and Nyirripi will also receive 4G via macrocell installations under the Telstra/NT Government Remote Telecommunications Co-investment Program. Haasts Bluff and Areyonga are yet to be listed for 4G services. Source: Email correspondence with NT Government 30/11/22.

⁵ 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.

support to help navigate these issues through workshops or resources to build community awareness and local strategies to reduce the risks of the newly arrived mobile service.

Reliable and affordable Internet access is becoming necessary for access to banking and government services, such as Centrelink, MyGov and MyHealth, as services increasingly move online as part of digital transformation. While the installation of the 4G service will provide much needed access, it should not be seen as a replacement for free public Wi-Fi services, as this shifts the cost of access of services onto the user. With the average personal income being only \$254 per week in Yuelamu (ABS 2021), and average household cost for pre-paid data costs already at \$160 per month before the 4G arrival, the expense of mobile data and devices are likely to become a significant cost burden on top of rising costs of food, fuel and other needs. Local strategies to relieve these costs at a household and community-wide level will be needed to alleviate 'digital poverty'.



"[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

Over the last two years, because of the COVID-19 pandemic and low vaccination uptake in remote Northern Territory communities, there have been border closures to other states and remote area travel restrictions in place. With already limited services available in Yuelamu, this has severely restricted access by service providers from Yuendumu and Alice Springs for health, education, training, disability support and youth activities. The lack of reliable communications services to enable telehealth delivery, online meetings and learning, and other remote service delivery has left Yuelamu community members highly excluded throughout this period. A case study in section 5 outlines how the lack of mobile communications continues to limit the ability of National Disability Insurance Scheme (NDIS) disability service providers to contact clients to arrange on-site service delivery.

The COVID-19 restrictions also led to increased demand on Internet data for accessing news, services, and information, as well as mobile and social media communications and entertainment. There is growing demand from young people for streaming services (e.g., YouTube, TikTok, Spotify etc.) and online gaming. The increase in demand and lack of mobile coverage has likely driven the increased uptake of Sky Muster services, despite concerns about being able to continue to pay for monthly billed services.



"Connectivity is increasingly crucial for access to education, for access to services as more and more services go online, it's become an essential service, and particularly for remote mob."

- Jennifer McFarland, CAYLUS / DotCom Mob, 2022

This demand for online services has been exacerbated by limited access to free-to-air TV services, due to VAST direct-to-home satellite services not working in 57% of households of those surveyed. With the lack of free-to-air television services, people turn to online entertainment services via WIFI, adding further cost burden on households. There is only one radio service, 8PAW Radio, broadcast 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 was cited as the most common source of emergency information and second most common source of news and information after face-to-face communications.



“We do [listen to PAW Radio], especially on workdays. 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*

Throughout the pandemic and vaccination rollout, local information sources played a crucial role in providing reliable trusted information to counter the misinformation spread via social media. With the vaccination rates in Yuelamu and Yuendumu being some of the lowest rates in the NT rates, health agencies delivered information in person, via flyers and broadcast daily radio messages in language on regional First Nations radio network 8PAW Radio. Throughout the pandemic, PAW Media produced a range of short videos in language to raise awareness of COVID health measures and to encourage vaccination uptake, which were distributed via social media channels.

While there was 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, there was demand for community access facilities and support to develop digital skills. In particular, older people and those with limited English literacy or disabilities had relatively low levels of digital literacy. While there is good support provided by CDRC staff at the Centrelink office, there were calls for a funded digital mentor role to provide culturally appropriate support in using online services, helping with phone SIM activation and data recharge and to download and use mobile applications. Without a dedicated space for people to seek assistance, there is increased demand on all service agencies to provide this support. There was also demand for digital skills training for workplace readiness as well as on-the-job training.



“There is an assumption that because something’s available [such as phone coverage or VAST TV services] that people can access it and can use it ... there’s this human rights issue ... we’re not fulfilling our obligations to Aboriginal people by assuming they can do things that are actually quite unachievable for them, and we’re blaming them individually for what is actually a systemic problem.”

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

There are currently limited opportunities for digital media or music production in Yuelamu. Local musicians are keen to record and share their work on PAW Radio and First Nations platforms like indigiTUBE or ICTV Play, and there is an emerging group of young media producers creating content for platforms like TikTok. With support from PAW Media and youth programs, there is an opportunity to encourage skills development in these areas and support local creative and cultural content production.

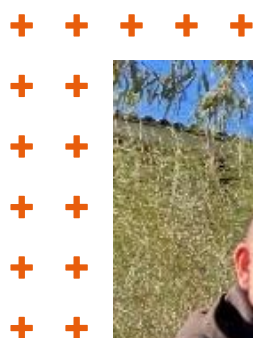


“[People have] become very savvy about using technologies in ways that suit them. There are cultural specificities to the way people use their data. There are also areas where their expertise is off the scale, they are so clever with it, but there are other areas where they don’t venture into at all.”

- *Jennifer McFarland, CAYLUS / DotCom Mob, 2022*

To address the media and communications needs identified in this report, and support improvements in digital inclusion and service delivery, it is recommended that a Digital Inclusion Plan be developed for Yuelamu. Based on the audit of existing media and communications infrastructure and services outlined in section 3 (and Appendix 2), analysis of surveys and interviews with community residents and stakeholders in section 4, a list of potential strategies for consideration for a Digital Inclusion Plan are included in section 6. As part of our ongoing research work with the Yuelamu community in 2023-24, the Mapping the Digital Gap team can assist with developing this plan.

Figure 2: Photo of research team – left to right: Dr Lyndon Ormond-Parker, Dr Daniel Featherstone, Co-researchers Stephanie Lynch and Dennis Charles, and PAW Media General Manager Jeff Bruer



3. MEDIA & COMMUNICATIONS IN YUELAMU

Existing Telecommunications Services

Backhaul to community: Yuelamu currently only has backhaul via the HCRC microwave network for basic telephony. A high-speed microwave network is currently being installed to provide backhaul for a small cell 4G service in the community. All broadband connectivity is via satellite.

Mobile coverage: The planned Telstra 4G service is due for completion on 31 March 2023. There is currently no mobile coverage in Yuelamu with the closest coverage at Yuendumu 43km to the west. Residents can access the 4G service from Yuendumu by using the Centre for Appropriate Technology (CfAT) HotSpot⁶, a passive signal concentrator dish located near the store (phones must be positioned in a cradle to receive signal).

Landlines: The copper network provides phone services only (not ADSL due to HCRC backhaul) to most agencies in the community, with limited residential access. None of the surveyed residents had home landlines.

NBN services: Yuelamu, and all other communities in the Central Desert region, only have access to satellite services under NBN zoning. 10 survey respondents had Sky Muster satellite services on their homes.

Public Phones: There are three public phones in Yuelamu, however only one of these (near the CDRC office) was working at the time of our visit in May 2022. Telstra have now made the public phones free to use. The public phones get regular use due to the lack of mobile coverage in Yuelamu.

Wi-Fi: There is public Wi-Fi available at the recreation hall (provided by CDRC) on the north side of town at set times (Tuesday to Thursday 3.30- 8.30pm, Friday 3.30-10pm, Saturdays 11am-10pm, public holidays 12pm-10pm), however access requires a voucher from Sport and Recreation officers. There is also an Activ8me Wi-Fi hotspot available full-time at the Alpirakina community store using a voucher system⁷. Wi-Fi is also available 24/7 for accessing government services at the Centrelink office adjacent within the CDRC office block.

HF / UHF Radio: There is no information about the use of HF or UHF radio by service providers in Yuelamu or communities and homelands in the region.

Telemetry: PowerWater is the NT government-owned corporation responsible for transmission and distribution of electricity and providing water and sewerage services across the Northern Territory. PowerWater use System Control for monitoring, operation, and control of regulated power systems⁸, using telemetry and on-site personnel.



149

(Population - ABS Census 2021)



94%

Aboriginal and/or Torres Strait Islanders



43km

East of Yuendumu



277km

To nearest regional centre - Alice Springs



43

Occupied private dwellings



4.8

Average people per ATSI household (ABS 2021)

⁶ 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>

⁷ The cost of data is relatively high using the vouchers- \$5 for 200MB; \$10 for 500 MB; \$20- 3GB.

⁸ 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, however there was no active broadcaster at the time of our visit. An ABC radio service (Alice Springs) can be picked up as a weak AM signal.

TV services: All houses in Yuelamu require Viewer Access Satellite Television (VAST) direct-to-home satellite for free-to-air TV services.

Regional and Local news: Being a small community, local news is shared via word of mouth and notices on the 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 and PAW Media's social media channels (Facebook, YouTube etc) , Central Desert Regional websites and Facebook pages and Central Land Council's .

Newspaper: The Land Rights News, produced by Central Land Council three times a year, is the only newspaper available in Yuelamu.

Access and Support Facilities

Community Access facilities: There are two community access computers in the Centrelink office for using Centrelink and banking services. There are also Apple computers available in the computer room (provided by CAYLUS) at the sport and recreation hall during youth program hours (Tuesday to Thursday 3.30- 8.30 pm, Friday 3.30-10pm, Saturday 11am-10pm, public holidays 12pm-10pm).

IT Support: Support in accessing and using online government services is available from CDRC staff at the Centrelink office.

Mobile phones and recharge sales: A basic range of smartphones and flip phones (calls only), as well as pre-paid Telstra recharge vouchers, are available from the Alpirakina store in Yuelamu. Activ8me Wi-Fi vouchers are also available.

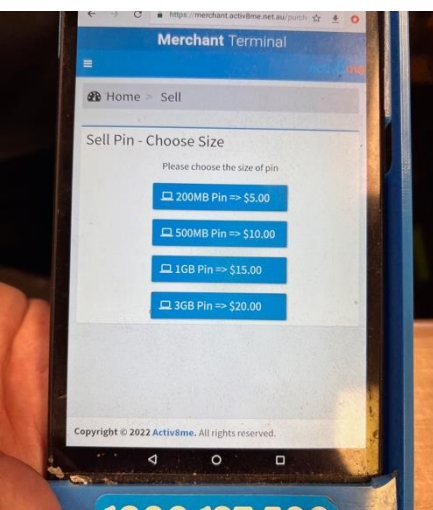


Figure 5: Merchant terminal to purchase vouchers for Activ8me Wi-Fi at Alpirakina store



Figure 4: The CfAT HotSpot enables access to mobile signal from Yuendumu 43km away

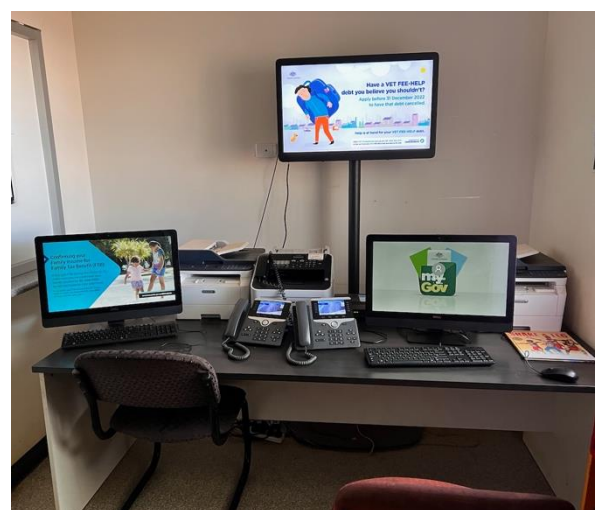


Figure 3: Access computers in Centrelink office

4. KEY FINDINGS

This section provides key findings from the 13 interviews conducted with community leaders and stakeholders, as well as observational data and survey results.

See Appendix 1 for the full set of unprocessed survey results, based on initial analysis of 37 surveys undertaken. As outlined in the Executive Summary, the finalised survey results may differ from those presented here once data cleaning and weighting has been completed. These will be available via the Australian Digital Inclusion Index website and data dashboards in mid 2023.

Communications Access

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

At the time of our 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. Telstra installed a 4G mobile tower on the hill in the centre of Yuelamu in September 2021. Residents and agency staff are keenly awaiting the mobile service, which is scheduled for switch-on in March 2023 after several delays.

- + “I’m looking forward to it because it will be helpful for the community, especially for emergencies. ... [We’ve waited] since last year and there have been promises from the governments and other agencies and nothing has happened ... we are still waiting for coverage.” (Norman Hagan, Support Administration Officer, CDRC 2022)
- + “They’ve been fighting for years for this 4G mobile coverage ... they’re still waiting on it, but it’s coming ... everyone has a phone [to use in] Yuendumu and Alice Springs. ... If the 4G coverage comes ... [everything is] going to change, a big change.” (Dennis Charles, Broadcaster/ Archive Worker First Nations Media Australia, 2022)

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 committee⁹ had agreed to contribute using royalty funding. However, Telstra subsequently advised that it would co-fund the installation with NT Government.

Telstra installed the 20m small cell tower on the hill in Yuelamu in September 2021 and were installing a repeater tower on a nearby pastoral property to provide microwave backhaul from Yuendumu. Central Land Council were assisting with negotiations of land use agreements for location of the new repeater towers, with a final negotiation underway with a pastoral station nearby Yuelamu at the time of our visit. According to NT Government, the Willowra 4G service, which also connects via microwave links from Yuendumu, was switched on in October 2022 and the Yuelamu service is scheduled to be activated on 31st March 2023¹⁰.



Figure 6: The 4G small cell tower has been installed in Yuelamu, awaiting backhaul connection.

⁹ 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.

¹⁰ Source: NT Government

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

Phone access is limited in Yuelamu with no survey respondents having a fixed line phone in their home.

The phone options are currently:

- + Public phones: In May 2022, there is one Telstra public phone outside the community office that was working, and two public phones on the other side of the community which were not working. There is one blue phone in the store that is used regularly. The Telstra public phones are free of charge.
- + There is active use of Wi-Fi calling and texting due to the lack of home phones and mobile coverage.
- + Phone calls and texting can also be made using the CfAT hotspot located near the store, which enables limited 4G access from Yuendumu (43km west).

The public phone gets regular use in Yuelamu, with 49% of respondents saying they used the public phone for calls and 35% use the phone at a community office or workplace. CDRC Support Administration Officer Norman Hagan said that people use the Centrelink office phone to call Centrelink or the bank.

Despite there being no mobile coverage in Yuelamu at the time of our visit, and the nearest coverage being from Yuendumu 43km away, 76% of survey respondents said they owned or shared a mobile phone. 62% said they regularly use a mobile phone for phone calls, most often while visiting Yuendumu or accessing the signal from there down the road, or via Wi-Fi Calling:

- + “[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)

The CfAT HotSpot gets regular use for making calls and texts, but the weak signal allows limited data.

- + “People are sort of fighting over that. It’s only one hotspot and you have to be in a line to be the next one to [use it].” (Norman Hagan, Support Administration Officer, CDRC 2022)

There is relatively high uptake of NBN Sky Muster services

The majority of respondents (62%) do not have any form of fixed home Internet. However, Yuelamu has a relatively high uptake of NBN Sky Muster satellite services, with 38% (14 respondents) having a Sky Muster service at home (primarily at 25/5 Mbps). There are estimated to be 14 NBN Sky Muster services on residential households (of 43) plus the 14 staff houses and agency buildings in Yuelamu.

This is largely owing to the lack of mobile coverage and alternate forms of Internet access. However, as residential Sky Muster services only have a post-paid option, there were still concerns raised about not having the money available when monthly bills are due and having the service disconnected. The lack of a pre-paid option was cited as a key reason for not getting a Sky Muster service.

Of those using Sky Muster services, there were mixed reports about the performance with some users describing issues such as dropouts with cloud cover and need for higher data limits to meet household usage needs. The recent changes of Sky Muster Plus services to unmetered data use prior to 4pm is an improvement for those with Sky Muster Plus, however most residential data usage is in evenings.

With Starlink satellite services now available, providing high-speed, low latency Internet access with unlimited data usage, some central Australian agencies are now transferring to Starlink services. However, the fixed monthly cost of \$139/month, and upfront cost of equipment of \$924, makes this unaffordable for most Yapa households.

Despite lack of mobile coverage, smartphones are used primarily for Internet access

Of the 73% of respondents who had used the Internet within the last three months, 100% said they use their smartphone as their primary means of Internet access. Some people also use a desktop computer (26%), primarily in the Centrelink office or recreation hall, or a tablet (19%). Given the lack of mobile coverage this suggests people are accessing Internet via the CfAT hotspot, a SkyMuster or Wi-Fi service or using mobile services from other communities such as Yuendumu.

There are typically very few households with computers or laptops across the region, even in the 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 ... [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)

The high turnover of mobile phones also relates to phone numbers, with people typically getting a replacement SIM rather than retaining 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 one and a new number. But they do keep getting a new one ... then some 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

Without 4G coverage in Yuelamu currently, Wi-Fi services provide an affordable means of Internet access. There is free Wi-Fi available 24/7 from the Centrelink office for accessing government and banking services, free Wi-Fi at the recreation hall (limited hours), and an Activ8me Wi-Fi hotspot available at the store using pre-paid vouchers.

While this gets some use, the high cost of vouchers can be a cost burden, with a \$10 voucher allowing only 500MB data use¹¹.

¹¹ Activ8Me vouchers cost \$5 for 200MB of data, \$10 for 500MB, \$20 for 3GB.

- + “A lot of people [buy] prepaid from the store for the Wi-Fi ... I haven’t heard anybody complaining about the cost. It just depends on how they use it whether it’s for banking or for downloading YouTube.” (Norman Hagan, CDRC Support Administration Officer, CDRC 2022)

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)

CDRC youth workers manage the Wi-Fi and computer room in 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 (outlined in section 3). Central Australian Youth Link Up Service (CAYLUS), which supported the setup of the Wi-Fi and a computer room for youth activities¹², have found that the Wi-Fi is getting broader community use:



Figure 7: CDRC provide free Wi-Fi access during youth activity hours at the sport and recreation hall.

- + “Initially it was the youth because they had the confidence and ... were interested, but over time we’ve found that user group has expanded to everyone now. You see middle aged people, even quite elderly people getting around town with their mobile phones, sending texts, making phone calls, checking out where things are at.” (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

As the recreation hall is on the north side of town and has limited access hours, there were requests for a similar free Wi-Fi service on the south side of town to supplement the existing Centrelink Wi-Fi and Activ8me service. However, this would require CDRC or another organisation to manage a Wi-Fi service. While funding is sometimes available to purchase and install Wi-Fi equipment, operating a Wi-Fi network requires ongoing operational funding for the Internet service, network management and maintenance:

- + “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. Most 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 you’ve just got to have quotas ... [In] places where there weren’t data limits, all the data got used in the first two weeks ... Everyone was offline after that ... Where possible, we make the [Wi-Fi access] free. So, some of the sites that have limited data, we use vouchers [usually 500Mb /day] but they’re not paid for ... youth workers [just give the vouchers] to people. But the

¹² This is one of one of 28 communities that CAYLUS support in Central Australia. See: caylus.org.au/computerrooms. The computer room has two computers, iPads and Garageband music equipment for use by young people.

great thing with vouchers I guess, is that they distribute the data more fairly.”
(Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

Starlink may provide an option for addressing the issues of speed and data limits for shared Wi-Fi, however there is currently not a product that allows Wi-Fi sharing. The business grade service costs \$750 a month (plus \$3240 up-front equipment cost), which is not an affordable option for most agencies.

Service Delivery and Use of Online Services

Challenges with use of banking and other online services

Norman Hagan outlined the challenges that people have in trying to use online banking:

- + “Most of them do know how to log in, log off ... but the big problem is ... logging into banks or to order a new card or to open internet banking ... things that make it hard for people. A lot of them don’t have ID card, licensing or birth certificates ... [or] an email address or phone number, mobile number and we don’t have a mobile internet coverage here in the community, still waiting. That’s when the bank sends you a code number to your phone to log into your internet banking, but it doesn’t work that way. ... We have to ring up the bank. But the best way is to do a 300 kilometre drive or three hour drive to the Alice Springs main branch and sort that out.” (Norman Hagan, Support Administration Officer, CDRC 2022)

Due to lack of Internet connectivity, Yapa rely primarily on phone-based services. However, there are often lengthy delays in getting to speak to someone, with messages directing people to use online services:

- + “When you look at the wait times on a normal telephone call, really it’s a strategy to push people away from person-to-person service. For those people who don’t have internet access, where there is no mobile 4G and where very, very few homes have an internet physical landline connection, like Yuelamu, it’s really only the government agencies that are able to afford [Internet access].” (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, Coordinator, Yuendumu Child and Family Centre, 2022)

There are also assumptions about people’s access to identification records:

- + “[So] 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, that you can be on the phone while doing all that and that you have a service provider or a business hub in your community to allow 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)

These issues were exacerbated during COVID-19 restrictions:

- + “Recently we had a family [with] six children and two adults in quarantine and I was trying to get a Centrelink crisis payment, using my mobile phone [because the person’s key card had been stopped. The bank were] asking for all this information that that person wasn’t able to provide. ... And in their house, they had no mobile phone ... no ability to do any banking ... they were very isolated. ... In an Aboriginal community, they don’t have the same resources, they don’t have the same skills to do it. They’re quite able to learn it but no one is investing the time for them to do that.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Impact of COVID-19 on service delivery

There were COVID-19 entry restrictions in Central Australian communities from mid 2020 to early 2022, reducing access by service providers to deliver programs and services. During a hard lockdown from late 2021, the Yuelamu CDRC office continued to provide basic services in Yuelamu, including the Wi-Fi service to enable residents to access online services. However, there was limited health and police visits, and the weekly Bush Bus was mainly used for delivering mail not passengers.

A representative from Yuendumu School reported that the School struggles with low connectivity speeds and lack of computers and limited IT support. This has been a particular challenge with NAPLAN tests moving to online delivery:

- + “It’s been really challenging because we don’t have an IT technician. We don’t really have any computers that are functioning at this point in time. So we’ve just had teachers trying to figure it out without any support.” (Steffani Kuhn, Literacy leader, Yuendumu School 2022)

The closure of schools during COVID-19 lockdowns, and the shift to home-based online learning had a detrimental impact on education outcomes for most children, where the lack of home Internet and devices limited access to online lessons and meetings.

In the neighbouring town of Yuendumu, the school was closed for the first seven weeks of 2022 during the COVID-19 outbreak, with a shift to home schooling:

- + “So we delivered out paperwork to the students to do because, again, we don’t have access to computers and a lot of the families don’t have access to the internet or power [relies on power cards]. So that [online learning] wouldn’t have been an option anyway.” (Steffani Kuhn, Literacy leader, Yuendumu School 2022)

Most agencies reported increased use of videoconferencing for telehealth, online meetings and training during COVID-19 restrictions, but unreliable communications made this challenging.

- + “That was how all of the teachers here were communicating [via Teams during COVID]. And same with professional learning, a lot of it has gone onto webinars ...

which is challenging because we don't have access to it most of the time." (Steffani Kuhn, Literacy leader, Yuendumu School 2022)

While there is a videoconferencing setup in the CDRC meeting room in Yuelamu, community staff report that regional council meetings are generally held over the phone or face to face at the CDRC office in Alice Springs due to connectivity issues with videoconferencing.

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. Clinic staff will come from Yuendumu however the travel policy is to only travel during daylight hours.

There are no home phones and limited WIFI mobile coverage in the community, this impacts on 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).

Access to media and new services

Most households no longer have a working TV service in Yuelamu

The VAST satellite service is no longer working in about 57% of households of those surveyed. This is typically due to failure of set-top boxes (42% of those with VAST not working) or damage to satellite equipment or cabling.

The VAST direct-to-home satellite TV service was installed on all premises in remote communities by the Australian Government in about 2014, replacing local television broadcasting, with the 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 2014 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 them [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, with 41% of survey respondents saying they watch TV via VAST. The preferred services were commercial TV channels (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 ... both [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)

A recent survey of Yuendumu households' lockdown preparedness by Yuendumu Child and Family Centre ¹³ also found that a majority of houses didn't have TVs or working VAST services, leaving households with limited access to free-to-air 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:

- ✦ "[People come] to PAW and say, 'I've got problems with my TV. I can't get the news. I can't watch my favourite shows. Can you come and fix it?' Well, we do as best we can, but we're not technical people ... 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 ... and we don't have the funding to employ someone to do that. We would love to train [local people] up ... where a number of 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)

The most common problem is with the VAST set-top boxes, which are prone to damage by surges in the community electricity grid. These power surges can even impact on 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, General Manager, PAW Media, 2022)

VAST set top boxes were available for \$442 at the Yuelamu store but can be as much as \$600 in Yuendumu and other community stores. They can be purchased online for about \$320. Even when people buy a new set top box, they have an issue in activating the smart card due to not having phone or Internet access at home.

- ✦ "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 then they have to get a TV as well. So those, that combination of trying to get all those ducks to line up, and then problem solve ... how to set a VAST card [online activation on Optus website] ... I mean, I've done it and it's quite difficult unless you're quite skilled

¹³ 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.

... You need a mobile, you need internet ... [to get Optus to activate] the card.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

- + “[Some people] purchase VAST TV boxes from our store here in the community ... They go back and try to watch TV, but it hasn’t been activated and they don’t have internet to activate or register their VAST TV box. ... [they] don’t use an email or have an email or a phone number. ... [So I offer to] do it for them. I use my email and use my number and use their name just to activate it and register their box under their names.” (Norman Hagan, Support Administration Officer, CDRC 2022)

This points to the need for a VAST television upgrade and maintenance program for remote communities and consideration of reinstating local broadcasting capability in communities.

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 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 [8PAW] is always switched on. ... [ABC Radio is] blurry because it’s away from our signal area.” (Norman Hagan, Support Administration Officer, CDRC 2022)

PAW Media General Manager Jeff Bruer outlined the organisation’s history:

- + “PAW, which stands for Pintubi Anmatyerr Warlpiri, the three language groups that we service, Media and Communications, that’s our trading name. Our formal name is the Warlpiri Media Aboriginal Corporation. We’ve been going since 1984, effectively. Our charter is to service and protect the media interests and promote the identity of Warlpiri, Anmatyerr and Pintubi people. We started in TV, strangely, and then migrated into radio. We also work online and in print media to a lesser degree. ... There are 12 [RIBS Communities] within the 8PAW radio network. It’s 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)

PAW Radio provides a full-time radio service to the region including 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 messages, anti-smoking, safe driving.

- + “Then there is the mainstream news service that we don’t generate ourselves ... It’s a 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, with

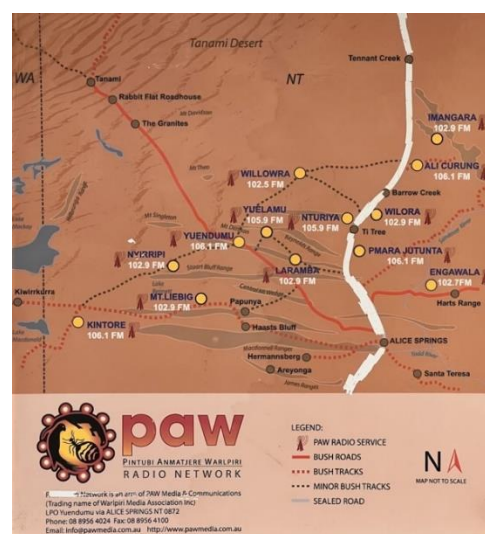


Figure 8: PAW Media supports 12 RIBS communities across the central desert region.

a basic summary. So people listening to radio get their news information through that.” (Jeff Bruer, General Manager, PAW Media, 2022)

PAW Media has a RIBS radio studio in Yuelamu, with RIBS broadcaster Judy Dixon doing occasional shows on the PAW radio network. Judy was away for sorry business at the time of our visit in May 2022.

- + “We broadcast programs from Yuendumu and from some of the other communities, when we have broadcasters there. We’re only occasionally broadcasting from Yuelamu now. ... 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, General Manager, PAW Media, 2022)

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], they sit in their car. 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 acknowledge 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, their phones. Video through news feeds and social media.” (Jeff Bruer, General Manager, PAW Media, 2022)

Local information sources were critical to counter misinformation during the COVID-19 pandemic

Local news and information sources in Yuelamu include:

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

These sources provide relevant information about meetings and events, service provider visits, news and weather or emergency situations. Our survey found that the most popular source of news and information was direct and in person (57% daily), followed by PAW Radio (33% daily), commercial television stations (Channels 7,9,10 – 27%), and community noticeboards (30% daily and 32% weekly). The most common sources of emergency information were PAW Radio (51%), direct and in-person (46%), ABC Radio (43%), Facebook (43%) and ABC TV (35%).



Figure 9: Community noticeboards are a primary means of sharing information.

These results were also typical of other communities such as Yuendumu:

- ✦ “In remote Aboriginal communities, people get the information through word-of-mouth first of all. So the best way to cascade the information down is to have a small hub of people that you tell the same message to and then ask them to spread it to their family groups. ... Around half [of the 40 or 50 households we surveyed] referred to radio as one of the sources of information that they received about the world. ... A lot of people still look at Facebook and also Instagram as their source of information as well. But there is a whole bunch of people who don't use Facebook or Instagram ... and it's pretty much just the radio and word-of-mouth.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Understanding of communicative modes can be important when distributing critical information, such as during COVID-19:

- ✦ “So during COVID ... [we found] word-of-mouth is the fastest way to communicate, not always the most accurate. We were using posters at the shop and people were reading posters at the shop. We were doing regular updates every day [on 8PAW Radio]” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

During the vaccine rollout in 2021, there was a high level of vaccine hesitancy due to misinformation about potential side effects and efficacy. The vaccination rates in Yuelamu and Yuendumu were some of the lowest rates in the NT. Health staff delivered information in person, via flyers and through daily radio messages:

- ✦ “We were getting a lot of misinformation being spread by COVID, especially the religious issues around COVID being the devil ... that did go around here for a while. And then we had public meetings and public conversations and then we did a PAW campaign to ... [convey] accurate information.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

PAW Media played an important role in distributing health information in local languages by trusted local people on 8PAW Radio. PAW Media used its social media channels to counter misinformation spread via social media:

- ✦ “Even before the virus got anywhere near Yuendumu [there were high levels of misinformation] ... about what you could do to prevent the virus, where the virus had come from, why you shouldn't get vaccinated. Stuff that was generally very not helpful ... So we used social media to try and counteract that, because that was the main source of information for people in Yuendumu and most of the communities.” (Jeff Bruer, General Manager, PAW Media, 2022)

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 and jingles in local languages (Warlpiri, Pintubi, Gurindji, Luritja) to share online and on Indigenous Community TV:

- ✦ “Messages really needed to be simplified ... We came up with one idea that was very successful. We stuck a whole lot of matches in some plasticine, and we 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. ... And that [20-second clip] was shared ... not only on official government websites, but also on TikTok, Facebook, Instagram, [ICTV as well] anywhere where we could get some likes, and people to share stuff. ... We had thousands of shares on some of our videos, which was great.” (Jeff Bruer, General Manager, PAW Media, 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, RIMOs do not have the capacity to maintain these services.

- ✦ “[There should be] financial support to ensure that the ABC is able to ... be broadcast in these remote communities. ... Little remote Indigenous media organisations like us [are unable] to service [and upgrade] the equipment ... with no budget. As a result, ABC radio services to most of our communities have failed. ... So those communities now live without the national broadcaster, and ... 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

Affordability of mobile data and devices is a significant concern

At the time of our survey in 2022, there was no 3G or 4G mobile coverage in Yuelamu. Yuelamu was reliant on mobile Wi-Fi connectivity via satellite or the limited mobile services via the CfAT hotspot. The cost of Internet access can be a barrier to usage due to low incomes and high pre-paid data costs. For example, the data cost for the prepaid Activ8me Wi-Fi vouchers were \$20-\$25/GB.

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” (41%). Also 41% 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.

Our survey found that, of the 33 responses on household mobile expenditure, the average household cost was \$160/month with an average of 2.9 mobile phone services per household. 30% of respondents indicated their household paid up to \$100/month, 48% paid \$101 - \$200/month, 15% paid between \$201-\$300/month, and 6% paid over \$300/month. Given the lack of 4G coverage currently in Yuelamu, these costs reflect limited use of mobile services while in other communities or via the CfAT hotspot. These costs are likely to increase significantly once 4G arrives.

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, 96% of Yuelamu residents use pre-paid services for mobile phone use. Pre-paid services enable people to pay what they can afford, rather than commit to a monthly billed service that they may not have the funds available 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 is 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 costs¹⁴. This consumer awareness will 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 if you’re on a \$40 pre-paid, you only get like 12 gigs. So 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*

With a lack of 4G services and increased demand for data, there was a relatively high uptake of NBN Sky Muster satellite services in Yuelamu, with 38% (14 respondents) having a Sky Muster service at home (primarily at 25/5 Mbps). There was an average household cost for fixed broadband was \$73.21 a month. While this is relatively affordable compared with the household mobile data costs which average \$160/month, usually fixed broadband costs are in addition to that expense, not a replacement.

Unfortunately, an attempt in another community to reduce household data costs by installing fixed Sky Muster services on all houses had limited success:

- + “There was one community where the community CEO helped people get [NBN SkyMuster] dishes on every house in the community ... [but] they all fell into disuse very rapidly. Within about three months the modems were keeping puppies warm because no one could afford to pay [the monthly bills] ... that money would come out of one person’s account. So [transfer to billed services have] not been at all successful.” (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

Jennifer McFarland argues that installing free Wi-Fi services is the most sustainable solution to enable 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 [by providing free Wi-Fi] ... 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. ... that’s zero income. 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 a feed for your kids, it’s a bit of a sad situation.”

- *Jennifer McFarland, CAYLUS / DotCom Mob, 2022*

The Yuendumu household survey found that the cost of mobile devices can also be a cost burden to low-income households:

¹⁴ Telstra have contracted CfAT to visit Yuelamu provide awareness training about phone and plan options, with posters promoting a visit on 19th May 2022.

- ✦ “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 one 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)

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 use of 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)

Despite limited Internet and mobile access in Yuelamu, there was a relatively high level of basic IT skills among the people surveyed. 73% of survey respondents regularly or semi-regularly use the Internet, of which most said they were able to send and receive emails (63% said ‘very true’ or ‘mostly true’), find and install apps/software (81%), open a new Internet browser tab (96%) and complete online forms (78%). Of the 73% of regular users, 93% reported using Internet for online banking in the last six months, 78% accessed government services, 67% did online shopping and 59% did online learning or study.

Jennifer McFarland from CAYLUS has found that, despite the challenges, people 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 disabilities, and those who have limited English literacy. In Yuelamu, 92% of people surveyed speak an Aboriginal language at home, with 62% indicating that they understand spoken English very or quite well.



“One of the obstacles to it is not just the lack of infrastructure or bandwidth, it’s the support and expertise that people who’ve grown up without English as a first language, older people particularly, who aren’t digital natives, the challenges they’ll 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 even if you’re a well-educated white fella with English as a first language. So, people need help with that kind of thing. But what we have seen is that people are able to extend the skills that they’ve

developed on Facebook, or TikTok, or those sorts of multimedia skills ... into interacting with those sort of text [applications].” (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

Of the 27% of respondents who never or rarely used the Internet, the most common reasons for not using the internet were not needing to use it (60%), low confidence (50%), and not having access (40%).

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] have online shopping [and banking and other basic] skills ... but it certainly doesn’t prepare them for [using] a computer and the larger programs [used in workplaces] ... like Outlook and calendars and emails and things like that ... 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)

Family and peer support play an important role in in skills development:

- ✦ “Some family members may be able to help them [learn] ... how to open up your phone, or logging out of your phone or searching ... [or] to do banking on the phone [or other things].” (Norman Hagan, Support Administration Officer, CDRC 2022)

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 and digital mentor support

There are two community access computers in the Centrelink office (adjacent to the community office) for community use for Centrelink, MyGov, banking, licensing and vehicle registrations 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.

There are also two computers for use by young people in a computer room at the sport and recreation hall, but these are only available during fixed youth activities periods (Tuesday to Saturday 3.30–8.30pm). The hall is not well insulated and is prone to flooding, making it an unsafe space to use when wet¹⁵.

For those wanting to learn digital skills, there is limited support available, other than at the CDRC / Centrelink office with using government and banking services. Typically skills development comes from having regular access to IT devices and engaging and relevant applications.

Other than the CDRC office, there is no specific space available for IT training delivery or support in the community. However, in other communities in the region, the Centrelink office does not often have the capacity to provide this type of support:

¹⁵ Email correspondence Jennifer McFarland, CAYLUS 17/11/22. Jennifer also raised the need for supervision and support of computer use, which is difficult for youth workers who also supervise sports and other youth activities.

- ✦ “The places where you would think you could go for that sort of help, say to your Centrelink, they’re increasingly being underfunded, outsourced, and not staffed in communities. And the Centrelink staff charter of responsibility doesn’t include helping people with non-MyGov services. And ... because often the staff are so overwhelmed ... servicing large communities with myriad problems, they have no time to help out with anything else, even if they wanted to.” (Jeff Bruer, General Manager, PAW Media, 2022)

People also need support in managing privacy of passwords and account details:

- ✦ “It may be as simple as ... ‘Here’s a safe place to keep your password’. Many people have great difficulties in protecting personal information. They live in shared houses ... [with] shared devices, possessions ... information’s shared. So someone’s suddenly using your account, used up all of your data, kids have been streaming movies, and bingo, you need to re-activate your phone or something, or check up on why your Centrelink payment hasn’t come through. You can’t get online because all the data’s been chewed up.” (Jeff Bruer, General Manager, PAW Media, 2022)

In nearby Yuendumu, there have previously been Internet access and training facilities publicly available, including the Warlpiri Youth Development Aboriginal Corporation (WYDAC) learning centre, which has been closed since November 2021 but was planning to re-open again in 2022:

- ✦ “Formerly the [WYDAC] Learning Centre was the one that had community computers available ... I think they were doing it like as a mentoring, so if someone had a problem, they’d help them problem solve and show them how to do it. It was more that one-on-one ... [approach to] capacity building.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)
- ✦ “Batchelor run similar learning centres in some of the larger communities over the Tanami area. And that’s where people traditionally go for help to log on, those learning centres have reasonable internet access, mostly. There’s often a coordinator there who’s skilled enough to be able to show people how it’s done.” (Jeff Bruer, General Manager, PAW Media, 2022)

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

- ✦ “[inDigiMOB] was an incredibly valuable and [useful project for community [using] digital mentors, Warlpiri people and others, to learn the basic skills and be able to pass them on, and to be able to help their families and friends. That was great. The ability to be able to come somewhere and find someone who you knew and trusted wasn’t going to steal your password, to help get you online and show you the ropes with solving those problems. That’s what inDigiMOB was set up [for] ... It ran for 4 years, or perhaps 5. It was a tremendous initiative.” (Jeff Bruer, General Manager, PAW Media, 2022)

However, with the inDigiMOB contract concluded and WYDAC learning centre in Yuendumu yet to re-open, there was community 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 re-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 ... My experience is that all the service providers on an

individual level will 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 ... who can support people in that way.” (Jeff Bruer, General Manager, PAW Media, 2022)

Agencies also support IT needs of Yapa employees:

- + “If you’re setting up a staff member as an employee, you help them [get] a Working with Children card ... set up a bank account ... access their birth certificate or something like that.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

Yuendumu Child and Family Centre argued that remote communities should have free public WIFI available to enable people to access online services rather than paying through their own mobile data plans. They also called for reinstatement of community access facilities or learning centres:

- + “Communities like ours, if they’re gonna move towards being independent, people 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 which is what’s being asked.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

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

- + “[People with digital skills] will peer mentor, but at the moment, we don’t have enough people in the community with the skills and knowledge and access to available resources like computer and Wi-Fi. ... And then the people will be able to start to do it themselves and become more independent in doing it themselves down the track.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

While Yuelamu is providing some digital mentor support at the Centrelink, a funded position in each community in the region would help to relieve the demand on local agencies and enable them to focus on core business.

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 a big platform ... because you can communicate with your network. With the younger ones, probably TikTok is the current craze. ... Young fellas really like Garage Band, because they all want to be rock stars, and being able to stream community football. ... Anything multimedia is really engaging, and it’s easier for the older people too ... visual data is where they get their info.” (Jennifer McFarland, CAYLUS / DotCom Mob, 2022)

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

- + “[We use] stuff that’s accessible offline where we can. For instance ... we gave a whole bunch of 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, CAYLUS / DotCom Mob, 2022)

PAW Media 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, 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 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 the potential for social media to impact of community cohesion once 4G arrives, based on the experience of other communities in the region.

- + "There'll be a big problem especially with Facebooking and TikToking. Probably kids not attending school, probably playing games all night on the phone. Yeah, so it will be a bit of a mess up in the community. ... [Facebook is] going to cause jealousy, fights, people swearing at one another, texting. So I reckon maybe stay off Facebook and try to do other things instead of doing Facebooking. Maybe look for news or what's around the world. ... Maybe look at [local archive content on PAW 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)

Based on the experience of mobile being introduced recently in Laramba, CDRC staff at Yuelamu anticipated initial issues from Facebook use but felt it would settle down after a few months. However, the 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.

With an increase in scam calls, texts and online messages becoming more commonplace, there is generally a need for more cyber-safety awareness and resources to inform people how to discern and avoid them.

Negative experiences from social media in Yuendumu

The 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. No good ... hurting families. Breaking families away too.” (Francis Jupurrurla Kelly, media pioneer/ former CLC Chairperson, 2022)
- + “We know that 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, but [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 the person’s friends, as well as someone from Nigeria scamming people for money on Facebook.

- + “So it’s sort of 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 ... I think people are starting to understand scams, especially the texting scams ... But before that, people were exposed to that.” (Fiona Jolley, Coordinator, Yuendumu Child and Family Centre, 2022)

There are also reports of financial fraud occurring within families:

- + “We’re definitely finding that young people are really cottoning on to the information technology really smart and they are, there’s 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 in music production and a studio facility for recording local bands. PAW Media are seeking to locate a staff member to Yuelamu to support music development and radio but there is currently no accommodation available or funding to build staff housing.

PAW Media have been looking for a space to run projects including music development. A music studio has been established on the school grounds, with GMAAAC funding to redevelop an old classroom, however this has limited access and no after-hours access.

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 has also produced television series, including the Bush Mechanics series, and major documentaries, including the 2016 documentary production Coniston, made with the Yuelamu community about the 1928 Coniston massacre, co-produced with Rebel Films. (Jeff Bruer, General Manager, PAW Media, 2022)

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 in 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)

Audio-visual archiving and community access

PAW Media has an extensive archive of audio-visual recordings dating back to the 1980s including photos, community records, video and audio recordings at its hub in Yuendumu. 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. The community want their collection kept on country under local cultural control.

PAW Media is keen to provide online access to the archive collection, however online systems are costly:

- + “There are solutions ... one of them is uploading compressed versions of our video collection to the cloud, or to a server like Vimeo or YouTube, that people can log into and watch things. But you’ve got to [digitise the old videos and compress into] ... small files that can be easily shared, 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. We have at least half of it already digitised. ... [If we had a fibre connection] we could share those files far more easily.” (Jeff Bruer, General Manager, PAW Media, 2022)

Dennis Charles now works as an Archive Officer at First Nations Media Australia. He described 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. Some were from PY Media back in the eighties or nineties ... 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 come 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)

5. REGIONAL CASE STUDIES

Case Study 1: Challenges for NDIS disability service delivery in sites without mobile coverage

In a stakeholder discussion held in Yuendumu, Allied health worker Laura Ferrie described the challenges for National Disability Insurance Scheme (NDIS) providers in delivering disability services to clients living in small communities or homelands without mobile or home phone services:

- ✦ “A huge barrier ... is being able to contact [NDIS participants] to sign service agreements, to make sure they’re happy for us to provide a service. ... [And] we need to guarantee that we have a certain number of participants within a community before our company can financially justify a trip. ... Because [NDIS is] fee for service ... you can only charge ... participants that you’ve physically seen. So if you rock up and five out of six people aren’t there, you can only charge for one person. And either they get lumped with the entire cost of your chartered flight out to that community or the company has to cop that [expense].” (Laura Ferrie, Speech pathologist, NDIS Allied health service provider, 2022)

This may limit access to disability services for people living in small communities like Yuelamu, or homelands, without mobile coverage:

- ✦ “[That means] we can’t service Yuelamu if we aren’t certain that the participant we want to see is there. ... [Otherwise] you’re just waiting and hoping that they come into Alice Springs to be seen.” (Donna Akbari, Speech pathologist, NDIS Allied health service provider, 2022)
- ✦ “If people aren’t contactable, the trip ... will get cancelled ... It definitely impacts our ability to provide service to people in communities. And with NDIS’s focus being on choice and control I think it definitely limits people with disability in communities, their ability to access the services that they want.” (Laura Ferrie, Speech pathologist, NDIS Allied health service provider, 2022)

Without direct communications, NDIS providers often rely on a local contact person to communicate with clients. However, with NDIS being a fully privatised sector, local clinic staff can be reluctant to drop their busy work to find people and search health records to provide to NDIS operators:

- ✦ “[It can be] challenging to communicate with clinics and counsellors and things because we’re private ... some clinics [will] help because it’s [in] the participant’s best interest. And others are really [reluctant] ... [With] so many private providers now [asking for] medical records ... they’re like ‘we’re trying to do our job, we’re trying to handle the day to day space’. So it’s just another complexity with the NDIS being a completely privatised sector.” (Laura Ferrie, Speech pathologist, NDIS Allied health service provider, 2022)

In Yuelamu the clinic is only staffed one day a week through outreach from Yuendumu clinic. This puts pressure on the community office staff to contact people.

Donna Akbari, who is also a speech pathologist and allied health service remote team leader, reinforced the need of effective communications:

- + “If everyone in community did have phone service and was contactable ... services to communities would be so much smoother and much more reliable and regular.” (Donna Akbari, Speech pathologist, NDIS Allied health service provider, 2022)

Digital literacy can also be a barrier. As many clients are elderly and may have limited English literacy, there can be language barriers to communications, requiring family members to translate complex information. Also, consent forms must be signed before a visit can be arranged:

- + “Some of our consent forms ... can be signed on a phone. Otherwise [we rely on a] support coordinator going out there and getting them physically signed and sent to us. And our very last option is for us to get them signed when we’re in communities. ... [But] if we can’t find the participant, we have the travel billing issue again.” (Donna Akbari, Speech pathologist, NDIS Allied health service provider, 2022)

Telehealth delivery of NDIS services is also challenging due to the impost on local clinics to assist with setting up a videoconference and bringing the client into the clinic. Limited connectivity and technical constraints can also be an issue, as reliable image quality is needed for a telehealth consultation:

- + “it needs to stream without a lag ... [or] people just log off ... especially if it’s a kid ... speech sessions would be actually impossible ... with a lot of people who are non-verbal and need alternative access to communication ... [I may need to] access their device remotely and edit their page settings and stuff. ... it just means the service in community is expensive because we need to do more stuff there.” (Donna Akbari, Speech pathologist, NDIS Allied health service provider, 2022)

This can require work-arounds to undertake a telehealth consultation:

- + “I have been the therapist on the ground and I have telehealth-ed in another therapist through a [Wi-Fi] hotspot. So the quality is average at best but in those communities that’s the best option ... you’ve just got to go with what you’ve got.” (Donna Akbari, Speech pathologist, NDIS Allied health service provider, 2022)

NDIS can provide funding for iPads or devices for clients to use for the purposes of telehealth, but the client needs to have Wi-Fi connectivity to use it, as well as a level of digital literacy:

- + “If the participants have never logged into a Zoom call before, you kind of need someone to [help them, with an email address to send the link] ... open it and get it set up so that you can then have the session ... There’s so many things you have to line up to have a successful telehealth session in community.” (Laura Ferrie, Speech pathologist, NDIS Allied health service provider, 2022)

A potential consequence of the challenges in providing support for people living with disabilities in remote communities is that some people may need to move into a regional town to have access services:

- + “The sad reality ... is people with complex disability end up having to live away from family. Because the service can’t be delivered and the clinics [say we can’t] handle this ... And so then the decision has to be made with Territory families, they’re not safe to live at home. ... [And there’s] social issues that come with that, which I think is a shame, that that’s the decision that has to be made because there’s a lack of service.” (Sarah O’Loughlin, Occupational therapist, NDIS Allied health service provider, 2022)

Case Study 2: Reliable connectivity critical for a regional radio network

PAW Media's regional radio network requires a reliable IP connection between each of its 12 RIBS facilities and the hub at Yuendumu to enable live broadcasting over the network. PAW Media General Manager Jeff Bruer described connectivity as a constant challenge, particularly in Yuelamu which is connected via a POTS¹⁶ phone connection over the copper network:

- ✦ "Sometimes the speeds on the copper network are so slow ... it's close to failure some of the time, which affects our broadcasts [which] are carried over telephone lines ... Telstra seems to be withdrawing its technical support for the copper network." (Jeff Bruer, General Manager, PAW Media, 2022)

PAW Media are migrating to using Sky Muster for connectivity in RIBS facilities for broadcasting and remote monitoring of the broadcast equipment. Jeff said that, while Sky Muster services are an improvement, it can also have issues:

- ✦ "It does allow us to implement remote monitoring more easily than through the copper network [but] it adds another level of potential failure. It only takes the power to go down of one of our remote sites and ... because it's not booting up properly you can't log into its IP address ... If we had sufficient budget and time, we'd be able to roll out fully automated ... backup power supplies, so if we did have a power failure ... they'll stay on as long as the emergency power supply lasts." (Jeff Bruer, as above)

PAW Media have found the satellite service to be more reliable than 4G connectivity in most communities:

- ✦ "The satellite data is definitely preferable to anything terrestrial. But we don't have enough [data]... We're broadcasting 24/7 [which] chews up a lot of data ... The cost is less on Sky Muster for doing what we need to do. So while 4G's really crucial for [phone] communications ... it's not our main go-to solution for our program radio sharing and networking needs." (Jeff Bruer, as above)

The remote monitoring system that PAW Media has installed in several RIBS sites has improved the reliability of the radio services in these communities:

- ✦ "The importance of remote monitoring is that it saves us having to send a technician hundreds of kilometres to troubleshoot what is sometimes a very simple problem. With remote monitoring, you can log into your devices on the internet, reset them, investigate [the problem], reboot the thing, troubleshoot it technically, update the firmware, all those sorts of things, which saves enormous expense, huge time. Some of our communities, you'd be travelling for at least a day to reach them. Then you've got to fix the problem ... you're looking 3-4 days sometimes out of a worker's week ... [to fix a] minor thing that you could potentially solve remotely. So it's a huge time saver, an enormous cost saver. We would love more of it. ... Sometimes with the more remote communities something can fail, we will be weeks if not months getting out there. It's not just the difficulty with time and cost. If you have flooding, for example, it can cut off a community for a long time. [With remote monitoring] we can service those communities much better." (Jeff Bruer, as above)

PAW Media have struggled with phone and ADSL connectivity at its hub in Yuendumu for many years:

- ✦ "ADSL never seems to reach the speeds that Telstra said it would, and terribly unreliable, and terrible service times ... waiting months for a technician to diagnose a

¹⁶ POTS (Plain Old Telephone Service) is provided via the Higher Capacity Radio Concentrator microwave backhaul at maximum speed of 19.2kbps.

simple problem. At PAW, our ... entire phone system has been out of action since before Christmas. Periodically we can get it up and running, then it will fail again. ... We pay \$50,000 a year to Telstra ... [so they] surely could do better than that.” (Jeff Bruer, as above)

Jeff described challenges in getting technical support when needed:

- + “We’re on the phone several times a week to [Telstra]. ... [when we] try and get through to somebody, you end up talking to an offshore person who goes, ‘Oh, we’ll just send someone out.’ You go, ‘Do you know where we are?’ ‘Oh, you’re in Alice Springs.’ ‘No, no, we’re not. We’re 300km from Alice Springs.’ ‘Oh.’ You know. They don’t understand what problems that creates.” (Jeff Bruer, as above)

PAW Media reported that the 2021 upgrade to the Telstra fibre backbone from Alice Springs to Yuendumu has improved the speed of the 4G services and reduced congestion. Since our visit, PAW Media have discontinued their ADSL service due to its unreliability, with all connectivity now via 4G and Sky Muster. PAW Media also installed a Starlink service in October 2022, which they described as stable and faster than Sky Muster with noticeably less latency. PAW Media is planning to install a fibre link to its Yuendumu hub in early 2023 to meet its need for increasing broadband capacity. They see huge potential in having reliable high-speed connectivity:

- + “There’s a whole raft of things that we could offer the community, and Australia generally, if we had good fibre. Video sharing, from our archival collection, is a major thing. Production work where we can share large files ... when you’re trying to produce something ... to go on broadcast television, you can’t do that easily. When our network was running, even at our main office at Yuendumu, it would take up to an hour to transfer 1GB of information ... Most video files are many gigabytes in size, so you would be doing a 20-hour upload and the service would drop out for a few seconds ... and you’d have to go back and start again. ... [So we can’t] upload any file larger than 1GB because of this failure. It would never go.” (Jeff Bruer, as above)

PAW Media has two Yapa staff doing journalism training and providing local news stories to ICTV. However, this is a challenge due the poor connectivity at the Yuendumu hub:

- + “It’s harder for us to provide the support and training that people need ... It requires online connectivity. ... Everyone at our offices [currently] has to hotspot off their mobile phone to get any internet connection for email, for anything. So we can’t provide streaming services or even Zoom meetings or Teams.” (Jeff Bruer, as above)

Ironically, Warlpiri Media was involved in innovative projects in the 1980s to establish the Tanami network to connect communities throughout the region with satellite video conferencing equipment.

- + “That’s the great irony. We pioneered that technology back in the days of ISDN phone lines, basically, with other capital cities, and internationally, with Canada and Inuit mob. It was a ground-breaking enterprise for a remote Indigenous community to be hosting ... videoconferencing. From a remote community that was Warlpiri-run, Warlpiri-managed, the Tanami network was a fantastically forward-thinking, pioneering thing. Now it’s commonplace for people to hook up through a Zoom meeting, but we can’t do that!” (Jeff Bruer, as above)



Figure 10. The huge old Tanami Network satellite dish is one of array of satellite dishes behind the PAW Media studios in Yuendumu

6. CONSIDERATIONS FOR LOCAL DIGITAL INCLUSION PLAN

Developing a local Digital Inclusion Plan would enable a coordinated whole-of-community approach to address some of the challenges outlined in this report. It would also provide a useful tool for advocacy to government, industry, and fundraising efforts.

Strategies proposed during community and agency consultations are outlined below to assist community stakeholders in planning efforts to improve communications services and digital inclusion in Yuelamu. These are not intended to be prescriptive, nor are they listed in order of priority.

| Identified Issue | Possible Actions | Potential Stakeholders |
|--|--|--|
| Access | | |
| Ongoing need for Wi-Fi access beyond 4G installation | <p>Continue provision of free Wi-Fi and computer services at Centrelink office to ensure affordable access to online services beyond installation of 4G small cell service.</p> <p>Review Wi-Fi access arrangements at sport and recreation hall, including voucher use.</p> <p>Ask Activ8me to review the Wi-Fi voucher rates to be more affordable, or seek an alternative service.</p> <p>For all services provide clearly visible information, with visuals, of how to connect to Wi-Fi services and Internet service provider contact details and instructions for maintenance needs.</p> | Central Desert Regional Council (CDRC), Department of Human Services (DHS)/ Centrelink, CAYLUS/ DotCom Mob |
| Demand for online computers (beyond those in Centrelink and youth computer room) for community access, virtual meetings/ training, digital skills development and creative and cultural use. | <p>Review use of existing community access facilities/computers (Centrelink, sport and rec hall) to identify access times, usage, and unmet demand, especially by elders, students/ trainees and creative/ cultural producers.</p> <p>Identify appropriate space/s for community access computers and IT equipment (printer, scanner, videoconferencing equipment etc.) to address diverse needs.</p> <p>PAW Media could set up training studio for music and digital media production, and Yuelamu-based trainer/producer if staff housing available.</p> | CDRC, Central Land Council (CLC), GMAAAC, WYDAC, PAW Media, CAYLUS/ DotCom Mob, inDigiMOB |
| Need fast, low latency broadband for community office and meeting room. | Consider trial of Starlink satellite service for CDRC office, Centrelink and meeting room for video-conferencing; also for Sport and Recreation Hall for shared Wi-Fi. | CDRC, DHS/ Centrelink, Northern Territory Government |

| Identified Issue | Possible Actions | Potential Stakeholders |
|--|---|---|
| Affordability | | |
| Primary use of pre-paid for data (high data cost), including for household use; limited awareness of changes to mobile pre-paid and post-paid plan options or satellite service options. | Provide easy-to-read materials in store (posters, brochures) and radio messages outlining options for more affordable mobile and data services via Telstra, Optus and NBN fixed line retail service providers | Telstra, CfAT, Optus, NBN retail service providers, PAW Media |
| Digital Ability | | |
| Mentor support for use of government and online services when needed (currently support provided by CDRC but unfunded). | Employment of a digital mentor, possibly based at Centrelink office, to support people to use government, banking and online services and apps, phone SIM activation/recharge, ID requirements etc. | DHS / Centrelink, CDRC |
| Demand for workforce readiness IT skills. | Incorporate digital skills training into workforce readiness training and on-the-job training by local agencies as needed | CDRC, DHS / Centrelink, Charles Darwin University, Batchelor Institute, employer agencies |
| Concerns around cyber-safety issues increasing once 4G arrives, especially scams, cyber-bullying and misinformation on social media. | Run culturally informed and targeted cyber-safety awareness campaign (including on radio and social media, in schools, and for elders). | CDRC, GMAAAC, WYDAC, PAW Media, CAYLUS/ DotCom Mob, inDigiMOB, Office of eSafety |
| Media Services and Production | | |
| VAST direct-to-home satellite TV services not working in about 57% of homes; high cost for households to repair equipment and replace set-top boxes. | Advocate for funding to upgrade or install VAST satellite services in all residences, replace VAST set-top boxes in homes where not working, and provide shelf unit and power surge protectors for all set-top boxes. Consider cost-benefit of switching to local broadcast of TV services (16 Freeview channels plus ICTV) in Yuelamu, Yuendumu and other larger communities in Central Desert region, to improve reliability and reduce ongoing maintenance costs. | CAAMA, 8CCC, Barkly Regional Arts |
| 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) | Julalikari A.C., Barkly Regional Arts, Nyinkka Nyunyu Art and Culture Centre, Papulu Apparr-Kari Language and Cultural Centre, CAAMA, ICTV, NITV, inDigiMOB |

Appendix 1: Summary of Survey results

The following results are based on the initial analysis of surveys with 37 residents, of which 93% identified as Aboriginal. As outlined in the Executive Summary the final results, after data cleaning and weighing against ABS statistics, may differ from these results. These authoritative results will be available via the Australian Digital Inclusion Index website and data dashboards in mid 2023.

Demographics

- + **Gender:** 57% of respondents were female and 43% male.
- + **Identity:** 97% of respondents identified as Aboriginal, with one non-Indigenous.
- + **Education:** 30% have completed up to year 12, 3% had completed a Certificate course, and 54% attained year 10 or lower.
- + **Employment:** 27% of respondents were employed full-time, 27% were unemployed, and 14% were doing home duties. 27% had been looking for work in the last month.
- + **Welfare:** 86% received some form of government pension or benefit, primarily Family Tax Benefit Part A or Part b, JobSeeker/ Youth Allowance, and Parenting Payment (Single or Partnered).
- + **Housing:** 78% live in multi-generational or shared households, with an average of 5.4 people per house. 62% of respondents said they pay rent to the public housing authority, with 27% boarding or living at home.
- + **Health:** 14% (five people) had a long-term disability or health condition.
- + **Language:** 92% indicated they spoke a language other than English at home. 86% speak Anmatyerre / Anmatyerr, 46% speak Warlpiri, with four other Aboriginal and/or Torres Strait Islander languages being spoken. While most respondents indicated they understand written English (67%) and spoken English (62%) very or quite well, 14 respondents (38%) said they only understand a few words of spoken English and five people (14%) did not understand written English at all.
- + **Income:** The average weekly household income was about \$1020. 18% of respondents' household income was between \$400 to \$800 per week, 39% between \$800 to \$900 per week, and 27% between \$1000-2000 per week.



57%

female respondents



97%

Torres Strait Islander or Aboriginal and Torres Strait Islander



27%

Employed full-time



76%

Own or share a mobile phone



\$160

Average monthly household expenditure



37%

Listen to local radio service PAW



57%

Get news and information direct and in person daily



51%

Get emergency information direct and in person

Phone use

- + **Phone Use:** 23 of 37 respondents (62%) regularly used a mobile phone for phone calls, 49% used the public phone, 35% use the phone at a community office or workplace, and had no phone access.
- + **Public Phone:** 54% said the public phone was sometimes reliable and 35% said that it was reliable.
- + **Phone ownership:** 76% of respondents said they owned a mobile phone (5% of these shared with others). Of those with phones, 27 out of 28 (96%) had smartphones as their main mobile phone, and 27 out of 28 (96%) used pre-paid services. There is an average of 2.9 mobile phone services per household.
- + **Data use:** Of the 28 responses on data use, the average monthly data allowances were: 15 (54%) used between 1-10GB/month, three (11%) used 11-20GB/month, eight (29%) used 21-60GB/month, and two (7%) reported using no data. However, 61% reported exceeding their data limit up to five times over the past year, and 18% (5 people) reported exceeding their limit every month, suggesting that data use is higher.
- + **Household Expenditure:** Of the 33 responses on household mobile expenditure, the total expenditure was \$5260/month, an average household cost of \$160/month. 10 (30%) respondents indicated their household paid up to \$100/month, 16 (48%) paid \$101 - \$200/month, five (15%) paid between \$201-\$300/month, and two (6%) paid over \$300/month.

Media use

- + **Radio Listening:** The most popular radio stations were local, with 43% listening to the First Nations radio service PAW radio daily or weekly. 19% listen ABC radio daily or weekly.
- + **Radio Access** (multi-choice question): The most common way to listen to radio was through the car radio (95%), with 24% listening on a radio at home.
- + **TV Access** (multi-choice question): 41% of respondents reported watching TV via VAST satellite, 32% reported using streamed services on their phones, 16% only watch TV at places other than home and 16% only watch DVDs. 19% reported never watching TV.
- + **VAST TV Access:** VAST satellite TV is the only means of access to free TV services in Yuelamu. 43% of respondents reported having VAST satellite TV working, with 57% saying that VAST TV was not working or their house did not have VAST equipment. Of those that reported the VAST not working, 42% said it was because the set-top box was not working, 36% due to the TV not working, and 26% did not know.
- + **TV and Online Content:** Commercial television stations (7,9,10) were most popular (38% watch daily, 51% weekly), followed by YouTube (30% daily, 41% weekly), NITV (24% daily, 43% weekly), ICTV (24% daily, 41% weekly) and ABC TV (22% daily, 46% weekly).
- + **News and Information Services:** The most popular source of news and information was direct and in person (57% daily), followed by PAW Radio (33% daily), commercial television stations (Channels 7,9,10 – 27%), and community noticeboards (30% daily and 32% weekly).
- + **Emergency Information:** The most common sources of emergency information were PAW Radio (51%), direct and in-person (46%), ABC Radio (43%), Facebook (43%) and ABC TV (35%).

Internet use

- + **Latest Internet Use:** 62% of respondents had used the Internet in the last week, with an additional four people (11%) having used it within the previous three months, 5% more than six months ago and 22% having never used the Internet.
- + **Regular Internet Users:** Of the 73% who had used the Internet within the last three months:
 - o 26% said they used the Internet almost constantly, another 26% several times a day, 15% once a day, and the other 33% using it at least once a week.
 - o The most common online device used is the smartphone (100%), with some people using a desktop computer (26%), tablet (19%), and smart TV (19%).
 - o Some people use Internet provided by others, with 41% reporting using the Internet at the house of friends or family, 41% using in a public space with free Wi-Fi, and 19% at a community or Shire office.
 - o The main reasons people gave for not using the Internet more often were 'The Internet is too expensive for me' (41%) and 'I do not have convenient access to the Internet' (30%), followed by 'I do not need to use the Internet more often' (22%) and 'I am concerned about privacy or scams' (22%).
 - o 44% of respondents said they were not concerned about the time they spent online, with 37% slightly concerned about how it affected their wellbeing and relationships, and 15% extremely to moderately concerned.
- + **Low Internet Users:** The 10 people who never or rarely used the Internet cited not needing to use it (60%), low confidence (50%), and not having access (40%) as their main reasons for not using the Internet. Only one respondent had considered using the Internet since social and physical distancing restriction introductions were introduced due to COVID.
- + **Impact of COVID-19 on Use:** Proof of vaccination requirements (57% slight to significant increase), public health messaging / COVID-19 updates (38%), and lockdowns (38%) were cited as the main reasons for increased Internet use during COVID-19 restrictions.
- + **Fixed Broadband Services:** The majority of respondents (62%, 23 of 37) do not have any form of fixed home Internet, with 14 respondents (38%) having an NBN Sky Muster service at home. Of the 14 respondents with fixed broadband, seven said they used less than 50GB data per month, five had between 50 and 200GB per month



62%

Of survey respondents used the Internet in the past week



22%

Never use the Internet



41%

Of regular users gave the reason "The Internet is too expensive" for not using the Internet more



46%

Of regular users gave the reason 'I do not have convenient access to the Internet'



62%

Of households do not have any form of fixed home Internet



63%

Can send and receive emails



93%

Use online banking

and two used above 500GB, with 62% exceeding their limit at least once over the last year. The average cost was \$73.21 a month.

- + **Affordability of Internet:** 27% of respondents said that they sometimes or often have had to cut back on essential household costs in order to afford personal or household Internet within the past six months, with 24% compromising on speed and/or quality on their connection to prioritise affordability.

Digital Ability

- + **Overall Digital Ability:** Digital literacy is at a relatively high level in the community.
- + **Regular Internet Users:** Of the 73% of respondents (27 out of 37) who regularly or semi-regularly use the Internet:
 - o Most people reported being able to send and receive emails (63% said 'very true' or 'mostly true'), find and install apps/software (81%), open a new Internet browser tab (96%), connect to a Wi-Fi network (93%), download and then open a file (93%), use a mobile phone or device as a Wi-Fi hotspot (89%), and complete online forms (78%).
 - o For online security and cyber-safety awareness, most people know how to set and manage secure passwords (93%), identify which apps/software are safe to download (74%), adjust privacy settings (85%), check if information is trustworthy (67%), add or remove friends or followers on social media (67%) and manage and decide what personal information to share online (63%), though there was lower confidence in managing how personal information was collected (41%)
 - o There is lower confidence in content creation – though people are confident in posting videos (63%), only 44% are able to produce online content and 22% know how to create a website. There is low awareness of online copyright law (41%).
 - o Most people know how to connect smart devices (e.g. smart TV) to the Internet (63%) and adjust privacy and security settings (59%).
 - o The main online activities include online banking (93%), accessing government services (78%) online shopping (67%), online learning or study (59%), comparing prices (56%) and job searching (56%).
 - o Social media is popular for keeping in touch with family or friends (85%), engaging with community (70%), and meeting new friends or reconnecting with old friends online (70%).
 - o 78% of respondents had used online entertainment services in the past six months (e.g. streaming video/music, playing online games) and 48% had attended a music, arts, or cultural event online.
 - o In the past 6 months, 44% had navigated a route via maps on a smartphone.

Comments

- + I'm looking forward to mobile coming, easier to contact family then.
- + We need better council services for Yuelamu. Looking forward to mobile
- + We need service
- + We're waiting for the mobile. We need it.
- + We need Telstra service
- + We need mobile coverage and free Wi-Fi to access online services. We need to understand more about online systems.
- + Waiting for mobile for Yuelamu. Need more community access computers.
- + Reliable phone box - mobile service in town
- + We need Telstra service
- + We need coverage in Yuelamu
- + Need a mobile coverage in Yuelamu
- + Mobile service needed
- + We need Mobile service
- + Mobile service needed
- + We need coverage here in Yuelamu
- + We need Telstra service
- + We need mobile coverage in Yuelamu
- + We need mobile in Yuelamu and free Wi-Fi.
- + We need Telstra service
- + We need Telstra service
- + Need a coverage at Yuelamu
- + We need the Telstra service



I go to Yuendumu to use phone or Alice Springs, but no mobile in Yuelamu. Tilmouth Well has mobile. Can get a signal on the CAT HotSpot to get mobile near office - have to wait a few minutes to get signal (Survey Comment)



I come from Mt Liebig which has had mobile coverage since 2019. Yuelamu needs mobile coverage. I can't use my mobile here, only in the CAT HotSpot or with Activ8me Wi-Fi (Survey Comment)



I have to go to Alice Springs for government services, appointments etc. We should have mobile coverage in Yuelamu, but will be more trouble then. Lot of people start swearing on Facebook. (Survey comment)

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 | 43km east of Yuendumu; 277km north-west of Alice Springs |
| Remoteness (ABS) | 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 |
| ATSI population | 142 (95.3%) |
| Gender breakdown | 53.3% male/ 46.7% female |
| Median Age (ATSI) | 26 |
| Families | 37 families (34 ATSI families) |
| Language group- number 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 - % of people reached | 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, number of households | 45 private dwellings |
| Housing suitability- average people/ ATSI household | 4.8; 1.7 people per bedroom |
| Median Weekly ATSI household income | \$833 (\$866 whole population) |
| Median Weekly personal income - over 15 years | \$254 |
| 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; Yuelamu 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 in households- monthly expenditure | Yes - approx \$10/day |
| Basics card site? | About 50/50 of pay goes into BasicsCard |
| Types of Communications Available | |
| Public phones- number/ location | 3 - opposite CDRC office, 2 on other side (not working) |
| Home phones- number | Unknown |
| Mobile coverage | No, only CAT hotspot near store (picks up 4G signal from Yuendumu) |
| Coverage description | N/A |
| ADSL- number of connections | Unknown |
| Business grade services - number of connections | Mostly satellite to business premises (Telstra satellite to CDRC office) |
| Fibre to community | No |
| Satellite services - number, locations, provider | 10 Sky Muster services on community houses (of 43); 14 staff houses have Sky Muster |
| UHF or HF Radio | CDRC planning to set up with UHF radio in May 2022 |
| Status of services- faults, issues, speeds during peak use time etc | No major outages in last 6 months, mostly short outage of power |
| Communications Programs | 4G small cell service being provided with NT Government/ RCP funding; CfAT mobile hotspot (funded by CLC); Activ8Me WiFi trial |
| Any planned upgrades? | 4G small cell service scheduled for completion in December 2022 |
| Emergency information system | No |
| Telemetry network | 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 VAST 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 | |
| Internet access / videoconferencing facilities | Centrelink office - two computers; Computer room at recreation hall for use during opening hours (Tuesday to Saturday 3-8pm); CDRC meeting room has videoconferencing facility |
| Public Wi-Fi availability | 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 |
| Programs to support community access- provider | CAYLUS provide training and support for youth digital activities; WYDAC were providing IT access and support in Yuendumu with some outreach activities (planned to re-start in November 2022); PAW Media were delivering inDigiMOB digital skills workshops and support until 2021, looking to set up music production workshops in Yuelamu. |

Figure 11: The Alpirakina Store has a free blue phone and the Activ8me Wi-Fi service available, with vouchers for sale



Appendix 3: Photos of Research Activities



Figures 12 & 13: Co-researchers Stephanie Lynch and Dennis Charles; Surveys being undertaken in store.



Figures 14 & 15: Co-researchers Stephanie and Dennis doing surveys with Yuelamu residents.



Figures 16 & 17: Dennis doing survey training with Dr Lyndon Ormond-Parker; Satellite dishes at CDRC office in Yuelamu.



Figures 18 & 19: Dr Daniel Featherstone with PAW Media pioneer Francis Jupurrurla Kelly; Yurrampi Child and Family Centre in Yuendumu