

June 2024

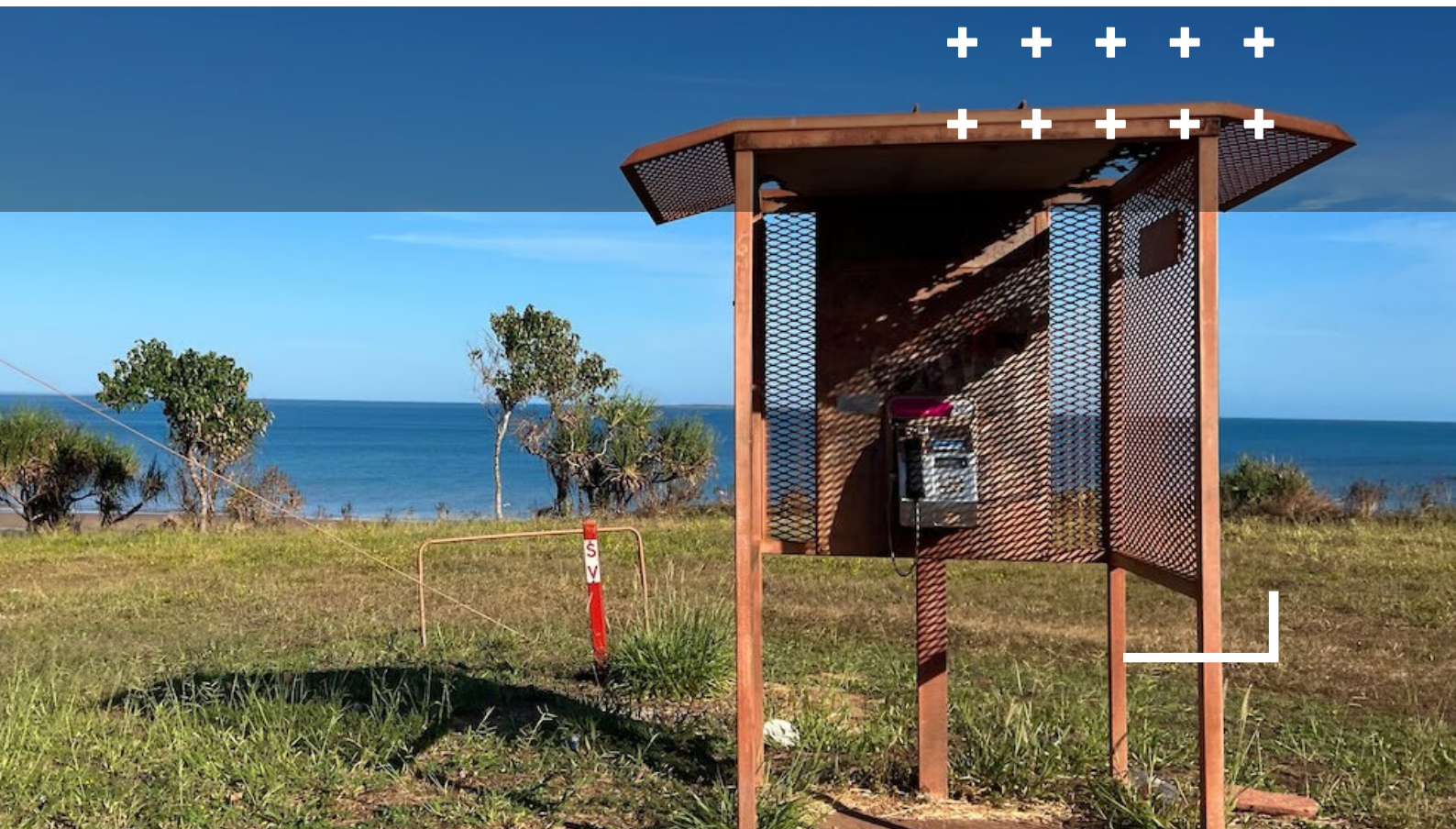


MAPPING THE DIGITAL GAP

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

Galiwin'ku, NT

2023 Community Update Report



Acknowledgement of Country

We respectfully acknowledge the Yolŋu (Djambarrpuyŋu, Gupapuyŋu, Djinang) people, and pay our respect to their Ancestors and Elders, past and present. We also acknowledge the Traditional Custodians and their Ancestors of the lands and waters across Australia where we work, live and undertake our research.

About the Mapping the Digital Gap Research Project

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

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Project and Indigenous Engagement

Coordinator: Tia Roko

Community Co-Researchers

Maliku Dhamarrandji and Glen Gurruwiwi

Research Participants and Stakeholders

Thank you to all the community residents and local agency staff who generously participated in the surveys and interviews, providing the personal experience to make this research meaningful. We conducted 70 surveys with First Nations community residents in 2023 (45 in 2022). During 2022 and 2023 research visits, we undertook 29 interviews with community leaders, residents and the following stakeholder agencies:

- + East Arnhem Regional Council (EARC)
- + Post Office (run by EARC)
- + Marthakal Homelands Resource Centre
- + Yalu Aboriginal Corporation
- + ALPA (Arnhem Land Progress Association)
- + Community Development Program (CDP)
- + ALPA Higher Education
- + Shepherdson College
- + Connected Beginnings, Shepherdson College
- + Families and Schools Together
- + Elcho Island Arts
- + East Arnhem Real Estate
- + AFL NT
- + Anglicare

Galiwin'ku research trips dates

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01. EXECUTIVE SUMMARY

This report outlines updated findings from our second research visit to Galiwin'ku community on the southern end of Elcho Island and the largest Yolŋu community in the East Arnhem region of the Northern Territory (NT). It is located about 150 km west of Nhulunbuy, and 500 km north-east of Darwin.

The Yolŋu traditional owners are the Djambarrpuyŋu, Gupapuyŋu and Djinang people, however there are a number of other clan groups also living in Galiwin'ku. According to the 2021 Australian Bureau of Statistics (ABS) Census, the population of Galiwin'ku is 2,199 with 94% identifying as Aboriginal people (Yolŋu). Of these, 97% speak an Aboriginal language, primarily Djambarrpuyŋu (81.6%) and Galpu (1.5%) (often grouped as Yolŋu Matha). There are approximately 369 residential dwellings.

Galiwin'ku is home to the Marthakal Homeland and Resource Centre and Marthakal Homelands Health Service, which supports 30 homelands throughout the Marthakal region, including 14 located on Elcho Island. Because of this inter-dependence with Galiwin'ku, this report also looks at the communications services and needs in the Marthakal Homelands.

Our second research visit to Galiwin'ku was undertaken 12–16 June 2023. The RMIT University team worked with community research partner Yalu Aboriginal Corporation and co-researchers Maliku Dhamarrandji and Glen Gurruwiwi. The team had a very productive week, undertaking 70 surveys with residents and conducting 13 interviews with agencies and community leaders. We thank all residents and agency staff who participated in the research and made us feel very welcome.

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

This report presents research findings to date, compares survey results from 2022 and 2023, outlines changes in communications and media services and usage, and renews the analysis section with 2023 findings and quotes. The proposed Digital Inclusion Plan has been updated based on community input and progress to date, as well as planned activities.

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

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



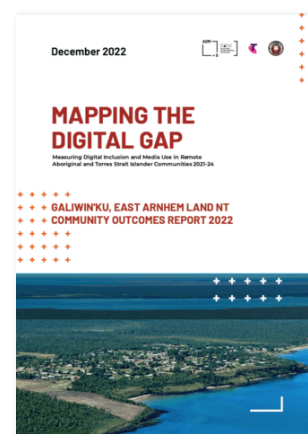
150 km
Nearest major regional centre (Nhulunbuy)

2,199
Population (ABS 2021)

94%
Aboriginal and/or Torres Strait Islanders

70
surveys conducted in 2023 (46 in 2022)

13
interviews conducted 2023 (16 in 2022)



Galiwin'ku at a Glance

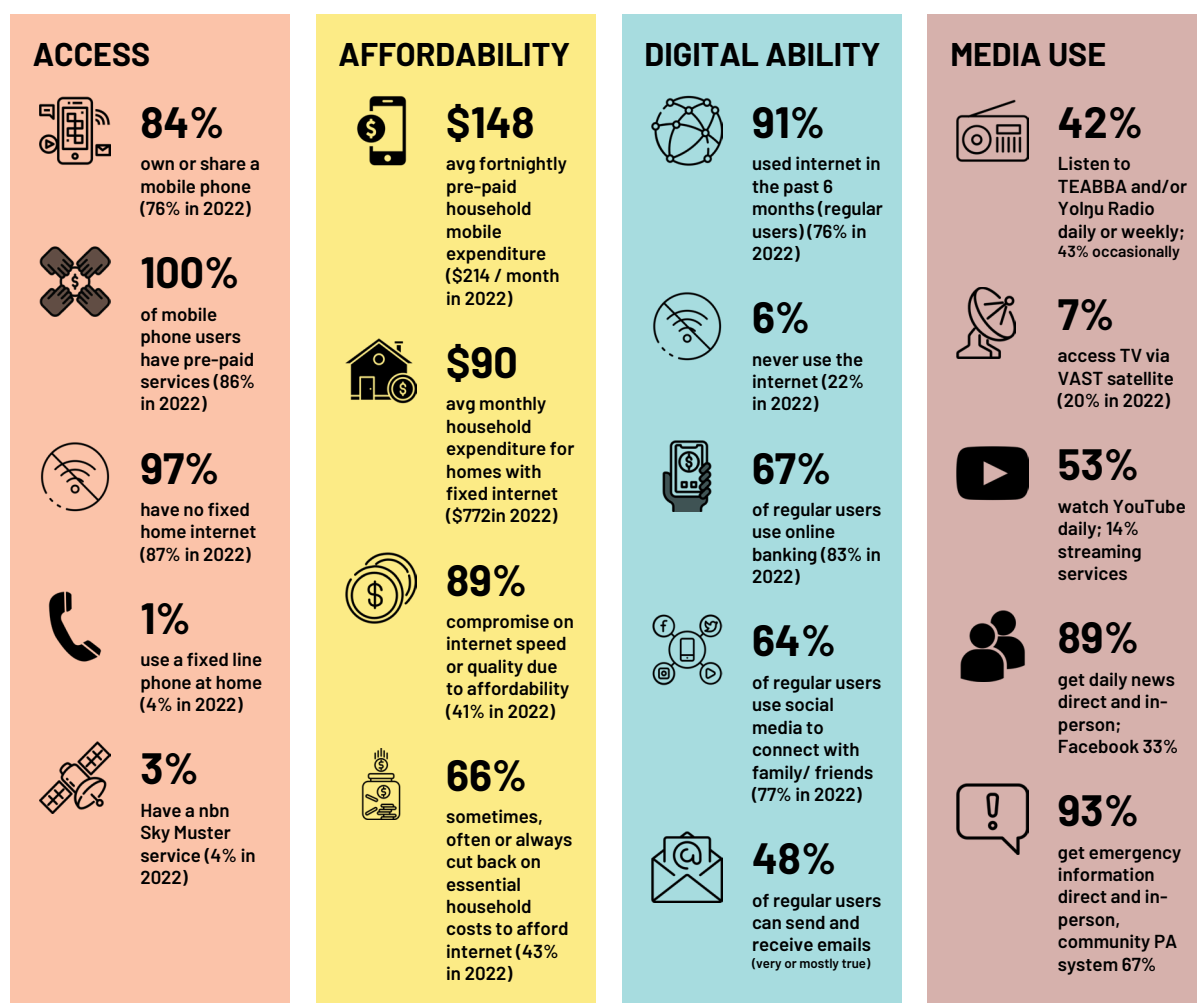
Distance	150 km	north-east of Darwin
Dwellings	369	occupied dwellings
	6.3	people per ATSI household
Language	96.9%	ATSI people who speak an Aboriginal language
Income	\$338	median ATSI personal income



Figure 1: Aerial photo of Galiwin'ku community

Key Survey Findings

The figure below provides a summary of 2023 survey results (70 respondents).



Full 2023 survey results are available in Appendix 1, with comparison to 2022 results (which included 5 of 46 non-First Nations respondents). An updated audit of demographics and communications and media services available in Galiwin'ku is provided in Appendix 2.

What is Digital Inclusion? How is it measured?

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

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

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

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

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

DIGITAL INCLUSION



ACCESS

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



AFFORDABILITY

- > Affordable phone and internet services
- > Affordable devices



DIGITAL ABILITY

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

ADII First Nations Data Dashboard

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

View dashboard using the QR code below:

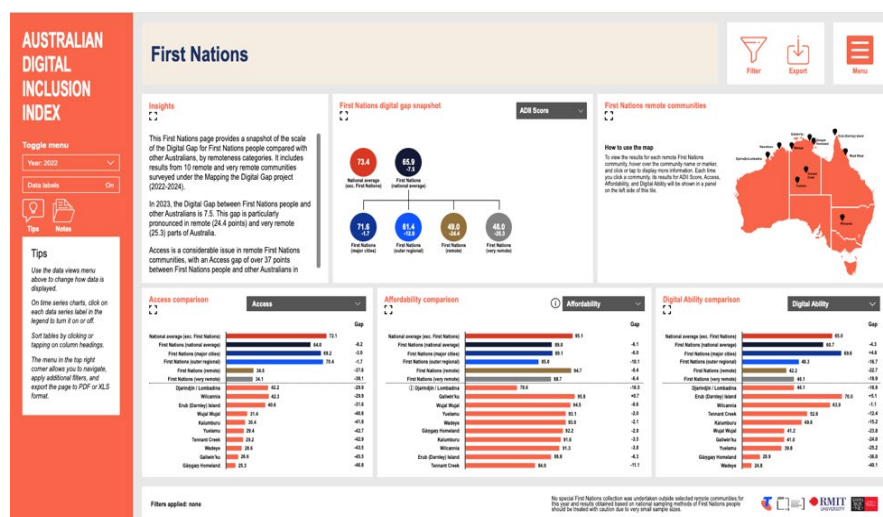


Figure 2: First Nations dashboard on ADII website: digitalinclusionindex.org.au/dashboard/firstnations.aspx

ADII 2023 Report Findings

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

Based on our 2022 survey results, the average Australian Digital Inclusion Index (ADII) score for Galiwin'ku was 46.0, a gap of 27.2 points below the national average for non-First Nations Australians.

The key elements of this gap (see Figure 4) were in the Access dimension score of 26.6, which was 45.5 points below the non-First Nations average, along with a large gap for Digital Ability (-23.9). The apparent lack of a gap in Affordability (+0.8) is due to large household sizes enlarging household income relative to expenditure and does not reflect lived reality in Galiwin'ku where Affordability is a major concern. These gaps vary widely for different demographic groups as detailed below.

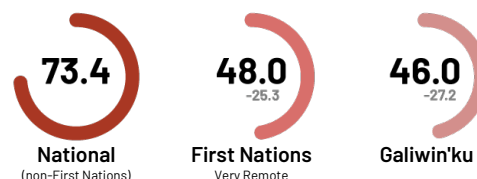


Figure 3: Galiwin'ku ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores, based on 2022 surveys

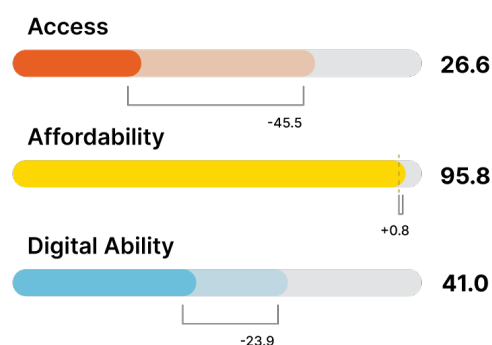


Figure 4: 2023 ADII scores for Galiwin'ku, with gap against national non-First Nations averages

Demographic gaps in Galiwin'ku:

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

Gender gap Men had higher average digital inclusion scores than women surveyed (53.3 compared with 40.0). The gap was primarily in the areas of Digital Ability (54.6 compared with 29.8) and Access (30.9 compared with 23.1).

13.3

Age gap Those aged 55–64 had an average digital inclusion score of 31.5, compared with a score of 56.2 for those aged 18–34 years (36.0 gap). The gap was greatest in the areas of Digital Ability (10.6 compared with 61.2) and Access (32.2 compared with 21.0). The gap was even greater for the 65–74 age group who had an average ADII score of 21.1 and a 0.0 Digital Ability score.

24.7

Education gap Those who did not complete secondary school had a lower average ADII score of 35.1 compared to 40.8 for those who completed secondary school (5.7 gap). The gap was greatest in Digital Ability (10.0 compared with 36.1). Average ADII scores of those who had completed Certificate 3 or 4 or a Bachelor's degree were 54.1 and 79.5 respectively.

5.7

Disability gap Unusually, surveyed people with disability had higher average digital inclusion scores relative to people without disability (51.9 compared with 45.2).* The positive gap was primarily in the areas of Digital Ability (54.3 compared with 39.2).

6.7

Employment gap The average digital inclusion score for people who were employed (full-time or part-time) was 49.4 compared to 38.4 for those who were unemployed. The gap was greatest in the areas of Digital Ability (44.3 compared with 31.8) and Access (31.4 compared with 18.1).

11.0

A demographic gap also exists for people living in large, shared housing, with those living in multi-generational family households scoring lower than single person households (42.6 compared to 51.0).

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

02. INTRODUCTION

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

2022 Findings

During our first visit to Galiwin'ku in 2022, we heard significant frustration from residents at the poor quality of communications services in Galiwin'ku, particularly the 3G/4G mobile service which was described as highly congested and slow throughout much of the day, with limited coverage in Buthan and nearby homelands. With the Telstra services delivered via a microwave link from Mapuru community on the mainland, which is connected to the Arnhem Fibre Network (initially installed in 2008), we also heard about various delivery chain and technical issues causing regular dropouts, especially in wet season, and several extended outages in recent years. There was a lack of redundancy or backup services in Galiwin'ku, with only a small number of agencies having nbn satellite services as well as Telstra connectivity.

We heard multiple accounts of the impacts of the poor quality and unreliability of services. These included challenges in delivering services, and difficulty for residents in accessing and using online services and building digital agency. Outages had led to stores unable to operate causing food security issues, as well as health and safety risks and significant community unrest.

There were plans underway to upgrade the Arnhem Fibre Network by July 2023, however no plan at the time to upgrade the microwave link to Galiwin'ku – a key element in the congestion. Interviewees expressed their frustration at the lack of a timeframe for the much-needed infrastructure upgrades and called for an interim solution. Beyond upgrading the microwave link, there were calls for an additional mobile service in Buthan, where housing construction was underway to address population growth.

Residents of the Marthakal homelands on Elcho Island and nearby areas on the mainland also described quality and reliability issues with some of the community Wi-Fi phones or public phones located in homelands, with calls for these to be upgraded and have more regular maintenance. Homeland residents were keen to have improved internet access while maintaining control over times when services were on. Some homelands could pick up weak 3G mobile reception from Galiwin'ku or mainland communities, with concerns that the 3G switch-off planned for June 2024 would reduce access to emergency phone services while on homelands or when fishing at sea.

Yolngu residents in Galiwin'ku were primarily dependent on pre-paid mobile for both phone and internet access, with very few ADSL or Sky Muster connections in households. This increased reliance on the mobile service for connection with family and friends, access to online services, and emergency communications, with few working public phones at the time of our visit.



Figure 5: The Galiwin'ku mobile tower with microwave repeater links from the mainland

With an estimated 90% of households without satellite-delivered TV services working, the mobile service had become the default source of all media-based entertainment and news. The increased use of mobile phones, including by children, along with growing demand for data-hungry streaming and gaming services, is a key contributor to network congestion. As a result, young people were staying up at night for gaming, streaming and other online use, impacting on school and workplace attendance.

The lack of access to reliable news sources via television or radio, which has low household use, was resulting in social media platforms being a primary source of news and information. Social media is used widely as a primarily social communications tool by Yolngu. However, the lack of alternate sources to verify online information meant that people experienced high levels of misinformation. This resulted in a high level of vaccine hesitancy during the COVID-19 pandemic.

The increased data usage was also an affordability issue, with pre-paid data costing an average of \$2–3/GB and users typically spending \$60–\$90 per month on data recharges. With increased freight costs to the island, costs had increased for most essentials in Galiwin'ku – food, rent, fuel, power cards and other household needs. With mobile phones often being shared, transferred or damaged in crowded households, the need for regular replacement of devices was a further affordability issue.

As outlined on page 7, our 2022 survey found relatively low levels of digital inclusion levels in Galiwin'ku, even compared to other very remote communities. The primary contributing factors were the lack of household internet access and limited access to online devices, as well as a large gap in Digital Ability.

Further, we found a lack of community access computers, public access Wi-Fi and digital skills programs or support in Galiwin'ku to help residents build their digital capability and agency. Most service providers described providing ad-hoc support to clients or residents with setup or use of online services, activating phones or SIMs, sourcing identification documents, and assisting with translating issues to helpline attendants. There were calls for more access computers, free public Wi-Fi and dedicated digital support services to help address the community demand.

While Galiwin'ku has a strong history of music, media production and language and cultural programs, there was demand for more support for these activities as well as access to archives of previously produced content. While young people are skilled in creating and sharing content on social media platforms, elders are keen to harness these skills to support language, cultural and community outcomes.



Figure 6: The 2022 research team co-researcher James Bayung, Yalu Program Manager Alice McCarthy, co-researcher Yungirrja Bukulatjpi, Dr Lyndon Ormond-Parker (below), Dr Daniel Featherstone, and co-researcher Cyril Bukulatjpi

2023 Findings

During our 2023 visit to Galiwin'ku, we heard many of the same issues that were raised by residents and service providers during our 2022 visit. The quality and reliability of Telstra mobile and fixed line services in Galiwin'ku remains a critical issue, with a high level of frustration at the lack of improvement after years of effort to highlight the impact on the community.

The 4G mobile service continued to struggle with dropouts and congestion, with very slow data speeds from early morning to midnight most days. While ADSL services were described as more reliable than mobile, ADSL users nevertheless struggled with slow speeds and long delays in connections and repairs. There was still very limited mobile coverage in Buthan suburb, with 84 new houses being built there but no plan to address increasing communications needs.

We also heard about several major outages in 2023–24, with back-to-back outages over 12 days in October 2022, and a series of outages in January and April 2023. There were calls for Telstra to undertake upgrades to the microwave link from Mapuru and provide a redundancy system in the interim. There were also calls for improved customer notification about the status of repairs. Since our first visit, several businesses had installed Sky Muster or Starlink satellite systems as backup in case of outages. Other agencies said they were considering getting a Starlink service, particularly due to frustration with speed, download limits, or unreliability of existing services.

Telstra representatives visited Galiwin'ku in June 2023 (at the same time as our visit) to hear directly from residents and announce planned upgrades including completion of the Arnhem Fibre Network by June 2023 and an upgrade of the microwave link from Mapuru by end of June 2024 (since amended to 23 August 2024), including a new mobile tower and upgraded transmission hut and power supply. There will also be upgrades to the public telephones to provide free Wi-Fi. Residents were pleased that their concerns were being heard and that plans were finally underway to address them.



Figure 7: Telstra's First Nations Advocate Lauren Ganley helping residents

The provision of free Wi-Fi at phone boxes will help to address a lack of public Wi-Fi hotspots in Galiwin'ku. We heard calls for more Wi-Fi access to help reduce costs, enable access to critical online services when pre-paid credit runs out, and to provide access in areas with poor mobile coverage such as Buthan. However, elders urged that Wi-Fi be close to residential areas to enable supervision of children, and that there be content filtering and a curfew time set on Wi-Fi services.

Two of the larger Marthakal homelands on Elcho Island, Gäwa and Banthula, are scheduled to have solar powered satellite small cell mobile services installed, along with Mapuru and Rorruwuy on the mainland. These will be the only mobile services on the island outside of Galiwin'ku, with concerns raised about potential loss of existing access to mainland 3G services following the upcoming 3G switch-off (re-scheduled to August 2024). With limited communications services and reliability issues with existing phones on many homelands, the support agency urged an audit of communications services on all of the Marthakal homelands, as well as basic technical training for homelands residents to troubleshoot outages.

Our survey of Yolngu residents found that reliance on pre-paid mobile services had increased since 2022, with 84% of respondents owning or sharing a mobile phone and 100% of these pre-paid. There was no increase in Yolngu household internet access, with only 3% of households having Sky Muster, and no ADSL connections by survey respondents. The primary uptake of household internet was by agency staff or people with regular income, including several staff with Starlink installed.

Our 2023 survey found that 93% of households did not have VAST satellite television services working, a significant increase from 80% in 2022, with set top boxes expensive to replace. Beyond lack of access to free-to-air TV services, this has flow-on effects with reliance on streaming services adding pressure on the already congested mobile network, increasing household costs for pre-paid data, and causing news and information to be consumed through less reliable sources on social media platforms. Galiwin'ku has

two First Nations radio services – Yolŋu radio and TEABBA – providing locally relevant news, information and music, with relatively high listenership, mostly by car radio or via online streaming.

Maintenance of IT networks and equipment are costly and time-consuming for agencies and residents, with technicians traveling from Darwin or Nhulunbuy. An option to reduce technical support expenses would be to coordinate technical support arrangements across multiple agencies.

Affordability of internet access remains a key issue due to low incomes and high costs for pre-paid data, especially since the cost of commonly purchased Telstra pre-paid vouchers increased in mid-2023 (\$30 vouchers now \$35, but offering 15 GB data instead of 10 GB). Following resident feedback in Galiwin'ku, Telstra have been undertaking trials of more affordable pre-paid vouchers in First Nations communities.

There were increased calls from residents for a community-access facility in Galiwin'ku for using online computers for accessing services, research or learning, and working on digital projects. There were also continued calls for a local digital mentor to provide support with the use of mobiles and online services when needed and promote awareness of scams and cyber-safety issues. ALPA Higher Education Centre had recently set up a lab near Buthan store with five laptops for use by higher education students and residents. However with limited awareness of the facility, there was low usage at the time.

Updates to Proposed Digital Inclusion Plan

Telecommunications in remote communities relies on finding telco providers who will deliver services that meet the community needs. Due to the remote locations and small populations, these projects typically require external funding from federal, state and/or local governments, with decisions and timeframes often determined by funding programs and industry players. This can leave residents and agencies feeling disempowered, with limited input to ensure the technology and services are fit for purpose.

The proposed digital inclusion plan in Section 7 is intended as a tool to assist communities to determine and communicate local needs and priorities. This updated plan builds upon the proposed digital inclusion plan in the 2022 Outcomes Report, including new strategies proposed by residents and stakeholders during our 2023 visit, as well as a summary of progress to date and planned activities for each item listed.

We recognise the challenges in implementing a local digital inclusion plan, with multiple agencies involved in delivering media, communications and digital programs. However Galiwin'ku agencies have collectively advocated for improved services over several years. This draft plan is intended to support planning and advocacy for improved media and communication services and digital inclusion activities in Galiwin'ku. As part of our ongoing research work with the Galiwin'ku community in 2024, the Mapping the Digital Gap team can assist with further development of this plan.



Figure 8: Research team and stakeholders: Yalu co-researcher Yungirrnga Bukulatjpi, Lilly Kerr (Coordinator, Galiwinku Youth Sport and Recreation), co-researchers Maliku Stephen Maliku Dhamarrandji and James Wunungurra, Tia Roko (Yalu Indigenous Engagement Coordinator) with Lyndon and Daniel from RMIT

03. MEDIA & COMMUNICATIONS IN GALIWIN'KU

Existing Telecommunications Services



Mobile coverage

The Telstra 4G/3G mobile coverage in Galiwin'ku is provided from a single tower located near the EARC library on Riyalanura Road. Despite the coverage map showing mobile reception at nearby Buthan suburb, this is currently very limited, with calls for an additional tower to support its expanding population. There are reports of limited 3G access at some Elcho Island homelands and out at sea from mainland communities. However, all 3G services will be switched off from 30 August 2024.

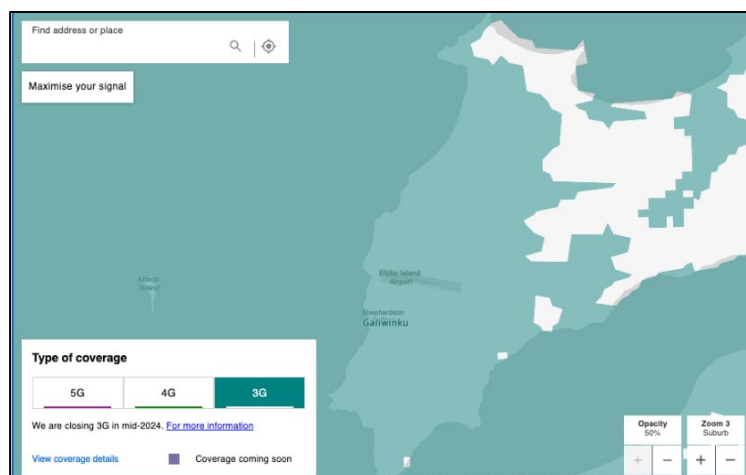
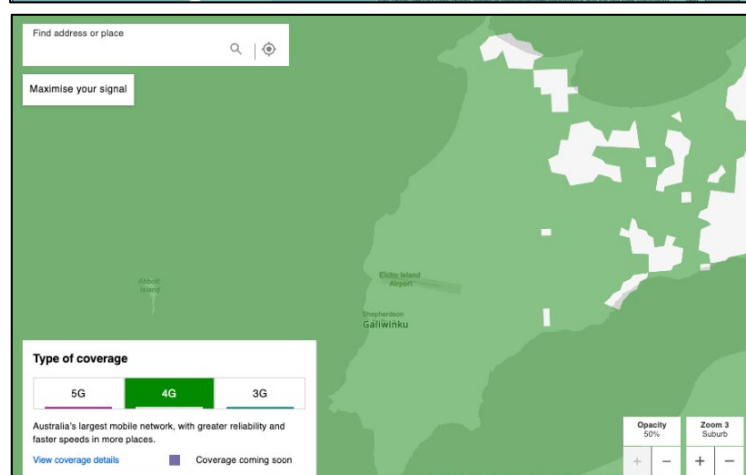


Figure 9: 3G and 4G Telstra coverage maps for Galiwin'ku. Source: <https://www.telstra.com.au/coverage-networks/our-coverage>



Backhaul to community

Backhaul for Telstra services (4G mobile, ADSL and fixed line phone services) is via a microwave link from Mapuru community on the mainland, connected to the Arnhem Fibre Network. Established in 2009 and costing \$34 million, the Arnhem Fibre Network stretches 800 km from Jabiru to Nhulunbuy. A \$5.5 million project to upgrade the backbone network from the current 5 Gbps to 100 Gbps capacity is nearing completion, with co-investment from the Northern Territory Government, Telstra, Developing East Arnhem Limited (DEAL), and the Australian Government's Regional Connectivity Program.¹ The microwave link to Galiwin'ku is to be upgraded by Telstra by 30 June 2024.

¹ Source: <https://www.miragenews.com/increased-connectivity-to-improve-services-and-657977/> 23/11/21



Mobile phones and recharge sales

A range of smartphones and flip phones (facilitating calls only), as well as pre-paid Telstra recharge vouchers, are available from the ALPA supermarkets in Galiwin'ku and Buthan and other local stores. Many users purchase Telstra recharges online. Some use Boost.



Landlines

The copper network is available to most houses in Galiwin'ku, enabling fixed line phone and ADSL services. However, no Yolngu residents had landlines or ADSL connections. The primary phone service reported by survey participants is through 4G mobile.



Public phones

There are eight public phones in Galiwin'ku, however three were not operating during our 2022 visit. Telstra public phones are now free to use, enabling voice calls by people without mobile phones or credit. Section 4 outlines the Activ8me Wi-Fi phones and Telstra public phones in several of the Marthakal homelands on Elcho Island and on the mainland.



Wi-Fi services

There is public Wi-Fi available at the EARC-managed library in Galiwin'ku, although this was described as very slow. The Centrelink agency within the central EARC office has free Wi-Fi but this has limited use beyond government services and online banking. There is demand for additional Wi-Fi services across the community, including in Buthan.



nbn services

Under nbn zoning, Galiwin'ku residents can only access Sky Muster satellite services. These are primarily post-paid plans through retail service providers, with very low uptake by Yolngu households (3% in 2023 surveys, 4% in 2022), with most usage by agencies and staff.²



Starlink services

There were no reports of Starlink use during our 2022 visit. By our 2023 visit, several agencies and staff houses had Starlink services (though no Yolngu households), with positive feedback on performance and reliability.



Telemetry

PowerWater, the NT government-owned corporation responsible for electricity, water and sewerage services in Northern Territory communities, use System Control for monitoring, operation and control of regulated power systems,³ supported by on-site personnel. TEABBA also use remote monitoring of RIBS transmission and studio equipment.



HF / UHF Radio

VHF radio was previously used as a primary communications mode in Galiwin'ku and the Marthakal Homelands up to the 1990s. Today, there is limited use of HF or UHF radio by service providers or homelands, with most use by rangers. Digital HF is used for aviation, shipping, emergency services, military, and border security.

² New Sky Muster Plus Premium products enable faster download speeds (up to 100 Mbps) and unlimited data use.

³ Source: <https://www.powerwater.com.au/market-operator/system-control>



Community networks

All agencies have independent services with no networks to support community access. EARC and ALPA both have communications networks connecting their facilities across Galiwin'ku.



Public Address (PA) system

EARC's PA system is used to broadcast information to the community. It is networked with speakers at the central EARC office, Marthakal Homelands and Resource Centre, and the Buthan Store.

Media Services



Radio services

Yolŋu Radio (88.9 FM) broadcasts primarily in Yolŋu Matha languages from Nhulunbuy. TEABBA also provide a regional First Nations radio service from Darwin, locally broadcast on 106.7 FM. TEABBA support the Galiwin'ku RIBS studio, but this was not staffed during our visits. There is also an ABC Darwin radio service (105.9 FM) and a Christian radio service Vision FM on 107.5 FM.



TV services

All houses in Galiwin'ku require Viewer Access Satellite Television (VAST) direct-to-home satellite for free-to-air TV services. However, our 2023 survey found that 93% of households did not have TV services working, mostly due to set top boxes not working or dishes or cabling requiring maintenance.



Newspaper

There is no supply of national or NT newspapers in the ALPA stores. However, the Land Rights News, produced by Northern Land Council three times a year, is distributed to Galiwin'ku.



Local and regional news

Regional news is shared via TEABBA radio, Yolŋu Radio, as well as ABC Darwin. Local news is shared on Facebook pages by EARC, Yalu and other agencies. Local noticeboards display upcoming events, training and job opportunities, and health information, with daily messages shared via the networked PA system.

Access and Support Facilities



Community access facilities

There are very limited public access facilities for computer use in Galiwin'ku. The ALPA Higher Education Centre in Buthan has five laptops and a printer available for community access and learning. The library provides free Wi-Fi access but had no access computers in 2023.



IT Support

Informal support in accessing and using online government services is available at the EARC office, post office and the ALPA Higher Education Centre. Other local agencies, including the school and CDP office, provide some support to staff or clients, as well as private residents.

04. COMMUNICATIONS IN THE MARTHAKAL HOMELANDS

About the Marthakal Homelands

There are 32 homelands on Elcho Island and across the northern mainland area of East Arnhem, supported by the Marthakal Homelands and Resource Centre Aboriginal Corporation (MHRCAC)⁴ as a hub and service provider. Each homeland belongs to individual clan groups, with representatives making up the Board of Directors of MHRCAC.

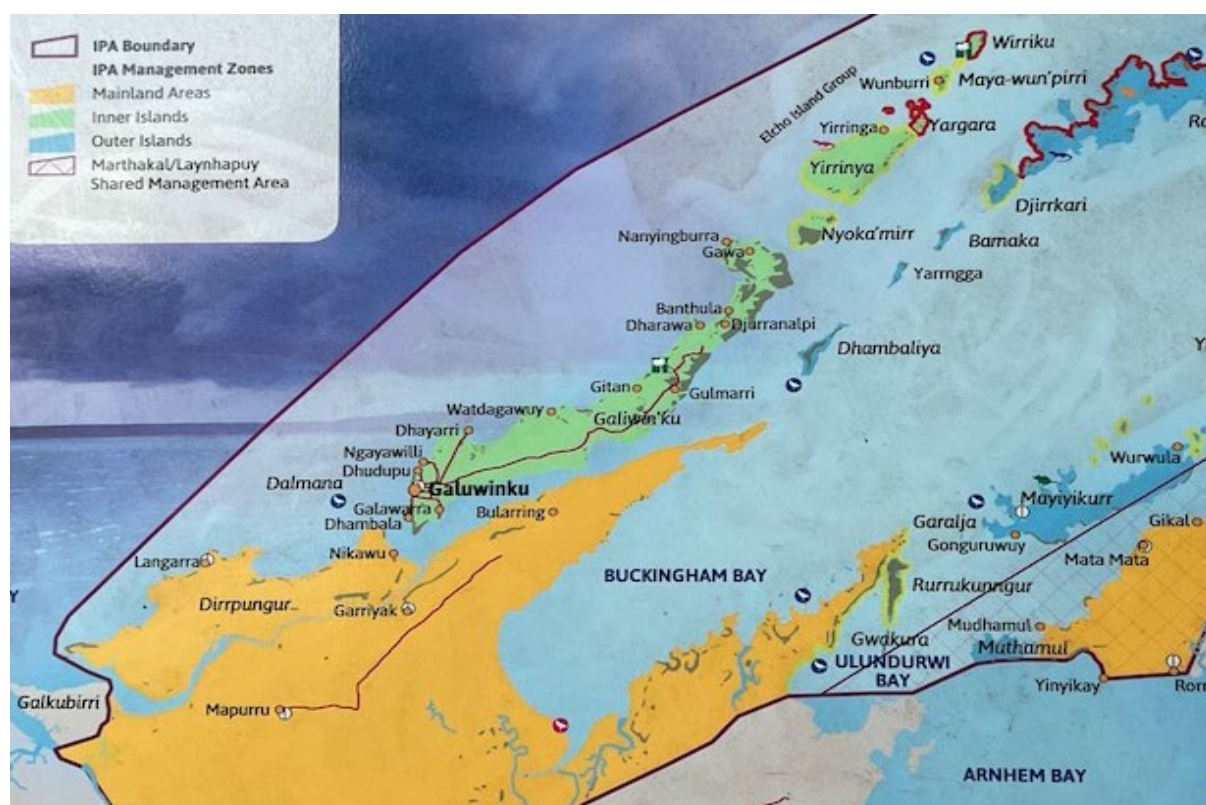


Figure 10: Map of Marthakal Homelands

- ✦ “[The] homeland movement [began in the mid 1970s] where people go back to country [to] not only establish their homeland but create a better lifestyle, a healthy lifestyle, and to grow the children on country but also to have some sort of development happening. [MHRCAC manages the] working on country [program and] central services for housing, water, all the other essential needs that homelands are run by.” (Marcus Lacey, Marthakal Homelands and Resource Centre, 2022)

History of communications in the homelands

While Yolngu have used traditional modes of communication for tens of thousands of years, new communications technologies have changed the way people maintain social and cultural practices.

⁴ MHRCAC is a parent entity of the Marthakal Group, which includes Marthakal Health, Marthakal Rangers, Marthakal Yolngu Airline Pty Ltd, and Marthakal Business Enterprise Pty Ltd, with the administration and services based in Galiwin'ku Community.

- + “Sometimes in the olden days, we lit a fire to signal other people and family, but nowadays in modern days we now use the phones and sometimes people walk to find good reception to use a mobile phone.” (Jane Garrutju, Chairperson, MHRAC, 2022)



“In the past Yolŋu were communicating very well ... Our people would journey to connect together ... attending the ceremony... We were sending smoke [and] fire to let them know that this event will be happening, or come to our ceremony, and the moon shows us, telling us where to go ... But nowadays it’s different [with] more technology coming and learning and taking. They were given for good purposes but [now], we all over the place.”

– Elaine Lawurrpa Maypilama, elder, 2022

By the 1960s mission era, communications from Elcho Island to the mainland was primarily via VHF radio.

- + “Communication in those days with the outside world, apart from Radio Australia,⁵ was VHF [radio, to contact] friends or family down south. Telegrams were very hard to send. [We] really had no outside communication, except for the Codan [VHF] radio system ... wherever they were, especially in the homelands, they could listen and know what’s happening everywhere else ... I would go out to a homeland and someone’s sitting there with the Codan radio on and they’re going ‘Oh, so and so’s just caught a big fish’ or ‘So and so’s had an argument’ ... it was just an amazing communication system.” (Kaye Thurlow, long-time resident/ former Manager, East Arnhem Regional Council, 2022)

VHF Radio was the only mode of western communication in the Marthakal homelands until the 1990s. While mostly the domain of adults, children would sometimes use the radio to talk to each other.

- + “When we’d finish school we’d go back to the radio station and would sit down and wait till [people] finish their work for the day and [go] hunting ... then we’d talk to our friends and family from other homelands through the radio. We’d talk about the days at school [or] what they caught on the weekend hunting. Sometimes we’d play music [on] our ghetto blasters ... But then someone [would hear us and say] ‘what you mob doing, leave it, that’s not toy’, ‘oh sorry, sir’. Then we’d ... go off air, it was fun.” (Marcus Lacey, Marthakal Homelands and Resource Centre, 2022)

The VHF radio enabled people to have multiple conversations concurrently in language.



“[The VHF radio channel was] just a river of language ... I don’t know how they did it, but the old people they would communicate with those people [from other language groups] while others are talking and they would keep that conversation going ... not get distracted by the other conversations that’s happening. ... that was the social media of the day and that’s how we connected just using voice and just picturing it in your mind what is happening ... it was great.”

– Marcus Lacey, as above, 2022

⁵ Radio Australia was an ABC service broadcast to the Pacific Islands and parts of South-East Asia via short-wave radio.

Introduction of public phones and Wi-Fi connectivity

Public phones were introduced in remote communities in Australia in the mid-1980s, with some installed in Marthakal homelands in the early 1990s.

- + “Telstra then came and started to build ... public phones, [the] old orange ones where you can put from a 10-cent piece to up a dollar.” (Marcus Lacey, as above, 2022)

Following Telstra upgrades during the 2000s, the Australian Government developed the Remote Community Telecommunications program in the early 2010s. Australian Private Networks (branded Activ8me) was contracted to install satellite-delivered community telephones in over 300 small communities of less than 50 people nationally and maintain Telstra public phones in another 240 sites. Many of the Activ8me phones were upgraded to have Wi-Fi capability in the mid-to late-2010s, enabling internet access and Wi-Fi Calling.

The only Marthakal homelands with Telstra public phones are Rorruwuy, Mata Mata, Mudhamul, Mapuru and Yinyikay on the mainland and Gäwa on Elcho Island. Activ8me Wi-Fi phones are in ten of the Marthakal homelands – Bulariny (on mainland), Dhayirri, Dhudupu, Galawarra, Gitan, Gulumarri, Nanyingburra, Ngayawili, Nikawu (on Howard Island) and Watdagawuy – with a voice-only phone located at Dhambala.⁶

- + “[We] went up to Bible Camp, about 15 kilometres out of [Galiwin’ku] and there’s a public phone there ... So we connected to the Wi-Fi there and we were able to call ... we were really happy to connect with our families [and even] get on the internet.” (Megan Yunupingu, Artsworker, Elcho Arts, 2022)



Figure 11: Activ8me Wi-Fi phone in Dhayirri homeland

However, we heard reports of issues with some phones.



“The public phones, some are working and some are not working. The [Wi-Fi] is a bit slow and it takes time, it’s not a good service ... sometimes it’s echoing like in the water.”

– Jane Garrutju, Chairperson, MHRAC, 2022

- + “They need an upgrade because they always have short coverage or sometimes it cuts out [or] doesn’t work. [Sometimes] the voice changes like a robot [and] they don’t understand [what is said]. It needs to be replaced with a new one.” (Jeffrey Lungarriny, Dhayirri homeland resident, 2023 – paraphrased by Maliku Dhammarandji)

- + “They have limited contact on the homelands. [Sometimes] they can’t contact families if they need diesel or petrol for the generator. When I [stay] at Nanyingburra [near Gäwa at eastern end of Elcho island], they have [an Activ8me] public phone [but it’s] not always working [so I] go down to the beach to try to get Telstra signal [from the mainland].” (Joanne Wanambi, Family and Schools Together, Galiwin’ku, 2023)



Figure 12: Dhayirri homeland, 10 km north of Galiwin’ku, has one main accommodation building and an Activ8me Wi-Fi phone

⁶ Source: National Indigenous Australians Agency (data set provided 10/8/2021)

We heard that the Activ8me Wi-Fi internet at Dhayirri was too slow to access online services.

- ✦ “[There’s] no internet here ... A lot of the boys are on Jobseeker and it would be good for them to be able to have [internet access] on the homeland so they can every fortnight report their Centrelink and ring CDP. [Mostly we have to drive a half hour] back to town [to access] Centrelink, government, that sort of thing ... What we need [is] to upgrade all the coverage, payphone, internet as well, instead of [driving] 60 minutes a day, going up and down.” (Jeffrey Lungarriny, as above, 2023)

Yalu runs youth camps in several of the Marthakal homelands. The reliability of homeland phones is critical for agencies to conducting activities and providing remote support.

- ✦ “Last month we ran a couple of [youth camps at] homelands. [We need] to be able to communicate with the team out there to make sure they had what they needed [and] do check-ins. [At Dhayirri homeland] you cannot get any service. Bible Camp [has] an emergency phone [but in most] other places there [is] absolutely nothing. [We] have satellite phones for emergencies [but we don’t go to homelands without a phone service].” (Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin’ku, 2023)

Homelands residents requested more regular maintenance of the phones to ensure they are reliable. They also asked to be informed about how the communications equipment works, or why it fails.

- ✦ “When [Activ8Me] come to visit ... they don’t really explain about the situation. They just come and just do their job without [telling us] what they are doing ... When like rain or lighting comes it will stop the line from communicating ... It’s very hard when there’s no signal for people that live a long way from the town area.” (Jane Garrutju, Chairperson, Marthakal Homelands and Resource Centre, 2022)
- ✦ “A mob from [Activ8me] comes once a year and replace the cables with new ones [but] they don’t really tell [us] anything.” (Jeffrey Lungarriny, as above, 2023)

There was a call for homelands residents to have basic technical training to help address outages.

- ✦ “It’s always important to be able to maintain that [service]. So [Activ8me could give] simple training to someone in the community, small information, just check on it and make sure it keeps going.” (Marcus Lacey, Marthakal Homelands, Galiwin’ku, 2023)



Figure 13: Maliku (centre) with Jeffrey Lungarriny and Denzel Dhamarrandji at Dhayirri homeland

Use of Sky Muster services and Wi-Fi

The Gäwa Christian School at Gäwa Homeland has a Sky Muster satellite connection, enabling students to communicate via videoconference with children from mainland schools.⁷ The Gäwa Clinic also uses Sky Muster to undertake telehealth services.⁸ Beyond the Wi-Fi at schools and clinics in the larger homelands, and the Wi-Fi public phones, there is a lack of internet access on Marthakal homelands. In Gäwa, some community access is provided via Wi-Fi, with community control over access times and content filtering.

- ✦ “[Internet is available] at the school up at Gäwa [and] Rorruwuy homeland [on the mainland]. They use a Wi-Fi system through their local clinic there [via] Sky Muster,

⁷ Source: Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022.

⁸ Simbani Research have undertaken a pilot study to assess the effectiveness of remote telehealth services via Sky Muster See: <https://simbani.com.au/crcna-telehealth-project/>.

[and] they allow community to use [the Wi-Fi]. But the good thing about it is that we have power to switch it off. [That means it doesn't] take away the freedom of knowing where we are and what the purpose of living out there is." (Marcus Lacey, Marthakal Homelands and Resource Centre, Galiwin'ku, 2023)

Some homeland residents have set up household Sky Muster services, which provides a backup service for homeland residents if the Telstra network is not working.

- ✦ "[Some people] have their own connections like Activ8me and [SkyMesh. So] when there's a problem we call them, but it's slow too." (Jane Garrutju, as above)

We also heard that the Sky Muster service drops out with cloud cover or rain, especially in wet season.

- ✦ "When rain or lightning comes it will stop the line from communicating ... It's very hard when there's no signal for people that live a long way from the town area." (Jane Garrutju, Chairperson, Marthakal Homelands and Resource Centre, 2022)

The only mobile access outside Galiwin'ku is via 3G

Five of the Marthakal homelands are close to Galiwin'ku, with some able to get a weak 3G signal at times.

- ✦ "At the top of the hill ... that's where you get a signal. But they have to move around with the mobile and when they get bars on the mobile they can start ringing." (Jeffrey Lungarriny, Dhayirri homeland resident, 2023 – paraphrased by Maliku Dhammarandji)
- ✦ "I live at the [Galawarra] outstation ... five kilometres from here. [Sometimes] we can use our mobile at the outstation [but] it gets worse during the wet season [and] there's just no reception at all." (Margaret Dhurrpuy, Artist, Elcho Arts, 2022)

Some coastal sites can pick up 3G mobile connectivity from a mainland community such as Milingimbi.



"There's some areas where we can pick up a signal coming off from [the mainland, but it's not] reliable ... On a windy [or cloudy] day you can't pick up the signal."

– Marcus Lacey, Marthakal Homelands and Resource Centre, 2022

However, with the upcoming switch-off of 3G in August 2024,⁹ there are concerns about whether they will still be able to access a mobile signal. There were calls to expand the Telstra 4G coverage from Galiwin'ku to include the nearby homelands or add an additional tower at Buthan.

There is also currently limited mobile reception at sea, other than 3G at Inglis Island and at Buckingham in Arnhem Bay. While mobile communications are not intended for emergency use at sea, MHRAC encouraged expansion of 4G coverage out to sea to enable connectivity when fishing or hunting.

- ✦ "We have to carry an EPIRB and proper equipment with the flares and all that. A lot of ships and boats passing by and you've got commercial fishermen and commercial barges that run those waters. But it's very important that [there is mobile coverage at sea] so those areas [are safe]." (Marcus Lacey, as above)

Marthakal Homelands and Resource Centre have called for upgraded communications on the homelands, including small cell mobile coverage in larger homelands such as Gäwa and on neighbouring islands.

⁹ Telstra extended the 3G switch-off date from 30th June to 31st August 2024 to allow more time for existing 3G devices to be upgraded.

- “[Mobile] should be on [Drysdale and] Stephens Islands for emergency purposes. A lot of families go hunting that way and when they break down there's no emergency [support].” (Marcus Lacey, Marthakal Homelands and Resource Centre, 2022)

Mobile small cells to be installed in Gäwa and Banthula

Two of the larger homelands on Elcho Island, Gäwa and Banthula, as well as Mapuru and Rorruwuy on the mainland, are scheduled to have solar powered satellite small cell mobile services installed, however the date is not yet known. We heard positive responses to the mobile services being installed, as well as some concerns.

- “Gäwa and Banthula are the major populated small homelands ... 100 miles [away] from the main township of Galiwin'ku [at] the end of this island. [It's] a private space. Those places were established so our kids and our people can live closely in partnership, in harmony, with the country and our spirituality. That's why there will be some major homelands where they won't accept full mobile coverage.” (Marcus Lacey, Marthakal Homelands and Resource Centre, Galiwin'ku, 2023)

Audit of communications services to inform community-led planning

With some homelands without any phone service, and a mix of solutions in place, there were calls for support for Marthakal Homelands AC to undertake an audit of the communications services on all Marthakal homelands, and an assessment of unmet needs. Decisions about communications services are often determined by external service providers or government agencies with limited community input, so this approach would inform community-led planning and locally appropriate and robust solutions.



“[My advice] to that Telstra [and government] mob, as much as you want to provide us with this service, you have to listen to the people and what we have to say, first. You have to listen to the traditional owners and the elders of each homeland [because] our lives depend on this type of decision. [And] it's peaceful out there, we don't want to lose that peace ... That's what we most value. [We want] control over the communications, so we don't get be governed by the outside system.”

– Marcus Lacey, Marthakal Homelands and Resource Centre, Galiwin'ku, 2023



Figure 14: Daniel and Maliku talking with Dhayarri homelands residents Jeffrey Lungarriny and Denzel Dhamarrandji



05. KEY FINDINGS FROM DATA ANALYSIS

This section provides key findings from the 16 interviews undertaken with community leaders and stakeholders, as well as observational data and survey results. The analysis builds upon the findings in the 2022 Community Outcomes Report, with new topics labelled with 2023 after the heading.

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

Communications Access

Quality of communications services in Galiwin'ku remains a critical issue

The Arnhem Fibre Network, rolled out by Telstra in 2009, led to improved communications services in the East Arnhem region, including 3G and 4G mobile in most communities. However, with significantly increased demand on broadband data, communications quality and reliability has become as an issue across the region due to ageing infrastructure and limited backhaul. This is particularly the case for the four island communities that rely on microwave links from the mainland to deliver Telstra services – Galiwin'ku, Mililingimbi, Waruwi on South Goulburn Island and Minjilang on Croker Island. However some participants described communications services in Galiwin'ku as the least reliable in the region.

- + “Galiwin'ku is [the largest community but] the connectivity is the worst of them all ... Mililingimbi [also has] challenges at the moment but historically hasn't [had] bad connectivity. [Gapuwiyak, Ramingining and Yirkkala are reasonable], Galiwin'ku is by far the worst.” (Hannah Fincham-Thomson, East Arnhem Real Estate, 2022)

The poor service quality has significant impact on residents and agencies in Galiwin'ku.



“Being an island, we can only use Telstra for phone lines and for ADSL because that's the [only option]. Thousands of people [living here have unreliable] connection, that are in the most remote, the most isolated place in the Northern Territory. You can't get more remote than Galiwin'ku ... we're off the mainland. And from a security perspective, it's really worrying ... We live in a first world country and that is just unacceptable ... We should have access to the same type of connection as mainland Australia or as anywhere else.”

– Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin'ku, 2023

The 4G network is still highly congested and unreliable

During our 2023 visit, the 4G network was still highly congested during much of the day despite minor improvements in the service since our 2022 visit. Interviewees said it was difficult to use from mid-morning to midnight, leading agency staff to undertake critical work or personal tasks during non-peak periods.

- + “It's really slow during the day right up to midnight ... three am till six, that's probably the best possible time to try to go on, yeah, to work on your phone.” (Va Matarakura, Manager, Marthakal Motel, 2022)

- ✦ “[Early morning the 4G speed is] not so bad ... I would try and do [our shopping order] at about 6am. [After that it was] literally a blank page for Coles Online, because it was taking so long to load.” (Rosalind Beadle, Support Worker, Families and Schools Together program, 2022)
- ✦ “There was times when I had to do my study at two, three, four “clock in the morning and go to bed at six. [I had to stay up] late at night or early in the morning just to do my studies because that was a better bandwidth [when] the kids are asleep or the stakeholders are offline.” (Christopher Alchin, AFL NT, Galiwin’ku 2023)

Some young people also stay up late at night to access online entertainment or gaming, known locally as ‘daybreaking’. Interviewees cited this as a cause for low school attendance.

- ✦ “Sometimes they daybreak it, [they stay up all night] ‘til morning, go back to sleep. [They are] using apps like Tik Tok, YouTube, Facebook, Instagram [or] gaming [on] mobile phones ... So it’s 50% chance to [go to school, or] sometimes [they] just sleep all day.” (Jerome Lacey, Galiwin’ku Youth Sport and Recreation, 2023)

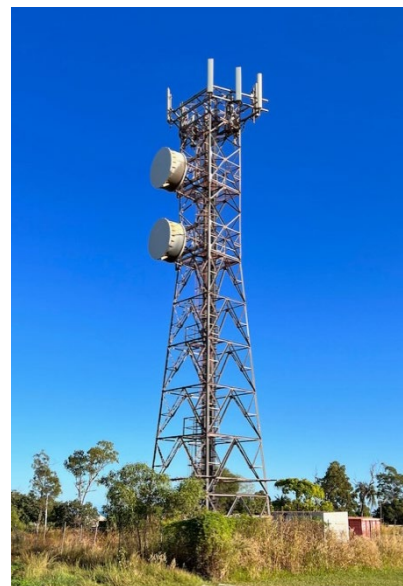


Figure 15: The existing mobile base station, with microwave links to Mapuru on the mainland



“Every kid here get a technology, and they want to watch movies or anything. Why do we have non-attendance of kids here at this school? Because they’re up at that time ... catching up on the reception!”

– Gaylene Yenhu, Community Engagement Leader, Connected Beginnings, 2022

The 4G coverage is patchy in and around Galiwin’ku, with quality and in-house penetration varying with distance and direction from the tower, as well as time of day.

- ✦ “I [used to live] up towards the top camp [where the mobile service] was a little bit more reliable generally, and I could get internet service in the evening. Where I am now, however, which is just on the fringe of town, down near the motel, it’s very unreliable and almost non-existent, really. I’m receiving one bar of 4G, which it isn’t strong enough to do anything on the internet ... before 8:30 am is a window of opportunity.” (Miranda Rielly, Connected Beginnings, Galiwin’ku, 2023)
- ✦ “The network in[side] some houses is really bad. [When you go outside] you have better service, like you can hear on the other side of the phone properly.” (Va Matarakura, Manager, Marthakal Motel, 2022)
- ✦ “We found places here in Galiwin’ku that you can almost throw the phone in the air and send a message, as long as it goes while it’s in the air.” (Kaye Thurlow, long-time resident/ former Manager, East Arnhem Regional Council, 2022)

Agency staff described difficulty in keeping in touch with family and friends on the mainland.

- ✦ “For Balanda [non-Indigenous people] that are coming to community, it’s important for us to stay connected to our families and friends. [It’s often hard] to access the internet because it’s so bad [so you] aren’t staying as connected as you’d like to.” (Miranda Rielly, Connected Beginnings, Galiwin’ku, 2023)

There is limited mobile coverage in Buthan suburb, with more housing being built there (2023)

The suburb of Buthan, about two kilometres from the town centre, has very limited mobile coverage. We heard that Buthan residents often have to walk to the town centre to get good reception or access online services.



“There's nothing really out in Buthan [and] it's a 10, 15 minute walk [into town]. [We need mobile access out here so kids stay] closer to home [and are] not walking across town and getting into mischief ... along the way.”

- Christopher Alchin, AFL NT, Galiwin'ku, 2023

To help address overcrowding and meet the needs of an increasing population in Galiwin'ku, 84 new houses are being built in Buthan. This will reportedly help to reduce the average number of people per household from 13–19 down to 8–10. However, there is currently no planning to address increasing communications needs.

- + “[More houses are] going to be built [in Buthan but there's no facilities] to access the internet or telecommunications [here] so it's a struggle ... EARC really needs to look at [the needs of Buthan], not just focus on the CBD or the town itself, but look at the outer suburbs and how to support them. [We need an additional mobile tower which] might stimulate business growth as well.” (Christopher Alchin, as above, 2023)



Figure 16: Buthan community store

Regularity and impact of network outages

Galiwin'ku has had numerous network outages in recent years, with the network having multiple vulnerabilities. Outages have been caused by damage to Telstra's fibre optic backhaul network, stretching across Arnhem Land from Jabiru to Nhulunbuy, which can cut all services – telephony, ADSL and mobile – on Galiwin'ku. Outages can also be caused by failure of the microwave link from Mapuru on the mainland. During the wet season, the underground copper network can also get flooded, impacting phone and ADSL services. Local power supply outages have also led to communications outages, with the battery life for the mobile tower limited to a few hours. There have also been instances of cyclones knocking down mobile towers and communications infrastructure, including Cyclone Lam in 2015.

During our 2022 visit, we heard about several extended outages during 2020–22, which affected all Telstra services. These included nearly 12 days without services in November 2020, 3 days in January 2021 and a 5-day mobile outage in early January 2022. Based on concerns raised in inter-agency meetings in 2020–21, Connected Beginnings collated stakeholder letters about the impact of the Telstra network outages on service provision and the community.

- + “[There were concerns about] risks in terms of safety, health, and access to just essential goods and services like power, food ... basic things that we all should be able to access ... we tried a small campaign [to get] more consistent coverage.” (Margaret Hewett, as above, 2022)

Interviewees reported that reliability improved for a while, but further increases in demand and continued ageing network and power infrastructure appear to have resulted in outages increasing again in 2023–24. When we returned in 2023, we heard that outages were still common, causing health and safety concerns.

- ✦ “In the last 12 months ... there has been a little bit more stability with our coverage. We haven't had the periods that we were experiencing in the year or two before that [but there still] have been [some outages. Often] there's no warning, [so we can't] help safeguard the community with issues like your EFTPOS and those sorts of things. [There's also an] issue when phone [service] goes down around security, and medical emergencies, those sorts of things, that become very tricky, especially when we have a community that has critical health needs. But those things are pretty important when the Telstra goes down.” (Margaret Hewett, Director, Connected Beginnings, Galiwin'ku, 2023)

Recent outages included loss of all services (mobile, fixed line and ADSL) for eight days in October 2022 (17 to 24/10/2022) followed by a four-day outage (31/10/2022 to 3/11/2022). One event was caused by damage to the fibre optic cable at Ramingingin, with other outages caused by power supply issues as Mapuru.

- ✦ “The first one was maybe four or five days [and] it came back on for [a] few hours [and] then cut out for almost two weeks ... We heard [that] someone had run into a power [pole].” (Margaret Hewett, Director, Connected Beginnings, Galiwin'ku, 2023)
- ✦ “Over the last 12 months, I can remember distinctly two times where we had no connection whatsoever. No Wi-Fi, no phone, no anything ... One of the times [was] about five days, [which was a regional outage] right through East Arnhem, but it took that amount of time for that to come back on. I could not imagine that happening in Darwin or in Sydney or in Melbourne.” (Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin'ku, 2023)

The network reliability issues have continued in 2024, with reports of repeated outages in January and April. An ABC report in April 2024 described nightly mobile outages for 12 nights in Galiwin'ku (from 22/3/24), with residents reporting intermittent outages coverage since December 2023.¹⁰ This was reportedly due to power supply issues at the microwave link to Galiwin'ku from Mapuru, where one of three battery racks had failed, leaving insufficient power to maintain services overnight. The nearby community of Milingimbi also reported daily Telstra outages in March 2024.

Network outages have significant impact on remote communities, restricting access to emergency calls or use of online or cloud-based services, or EFTPOS and ATM in stores without satellite back-up systems. Interviewees described instances where people had been unable to purchase food, essentials and power for their house, creating food security issues, high levels of unrest, and safety concerns in the community.

- ✦ “Because every house operates with [a] power meter [requiring recharge power cards, families went] a week with no power on at their house [and so could not refrigerate or cook food]. Even the EFTPOS would go down [so] no shopping ... Most people out here are on Centrelink benefits, not many people work, so it's also a bit challenging [to do reporting to] get fortnightly [payments] on time ... It just made people really powerless.” (Gaylene Yenhu, Community Engagement Leader, Connected Beginnings, 2022)
- ✦ “[Outages mean] not having access to the outside world in any shape or form. [This creates] a domino effect of negativity because then people are frustrated [and] bored, people have nothing to do. [People do go hunting and fishing] but when they come home, they want to be able to watch something [or] call their family or ... find out what funeral is happening ... One or two or three days people are a bit frustrated,

¹⁰ <https://www.abc.net.au/news/2024-04-04/galiwinku-and-milingimbi-without-telstra-mobile-coverage-nt/103658508>

but by the third or fourth day they've just had enough ... So, there was a huge influx of violence, of break-ins, of sniffing volatile substances, and it just absolutely ricochets through the whole community ... And it is not a good time when that happens ... it's really, really frightening." (Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin'ku, 2023)

- ✦ "It took quite some time for us finally to get Power and Water to [keep the power going for houses] if the internet's out and people can't go to the store and pay for their power ... now Power and Water can override the cut off point, but [households] build up a bill So, once it comes back on, they've got to pay all that back payment before they keep the power on." (Kaye Thurlow, long-time resident/ former Manager, East Arnhem Regional Council, 2022)

There were calls for better information for residents during outages about the status of repairs.

- ✦ "[During outages] there has to be ways of communicating with this community to say, 'Look, this is where we're up to. This is what's going on.' You'd hope the same for a very basic service. Telstra [must have] a way of getting communication to the council so then they could actually communicate across the speaker." (Margaret Hewett, as above, 2023)

More agencies have back-up communications systems, with calls for a redundancy system

Some businesses are more prepared for outages now, with satellite systems for redundancy.

- ✦ "[Some] businesses [have backup options] now. I know that ALPA have done that, the café have done that, where they've upgraded [to satellite backup] so at least there's the ability to pay for food with cards, so that has been a change." (Margaret Hewett, Director, Connected Beginnings, Galiwin'ku, 2023)

EARC also have satellite back-up in case the Telstra network is down.

- ✦ "The [mobile] reception went out for three days ... but I connected at work [via the satellite back-up] ... Even the police station don't have the same sort of set-up." (Melissa Jones, Community Development Coordinator, EARC, 2022)

The school has also set up a satellite back-up system to provide communications for the community cyclone shelter in the case of another cyclone.

- ✦ "At the school [there] is a satellite now for emergencies, [so people can] check in with family just to send a little message to say, 'Yep, all okay, but we just don't have coverage.'" (Margaret Hewett, as above, 2023)

We heard calls for more reliable communications services and a redundancy system in place to reduce the significant impact of outages.



"Obviously [outages] are going to happen, then what's the backup? ... This is a community that has unique needs [so] we need the right supports in place so that people aren't disadvantaged when those outages happen ... Some people [are] not able in their daily life to plan ahead [with] food in stock in the cupboard. 'It's] a day by day survival [so] as soon as an outage happens and people can't utilise their money ... then it impacts on the way that they are coping day to day."

– Margaret Hewett, as above, 2023

Telstra visited Galiwin'ku in May 2023 to hear concerns and announce planned upgrades (2023)

Coinciding with our research visit in May 2023, three Telstra representatives¹¹ visited Galiwin'ku to hear first-hand from community residents and agencies about their experience and concerns and to outline planned upgrades over the next year.

The planned upgrades included an upgrade to the Arnhem Fibre Network, which extends from Jabiru to Nhulunbuy, and provides backhaul capacity to communities across the Arnhem Land region. This was due for completion by June 2023. Beyond that, Telstra was upgrading the microwave links to the four island communities of Galiwin'ku, Waruwi, Minjilang and Milingimbi. The Galiwin'ku upgrade will include a new mobile tower at Galiwin'ku, and replacement microwave link from Mapuru on the mainland, with upgraded transmission hut, power supply and batteries.¹² It is not yet clear whether the mobile transmission capacity at Galiwin'ku will be upgraded to provide greater range. Telstra is also planning to upgrade the public telephones boxes to have free Wi-Fi, supplied via 4G fixed wireless links to each phone.

While there was some frustration expressed about how long it had taken Telstra to visit and to implement upgrades, we heard that many residents were pleased that Telstra had come in person.

- + "I think people were really glad to hear that they were out, and have responded in person. [Most responses to issues happen] via letters or emails, but it's another thing to actually come out and physically be a presence, and speak to people on the ground, so I think that was a really positive step by Telstra." (Margaret Hewett, Director, Connected Beginnings, Galiwin'ku, 2023)
- + "I personally appreciate them coming out [to] see the reality of this community and of this region. I think that was a really positive step [because people have been] waiting for them to come [and] listen to the voice of the people. [But] people aren't grateful because [upgrades] should have happened [already]. 'We've had so many years of terrible, terrible service ... I have not been able to download a PDF file after 5:00 pm in Galiwin'ku for four years. It's to that point of frustration where it's like, 'we'll believe it when we see it.'" (Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin'ku, 2023)

There were calls for Telstra to visit more regularly to listen to and address community needs.



"I got a lot of positive feedback and quite a lot of shock that [Telstra] were actually here ... having conversations with local people and listening. [It's important] that they follow through with their promise of coming more regularly [so people can] share more stories with them. [For] those people who were involved in the petition, quite a few years ago now, [we] actually thought, 'Oh my goodness we're being listened to.' And that can make a massive difference to community empowerment and wellbeing that actually we can make a change."

- Ros Beadle, Family and Schools Together, Galiwin'ku, 2023

¹¹ Telstra representatives were: Lauren Ganley, Head of First Nations Strategy and Engagement, Nic Danks, NT / SA Regional Manager, Lyndall Stoyles, Group General Counsel & Group Executive, Sustainability, External Affairs & Legal.

¹² Source: Nic Danks, NT / SA Regional Manager, Telstra.

Pre-paid mobile is the primary phone and internet access, with few fixed internet or phone services in First Nations households

Despite the limited mobile service in Galiwin'ku, mobile phones are the most common device for phone and internet access among Galiwin'ku residents. 84% of 2023 survey respondents own or share a mobile phone, with 100% of these using pre-paid services. Of the 91% of respondents who had used the internet in the last six months, 100% said they use their smartphone for internet access.

Despite mobile connectivity issues, 97% of 2023 survey respondents reported not having any form of fixed home internet. The 3% with fixed broadband all had nbn Sky Muster services, with no household ADSL services.

1% of 2023 respondents had a fixed line phone in their home (down from 4% in 2022). 26% reported using public phones as a means of making calls. There were an estimated eight Telstra public phones in Galiwin'ku and the surrounding suburbs, with several reportedly not working during both our 2022 and 2023 visits. 44% of respondents said that the nearest public phone was reliable.



Figure 17: Mobile phones are a primary means of communications and internet use

Mixed response to Sky Muster services, with rain fade a key issue

There is low uptake of Sky Muster services by First Nations households with only 3% with nbn Sky Muster in 2023. The reasons people gave for not using Sky Muster included that it only has a post-paid (billed) option, was unreliable in wet season, the data limits were insufficient, and the monthly costs were unaffordable.

The residences with satellite internet in Galiwin'ku are primarily agency staff or people with regular incomes. To order these services requires awareness of the providers and plan options available, and an online or phone order with site details, making these relatively inaccessible for Yolŋu residents.

- + “Quite a few people use SkyMesh within the school [staff]. But for [Yolŋu residents] I think the pre-paid Telstra is also what’s accessible at the shop, it comes down to what is available.” (Margaret Hewett, Connected Beginnings, 2022)

Sky Muster services was described as an important backup when phone services are not working.

- + “SkyMesh is really good. So when Telstra goes down we still have internet ... still connect with families and for me to do work as well if my internet’s down.” (Va Matarakura, Manager, Marthakal Motel, 2022)

However, other Sky Muster users reported a range of issues including speed, latency and unreliability during wet season. Many users are still on legacy Sky Muster plans and described the lack of data.

- + “I got a satellite [service] at my residence [but] I found [I] was using up their daytime data really, really quickly. [Peak data is only] 75 gigs [so if] you are streaming content [or] trying to do a video conference and stuff you will use that 75 gig very quickly [Off-peak has more data but] I’m not going to stay up to 1 am in morning just so I can do all my work, that’s not feasible.” (Shishir Kushwaha, Higher Education Program Coordinator, ALPA, Galiwin'ku, 2023)

Sky Muster Plus plans partially addressed the increased demand for data by making data use unmetered until 4 pm daily, with monthly data limits only applying to video and VPN use.¹³ In late 2023, nbn introduced a new high-speed Sky Muster Plus Premium product. This provides unlimited data use and download speeds of up to 100 Mbps for a monthly cost of between \$59 and \$99. While this is more affordable than Starlink, it is more prone to dropouts during rain or heavy cloud.

However, we heard calls for more household internet access to reduce cost of pre-paid mobile data use.

- + “I feel that there is a real sense of inequity that families here can't have some kind of Wi-Fi at home and to even have the capacity of having a plan for internet. [I live in] a Department of Education house [and pay only] \$80 a month [for an] ADSL plan, [which is a lot] less than these families who are having to constantly top up their phones ... a lot of money [is spent] on phone credit every month.” (Ros Beadle, Family and Schools Together, Galiwin'ku, 2023)

There is increasing take-up of Starlink, particularly by agencies and staff (2023)

While we did not hear of any Starlink uptake during our 2022 visit, there were several agencies and staff with Starlink installed during our 2023 visit.



“People are going to Starlink ... One of the council offices [is] changing to Starlink because the internet is so slow, you just can't do anything.”

– Tia Roko, Yalu Indigenous Engagement Coordinator, Galiwin'ku, 2023

Other agencies said they were considering getting a Starlink service, particularly due to frustration with speed, download limits, or unreliability of existing services.

- + “[If the ADSL isn't fixed soon we may] just get Starlink so we can run our business. Because at the moment, we cannot and that's very, very disruptive ... More and more people are actually shifting [to Starlink] because unfortunately, Telstra has been unreliable ... It wasn't built for the types of services people are using. [During outages the only places with connectivity were] those with satellite connection, hence why more and more are shifting [to] that option.” (Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin'ku, 2023)

Resident and AFL NT staff member Christopher Alchin had just installed Starlink at his house when we visited in 2023. He described how easy it was to install and use.

- + “[It took] less than half a day to install [the Starlink dish], get the app, download it, get that all connected ... I [had to] download the applications to run Starlink [from 4G], from there onwards it's smooth running. [With Starlink it only took] two minutes to download a two and a half hour movie. [With ADSL] it'd take probably a day and a half to download.” (Christopher Alchin, AFL NT, Galiwin'ku, 2023)

ADSL is relatively reliable, but users described slow speed, outages and connection delays

Residents with ADSL service described the services as slow but relatively reliable, even when the mobile services is congested. According to Telstra, this is because there was not as much demand on ADSL services, which had dedicated bandwidth, with only 44 of 367 ADSL ports available being used as of May 2023. During wet season, ADSL was reportedly more reliable than Sky Muster.

¹³ Source: <https://www.nbnco.com.au/corporate-information/media-centre/media-statements/nbn-sky-muster-plus-satellite-service-now-offers-more-data>



"[In] bad weather, which is for four or five months of the year, [Sky Muster services drop out]. ADSL connections aren't as fast but [are] just so much more reliable. [It] doesn't slow down much in the evenings whereas the mobile phone network becomes unusable."

- Stephen Henderson, Resident/ Community IT Support, 2022

- + "I've got little kids at home, so it's nice to know that in an emergency we've got access to [ADSL and] the landline [if the mobile service is not working]." (Rosalind Beadle, Support Worker, Families and Schools Together program, 2022)

However, some agencies using ADSL as their primary internet service described this as very slow and unreliable, especially during peak use periods.

- + "We have a Telstra business account. We have currently three business lines that are connected [to] ADSL to provide us internet ... Our original office and research hub ... cannot get internet at all [so] our project coordinator has to work out of here half the time [and] our chairperson [can only work] offline. [It's] virtually impossible to actually work." (Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin'ku, 2023)

We heard reports of multiple requests and long delays to try to get ADSL services fixed.

- + We have reported it and we've reported it and we've reported it. They have changed the lines once. They said that it was ants in the cable and I believe they replaced them. We reported it again last week [and] they've advised me to call the fault line. So that's as far as we've gotten [in two years]." (Anahita Tonkin, as above, 2023)

We also heard reports of difficulties getting home fixed-line phones or ADSL services connected.

- + "I know a couple of Yolŋu families who do want internet in their household ... even houses which have previously had copper running to them, Telstra seemed to be saying to them now that there is no more ADSL slots in the exchange." (Stephen Henderson, Resident/ Community IT Support, 2022)
- + "My husband and I [depend on] internet at home [for our work. It took] almost three months [to get ADSL installed after] weekly telephone calls to Telstra ... One of the big barriers [is houses have] a lot number [but] Telstra just relies on the standard address system. [Even the Telstra technician] struggled to identify the address. [A] lot of staff [in] Galiwin'ku have given up on Telstra and go with satellite." (Rosalind Beadle, Support Worker, Families and Schools Together program, 2022)

For Yolŋu residents, these obstacles can be even more challenging.

- + "You need ... good communication skills [to use a helpline so] for a lot of people here, for whom English is their second, third, fourth language, to have to navigate that is endlessly frustrating." (Rosalind Beadle, Support Worker, Families and Schools Together program, 2022)
- + "For many of our community members [it] is a tricky thing [to communicate in English with] well-meaning Telstra consultants who don't understand the context." (Margaret Hewett, Connected Beginnings, 2022)

Telstra now has a First Nations Connect helpline,¹⁴ however there was little awareness of this service in Galiwin'ku.

¹⁴ First Nations Connect (Ph: 1800 444 403) was started in March 2021 to assist First Nations people to navigate these language issues. Source: <https://exchange.telstra.com.au/supporting-indigenous-customers-with-new-centre/>.

Cost and timeliness of technical support is a critical issue

Maintenance of IT and satellite equipment is a recurring and costly factor for agencies and residents. Climatic factors of wet season flooding, humidity and coastal winds and cyclones impact on communications equipment. However, with no technicians living in Galiwin'ku, most technical support comes from Nhulunbuy or Darwin, resulting in high costs and delays in getting IT equipment or support.

- + “Marthakal [IT contractors] come out I think every six months and go through all of Marthakal for IT issues ... They're here for a week, yeah, and they just go through each of the entities to fix any problems.” (Polly Holt, Manager, Elcho Arts, 2022)

Marthakal Motel reported having outages of up to three months while waiting for a Telstra technician.

- + “[Telstra] don't come out like until they have [enough] other jobs to do in the community ... Unless it's really bad they [don't] come out.” (Va Matarakura, Manager, Marthakal Motel, 2022)

There appears to be little coordination of technical support arrangements between agencies. This could reduce expenses associated with technician travel and remote area delivery.

Access to IT devices, Wi-Fi or shared facilities

Community access facilities are needed for developing digital skills and supporting usage

The most common reason that regular internet users gave for not using the internet more often, after cost, was “I do not have convenient access to the internet” (88% in 2023, 51% in 2022). Of the 9% of people who rarely or never used the internet, 83% cited “no convenient access” as their main reason on a multi-choice question.

There was demand from residents for a space for using online services, conducting research, and working on digital projects, including language and culture projects. With few home computers, community access computers are needed for digital skills development, such as learning keyboard skills and work-relevant applications, and gaining confidence with using online services.

The small library, run by EARC, re-opened in February 2022 following closure during the pandemic. There were no community access computers in the library at the time of our visits in 2022 and 2023, with outdated devices disposed of and not replaced. Research participants suggested that the library could take on a stronger role in terms of digital inclusion initiatives.



“The library could do so much [to] increase awareness about how to utilise technology, [to] have a safe area to do your studies, [or] for printing [and other services].”

– Christopher Alchin, Healthworker / IT enthusiast, 2022

Interviewees urged the need for a better equipped internet access facility in Galiwin'ku.

- + “[With] like 3,000 population here they need that space [to do] their online banking, online shopping. [The library is] an old building, we need to have a proper building with [about] five or six [computers] so people can just come in and help each other to do the job.” (Jane Garrutju, Chairperson, Marthakal Homelands, 2022)

EARC offered to investigate options for replacement computers and employing a second library officer with digital skills to provide mentor support. EARC also advised that there is a large conference room in the office building which could be used for IT training activities.

The only community access computers we identified were in the ALPA Higher Education Centre, which has a lab with five laptops for use by higher education students, but also allows community access.

- + “Now we’ve got our new training centre here [I’m] hoping that more people will come in and utilise [it]. They don’t need to do a course, just the basic stuff I can help them with.” (Uilelea Uilelea, former ALPA Higher Education Program Coordinator, 2022)

There is support for more public Wi-Fi in Galiwin’ku, but concerns around night-time access

The only public Wi-Fi access in Galiwin’ku is at the NT library, although this was described as quite slow and has daily data limits per device. With high levels of congestion on 4G, a free Wi-Fi service would enable access to critical online services.



“People need Wi-Fi] Because when the signals down in Galiwin’ku ... they need internet, like Wi-Fi, to use [online services].”

– Verity Burarrwanga, EARC Post Office, Galiwin’ku, 2023

- + “The community need to have a public Wi-Fi [at the] shop [and] basketball courts.” (Jerome Lacey, Galiwin’ku Youth Sport and Recreation, 2023)

There were also calls for Wi-Fi to be available in Buthan where there is very poor mobile reception. While some thought the store would be the appropriate location, others felt this was not suitable.

- + “Buthan should have Wi-Fi public to use [in] the public community area ... Because at Buthan shop they use with password ... They always ask the manager, but we need a public one to make it easier and just connect it.” (Verity Burarrwanga, as above, 2023)
- + “[Buthan needs Wi-Fi but the] kids hanging around the store, more things that may happen negative-wise within the store itself. [Maybe the] oval or youth [centre would be ideal so it] creates a bit of evenness within the facilities.” (Christopher Alchin, AFL NT, Galiwin’ku 2023)

However, elders raised concerns about Wi-Fi services being accessible by young people at night.

- + “Some kids hang around the organisation or the department [at night] just to use Wi-Fi. [This makes the kids stay up] really late and their [school] attendance is going down ... Kids need to understand [that] the parents buy phones for them to communicate with them ... not for some other reasons.” (Jane Garrutju, Chairperson, Marthakal Homelands, 2022)

We also heard that there had been issues when Wi-Fi was previously available at the recreation hall.

- + “They did at one point have Wi-Fi that was publicly accessible [at the rec hall but] I don’t think it was promoting good behaviours outside of the rec hall because they were here late at night ... It wasn’t a good outcome [so was removed].” (Lilly Kerr, Coordinator, Galiwin’ku Youth Sport and Recreation, 2023)

Some First Nations communities in central Australia have set curfew times on public Wi-Fi to address this challenge.

Service Delivery and Use of Online Services

Connectivity is critical to service delivery in Galiwin'ku

Service providers use a range of communications technology for engaging with clients and stakeholders, including email, phone, text messages and Facebook, depending on the client's access to communications.

- + "I send out an email to all the stakeholders [and] put posters around. [Our] social media person [posts] it onto the council Facebook page and the Elcho Island Facebook page ... that usually reaches a few people." (Melissa Jones, Community Development Coordinator, EARC, 2022)

Reliable connectivity is critical to running a business or program.

- + "[We] rely on the use of phone [and] internet connectivity, which obviously is always a challenge ... We are required to report [and] be on Teams meetings [with] any business in Australia. [We use videoconferencing for] our board meetings [and for] family visits [with incarcerated children and to] host [inter-agency meetings]. [Reliable connectivity is] absolutely crucial for us and as we are expanding ... beyond just Galiwin'ku [we need it] more than ever." (Anahita Tonkin, CEO, Yalu Aboriginal Corporation, Galiwin'ku, 2023)

Agency staff found that mobile communications has improved their ability to communicate with staff and co-workers, and improved productivity.

- + "The Yolŋu staff who I work alongside here all have phones, and [are] contactable. It does give a different level of productivity to work, and I think being able to communicate over that medium ... when it's being used in the right way, can be incredibly valuable." (Rosalind Beadle, Support Worker, Families and Schools Together program, 2022)

Unreliable communications impacts on service delivery and reporting

However, we heard from services providers about numerous challenges due to unreliable connectivity.

- + "[We] depend on [Telstra mobile for connectivity but it] seems to constantly be failing us ... We've had big periods when there's been Telstra outages [where] we've just literally [had] to pause [our programs]. We've become reliant on [mobile connectivity so] when it's so up and down it can be a little bit frustrating ... It's constantly inhibiting us having our meetings with people that we depend on outside the community. [A] lot of organisations have head offices or managers who sit outside the community and you've got to have regular contact with them, regular meetings." (Ros Beadle, Family and Schools Together, Galiwin'ku, 2023)
- + "We use the internet to [send] reports of the programs we run. [For reporting we] upload a couple of photos [to] a Google form [but most nights that] doesn't work because the internet is really slow and it times out ... So I have to wait for the Wi-Fi in the morning to report the next day." (Lilly Kerr, Coordinator, Galiwin'ku Youth Sport and Recreation, 2023)



"We can't do a Teams meeting without someone freezing at least 36 times. Not being able to hear it, having to dial in again, having to dial in with a different device ... We cannot do [online training with staff in other communities because] the connection isn't there [so] we fly them into Galiwin'ku and do training with them on the ground. [And] we always submit [funding reports the] day in advance to have that buffer. [Outages have caused us to be] late with things before, which then impacts our funding, which impacts our business, which impacts our payroll and so on."

- Anahita Tonkin, as above, 2023

Anglicare run the Money Support Hub East Arnhem, a financial wellbeing program for people in East Arnhem communities. Poor connectivity impacts their ability to support clients when they visit Galiwin'ku.

- + "I visit Galiwin'ku once a month for three days, so I've got a bit of experience with the internet and the problems that my clients face. [Beyond early morning] we find it quite difficult to [help clients to] look on their ATO in MyGov or just anything to do with the internet ... we're just waiting, waiting, waiting and nothing happens. [Some] clients might just walk out and go 'I'm not even bothering' because they deal with this all the time [and] they end up getting [in] a more worse place financially." (Monique Achterberg, Anglicare, Galiwin'ku 2023)

The lack of phone connectivity and email usage amongst residents impacts the ability for service providers to communicate with clients. East Arnhem Real Estate (EARE) staff found it easier to drive to clients' houses due to lack of email communications.

- + "So we must visit homes ... Out of the eight clients that we visited, one person had a mobile number and an email ... All the other clients had [either] no email or no mobile phone ... When I sent emails, I didn't get a response ... [And I was sending] a PDF document that they would have to click on and download." (Hannah Fincham-Thomson, EARE, 2022)

Cloud-based and automated systems are increasingly used by service providers and software companies. While this can improve record-keeping and data management, these systems can have issues when the internet is not reliable. Hannah Fincham-Thomson from EARE described issues in using online applications while doing an audit in Galiwin'ku for the Living Strong housing program.

- + "We are trying to go paperless and so we have [our forms on] iPads and devices ... to prevent having to print and scan [but] because the connectivity is so poor we're struggling to roll that out in Galiwin'ku ... Trying to download anything or upload anything it just takes such a long time [so] being productive with your time in Galiwin'ku is very challenging." (Hannah Fincham-Thomson, EARE, 2022)

Local businesses are impacted by unreliable communications

Marthakal Motel is a business enterprise of MHRAC, while relies on good connectivity for bookings.

- + "It's really important to have this network going smoothly ... When there's no internet [people can't] make a booking. [It's] difficult for us [to] run a business." (Va Matarakura, Manager, Marthakal Motel, 2022)

Marthakal Motel called for a more resilient network, having experienced extensive outages during wet season and long delays in getting technical support.

- ✦ “[Two years ago] we went out without internet was three months. [And this last] wet season [a] big storm really damaged the network ... We put in a job to our IT services and [they] put it through to Telstra and it can [take up to] a month for them to respond.” (Va Matarakura, Manager, Marthakal Motel, 2022)

Improved communications are needed for homelands where people operate small businesses and tours.

- ✦ “[Some homelands] are running shops [or] small business, they're running tours. That also can help build the business on country.” (Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022)

Elcho Arts also need a more reliable internet than their current 4G service, which has regular outages.

- ✦ “Once we get our online shop and database and everything up and running [it would be good] to have a quicker [service to manage sales and not always] dropping out.” (Polly Holt, Manager, Elcho Arts, 2022)

Challenges with use of internet banking and other online services

While Galiwin'ku has a Traditional Credit Union banking service in the central office precinct, people with other banks have to use internet banking or pay fees. Participants in our research interviews called for a more coordinated banking service.

- ✦ “[With] limited options for banking outlets [a support person is needed] who's not attached to a bank but can represent a range of banks. [Maybe the TCU bank could have] an MOU around access [and] cash out or balances to be without the charge.” (Margaret Hewett, Connected Beginnings, 2022)

Of the 91% of 2023 survey respondents who used the internet within the prior six months, 67% had used online banking, 63% had accessed online government services (e.g., Centrelink, MyGov, licensing etc), and 45% had done online shopping.

Since the abolition of CDEP (Community Development Employment Projects) program in the late 2000s, Yolŋu have had to deal directly with Centrelink, including navigating the online system and helpline.

- ✦ “[With] community control around income [under CDEP removed] people were directly communicating with Centrelink. [They] have to navigate that system, either speaking to someone on a phone, or having to do it online. [That] was very stressful and required a lot of support, from particularly non-Indigenous people around them.” (Rosalind Beadle, Support Worker, Families and Schools Together program, 2022)

The shift to debit cards by some banks has enabled online shopping access and more affordable choices.

- ✦ “[Previously staff would have to help people] buy things online. They would just bring cash and you'd help them by buying it on the credit card [because] all they had was a key card ... [now Yolŋu people have] the ability to purchase things at a reasonable price.” (Margaret Hewett, Connected Beginnings, 2022)

However, with multiple online accounts and shared devices, retaining log-in details can be an issue.

- ✦ “[It can be] a challenge to try and keep all those numbers [and ID documents] together. [People have] small scraps of paper and bits and pieces with different account [and PIN] numbers [so I help] type them up a nice sheet and laminate it.” (Stephen Henderson, Resident/ Community IT Support, 2022)

Low levels of English literacy by many residents creates another significant barrier to using online services and phone helplines.

- + “Some people are shy and illiterate. [They need help from] someone to just do their claims or whatever.” (Jane Garrutju, Chairperson, Marthakal Homelands, 2022)
- + “We [regularly] deal with ... Westpac and Centrelink [where] the Yolŋu person relays information to me in English and a bit of Yolŋu Matha and I try and understand [and] relay that on [but] that is difficult. [For example], somebody was waiting for a card from Westpac. [We] rang Westpac [and they] cancelled that card and reissued a new one [but I] subsequently found out that the card had come but just wasn't activated.” (Stephen Henderson, Resident/ Community IT Support, 2022)

The slow network speed is also a barrier with many online services not working properly.

- + “The problem is when the network is so congested and you're typing and passwords and pages [not] uploading properly [and] timing out. [Sometimes] you click a submit button [and] it just won't respond. [It's] difficult to know what the actual issue is [so people give up].” (Stephen Henderson, Resident/ Community IT Support, 2022)

Regularly changing phone numbers affects communication and two-factor authentication

There is high turnover of mobile phones, with people typically purchasing a new SIM when replacing their phone rather than porting their former number. Constantly changing numbers can affect communication by family and service providers, and require updating of contact details with service providers to maintain use of two-factor authentication.

- + “I've helped people log in to Westpac or whatever ... you get the two-factor authentication and they've got a mobile phone in front of them but the message doesn't come, and they're like, my sister [or other family member] has got that phone ... So that's definitely a factor in terms of not having a number that's linked to them.” (Stephen Henderson, Resident/ Community IT Support, 2022)

New SIMs are often sold with bonus data, which incentivises the replacement of the SIM and getting a new number. We have encountered very few people who have ported a previous mobile number to a new SIM, due to limited awareness about the process and lack of support to do so in most communities.

New SIM activation is also challenging, requiring an email address and alternate contact.

- + “I must have 20 Telstra phones registered in my name because when people need their Telstra account activated ... you need the ID and the email address and the Telstra account and it's too hard, so I just activate it on my account.” (Stephen Henderson, Resident/ Community IT Support, 2022)

Digital tools can improve service delivery, client communications and reporting (2023)

In 2022, Elcho Arts were developing a new website with an online shop for promotion and sales of artworks, and were keen to promote their work using social media. They recently installed the Story Arts Money (SAM) database for their art cataloguing and sales records, integrated with their online sales.

- + “We just started [using the SAM database] to enter all the details of the artists and art works and hopefully everything will be online which we haven't had in the past.” (Megan Yunupingu, Artsworker, Elcho Arts, 2022)

This has improved their record-keeping and sales capability compared with previous offline systems.

- + “[We] had to manually upload everything [into Excel] because we didn't have a database. ... we manually had to take photos, upload it all. ... [Now] we can run a consignment and SAM can upload it through to the Darwin Art Fair.” (Polly Holt, Manager, Elcho Arts, 2022)

Connected Beginnings was developing an app to inform parents of their child's progress and health needs.

- ✦ "That will [enable parents to] follow the pathway of their child from birth right up to school with little hurdles like immunisations, health checks. [It will provide] reminders that this is happening or that your child is eligible. [This will help] families get the right information." (Margaret Hewett, Connected Beginnings, 2022)

Access to media and new services

Local media and information channels

Effective modes of communication are critical to ensure residents are aware of local news or activities. In Galiwin'ku, news and information is shared through a range of channels, including:

- ✦ Radio services – Yolŋu radio (ARDS), TEABBA radio, ABC Radio Darwin
- ✦ Websites and Facebook pages – East Arnhem Regional Council, Elcho Island Facebook, Yalu etc.
- ✦ Community noticeboards and distribution of flyers
- ✦ Public Address (PA) announcements.

The use of local information sources enables delivery of reliable and trusted information, including in language, to counter misinformation spread via social media.



Figure 18: TEABBA Radio poster

With limited access to television and home radio in Galiwin'ku, Facebook and other social media platforms have become primary sources of news and information. Our 2023 survey found that Facebook is the second most common source of news and information (33% daily), after direct and in person communications (89% daily). These were followed by local noticeboards (14% daily) and First Nations radio services (Yolŋu Radio and TEABBA) (11% daily).

Some interviewees raised the limited access to reliable and trusted news sources as a concern, with high levels of misinformation spread via social media.

- ✦ "I'd say probably maybe half of the information they get is from Facebook ... That's dangerous." (Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022)

Several organisations use Facebook to communicate their activities, as it is a primary means of communication for many Yolŋu residents. However, there is an awareness that not everyone has Facebook or a smartphone.

- ✦ "I get annoyed if people purely give out information on Facebook ... What about people that aren't on Facebook? How are they going to get the information? [Not] everyone's got a smart phone ... How are you accounting for elderly people [or those without phones]." (Melissa Jones, Community Development Coordinator, EARC, 2022)

The EARC Council still uses a public address (PA) system to get messages out each day, with networked speakers on the central office, the Marthakal Homelands office, and Buthan store.



“[The] community announcement [comes through] speakers all around community ... That’s the main information we’ll get [about] things that are important in community. [They give] updates around funerals and meetings [and] hearing ceremony, sports activities. [Sometimes they give] warnings not to go to the beach because the crocodile there, jellyfish ... Cyclones ... Once they did one [telling] young people to talk to somebody if they’re feeling concerned about wanting to commit suicide.”

- Various speakers, Galiwin’ku Youth Sport and Recreation, 2023

- + “Usually [an elder talks about] scams [or] kids breaking in and stuff ... They support and encourage the kids.” (Verity Burarrwanga, EARC Post Office, Galiwin’ku, 2023)
- + “[This morning It was used] five times ... one after another, people making announcements. [It gets used for] ceremonies with bodies arriving anything, like AFL [or school activities].” (Melissa Jones, Community Development Coordinator, EARC, 2022)

Yalu also use their website and social media channels to promote their activities to the community and external stakeholders.

Very few households have free to air television services in Galiwin’ku

Our 2023 survey found that 93% of households did not have VAST television services working. This is a significant issue in terms of adding pressure on the already congested mobile network for accessing entertainment, increasing household costs for pre-paid data and shifting the primary means of accessing news and information to less reliable sources on social media platforms.

The lack of household TV services is addressed in more detail as a case study in Section 6.

First Nations radio services are primary services but there is limited access

Galiwin’ku receives two First Nations radio services. Yolŋu radio is delivered from Nhulunbuy to six major communities and 15 homelands in the north-east Arnhem region by ARDS,¹⁵ primarily in Yolŋu Matha languages. The TEABBA¹⁶ radio network delivers services to 29 Top End communities from their Darwin studios. These primary radio services provide locally relevant news, information, and music to the community.

- + “[Services] like Yolŋu radio, when that’s running well, people do enjoy it and there’s lots of news shared on that platform.” (Margaret Hewett, Connected Beginnings 2022)

42% of those surveyed said they listen to the First Nations radio service (Yolŋu Radio and TEABBA) daily or weekly (up from 33% in 2022), compared with 14% listening to ABC radio daily or weekly. However, 13% said they never listen to radio. There is low home radio access, with 66% of respondents listening via streaming on a phone or tablet, 52% via car radio, 20% with a radio at home and 16% via radio in places other than home or car. Interview participants highlighted the potential role that improved radio access could provide in terms of communications.

¹⁵ Aboriginal Resource and Development Service. See: <https://www.ards.com.au/about-2>

¹⁶ Top End Aboriginal Bush Broadcasting Association. <https://www.teabba.com.au/>



"It's one of the key ways that people get information, however, I don't think there's a huge amount of people listening to it regularly. Often, when I go around community, the workplaces might have TEABBA or Yolŋu Radio on [but] people don't [have] the radio at home. [It] needs to be made more accessible to people."

- Kaye Thurlow, long-time resident/ former Manager, East Arnhem Regional Council, 2022

- + "I know it gets played in the store, maybe in your car, but ... if we're broadcasting announcements and things like that, are people actually hearing it? [It's] really hard to listen to radio online here." (Melissa Jones, Community Development Coordinator, EARC, 2022)

With 100% of those surveyed speaking a language other than English at home, programming in language is crucial.

- + "People switch off when it's English only. [They say] 'My head's full up with English, I need to have a break' ... Yolŋu Radio or TEABBA is really vital for people to have greater access to the information in their own languages." (Kaye Thurlow, long-time resident/ former Manager, East Arnhem Regional Council, 2022)

East Arnhem Regional Council is responsible for operation of the RIBS radio station, located in the EARC office, as well as employment of the RIBS broadcaster. While James Bayung has worked as RIBS broadcaster intermittently, there was no broadcaster in Galiwin'ku during our two visits.

- + "[EARC] gets funding to run a media centre in five communities of our nine, and they've only got two operating at the moment ... They've got some good workers, but they're only employed part-time [three hours per day, which limits Centrelink eligibility]. It's [sad] that we can't get a stronger local media centre operating." (Kaye Thurlow, long-time resident/ former Manager, East Arnhem Regional Council, 2022)

Reliability of radio services had also been an issue in Galiwin'ku.

- + "[The Yolŋu radio signal is] not good [here]. I can't get it in the troopie anymore, because the kids ask for it ... So we just listen to Spotify or YouTube instead." (Lilly Kerr, Coordinator, Galiwin'ku Youth Sport and Recreation, 2023)
- + "We quite often have issues with the radios going off. I heard Yolŋu Radio for the first time on the weekend all year. TEABBA [is] not working at the moment ... Wet season can be pretty detrimental to the transmitters." (Melissa Jones, Community Development Coordinator, EARC, 2022)

To improve reliability, EARC have relocated all broadcast and communications equipment¹⁷ from the old transmission room into a new air-conditioned sea container beside the broadcast tower. TEABBA also completed rollout of a Wide Area Network radio system in November 2022 to deliver targeted content and improve reliability through remote monitoring and support to reduce outages.

¹⁷ This includes Yolŋu Radio, ABC services and communications equipment for EARC and Arnhem Land Progress Association.

Demand for online entertainment and gaming has increased

Just as in other parts of the country, there is growing demand in Galiwin'ku for streaming services for movies and TV series, news and sports, and music, as well as online gaming. The lack of free-to-air TV services¹⁸ has further increased demand for online platforms to access media and entertainment, especially for young people.

- + “Young people [use] a lot of social platforms [like Instagram, Facebook, AirG]. They use iPads or iPods to listen to music [and] through Spotify. [They are] watching YouTube [and TikTok]. Kids upload a lot of games [on their phones], puzzles, fishing [and flying] games ... That's what I see kids are playing today. [I] have a PlayStation PS5 [and I do gaming with] players around the world.” (Cyril Bukulatjpi, Media Officer, Yalu, 2022)

The expanded use of streaming services and gaming has contributed to congestion on the 4G network. It is also a significant cost burden given most users are reliant on pre-paid mobile services.

While online gaming is becoming popular among young people, accessing the speed and low latency needed is most possible after midnight when there is less congestion on the 4G network, leading to school attendance issues.



Figure 19: Discarded pre-paid voucher

Affordability

Cost of living is very high in Galiwin'ku (2023)

Due to Galiwin'ku's remoteness and all supplies coming via barge, cost of food, fuel and other essentials is very high. Increased transport costs impact people's ability to purchase large items such as cars.

- + “[Lack of fridges working so people] rely on being able to go to the shop to get what they need for that meal, or at that time, knowing that they could then do the same thing again the next day. And likewise, again, the cost of barge [has increased], you used to be [able to] freight in a car, let's say, which is a big, big thing for around \$1,400–\$1,500. Now it's up at \$2,300, \$2,400. And this is in the space of 12 months ... On top of buying the car.” (Margaret Hewett, Director, Connected Beginnings, Galiwin'ku, 2023)



“When community members go to the store to buy the week's groceries [they pay] inflated prices because of freight. [So] the cost of living [is] a lot higher. There's a lot of people living in houses, so there's a lot of strain on the people that do bring the income ... And then you've got the cost of fuel if they've got a vehicle ... And then the kids on the mobile phones ... Poverty [is] in your face when you go to Galiwin'ku ... It's their land, it's their country [but] they struggle to be able to survive in their own communities because of these costs, which is exceptionally unfair.”

– Monique Achterberg, Anglicare, Galiwin'ku, 2023

¹⁸ See case study about lack of VAST TV services in Section 6.

Affordability of pre-paid mobile data is a significant concern

Affordability of internet access is a key issue due to low incomes and high rates for pre-paid data. In our survey, the second most common reason given by respondents who used internet within the last six months for why they don't use the internet more often was, "The internet is too expensive for me" (77% in 2023). 67% of low or non-users also reported cost as a key reason for not using the internet. 13% of 2023 respondents said they often or always cut back on essential household costs to afford personal or household internet within the past six months, with 53% saying they sometimes cut back.

Galiwin'ku households have an average of 4.7 mobile phone services and are paying an average of \$148 / fortnight for mobile phone use (up from \$214 / month in 2022), with 47% of survey respondents reporting a household expenditure of \$101–\$200 / fortnight and another 24% paying \$201–\$300 / month.

With the cost of Telstra pre-paid mobile vouchers having increased in mid-2023, the most commonly purchased recharge vouchers have gone up from \$30 to \$35 (with data allocations increasing from 10 GB to 15 GB). While a relatively small increase, there were concerns that this would add further pressure to household budgets. Following feedback from Galiwin'ku residents and the First Nations Digital Inclusion Advisory Group, Telstra are undertaking trials of more affordable pre-paid vouchers in First Nations communities.¹⁹

With regular outages, the 28-day period for most pre-paid vouchers can run out before users have been able to access services or data they have paid for, making the increased data allocation irrelevant to many users much of the time. There is little opportunity for remote consumers to have this addressed.

- + "There's certainly a big cost, especially when you've paid for pre-paid [top-up], and then there's no service [so they can't use] what they've actually paid for. And the process then for actually rectifying that is so lengthy [that people] just let it ride. And then that's money [been] spent, but haven't been able to [use the service. During outages the] expiry date for their pre-paid is obviously ticking all the time." (Margaret Hewett, Director, Connected Beginnings, Galiwin'ku, 2023)

There is little shift towards post-paid mobile plans, partly due to negative experiences (2023)

Despite pre-paid data rates being considerably higher than post-paid plans, our 2023 survey found that 100% of people with a mobile phone have a pre-paid service. While this is likely due in part to pre-paid phones being the only option available in the local stores, it is also preferable because it enables people to pay what they can afford, rather than commit to a monthly billed service they may not be able to afford when it comes due.



"My concern is the excess data charges because that's what gets people into a lot of trouble out here ... People will look at a plan and think 'oh \$60 a month, yes we can afford that'. [But] if they're on post-paid, they get their first bill and it's \$1,000, and then they wonder why and then it doesn't get paid. And then the service gets cancelled. [On] a pre-paid [plan] if the data runs out [they can] recharge [when they can afford to], they don't have to go through that whole process [of re-activating services]."

– Monique Achterberg, Anglicare, Galiwin'ku, 2023

Some people referred to negative experiences with post-paid bundle plans that were unaffordable. Numerous Galiwin'ku residents were impacted by the mis-selling practices of some Telstra shops,

¹⁹ A 2023 trial was undertaken to sell Boost pre-paid vouchers in community stores, which have cheaper data rates than Telstra pre-paid vouchers. However there was low uptake, with Telstra now exploring other options.

including in Darwin, which led to action by the Australian Competition and Consumer Commission against Telstra in 2021.²⁰ Anglicare provides support for victims of mis-selling to seek compensation.

- ✦ “Sometimes we help people with the Anglicare mob [including] people [who] lost their money [through phone plans]. Because I heard that some of the people get phone for free in Darwin ... Sometimes they take all the money off from that person, and they receive a mail from Telstra saying that they're still paying off, but more than [they can afford]. And then the Anglicare mob help the people, and contact me and Esther [to help] fill out the [compensation] forms for those people [to get] their money back ... Some of them are sorted out, but some of them are still struggling. [And] when the phone is broken, they're still paying it off.” (Verity Burarrwanga, EARC Post Office, Galiwin'ku, 2023)

Telstra have significantly changed their selling practices since that time, no longer including devices in post-paid bundles, simplifying plan options, not charging excess usage fees, and having month-to-month plans rather than fixed term. However, there is low awareness of these changes and limited information available about telecommunications plans or managing costs.



Figure 20: Telstra pre-paid phones in the ALPA store

While some people on a reliable income said they would be interested in getting a post-paid plan, without access to a Telstra shop or support person they found the online application process too difficult.

Cost of devices is also a concern, with high device turnover

The cost of smart phones and devices was raised as an issue, especially with limited options available locally. Because of the high cost of mobile phones, these are often shared between couples or within families.

- ✦ “Most people need a phone, and that’s something that’s often shared between family members, and passed around.” (Margaret Hewett, Director, Connected Beginnings, Galiwin'ku, 2023)
- ✦ “[I] have to buy my own phone always [but] my three kids always [tell me] I have to give them. But my new phone I am not going to give it to my son.” (Joanne Wanambi, Family and Schools Together, Galiwin'ku, 2023)

With high demand on smartphones as entertainment devices, we heard that some people use non-smartphones to reduce requests from children or others.

- ✦ “Many people are still running the flip style mobile phones [to reduce humbug.] So you can't text them, and they can't watch, anything like that.” (Hannah Fincham-Thomson, East Arnhem Real Estate, 2022)

The lack of access to devices, along with affordability and skills, can limit access to critical services.

- ✦ “[Most of our clients] don't have computers, so the only access they do have is on their phones. And a lot of the older clients ... don't have mobile phones either, so they have no access [or they] have a phone but don't know how to [access a service and] keep using it. So there's a whole lot of compounding issues [around digital ability and] not being able to afford it, even if they do have that access.” (Monique Achterberg, Anglicare, Galiwin'ku, 2023)

²⁰ <https://www.accc.gov.au/media-release/telstra-to-pay-50m-penalty-for-unconscionable-sales-to-indigenous-consumers>

Joanne Wanambi is the coordinator of the Family and Schools Together program and is provided a phone to do her work. However, she told us about demand from family members to share the work phone.

- + “I spend \$70, \$60, \$80 [a fortnight on data]. Even the six rooms crowded [in my house]. They're always, ‘Can I borrow your phone. I ring Basic card or I ring Telstra’. They always use [my] work phone but I have to give them ... I said that work phone please. You have to get your own phone.” (Joanne Wanambi, as above, 2023)

High use of mobile phones and data by children is increasing household costs (2023)

High uptake of online streaming services and gaming, particularly by young people, has increased data usage and weekly costs, with demand on parents for top-up when data runs out.



“[Kids always] ask mother or family for their phone so they can watch the YouTube. [My grandchild is] always watching, connected on phone, TV ... Kids love to see but it cost a lot to recharge ... You have to pay credit every [day], \$30 at the shop.”

– Joanne Wanambi, Family and Schools Together, Galiwin'ku, 2023

There is also high demand on parents or grandparents to buy mobile phones for children.

- + “Even the little ones ... I've seen them in the shop, they don't cry for toys, they cry for their mother to buy them phones.” (Va Matarakura, Manager, Marthakal Motel, 2022)
- + “One phone can be often shared between family. But sometimes the parents might have a phone, but in the night [kids may] take the parents' phones while they're sleeping and they might not see them again because the kids will be playing with them, pass around, and all of a sudden the phone's broken ... start again situation.” (Miranda Rielly, Connected Beginnings, Galiwin'ku, 2023)

Digital Ability

Digital ability levels in Galiwin'ku are relatively low, especially for elders

The overall digital ability score for Galiwin'ku based on our 2022 surveys was 41.0, a gap of 23.9 compared with national non-First Nations averages and 4.1 below the remote First Nations average. Digital ability scores in Galiwin'ku ranked seventh of the ten remote communities visited in 2022, with this result consistent across the various indicators of digital ability.²¹

This suggests that more dedicated programs and support services are needed to improve digital literacy in Galiwin'ku in order for residents to independently and safely use online services, access news and information, communicate with family and service providers, and have the digital skills needed for employment or economic opportunities.

As outlined on page 7 of this report, the levels of digital literacy in Galiwin'ku vary widely between demographic groups. Respondents who are elderly, have lower education levels, have limited spoken or written English literacy, or do not have internet access generally have lower levels of digital literacy.

- + “The elderly are [often] not well versed on the use of mobile phones and that's really something that needs to be looked into. [Sometimes] elderly people [ask us for help to] communicate with their partners who may be in hospital. [People ask] how do I

²¹ For details, see the dropdown list on the Digital Ability chart of the First Nations page on the ADII dashboard: <https://www.digitalinclusionindex.org.au/dashboard/firstnations.aspx>

create something on my mobile phone and account so that I can call my partner?" (Tia Roko, Yalu Indigenous Engagement Coordinator, Galiwin'ku, 2023)

Ted Gondarra, an elder working with the Connected Beginnings program, described his challenges with using the internet and concerns about its impact for Yolŋu people.

- + "I [find] the internet ... a challenge. It has come in with a different ... mindset to the people ... It's good, bad and challenge. [It's good for] connecting or online service, but [it] sometimes lead them into a financial stress ... It's not Yolŋu language, it's not identifying [us online]. We are so invisible." (Ted Gondarra, Community Engagement Leader with Connected Beginnings, 2022)

While some people get family support to use online services, targeted support is needed for elders.

- + "We don't know how to use that. We can slowly learn but we use it in a way that ... we do it slowly, slowly." (Yungirrŋa Bukulatjpi, Yalu researcher, 2022)

Increasing need for digital skills to use online services (2023)

With services increasingly moving online, digital literacy is becoming a necessary life skill. However, there is limited training and support available in Galiwin'ku. According to research participants, support is typically needed when undertaking tasks such as accessing MyGov, doing online banking, completing a form, or doing tax returns.

- + "During tax time, [people are] knocking on our doors asking us to help them do their taxes, lodging it online ... a lot of our time is spent doing that." (Tia Roko, Yalu Indigenous Engagement Coordinator, Galiwin'ku, 2023)

While there is some basic support available at the Centrelink office, post office and other agencies, there are limited options for digital skills training, especially for the elderly, people with disability, and those with low English and digital literacy.

Residents often seek help at the post office with activating SIMs on new phones, as well as using online services. One of the challenges people face is not having the identification documents needed.



"That's the difficulty [is] they don't have the ID's ... Medicare card or license or passport. [When people] buy a new phone ... they come here [for help] to activate the SIM card. [They] are still learning how [to do] the Telstra activation [or don't have ID so we help them with] email address and everything."

- Verity Burarrwanga, EARC Post Office, Galiwin'ku, 2023

Low digital literacy can be an obstacle to employment and further education

Digital skills are now often needed for jobs in communities, including for use of Microsoft Office software, email correspondence, online meetings and training, and other job-specific applications. However, our survey found that of the 91% of regular internet users, all use the mobile phone for internet use (100%). Only 23% reported that they have used a desktop computer (typically occasional users in the Centrelink office or a workspace) and only 6% use a laptop or notebook computer. This low use of computers can limit development of keyboard skills and understanding of typical workplace systems.

ALPA Higher Education Program provides local support for people who are studying through Batchelor Institute or Charles Darwin University or other registered training organisations. Program Coordinator Shishir Kushwaha supports students who often have very limited language, literacy, and numeracy and

digital literacy. He helps them learn to use computers, laptops or even phones to access learning materials, use online learning platforms, connect to videoconferencing for lectures and develop other digital skills.

Shishir told us that poorly designed online forms for seeking employment or workplace learning resources can be a barrier to seeking employment. Some applications are overly complex and text-heavy and not configured for use on mobile devices.

- + “Not all websites translate well onto a mobile device. [And] the lack of digital literacy that seems to exist in this community [means that] people are not so comfortable using a PC or using a computer.” (Shishir Kushwaha, Higher Education Program Coordinator, ALPA, Galiwin’ku, 2023)

Shishir set up a computer lab in 2023 to support students to undertake online training.

- + “A lot of RTOs deliver courses that are online so you need a space that participants can use computers and go on to the website and kind a click links and look up information and do research that way, and so I thought it was important to have a space that could facilitate that.” (Shishir Kushwaha, Higher Education Program Coordinator, ALPA, Galiwin’ku, 2023)

ALPA Higher Education Program runs a Certificate I in Workplace Skills course for entry level digital skills, including computer, scanner and printer use, how to type, create and save documents, and using email. ALPA also delivers an online foundation program for language, literacy and numeracy, called Building Key Skills Blocks, which is needed to progress to other qualifications.

- + “BKSBS was developed by TAFE Queensland, it’s designed to grade ... someone’s performance against the Australian Core Skills Framework [and is a requirement for many] higher-level qualifications.” (Shishir Kushwaha, as above, 2023)

There are currently few visual learning materials and resources in language for higher education. However, we heard about a recent language-based learning pathways app designed for use in schools.

- + “There was [recently] a launch of a [free Learning Pathways] app called [which] explains in language, and it works both ways, it explains the ... Balanda [non-Indigenous] Education Pathway from like kindergarten up to like Year 12 and the Yolngu Education Pathway. [So] it explains to a Yolngu person how the Balanda system works and explains to a Balanda how the Yolngu system works ... it’s kind of more information and framework kind of thing.” (Shishir Kushwaha, as above, 2023)

Online learning is starting to be embraced

Being a remote island community with limited access to adult education and training without costly travel, online learning provides an opportunity.

- + “[Connectivity provides] better opportunities for education and training, [especially] for young parents who are interested in furthering their education and doing online courses. [But] currently it’s probably a bit challenging.” (Miranda Rielly, Connected Beginnings, Galiwin’ku, 2023)

We also heard about the challenges faced by students leaving the community to do training, such as being away from family and friends, and language barriers.

- + “When they go to these [on-campus] courses, it’s really hard to sit in the huge theatre [or] understand the whole digital connections and digital training. [Also] it’s still in the

English language [so some] have difficulties.” (Uilelea Uilelea, former ALPA Higher Education Program Coordinator, 2022)

For this reason, a mix of locally delivered and online training is considered the most appropriate means of training delivery. While online learning can save significant travel time and expense, there are challenges of poor connectivity, low digital literacy, and language barriers.

- ✦ “I have found that [a] lot of Indigenous students prefer [to] engage with the physical textbook [as] opposed to online [and I help] translate the English into easier English. [The] Yolngu prefer [face to face training] because that’s how they learn traditionally ... they are taught by family and friends in groups so that’s more familiar to them.” (Shishir Kushwaha, Higher Education Program Coordinator, ALPA, Galiwin’ku, 2023)

There is demand for a dedicated agency to provide digital support (2023)

We heard community demand for an agency to provide digital literacy training and support.

- ✦ “They should have an office in [Galiwin’ku] for the people to come bring the ID’s, and [have a digital support] worker help them activate everything. I would like to make another office [set up for that role] because this community is getting bigger, and all organisation should do something about [digital support], especially for the phone.” (Verity Burarrwanga, EARC Post Office, Galiwin’ku, 2023)

Some community members suggested Yalu as an appropriate agency due to their existing work and experienced staff of cultural leaders and translators.

- ✦ “Definitely Yalu, for sure. They have a good model to properly utilise the space to create that awareness [in a culturally appropriate way].” (Christopher Alchin, health worker/ IT enthusiast, 2022)

With limited digital support available in the community, ALPA Higher Education Coordinator Uilelea Uilelea gets asked to help with students’ personal digital needs, such as using Centrelink, MyGov and banking, setting up an email account or using Teams or Zoom so they can talk to people in language. However, this is not an official part of her role.

Digital mentors could help support residents to use online services and learn

With widespread transition to online services, there is increasing need for greater support to access and use online services. EARC are calling for dedicated funding for digital mentors to support residents to use online services to reduce pressure on Centrelink and post office staff to provide digital support.

- ✦ “Especially with all the COVID vaccines, and having to be linked with MyGov, who’s going to show everyone how to do that? ... Is it Centrelink that does that? ... they don’t have the capacity ... [One of] our post office ladies ... usually helps a lot of people out doing their tax returns and things like that. It’s not part of her job, but I’m fine if she wants to help. ... Even banking stuff ... and printing and scanning and stuff like that. We just help them if we can because what else are you going to do? IT [support] is very limited.” (Melissa Jones, Community Development Coordinator, EARC, 2022)

While there was demand for more digital training and support, the preference was for one-one-one support with a Yolngu digital mentor as needed, rather than doing workshops.

Peer learning already happens within families, particularly with young people and those with digital skills helping older ones to use phones and online services. There were suggestions that young people could play a role as digital mentors, as they are rapid adopters of communications technologies.

- + “Young people these days they're ahead of us. They are very clever in how they use technology.” (Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022)
- + “I think they [young leaders] would be the best people to mediate and mentor ... the next generation. [They also] need a mentor to show them [web design, creative applications, which could lead to] opportunities for future business.” (Christopher Alchin, Healthworker / IT enthusiast, 2022)

Cyber safety and scams are a significant concern, with e-safety awareness required

Local agencies identified a range of cyber-safety issues prevalent in Galiwin'ku from scams, online abuse, access to inappropriate content, and copy-cat behaviour on social media. Some people described the impact of inappropriate use of social media, and the need to extend Yolŋu social protocols to online use.

- + “[People have been swearing in language on social media] and caused trouble [and people] arguing each other.” (Ted Gondarra, Community Engagement Leader with Connected Beginnings, 2022)
- + “It’s the worst thing that Yolŋu people are using that [swearing] in Facebook. [If people] talk in bad language [we should] cut the Facebook [so] they won’t use it again.” (Elaine Lawurrrpa Maypilama, elder, 2022)
- + “[There’s a lot of] conflict that probably breaks out and comes from platforms like Facebook or Diva Chat. [Social media use is still relatively new so there aren’t] the social rules, the way to keep everybody safe and happy ... there’s still a lot of navigating going on.” (Margaret Hewett, Connected Beginnings, 2022)

Awareness by parents of the need to keep children safe online is growing, but there was limited awareness of how to manage privacy settings and parental controls on phones and online platforms such as TikTok. There were requests for more cyber-safety awareness support for parents.

- + “I’ve seen often that parents will thrust their phone towards their children, and the kids will end up on various social media sites like TikTok and Instagram, which obviously are unfiltered, and have the potential to be a little bit unsafe for these small children.” (Miranda Rielly, Connected Beginnings, Galiwin'ku, 2023)

The local Shepherdson College has been promoting cyber-safety awareness for children at school.

- + “That’s talked quite a lot about at school ... cyber safety and cyberbullying and those sorts of things [but more is needed to keep up with changes].” (Margaret Hewett, Connected Beginnings 2022)

There are concerns about the impact of online bullying and abuse on young people’s mental health.

- + “We’re under a lot of depression and a lot of pressure. [Those untrue and negative stories on Facebook] takes you away from who you ought to be, a strong cultural person.” (Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022)

Social media is being used for calls for help around self-harm and suicide attempts (2023)

We heard of a growing incidence of suicidal messages on social media, described as calls for help.

- + “[It’s] calling out for help ... they’re reaching out for people to help [and] trying to get attention from the family, see if they love him or caring for him.” (Jerome Lacey, Galiwin’ku Youth Sport and Recreation, 2023)
- + “Sometimes people [have suicidal thoughts]. They can say, okay, I might kill myself, because no-one loves me, no-one wants me.” (Elaine Lawurrrpa Maypilama, elder, 2022)

There have been several recent incidents of people self-harming or suicide attempts on Facebook.

- + “[Some people] harm themselves on the [Facebook Live]. One man ... went on the Facebook [to] let the people know what was happening in his life. Instead of keeping it, he was sharing it ...with everyone on Facebook. Then he just suicides himself while he was on the live ... But lucky one of the friends saw it and went in there [and saved him].” (Verity Burarrwanga, EARC Post Office, Galiwin’ku, 2023)

While there is mental health support available for young people in Galiwin’ku, clearly more is needed to help stem this emerging trend, which indicates how social media is used by young people for expressing emotional issues that may be difficult to express in face-to-face communications.

There are helpline services available at 13YARN (13 92 76), an Aboriginal & Torres Strait Islanders crisis support line, or Lifeline Australia on 13 11 14.

There is increasing incidence of scams, with many people losing money (2023)

There is a need for more scam awareness, with scams becoming more regular, harder to identify and with some scams targeted at people living in remote communities.



“There is a problem with scams, like Facebook advertisement [saying] you can get \$800,000, and people just go in with their debit card ... Many people [in Galiwin’ku] were caught, they’re losing money on day-to-day basis.”

- Ted Gondarra, Community Engagement Leader with Connected Beginnings, 2022

Verity and Esther Burarrwanga work in the EARC Post office and regularly hear about the scam messages people are receiving, including parcel delivery and prize scams. They give people advice about scams.

- + “[People] receive a message saying that their phone is coming. You’ll receive a parcel ... When they click the link [the] scammers ask for the account details. I had that once before but I didn’t give my bank details because I knew that was the scammers ... And the other day another old lady came and said, ‘I receive a message here saying that I’ve win a hundred thousand dollars and they need a stamp.’ ... I said, ‘No that’s not real. It’s the scammers. You have to be careful using your phone.’ That’s what I said to old people, even the young people.” (Verity Burarrwanga, EARC Post Office, Galiwin’ku, 2023)

We heard about a scam caller contacting people directly through Facebook Messenger.

- + “One day, I was sitting down and my Facebook was on and someone rang [by] video call on my Facebook. I said, ‘Hello’ and I just put video, it shocked me ... that someone [called me direct]. And I’ve text don’t do you ever call me on my video otherwise I’ll go and see police ... Then I had to block that number.” (Joanne Wanambi, Family and Schools Together, Galiwin’ku, 2023)

- + “One man came here, and he was saying there's someone on the phone here Face Timing, and he's telling me my parcels in there, my iPhone. When I took the phone, I seen [it was a scam and] said, 'Bro, this is not real. This is scammers. You need to hang up and block this contact.'” (Verity Burarrwanga, as above, 2023)

With scams becoming increasingly sophisticated and difficult to identify, more awareness and support is needed. More information about scams is available on the Scamwatch website (<https://www.scamwatch.gov.au/>), where people can also report scams. The ACCC have also produced *The Little Black Book of Scams* which is regularly updated.²²

Use of devices is described as an addiction, impacting on work and other activities

Mobile device use can become addictive for some users, limiting their face-to-face engagement in schooling, communication or work activities. The term 'addiction' came up in several interviews.

- + “Back in the days when I used to grow up we didn't have phones, but now [all] kids have a phone and they are addicted to it.” (Jerome Lacey, Galiwin'ku Youth Sport and Recreation, 2023)
- + “Sometimes when our young people ... they've lost their credit ... they smash their phone ... it's really addiction to them. They can't live without phone.” (Cyril Bukulatjpi, Media Officer, Yalu, 2022)
- + “[Kids] about five or four years old, playing those games ... they're really very much addicted. ... You can hear local children here crying for a ... mobile phone, and parents ... get it for them.” (Ted Gondarra, Community Engagement Leader with Connected Beginnings, 2022)

While there are calls for improved mobile and Wi-Fi services on homelands services there are also concerns about the potential impact on homeland life and culture.

- + “Kids won't stay off the phone. They'll be hanging onto that phone and not go out hunting. ... Instead of going out and being part of their normal lifestyle, they'll be a slave to Facebook or ... TikTok or whatever.” (Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022)

There are calls for more cultural authority of elders in the digital realm

Some elders expressed concerns about the impact of social media and digital technology on Yolngu cultural protocols, introducing behaviours that are against cultural protocols. Elder Jane Garrutju stressed that phone and internet access on homelands is to be used appropriately.

- + “It's no good using the phone or the [online] services ... for bad reasons ... It's for the emergency ... we need to use it wisely and properly.” (Jane Garrutju, Chairperson, Marthakal Homelands, 2022)

There were concerns that young people's access to online content is eroding respect for elders' guidance.



“When I [was young, I listened to] old people, they always there to teach us [and encourage us for school and work] ... When this technology came [children are] not really listening to your old people. ... [We need to teach children how to] access [the phone] in proper way.”

– Yungirrnga Bukulatjpi, Yalu researcher, 2022

²² <https://www.accc.gov.au/about-us/publications/the-little-black-book-of-scams>

This is leading to calls for elders to have the authority and capability to switch the internet off when required, particularly on homelands, as is the situation in some central Australian communities.

- ✦ “Elders and ... parents can step in and actually monitor how long they can use ... [They want the power over] the technology [so it] can be adjusted and monitored closely by the community.” (Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022)
- ✦ “In homelands, I think that there needs to be an option for traditional owners to be able to turn connectivity off and disconnect from social media [they] should have the right [to] turn it off.” (Hannah Fincham-Thomson, East Arnhem Real Estate, 2022)

Yungirrnga proposed a digital driver’s license for young people before being allowed use of mobile devices and social media.

- ✦ “[The kids need to learn] the rules, so guidelines of this is how to use it ... in a safe way. [We need a] plan for the community ... [because] they introduced [mobile coverage with] no plan.” (Yungirrnga Bukulatjpi, Yalu researcher, 2022)

Local Digital Media Content Production, Archiving and Sharing

History of digital media and cultural knowledge programs in Galiwin’ku

Galiwin’ku has a strong history of Indigenous knowledge and digital media projects. While these have waned, there were calls for renewed support for language and cultural recording projects.

In the early 1990s a project called Yolŋu Nations Knowledge Centre, supported by Sydney University, Charles Darwin University, and Flinders University, set out to collate an archive of cultural information (photos, songs, language recordings) across numerous Yolŋu clans. In 2001, a Galiwin’ku Community Newspaper project was set up as part of a youth employment project, including digital media production skills.

Numerous researchers have documented the various Indigenous knowledge recording and archiving projects over the last 20 years.²³ An Indigenous Knowledge Centre was opened on 12 June 2003 by the Galiwin’ku Community Council, with support from NT Library and Information Service. An archive project was established which delivered community-managed access to “a web-enabled knowledge database developed by Yolŋu people.”²⁴ In the 2010s, Galiwin’ku established a multi-media program, called Digital Futures Live, but it was forced to close when funding was discontinued in the mid-2010s. A recent thesis by Cathy Bow (2020) outlines the use of digital technologies for language resources in Indigenous NT communities. A number of organisations still support language projects in Galiwin’ku, including Yalu,



Figure 21: Poster describing seasons based on cultural knowledge

²³ These include including Beale (2003), Richmond (2005), Anderson (2005), Christie (2008, 2009, 2010), Corn (2012, 2013, 2019 with Stephen Patrick), De Lary Healy (2013), Deger (2013), Gumbula (2005, 2009, 2019) Maina (2012), Masterson et al (2019), and Van Gelderen & Guthadjaka (2019). Michael Christie has an extensive body of research with Yolŋu, in particular the *Indigenous Knowledge and Resource Management in Northern Australia: Making collective memory with computers* project (2003–2006). As part of this Scott (2004) produced an audit of Indigenous Knowledge Databases in Northern Australia, including the Galiwin’ku IKC.

²⁴ Beale, 2003: 289.

ARDS, Charles Darwin University, Menzies School of Health, the literacy production centre at the school, and the bible translation program.

A renowned cultural output from Galiwin'ku is the Tjuki dancers, a talented troupe of young men melding traditional dance moves with western music styles. This grew from a video of a performance by local students for a departing schoolteacher posted to YouTube in 2007. The video went viral, leading to requests for the dance troupe to perform at events in Australia and overseas for more than a decade.

Digital content is being produced by young people for TikTok and other platforms

There is interest in reinvigorating digital media production in Galiwin'ku, including supporting young people to create content in language. Yalu Communications Officer Cyril Bukulatjpi described the potential use of digital technologies for transferring cultural knowledge.

- + “I would really love to see media production [come back] in Galiwin'ku to capture every event, every language, every knowledge ... When kids are recording [the] songlines ... that becomes their identity to understand those songlines ... [It's] a good way to learn.” (Cyril Bukulatjpi, Media Officer, Yalu, 2022)

Yalu have done some in-house video production, including providing basic training for staff.

- + “We made [two] music videos ... the respect video and the Miyarrk respect one, so there's one for men, one for women.” (Tia Roko, Yalu Indigenous Engagement Coordinator, Galiwin'ku, 2023)

While there is no training program for digital media production currently, we did hear about video productions by young people being shared on TikTok, Instagram and other platforms, including new Tjuki dance videos being distributed on TikTok.



“Yeah the kids are really genius what they're doing ... They make comedy ... Fighting things and then they put a music track onto it. [It's a] Mix, all things, but pretty much the popular one is just singing with the song.”

– Jerome Lacey, Galiwin'ku Youth Sport and Recreation, 2023

We heard about the potential of sharing locally produced content but also the difficulty faced by digital producers in uploading media content via the mobile network.

- + “There's a lot of talent and there's a lot of stories [to] be told from the local people, but getting those stories online and uploading them is a bit of a challenge ... Often we hear all the negatives, but in community there's so many rich stories that haven't been captured, and I think having digital speed would be really good to get out to the world and tell the stories, especially for people who are digital content creators like me.” (Tia Roko, Yalu Indigenous Engagement Coordinator, Galiwin'ku, 2023)

Need for archive storage

While there are a number of online repositories with content from Galiwin'ku, including Batchelor Institute's Centre for Australian Languages and Linguistics (CALL) collection and CDU's Living Archive of Aboriginal Languages platform, there were calls for a multi-media archive facility in Galiwin'ku to store and enable access to the collections of photos, videos, audio recordings, community records and cultural heritage materials.



"There should be some sort of archive centre [for] the history of Galiwin'ku and the [many] Yolŋu nations from this area."

- Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022

An archive can help to transfer cultural knowledge and strengthen identity of future generations.

- + "Something to empower ... this generation to make them think how strong our people were [in the] '40s and late '70s. That was a time when Yolŋu had the self power and determination ... to encourage the new generation ... make them feel good about themselves." (Marcus Lacey, Executive Officer, Marthakal Homelands and Resource Centre, 2022)

Storage of personal collections is also an emerging challenge with increasing use of phones for taking photographs and video. People are wanting help to save their content on a server or in the cloud so it isn't lost when they replace their phone. However, this can be costly and challenging.

- + "It's been so difficult to [back up] all my photos and now my phone is full ... how do I save my photos ... backup everything? That's the issue I've had." (Margaret Dhurrpuy, Artist, Elcho Arts, 2022)



Figure 22: Aerial view of Galiwin'ku

06. CASE STUDY – IMPACT OF VAST TV SERVICES NOT WORKING

High incidence of household VAST TV services not working

The Mapping the Digital Gap survey undertaken in 2023 found a total of 93% of respondents did not have VAST TV services in their home, made up of 39% without VAST equipment installed and 54% with equipment not working. This was up from a total 80% in our 2022 survey. Of those who said VAST equipment was not working in 2023, 42% said this was due to the set-top box not working and 39% due to damage to the satellite dish or cabling.

Our results were verified by local agencies. Former EARC Manager Kaye Thurlow also estimates that about 90% of Galiwin'ku households were without television services, including staff houses. East Arnhem Real Estate (EARE) also estimated that VAST TV services were not working in 90% of homes based on a May 2022 assets survey in 221 households.



Figure 23: VAST TV satellite dishes

- + “Most tenants [have] absolutely no TV access ... They just download shows onto a USB stick [to watch on TV or] watch off their phone ... [I haven't seen any Yolŋu] watching ABC or [free to air] television [in] the past six years.” (Hannah Fincham-Thomson, EARE, 2022)

Background: Switchover from local broadcasting to VAST direct-to-home

The VAST DTH satellite TV service was installed on all premises in remote communities by the Australian Government in 2012–2013, replacing the Broadcasting for Remote Aboriginal Communities Scheme (BRACS), which had been in place since 1987. The BRACS facility enabled broadcast of a local radio service and up to four television channels in communities, supported by the remote Indigenous media organisation TEABBA. BRACS enabled broadcast of locally produced video content, including meetings, sports, or cultural events.

- + “[Since] the late ‘80s [our TV] reception came through the BRACS system [enabling local] control [between] access to [ABC or] switch to community transmission. They played local videos [or live events] like the footie Grand Final and other interviews and stories.” (Kaye Thurlow, long-time resident/ former Manager, EARC, 2022)

With the VAST DTH model removing local content capability, some people felt the replacement of BRACS was a significant loss.

- + “[The switch off of BRACS] has devastated us in getting local information to community.” (Kaye Thurlow, as above, 2022)

At the time of switchover, EARC argued strongly to upgrade from BRACS to digital retransmission rather than direct-to-home satellite services. However, the Government did not support the community's request, saying that a digital broadcasting facility would have to fully funded and maintained by EARC.



“[We told them] ‘It’ll be cheaper for you to do retransmission rather than put a satellite dish on every roof and give everyone a set top box’ ... ‘The satellite dishes will become flying saucers in the next cyclone.’ [But they refused] ... And it’s been devastating.”

– Kaye Thurlow, as above, 2022

Under the Digital Switchover program, there was no funding allocation for a coordinated maintenance program of VAST equipment for remote First Nations communities, with maintenance becoming a tenant responsibility. As a result, VAST satellite services are no longer working in an estimated 90% of households.

EARC said that NT Housing should ensure VAST services are working under its housing maintenance program. East Arnhem Real Estate,²⁵ who are contracted to manage housing assets in Galiwin'ku, advised that under NT Government's Residential Tenancies Act, as landlords, they must provide a working satellite service. However, there is no regular monitoring of whether VAST satellite equipment is operational, or the reason if not working. Also, the landlord's responsibility does not extend to the set-top box, the most common failure point.

Impact of cyclones on VAST DTH equipment

The prevalence of cyclones in the Top End is a key issue for reliance on satellite services. After Cyclones Lam and Nathan in 2015, more than 40% of the satellite dishes were damaged and needed to be replaced.

- + "[We] had to argue for the Government to replace the damaged satellite dishes."
(Kaye Thurlow, resident/ former Manager, East Arnhem Regional Council, 2022)

NT Government did replace many of the satellite dishes, however a future cyclone is likely to see a repeat of similar damage unless an alternate approach is taken to television service delivery.

Challenges with purchasing and retaining VAST set top boxes

Another issue is that some set-top boxes are prone to damage from power surges in the local electricity grid. The cost of replacement VAST set top boxes can be prohibitive for families on low income, at \$567 in the ALPA store in 2023.



"Direct to home! That is a nightmare here. Some of us just gave up. [Our set-top box worked at first but it got] damaged that quick, and then you've got to get another, for \$600 ... I've got two set box that myself and my daughter bought, \$1,300, and it still sits at home [because we can't activate them]. We've given up now."

- Gaylene Yenhu, Community Engagement Leader, Connected Beginnings, 2022

Residents also reported loss of the smart card, rendering the unit unusable.

- + "I haven't had any TV for years now ... I had families move into our house and the kids got to the card and I don't know what they did with it. So the box was just sitting there." (Margaret Dhurrpuy, Artist, Elcho Arts, 2022)

We also heard that set top boxes are often taken from households.

- + "There's a few barriers to people having TVs in the home; I know that it's not always just that people can't afford it ... not a lot of people lock up their houses, and families are moving through and around, sometimes it's hard to hold onto those possessions ... I think that is something important to note about people's access to being able to watch TV." (Miranda Rielly, Connected Beginnings, Galiwin'ku, 2023)

²⁵ EARE is contracted by NT Government to provide tenancy services for 221 public housing assets in Galiwin'ku.

Challenges with activating set-top box smart cards

Even if households can afford to replace the set-top box, activating the smart card can be challenging. This requires having a mobile phone number, email address and a high level of English and digital literacy to follow the online activation instructions. There is no technical support available to activate the cards.

- + “[We asked ALPA store] to help [but] they said ‘We just sell them. We can’t help you’. [I tried to activate the smart card] and then gave up. So I’ve still got those two boxes [with] no [TV] access for 5 years ... Most [households] have just given up now.”
(Gaylene Yenhu, Community Engagement Leader, Connected Beginnings, 2022)

Impacts of VAST TV not working

The lack of free to air services has significant impacts on an already disadvantaged community. Firstly, access to news and entertainment is largely transferred to a user-pays model via online delivery, causing affordability issues. Secondly, as video content uses significant bandwidth and data, this substantially increases congestion on the already stressed 4G mobile network (outlined in Section 4). Thirdly, with reduced access to reliable sources of news and information, misinformation is more likely to dominate users’ information channels (outlined in Section 4).

- + “Social media tends to be that kind of forum for misinformation. Having access to a wider spread of different media communications, people can make informed decisions.” (Miranda Rielly, Connected Beginnings, Galiwin’ku, 2023)

Interviewees also noted that having the television and set-top box connected to a wall plug limits outdoor TV viewing, a common practice in remote communities during analogue broadcasting days.

Our 2023 survey found that 10% of respondents who watch television access it via VAST, with 57% saying they watch TV via a mobile phone. This indicates a transfer of TV viewing from the free-to-air VAST satellite service to a user-pays content streaming model using pre-paid data over the mobile network or via household Wi-Fi in the 3% of residences with an nbn Sky Muster service.

- + “I gave up on that VAST thing, and [got] SkyMesh, just so that I can watch a movie with the family at home now [but] it costs a lot of money, [\$74 for 150 GB data]. There’s a lot of us in the house [so it’s] run out after 2 weeks.” (Gaylene Yenhu, Community Engagement Leader, Connected Beginnings, 2022)

Calls for digital broadcasting

To reduce the cost of maintaining VAST DTH services on over 300 houses, there were calls for a return to terrestrial broadcasting. This would ensure that all households had reliable access to all free-to air television services and would reduce maintenance to a single EARC-managed facility.

- + “It’d be cheaper doing it as a whole [set up of digital broadcasting] than trying to fix all the houses individually.” (Melissa Jones, Community Development Coordinator, EARC, 2022)

In 2023, the Australian Government established a Television Transmission and Reception Audit project group to identify issues in television transmission and reception in remote and regional areas of Australia, including in First Nations communities. While the audit process is still underway, First Nations communities are being asked about preferred models for TV access. Given the high level of VAST failure in Galiwin’ku, a local broadcasting model would be a more sustainable model and would help to address the impacts outlined above.



Figure 24: New radio broadcast tower could be used for digital TV broadcast

07. CONSIDERATIONS FOR LOCAL DIGITAL INCLUSION PLAN

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

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

Identified Issue	Possible Actions	Potential Stakeholders	Progress / Next Steps
Access			
Mobile service in Galiwin'ku slow, congested and unreliable: Highly congested 4G coverage in Galiwin'ku, very slow speeds during day, patchy coverage, with regular outages and dropouts	Ask Telstra to provide interim solution to reduce 4G congestion while awaiting planned upgrades (e.g. cell on wheels with satellite backhaul, or satellite delivered Wi-Fi mesh network)	Telstra Northern Territory Government (NTG) East Arnhem Regional Council (EARC) Developing East Arnhem Limited (DEAL)	<i>Telstra have almost completed the Arnhem Fibre Upgrade Project to improve backhaul capacity, with microwave link to be upgraded by 23 August 2024, with new mobile tower being installed</i>
Poor mobile in Buthan: Limited mobile coverage in Buthan (housing expansion underway) and nearby homelands	Additional 4G tower may be required near Buthan to address poor reception and increased demand with new housing development.	Telstra NTG EARC Marthakal Homelands and Resource Centre (Marthakal HRC)	<i>Yet to do The upgraded Telstra tower may improve coverage</i>
Coordinated technical services: Technical and IT support for multiple agencies costly due to remoteness, and delayed in wet season	Review technical maintenance and IT support needs of all agencies on Galiwin'ku Review options for multi-agency maintenance contracts to reduce costs Consider employing local technician based on Galiwin'ku and/or Yolŋu trainees	EARC DEAL MHRC Arnhem Land Progress Association (ALPA) Other agencies	<i>Yet to do</i>

Limited communications services on most Marthakal homelands: Reports of some Marthakal homelands having limited or no connectivity and/or existing infrastructure not working reliably	Audit of communications infrastructure in Marthakal homelands, identify additional infrastructure needs and upgrades Review maintenance processes including remote monitoring and support to reduce costs and outage times Develop protocols for community awareness of communications systems and on-site maintenance support Identify options for community control over internet access times where desirable	Marthakal HRC NLC EARC Telstra nbn	<i>Yet to do</i> <i>Note: Telstra are planning to install satellite small cell mobile services in Gawa, Banthula, Mapurru and Rorruwuy by October 2024 (pending community consultation)</i>
Limited free Wi-Fi access: Lack of Wi-Fi coverage to enable affordable use of online services and to provide access when 4G access is congested	Consider setting up free public Wi-Fi hotspots in Galiwin'ku (near EARC office, stores) and at Buthan Store using nbn Sky Muster or Starlink as potential backhaul	EARC ALPA NTG NT Library nbn Yalu AC	<i>nbn have included Galiwin'ku as one of 20 sites to roll out a free Wi-Fi mesh network to residential areas, consultation to begin June 2024</i>
Lack of community access computers for skills development, personal use, and creative and study needs	Purchase computers for use in Galiwin'ku library Expand access of ALPA Training Centre facility and computers Yalu may set up computer access within proposed new facility	EARC ALPA Yalu AC	<i>ALPA Higher Education have established a computer lab with 5 laptops, but needs better promotion to increase usage</i>
Affordability			
High cost of pre-paid mobile data: 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 IGA store and post office (posters, brochures) and radio messages outlining options for more affordable mobile and data services via Telstra and nbn Sky Muster retail service providers Telstra to provide affordable pre-paid option	EARC ALPA Telstra nbn retailers Australian Communications Consumer Action Network (ACCAN) Yalu AC	<i>Yet to do</i> <i>Telstra are trialling lower-cost pre-paid options for remote communities</i>

High device turnover: Replacement of devices multiple times a year is common due to phone or screen damage	Provide rubber phone cases as standard with new phones, especially high-priced models (Note: Opel offer a dual-SIM phone with standard rubber case)	ALPA Stores EARC	<i>Yet to do</i>
High excess data cost for Sky Muster users: Reports of high bills for Sky Muster plans up to \$200 / month due to excess data use	Recommend customers on Sky Muster or Sky Muster Plus plans transfer to the new Sky Muster Plus Premium plans, which has unlimited data use and higher speed options	nbn Sky Muster retailer service providers Yalu AC	<i>Yet to do</i>
Digital Ability			
Digital skills support: Need for more regular digital skills training and support, particularly for seniors and other target groups	Provide one-on-one digital literacy training and support for community members in library Consider running targeted digital skills workshops at Yalu office, library or EARC meeting room	EARC / Galiwin'ku Library NT Library Yalu AC ALPA	<i>Yet to do</i>
Digital mentors: High demand on service providers for support in setting up and using online services, banking, sourcing identification, SIM activation, etc	Employment of a digital mentor, possibly based at library and/or post office, to support people with limited digital ability to use government and online services and apps, set up phones, add recharge data etc	EARC Australia Post Centrelink / Services Australia Banks / other agencies	<i>Funding for Digital mentors program approved in 2024 Federal budget, with program yet to be developed</i>
Online safety: Demand for cyber-safety awareness, training and resources about scams, online safety for young people, malware, content filtering, and privacy	Run cyber-safety awareness workshops (including in schools, workplaces, for elders) Awareness campaign to highlight cyber-safety risks using resources designed / adapted for Galiwin'ku audience (radio, Facebook, posters etc) Establish a Council of Elders to enable cultural authority of elders in the digital space Design a youth-based 'digital driver's license' program to guide safe online behaviour	EARC Yalu AC Office of e-Safety Aboriginal Resource and Development Service (ARDS) TEABBA Anglicare Connected Beginnings	<i>Yet to do</i> <i>Office of e-Safety have targeted First Nations resources available and distribute messages on ICTV and radio</i>

Workplace digital skills: Demand for IT skills for workforce readiness and use of online services	Expand awareness of ALPA Training Centre courses including Certificate I in Workplace Skills course Provide specific training workshops for CDP participants or one-on-one support in workforce readiness skills as needed	ALPA Higher Education EARC Yalu AC	<i>Yet to do</i>
Media Services and Production			
TV services failure: VAST Direct-to-home TV services not working in over 90% of residential households High household cost to repair equipment and replace set-top boxes Difficulty with activating smart cards for set-top boxes	Audit number of houses without VAST Look at costing to upgrade to digital broadcasting of all 16 Freeview services plus ICTV (compared with ongoing maintenance of over 300 houses) Alternately, advocate for funding to upgrade or install residential VAST satellite services, replace set-top boxes where not working and install power surge protection	NT Housing NT Government EARC Dept of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA)	<i>DITRDCA have set up an Audit Group for remote and regional TV services to review future of VAST services in remote communities</i> <i>No funding program as yet, pending outcomes of review</i>
RIBS broadcaster role not filled: Challenge with recruiting RIBS broadcaster role for 3 hours/day to do local radio shows	EARC to look into expanding RIBS broadcaster roles from 3hrs/day to full-time, possibly including other TEABBA suggested tasks / activities (e.g., journalism, social media, music / video production) and provide training and support	EARC TEABBA National Indigenous Australians Agency (funding agency)	<i>Yet to do</i>
Digital media and music production: Demand for digital media skills and social media skills for creative and cultural production and promotion	Run skills workshops in digital photography, music recording, social media for promotions, and multi-media production Run TikTok production workshops for young people (maybe set up green screen in room at hall)	Elcho Arts ALPA ARDS Batchelor Institute EARC inDigiMOB	<i>Yet to do</i>

Demand for multi-media production facility: Lack of multi-media facility to support production of local cultural and creative content and archiving of existing content (since closure of Digital Futures Live)	Review demand for local multi-media production facility and modes (e.g., video, online, music, photography, art/design, archiving) Pending review, develop a Business Plan to establish a facility and ongoing operations, including staffing, production development and support, training activities, exhibition/distribution, etc. Seek partnerships to providing training and support.	Elcho Arts EARC Yalu AC ARDS Artback NT Northern Territory Aboriginal Investment Corporation	<i>Yet to do</i>
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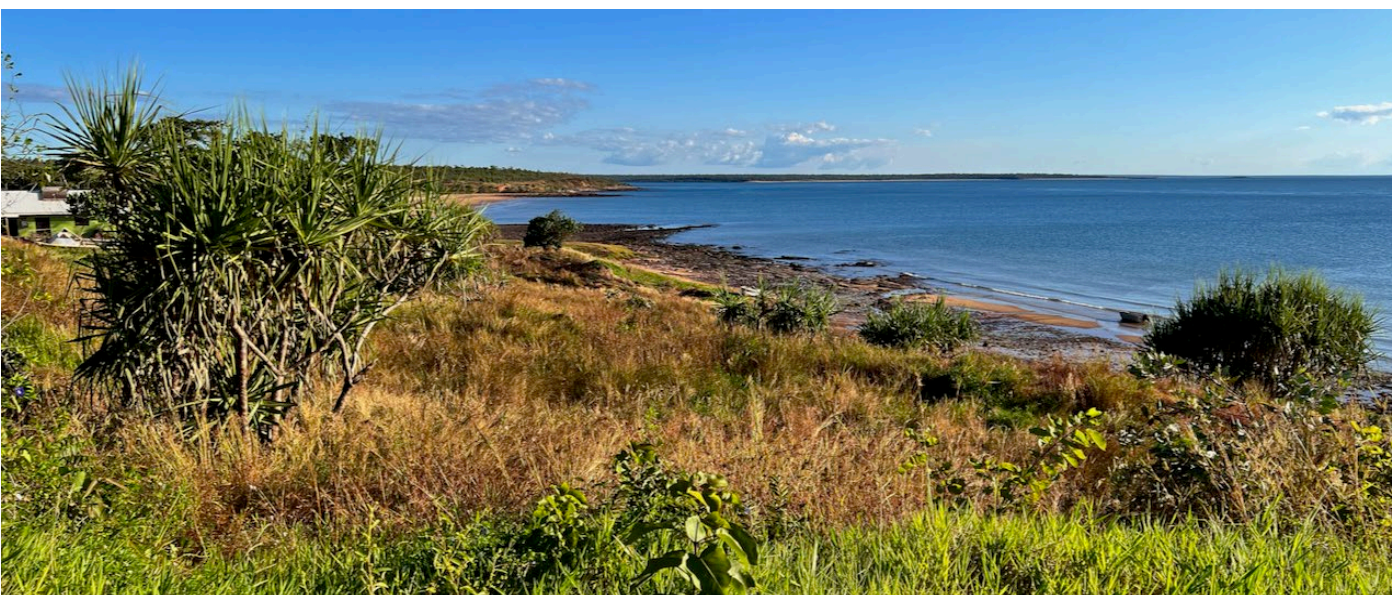


Figure 25: View south-west from Galiwin'ku foreshore



Appendix 1: Summary of Survey Results

Notes: Surveys undertaken in 2022 included 5 of 46 non-First Nations respondents, whereas all 70 respondents in 2023 were First Nations people. Please note this difference when making comparisons between the two sets of results. Not all respondents answered all questions, so percentages are based on the number of respondents to that question.

Demographics	2022 (46 respondents)	2023 (70 respondents)
Gender	67% female; 33% male; 0% non-binary / genderfluid	51% female; 47% male; 1% non-binary / genderfluid
% Aboriginal	89%	100%
Education	15% up to year 12 35% year 10 or below 26% with tertiary education (certificate, diploma, degree)	26% up to year 12 31% year 10 or below 20% with tertiary education (certificate, diploma, degree)
Employment	65% employed or on CDP (37% of these full-time) 11% unemployed 26% looked for work in past month	40% employed or on CDP (43% of these full-time) 40% unemployed 43% looked for work in past month
Welfare	72% received Centrelink (primarily JobSeeker / Youth Allowance and Family Tax Benefit)	81% received Centrelink (primarily JobSeeker / Youth Allowance and Family Tax Benefit)
Housing	80% in multi-generational or shared households (8.2 people per house)	94% in multi-generational or shared households (7.6 people per house)
% with long-term disability or health condition	11%	10%
% who speak a language other than English at home	91%	100%
ATSI languages spoken (multi-choice question)	85% Yolŋu Matha 11% Djambarrpuyngu 5 other languages	91% Yolŋu Matha 29% Djambarrpuyngu 3 other languages
Understanding of English (very and quite well)	Spoken English: 98% Written English: 96%	Spoken English: 84% Written English: 70%
Average weekly household income	\$1,433.22	\$1,300.61
Income breakdown	4% \$1-\$399 15% \$400-\$999 67% \$1000-\$1999 13% above \$2000	3% \$1-\$399 18% \$400-\$999 75% \$1000-\$1999 4% above \$2000

Phone use	2022 (46 respondents)	2023 (70 respondents)
Primary devices used for phone calls (multi-choice question)	76% mobile phone (own) 22% shared mobile phone 20% phone in community office or workplace 11% public phone 7% without phone access	96% mobile phone (own or shared) 36% phone in community office or workplace 26% public phone 0% without phone access
Reliability of public phone	50% don't use a public phone 17% said it was reliable 33% said it was not or sometimes reliable	4% with no access to public phone 44% said it was reliable 14% said it was not reliable 37% don't know
Rate of mobile phone ownership	76% own or share (89% of these smartphones)	84% own or share (98% of these smartphones)
% of phone owners on pre-paid services	86%	100%
Average pre-paid data allowances	6% no data 54% pay for up to 10 GB / month 37% 11–40 GB / month 0% 41–60 GB / month 3% over 60 GB / month 0% unlimited	2% no data 73% pay for up to 10 GB / month 26% 11–40 GB / month 0% 41–60 GB / month 0% over 60 GB / month 0% unlimited
Average number of pre-paid services per household	N/A	4.7
Household pre-paid mobile expenditure	45 responses Average household cost of \$214 / month 22% pay up to \$100 / month 38% pay \$101–\$200 / month 20% pay \$201–\$300 / month 20% pay over \$300 / month	62 responses Average household cost of \$148 / fortnight 29% pay up to \$100 / fortnight 47% pay \$101–\$200 / fortnight 24% pay \$201–\$300 / fortnight 0% pay over \$300 / fortnight
Media use	2022 (46 respondents)	2023 (70 respondents)
Radio access (multi-choice question)	43% listen via car 35% via phone/tablet 17% listen to a radio at home 35% never listen to radio	66% via phone/tablet 52% listen via car 20% listen to a radio at home 16% only listen to radio at places other than the home or car 13% never listen to radio
Primary radio stations listened to	Yolngu and/or TEABBA radio (33% listening daily or weekly, 28% occasionally) ABC Radio (22% listening daily or weekly, 26% occasionally)	Yolngu and/or TEABBA radio (42% listening daily or weekly, 43% occasionally) ABC Radio (14% listening daily or weekly, 24% occasionally)
TV access (multi-choice question)	28% via phone 17% on TV via VAST satellite 7% only via USB/DVDs on TV 7% only watch TV outside of home 7% via computer or tablet 28% never watch TV	57% via phone 43% only via USB/DVDs on TV 10% on TV via VAST satellite 10% never watch TV

VAST TV access	20% have VAST service working 48% VAST not working (59% due to set-top box not working, 26% due to a damaged dish or cabling) 33% do not have VAST installed at house	7% have VAST service working 54% VAST not working (42% due to set-top box not working, 39% due to a damaged dish or cabling) 39% do not have VAST installed at house
Most popular sources of TV and online content (multi-choice question)	YouTube (35% daily, 13% weekly) Streaming services (17% daily, 7% weekly) ABC TV (15% daily, 9% weekly) ICTV (11% daily, 7% weekly) SBS TV (11% daily, 4% weekly) Other (9% daily, 2% weekly) Commercial TV (7, 9, 10) (9% daily, 9% weekly)	YouTube (53% daily, 24% occasionally) Other (15% daily, 4% occasionally) Streaming services (14% daily, 11% occasionally) Commercial TV (7, 9, 10) (7% daily, 1% occasionally)
Primary sources of news and information (multi-choice question)	Direct / in-person communication (76% daily, 7% weekly, 7% occasionally) Facebook (38% daily, 4% weekly, 9% occasionally) Yolŋu and/or TEABBA radio (22% daily, 9% weekly, 20% occasionally) Online news service (22% daily, 7% weekly, 11% occasionally) Local noticeboards (17% daily, 46% weekly, 15% occasionally) ABC radio (17% daily, 11% weekly, 17% occasionally)	Direct / in-person communication (89% daily, 4% weekly, 3% occasionally) Facebook (33% daily, 4% weekly, 16% occasionally) Other (19% daily, 10% weekly, 4% occasionally) Local noticeboards (14% daily, 29% weekly, 39% occasionally) Yolŋu and/or TEABBA radio (11% daily, 29% weekly, 36% occasionally) Other social media (11% daily, 7% weekly, 20% occasionally)
Primary sources of emergency information (multi-choice question)	Direct / in-person communication (76%) Community PA system (48%) Facebook (39%) Online emergency services (37%) Yolŋu and/or TEABBA radio (35%) ABC radio (24%) Local noticeboards (24%) ABC TV (22%) Text message from police or emergency services (22%) Online news service (20%)	Direct / in-person communication (93%) Community PA system (67%) Yolŋu and/or TEABBA radio (60%) Facebook (29%) Local noticeboards (17%) ABC TV (16%) ABC radio (11%) Online emergency services (11%)
Internet use	2022 (46 respondents)	2023 (70 respondents)
Latest internet use	61% used internet in past week 9% in past month 22% never use the internet	77% used internet in past week 13% in past month 6% never use the internet
Rate of internet use (of respondents who had used the internet within the last three months)	31% use the internet almost constantly 28% several times a day 19% about once a day or several times a week	11% use the internet almost constantly 39% several times a day 34% about once a day or several times a week

Regular internet users (The following indented sections refer to respondents who had used the internet within the last six months)	73%	58%
Primary online devices (multi-choice question)	Smartphone (83%) Desktop computer (34%) Smart TV (23%) Portable laptop or notebook computer (23%) Tablet (23%) Games console (11%)	Smartphone (100%) Desktop computer (23%) Smart TV (45%)
Use of internet provided by others (multi-choice question)	40% at place of work or education 23% community or Shire office 20% at houses of friends or family 17% public space with free Wi-Fi	50% public space with free Wi-Fi 27% community or Shire office 23% at place of work or education 20% shopping centre, retail, or service business
Reasons given for not using the internet more (multi-choice question)	'I do not have access to the internet' (82%) 'I have no need to use the internet' (55%) 'The internet is too expensive for me' (55%) 'I am not confident using the internet' (45%) 'I do not have access to content in my own language' (45%) 'I am concerned about privacy or scams' (45%)	'I do not have convenient access to the internet' (88%) 'The internet is too expensive for me' (77%) 'I do not have access to content in my own language' (39%) 'I am concerned about privacy or scams' (34%) 'I am not confident using the internet' (31%)
Concern about amount of time spent online	6% extremely concerned 14% moderately concerned 37% slightly concerned 40% not at all concerned	3% extremely concerned 9% moderately concerned 25% slightly concerned 59% not at all concerned
Low internet users	27%	42%
Reasons given for not using the internet more (multi-choice question)	'I have no need to use the internet' (60%) 'I am not confident using the internet' (50%) 'I do not have access to the internet' (40%)	'I do not have access to content in my own language' (100%) 'I do not have access to the internet' (83%) 'I am not confident using the internet' (83%) 'The internet is too expensive for me' (67%)
Fixed broadband services (e.g. nbn Sky Muster, ADSL, Starlink)	87% did not have any kind of fixed home internet 4% on nbn service (100% Sky Muster) 4% on ADSL 2% other form of fixed internet 2% on fixed wireless (non-nbn)	97% did not have any kind of fixed home internet 3% on nbn service (100% Sky Muster)
Respondents with fixed broadband	13%	3%
Data allowances	17% had less than 49 GB / month 33% between 50-199 GB / month 17% above 200 GB / month	0% had less than 49 GB / month 100% between 50-199 GB / month 0% above 200 GB / month

	33% unlimited internet data	0% unlimited internet data
Average cost	\$71.50 / month	\$90 / month
Mobile broadband services (e.g. 4G modem or dongle)	91% without any mobile broadband device 9% used a Wi-Fi dongle / device	97% without any mobile broadband device 3% used a Wi-Fi dongle / device
Respondents with mobile broadband	9%	3%
Data allowances	0% had less than 10 GB / month 25% between 11–40 GB / month 25% between 41–100 GB / month 50% above 100 GB / month 0% unlimited mobile data	50% had less than 10 GB / month 50% between 11–40 GB / month 0% between 41–100 GB / month 0% above 100 GB / month 0% unlimited mobile data
Frequency of exceeding data limits	75% exceeded their monthly data limit between 1–5 times in the last year 0% 6–11 times 25% every month	0% exceeded their monthly data limit between 1–5 times in the last year 0% 6–11 times 100% every month
Affordability	2022 (46 respondents)	2023 (70 respondents)
How often respondents cut back on essential household costs to afford personal or household internet	15% often or always 28% sometimes 57% rarely or never	13% often or always 53% sometimes 34% rarely or never
Respondents who compromise on internet speed and/or quality to prioritise affordability	41%	89%
Digital Ability	2022 (46 respondents)	2023 (70 respondents)
Regular internet users (The following indented sections refer to respondents who had used the internet within the last six months)	76%	91%
Basic digital ability metrics (very true or mostly true of me)	Use a mobile device as a Wi-Fi hotspot (83%) Open a new browser tab (80%) Connect to a Wi-Fi network (80%) Download and then open a file (77%) Send and receive emails (77%) Find and install apps (76%) Complete online forms (63%)	Connect to a Wi-Fi network (88%) Use a mobile device as a Wi-Fi hotspot (77%) Find and install apps (67%) Open a new browser tab (55%) Send and receive emails (48%) Download and then open a file (44%) Complete online forms (39%)
Online security and cyber-safety awareness (very true or mostly true of me)	Set/manage secure passwords (83%) Add or remove friends or followers on social media (77%) Set/adjust privacy settings (71%) Identify which apps/software are safe to download (69%)	Add or remove friends or followers on social media (64%) Set/manage secure passwords (52%) Identify which apps/software are safe to download (52%)

	Decide what personal information to share online (66%)	Decide what personal information to share online (45%) Set/adjust privacy settings (41%) Check if information is trustworthy (31%)
Online content creation (very true or mostly true of me)	Produce online content (43%) Post videos (66%) Create websites (29%) Awareness of online copyright law (40%)	Produce online content (25%) Post videos (33%) Create websites (9%) Awareness of online copyright law (11%)
Smart devices (e.g. smart TV) (very true or mostly true of me)	Connect smart devices (e.g. smart TV) to the internet (57%) Adjust smart device privacy and security settings (54%)	Connect smart devices (e.g. smart TV) to the internet (58%) Adjust smart device privacy and security settings (25%)
Primary online activities (activities undertaken in past six months)	Online banking (83%) Accessing government services (69%) Online shopping (57%) Online learning / study (51%) Comparing prices of products or services (49%) Online buying / selling (46%) Tracking packages (46%) Accessing health information (43%)	Online banking (67%) Accessing government services (63%) Online shopping (45%) Tracking packages (44%) Comparing prices of products or services (39%)
Social media use (activities undertaken in past six months)	Keeping in touch with family or friends (77%) Meeting new friends or reconnecting with old friends online (71%) Engaging with community (63%)	Keeping in touch with family or friends (64%) Meeting new friends or reconnecting with old friends online (56%) Engaging with community (56%)
Online entertainment (activities undertaken in past six months)	86% used online entertainment services 26% attended an online music, arts, or cultural event online	91% used online entertainment services 80% attended an online music, arts, or cultural event online 28% played online games
Online navigation and transport (activities undertaken in past six months)	46% had navigated a route via maps on a smartphone 20% had booked a rideshare service 20% had booked a hire car via app 20% had booked a shared e-scooter or bike	41% had navigated a route via maps on a smartphone 23% had booked a taxi service via app 17% had used a public transport app

Comments

Mobile and TV access

- + We need places to learn about computers and online services. Need better 4G at Buthan
- + Need phone at my homeland fixed
- + Need better mobile at Buthan
- + Television reception – need to get the retransmission system
- + Need more training to use internet. Need Wi-Fi to use services. Need television fixed so we don't have to pay mobile pre-paid to get TV
- + Need access to training for mobile and using internet
- + We need the TV fixed up in all the houses, we need better mobile service, it's too slow. The public phones in the homelands need servicing



We need the TV satellite dishes fixed up or broadcast for Galiwin'ku. They were all damaged in the cyclone. We want access to news and information but have nothing. We can't afford to fix the TV so nobody has TV. We also need help to learn to use the phone and internet. We should also get newspapers. Kids are breaking in because they are bored, TV was a good thing to give them something to do

- + Want services same as other people in Darwin, better coverage
- + I want better mobile service, it's too slow. Also need digital skills training and Wi-Fi to access services
- + Better signal, EFTPOS goes down, ATM goes down – little download speed
- + Need a big Telstra antenna and a new antenna in Gitan homeland, and for Telstra to fund a tower at Gitan outstation
- + I don't have a mobile because I prefer to talk to people in person

Internet access

- + We need better internet in Buthan. We have all the way to the town centre for phone and internet and services
- + Internet service in Galiwin'ku is terrible and needs to get fixed quickly
- + Faster speed = better coverage – more data on PAYG faster internet for download and downloading movies faster – during day – uses band lab
- + I want to have a lot of data or a good satellite. I think it is really good for the people that live in the house to have a lot of internet like 5G to cover holistically



The internet here in Galiwin'ku past 10 am is hopeless, unfair, and further marginalises people already living in an isolated community. You cannot look up information in an emergency or when you want to access info for something you are worried about. You cannot access internet banking or help other people book flights out of the island. You cannot open emails or send them without copying the text, reloading the page, paste the text, then it only might send from there. Often there are unexplained internet outages

Affordability of internet and issues with recharge vouchers

- + More free Wi-Fi and more free internet recharging. Voucher don't always work – make recharge cheaper
- + Sometimes the recharge voucher doesn't work. Need help to learn how to use internet and phone
- + Recharge vouchers don't work sometimes. I call 1800 number but it doesn't work. The 4G internet doesn't work in afternoons, too busy
- + It's too hard to access internet in Galiwin'ku and costs too much



There's no free Wi-Fi and it costs too much money and not having a good internet connection always with the Telstra service. And wasting money monthly and weekly with mobile internet, not saving money for food

Digital ability

- + Need training and support to do internet banking, online services like MyGov
- + Need more training, computers and support to use digital phones
- + Want more digital training for elders and middle aged people, more access computers and free Wi-Fi to use services



The lack of service significantly disadvantages the people of Galiwin'ku. Due to minimal to no service at times locals are not able to access the same opportunities as one in a regional or city space. For example, people cannot participate in furthering their education via remote learning classes ie. online University or TAFE as the service connection is just far too unreliable. This then creates a significant gap for our community and deprives us of our right to strive for more for ourselves and our future

Social media concerns

- + We should cut Facebook out. It's making trouble for our community and hurting our young people
- + Instagram and Facebook are sometimes bad with arguments with Facebook



Figure 26: Daniel and Yungirrnga Bukulatjpi doing a survey with resident Jesselina Dhamarrandji



Appendix 2: Community Communications Audit

About the community	
Community name	Galiwin'ku
Alternate name	Elcho island
Traditional owners/ Language group	Yolŋu Matha (Djambarrpuyŋu, Gupapuyŋu, Djinang)
Location (Coords)	Longitude: 135.5664 Latitude: -12.0235
Region	East Arnhem
LGA/Shire/ Regional Council	East Arnhem Regional Council
Land Council	Northern Land Council
Regional Service Centre, distance	Nhulunbuy – 150 km east (40 min flight); Darwin – 550 km south-west
Remoteness (ABS)	Very remote
Demographic data – ABS 2021	
ABS link – All persons	https://www.abs.gov.au/census/find-census-data/quickstats/2021/SAL70106
ABS link – Aboriginal and/or Torres Strait Islander people QuickStats	https://www.abs.gov.au/census/find-census-data/quickstats/2021/ILOC70600401
Total population	2,199
Aboriginal and Torres Strait Islander population	2,027 (92.2%)
Gender breakdown	49.6% male / 50.4% female
Median age / breakdown	25 (All persons) / 23 (ATSI population); Children aged 0–14 years made up 26.8% of the population and people aged 65 years and over made up 3.1% of the population
Families	474 (All persons) / 444 (ATSI population)
Language group – number of first language speakers	Djambarrpuyŋu (81.6%), Galpu (1.5%), Australian Indigenous Languages (1.2%), Gumatj (0.8%), Warramiri (0.6%)
% ATSI people who speak an ATSI language	96.90%
% who speak only English at home	4.8% (All persons) / 0.2% (ATSI population)
Employment levels	In the labour force – 616 (38.1%); Not in the labour force – 911 (56.4%); Not stated – 90 (5.6%). Of those in the labour force, 40.9% were employed full time, 19.0% part-time, 8.0% were away from work and 32.5% were unemployed
Education levels – % of people attained	Bachelor's degree or above – 4.5%; Diploma/Adv Dip– 2.2%; Cert 3/4 – 5.7%; Year 12– 19.1%; Year 11 – 15.2%; Year 10 – 17.2%; Cert 1/2; 0.4%; Year 9 or below – 17.3%; No education attainment – 0.8%; Not stated – 17.9%
Number of buildings	309 occupied private dwellings, 34 unoccupied

Housing suitability for ATSI households	Average number of people per household – 5.6 (all households) / 6.3 (ATSI households); Average number of people per bedroom – 2 (ATSI households)
Median Weekly ATSI household income	\$1,913 (All persons) / \$1,812 (ATSI population)
Median personal income – over 15 years	\$352 (All persons) / \$338 (ATSI population)
Average weekly rent	\$200
Number motor vehicles per dwelling	63.2% – none; 25.7% – 1 motor vehicle; 6.9% – 2 motor vehicles; 1.3% – 3 or more motor vehicles
Community services and plans	
Community layout plan	See Bushtel: https://bushtel.nt.gov.au/profile/492
Agencies in community	2 ALPA (Arnhemland Progress Association) stores; CDP service; EARC Council office / post office; Centrelink; Baby Hub – Territory Families (NTG); Hope for Health; Public Library (NTG); Miwatj Health; Shepherdson College – up to year A12; Marthakal Homelands Resource Centre; Galiwin'ku Primary School; Galiwin'ku Depot – EARC; Elcho Island Arts; Ngalkanbuy Wellbeing Centre; Galiwinku Aged And Disability Service; Marthakal Housing Services; Marthakal Motel and Contractors Quarters (EARC); Marthakal Rangers; Takarrina Tuckerbox; Nhawe Manyamak Café; Elcho Island Airport Terminal
Visiting agencies	NLC, NTG, Anglicare (providing financial literacy and support re Telstra plans), AMSANT, AMSANT, East Arnhem Real Estate (provide housing management)
Community development plans	See Bushtel: https://bushtel.nt.gov.au/profile/492 ; Yalu AC have a Strategic Plan mapping to CTG targets including digital inclusion (Target 17)
Power supply type in community	Diesel generator, solar farm near airport; power outages reported as having been a major issue for communications
Use of power cards	Yes
Types of communications available	
Public phones – number/ location	8 (several not working)
Home phones – number	Unknown – very few community houses have home phones
Mobile services, provider, location of base station	One 3G / 4G mobile base station in town centre behind library; no other mobile services currently on Elcho Island
Coverage description	Coverage best in centre of Galiwin'ku, 1-2 bars signal at Buthan and Beach Camp areas, limited signal beyond town limit
Fibre to community	None (microwave link from Mapuru ion mainland, connected to Arnhem Fibre Network)
ADSL – number of connections	44 of 367 ports being used

Fibre-to-the-premises connections	None – copper network only in Galiwin'ku
Satellite services – number, locations, provider	Sky Muster taken up by many staff houses and agencies, but only in a few community households due to cost and limited downloads
UHF or HF Radio	HF for aircraft and shipping; UHF used by Marthakal Rangers
Communications funding programs	Regional Connectivity Program funding to Telstra (\$2.77 million) for Arnhem Fibre Upgrade Project – the project will upgrade transmission equipment at Telstra sites across East Arnhem Land, increasing backhaul capacity from 5 Gbps to 100 Gbps
Any planned upgrades?	Once Arnhem Fibre Network upgraded, Telstra to upgrade microwave link to Galiwin'ku and power supply at Mapuru; Public telephones boxes to have free Wi-Fi; two small cell mobile services to be installed at Gäwa and Banthula
Emergency information system	No
Telemetry network	All generators, pumps, water chlorination etc monitored via telemetry; TEABBA have remote monitoring system for RIBS broadcast equipment
Media services available	
Radio services broadcast – AM or FM	88.9 FM ARDS / Yolŋu Radio; 105.9 FM ABC Darwin; 106.7 FM TEABBA (not working currently); 107.5 FM – Vision FM
TV services – local broadcast, number of DTH services, number working	All TV services via VAST direct-to-home; East Arnhem Real Estate (tenancy managers) estimates 90% of community houses do not have TV working
RIBS radio station – location, staff, roles	No RIBS station currently active
RIMO – regional provider	TEABBA – Top End; ARDS – Arnhemland
Other media services – newspaper etc	NLC Land Rights News (no sign of distribution)
Community access facilities	
Internet computer access facilities	5 computers and printer at ALPA Higher Education Centre, Buthan (running off Starlink); no computers at EARC library (discarded in 2022 due to age)
Public Wi-Fi availability	Library has limited Wi-Fi access; free Centrelink Wi-Fi provided by DHS
Training / skills data	
Nature and provider of training programs	Cert 1 in Business Skills (through ALPA Higher Education Centre)
Training options available – school, TAFE, CDP, other	ALPA Higher Education Centre works with Charles Darwin University and Batchelor Institute
Any workplace digital skills training – rangers, art centre, media, store etc	No data

Appendix 3: Photos of Research Activities



Figures 27 & 28:
Lyndon and Daniel
with Tia Roko from
Yalu AC and Maliku
Dhammarandji;
Daniel interviewing
post office workers
Verity and Esther
Burarrwanga



Figures 29 & 30:
Maliku
Dhammarandji with
Jeffrey Lungarriny &
Denzel Dhamarrandji
at Dhayirri homeland;
Activ8me Wi-Fi phone
at Dhayirri homeland



Figures 31 & 32:
Resident Lynette
Garrawurra doing
survey with Daniel
and Maliku;
Shepherdson
College entrance



Figures 33 & 34:
Telstra visit – Maliku,
Lyndall Stoyles
(Telstra), Lyndon,
Lauren Ganley, Yalu
CEO Anahita Tonkin,
Daniel and Nic Danks
(Telstra); Anahita
with Nic and Lauren