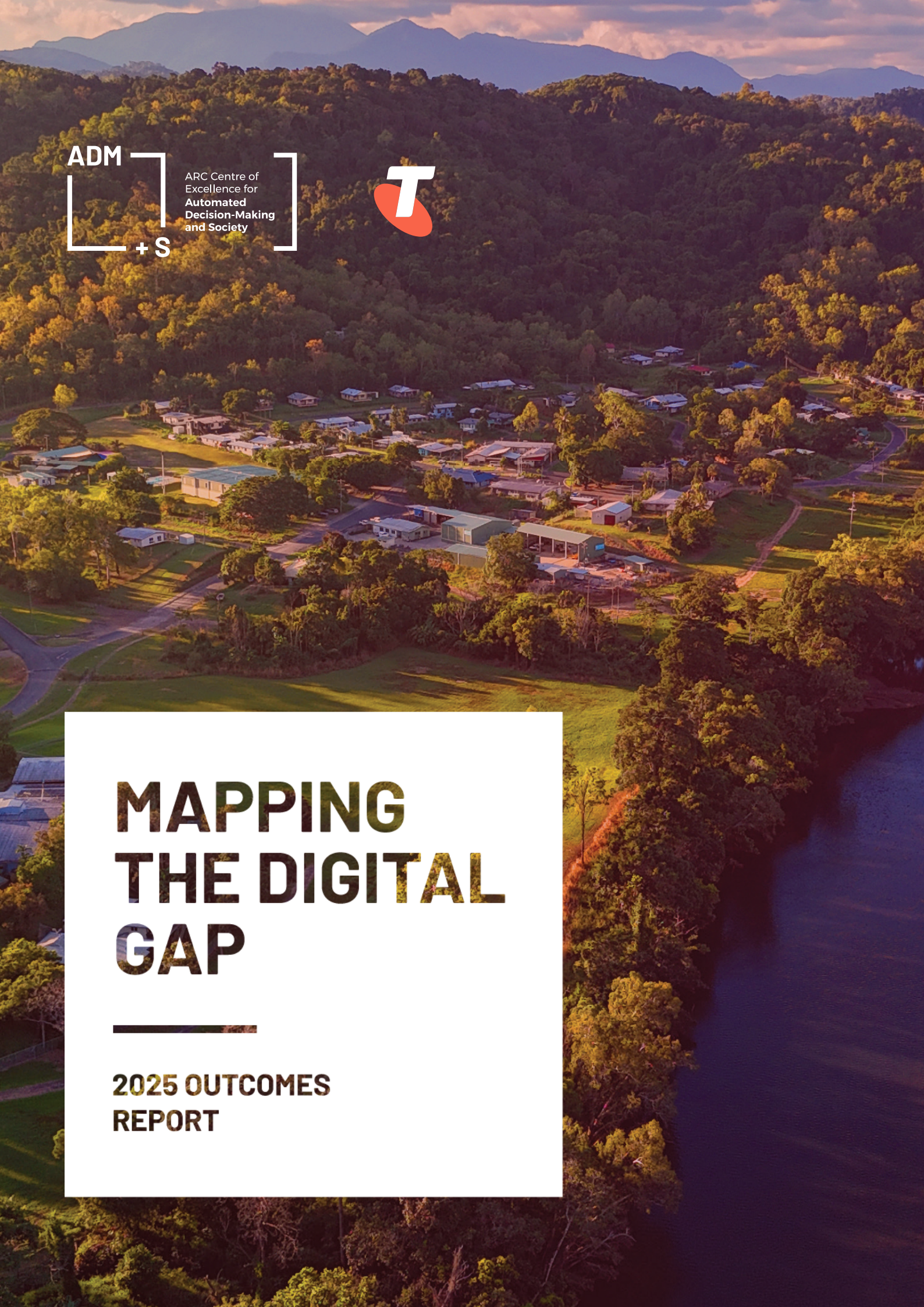


MAPPING THE DIGITAL GAP

2025 OUTCOMES REPORT

We respectfully acknowledge the Baarkandji, Eastern Kuku Yalanji, Erubam Buaigiz, Warumungu, Anmatyerr, Warlpiri, Yolŋu (Djambarrpuyŋu, Gupapuyŋu, Djinang, Dhuwala), Kwini, Kulari, Bardi, Dinnuman, Ngaanyatjarra, Ngaatjatjara, Pitjantjatjara and other Traditional Owners for the lands on which *Mapping the Digital Gap* research was conducted. We extend that respect to all Aboriginal and Torres Strait Islander peoples today, and 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.

Warning: Aboriginal and Torres Strait Islander people should be aware that this report may contain images and names of deceased persons.

Cover image: Wujal Wujal community

Inside image: Animal tracks on dune, Pilbara, WA

Suggested Citation

Featherstone D, Ormond-Parker L, Thomas J, Parkinson, S, Hegarty K, Hawkins, L, Louie YM, Barton A, Johnson Y, Kennedy J, Bawden, S, Ganley L (2025) Mapping the Digital Gap: 2025 Outcomes Report, Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/1dhh-2e31

Acknowledgements

The *Mapping the Digital Gap* project is being undertaken through RMIT University as part of the Australian Research Council (ARC) Centre of Excellence for Automated Decision-Making and Society (ADM+S) in partnership with Telstra. The project receives funding support from Telstra and the ADM+S (CE200100005). We gratefully acknowledge this support and collaboration. The views expressed herein are those of the authors and are not necessarily those of the Australian Government, the ARC or Telstra.

The research team would like to thank the many people and organisations who supported the *Mapping the Digital Gap* project and contributed to this first annual report. In particular, we thank all remote community residents and stakeholders who have participated in the research, the First Nations Expert Advisory Group for their guidance, and the many contributors from government, industry, non-profit and research sectors.

Research Partners

This research would not have been possible without our First Nations community partners. We thank Regional Enterprise Development Institute, Wujal Wujal Aboriginal Shire Council, Torres Strait Islanders Media Association, Julalikari Aboriginal Corporation, Pintubi Anmatjere Warlpiri Media and Communications, Yalu Aboriginal Corporation, Laynhapuy Homelands Aboriginal Corporation, Kalumburu Aboriginal Corporation, Djarindjin Aboriginal Corporation, Thamarrurr Development Corporation, Warakurna Community, Ngaanyatjarra Council and NPY Womens' Council for their collaboration and support.

Community co-researchers

We also thank our community co-researchers

Audrey Shadforth, Bernadette Angus, Marlon Sampi (Djarindjin / Lombadina)

Nixon Mye, Lala Gutchen (Erub Island)

Yuŋgirrŋa Bukulatjpi, Cyril Bukulatjpi, James Bayung, Maliku Dhamarrandji, Glen Gurruwiwi, Evelyn Djotja Bukulatjpi, Wesley Dhurrkay, Shaun Dhamarrandji (Galiwin'ku)

Djamika Ganambarr, Guruwuy Ganambarr, Billy Gumana, Marrpalawuy Marika (Gäṉgaṉ)

Leanne Kelly, Ashlyn Hassett, Julia Campbell, Maggie Captain (Kalumburu)

Sheana Sampson, Deb Cain, Floyd King, Linda (LT) Turner (Tennant Creek)

Marcus Kinthari, Veronica Munar, Vincent Jinjair, Honorata Jinjair, Teresa Jinjair (Wadeye)

Anthony Wiltshire, Shaylin Wiltshire, Katelyn Whyman, Sheldon Hunter, Monica Kerwin, Shalarna Thorpe, Bobbi Harris (Wilcannia)

Lexton Nandy, Marie Shipton, Vincent Tayley, Dallas Walker, (Wujal Wujal)

Stephanie Lynch, Dennis Charles, Mel Langdon (Yuelamu)

Tracey Yates, Christine Mineri, Bernadette Newberry, Heston Newberry (Warakurna)

Tenisha Fox, Renae Fox, Danny Fox (Pipalyatjara / Kalka)

First Nations Expert Advisory group

Dr Scott Winch, Dr Heron Loban, Dr Romaine Moreton,
Lauren Ganley, Yingiya Mark Guyula MLA

CONTENTS

Tributary and floodplains near Ord River, Kimberley WA

MAPPING THE DIGITAL GAP

2025 Outcomes Report

Authors

Daniel Featherstone, Lyndon Ormond-Parker, Julian Thomas, Sharon Parkinson, Kieran Hegarty, Leah Hawkins, Yee Man Louie, Alison Barton, Yasmin Johnson, Jenny Kennedy, Shane Bawden, Lauren Ganley

Photography

Daniel Featherstone

Design

Leah Hawkins

EXECUTIVE SUMMARY

Over 150,000 Aboriginal and Torres Strait Islander people live in remote and very remote Australia, making up about 15% of the national First Nations population. Many reside in the 1,499 remote communities and homelands across the country. Living in these communities and homelands is important for supporting ongoing connection to Country, culture, family and community.

At the same time many communities face structural barriers, including reduced access to face-to-face services, limited local employment options high levels of overcrowded and sub-standard housing, and high cost of living. Household incomes and rates of participation in education and employment are substantially lower than in major cities. More than 1 in 3 dwellings fall below acceptable living standards. These conditions represent broader inequalities that impact digital inclusion These conditions present several barriers to digital inclusion, contributing to higher rates of digital exclusion compared with other parts of the country.

Mintaya Ward using computer in PY Ku Centre, Pipalyatjara SA

2023 research team in Warakurna WA

Improving digital inclusion in remote First Nations communities has the potential to strengthen cultural, social, emotional and economic outcomes. Having access to quality, reliable and affordability internet, fit-for-purpose devices, and the skills and confidence to use them effectively would help overcome barriers associated with remoteness. Digital inclusion can support access to critical services, health and education, create new opportunities for learning and employment, help to sustain social and cultural connections and support informed decision making.

Kalumburu, north Kimberley WA

Warakurna and Rawlinson Range, Ngaanyatjarra Lands WA

Since 2022, the *Mapping the Digital Gap* research project has sought to improve understanding and awareness of the nature of digital inclusion for First Nations Australians living in remote communities. This final outcomes report shares findings and insights from that first phase of the research, conducted in collaboration with 12 remote and very remote First Nations communities across Australia from 2022-2024. It builds upon the Australian Digital Inclusion Index (ADII), which measures digital inclusion nationally. *Mapping the Digital Gap* has also contributed to the establishment of a comprehensive national study of digital inclusion among First Nations Australians in 2025.

Our findings reaffirm the critical role that reliable and affordable communications and media services in remote and very remote communities, while highlighting the strengths, adaptability and digital innovation already present. It outlines the systemic and multi-layered barriers that contribute to the digital gap. Since its inception, this evidence has helped guide community-led solutions as well as national and regional policy and programs aimed at strengthening digital inclusion for First Nations Australians in remote communities.

Co-researcher Julia Campbell conducting surveys in Kalumburu WA

Along with two previous annual outcomes reports and 27 individual community outcomes reports to date, this report contributes to a rich and growing evidence base of digital inclusion and detailed insights into the broader ecology of communications and media use in remote First Nations communities and homelands. This provides a strong platform to broaden our regional coverage and analysis in the second phase of *Mapping the Digital Gap* research in nine new sites from 2025 to 2027. This will expand the evidence base to help close the digital gap for First Nations Australians living in remote communities through community partnerships, capacity building and systemic change.

WHAT IS DIGITAL INCLUSION?

Digital inclusion means having reliable, safe and affordable access to the internet and digital technologies that are now critical for full participation in social, cultural and economic life, along with the skills, confidence and support needed to use these technologies effectively.

For First Nations Australians, digital inclusion is deeply linked to self-determination and cultural sovereignty. Digital inclusion enables individuals, families and communities to make informed decisions and exercise agency across all areas of their lives, stay connected to cultural, kinship networks and Country, and enables safe participation in social, cultural and economic life online, supporting strong, empowered and thriving communities.

As digital systems now shape our daily life, digital inclusion is critical for accessing essential services, engaging with health, education and employment needs, organising finances and finding relevant news and information.

Remote First Nations people are rapid adopters of digital technologies, with high take-up of online platforms and services to connect with family and community, maintain language and cultural responsibilities, and share local news and stories.

However, 41% of First Nations people are considered "digitally excluded", meaning they have more limited access, affordability or ability to effectively use the internet and digital technologies. This is double the rate among non-First Nations people (20%). These figures reflect ongoing structural and systemic barriers that impact many First Nations Australians' ability to effectively participate in a digital society and economy. In remote communities and homelands, rates of digital exclusion are even higher.[1]

Renisha Yates using the public phone, Warakurna WA

CLOSING THE GAP OUTCOME 17

Recognition of this digital gap and the growing importance of digital inclusion led to Outcome 17 of the National Partnership Agreement on Closing the Gap:[2]

Aboriginal and Torres Strait Islander people have access to information and services enabling participation in informed decision-making regarding their own lives

Target 17 sets out an ambitious goal:

By 2026, Aboriginal and Torres Strait Islander people have equal levels of digital inclusion.

ABOUT MAPPING THE DIGITAL GAP

From 2022 to 2024, we worked in partnership with local First Nations organisations, undertaking three annual research visits to 10-12 remote and very remote First Nations communities across Australia. Guided by a First Nations Expert Advisory group, this project strengthens understanding of the scale and nature of the digital gap for First Nations people by addressing long-standing gaps in First Nations-specific data[3] and by supporting progress toward Target 17. Our data is now being used by the Productivity Commission as a key indicator for Target 17.

Our team undertook 32 site visits to 12 communities, partnering with local First Nations organisations in each site, and working with 44 community co-researchers (See A Partnership Approach on page 20). Over the three years, we collected a total of 2,063 surveys and undertook 350 interviews with community leaders, local agencies and residents. The project is grounded in NHMRC[4] and AIATSIS ethical guidelines for research with Aboriginal and Torres Strait Islander peoples and communities.[5] As part of our commitment to Indigenous data sovereignty, annual Community Outcomes reports were returned to each community, including a local digital inclusion plan to support local planning, community-led advocacy and place-based strategies.

Lyndon Ormond-Parker with co-researcher Djamika Ganambarr, Gängan homeland NT

Maggi Captain conducting a survey with Anastasia Bundamurra and Maria Fredericks, Kalumburu WA

MORE INFORMATION

Further information about the project objectives, context and methods is available on the *Mapping the Digital Gap* website, including a Background Paper detailing the research objectives, methodology, site selection and research and policy context. There are also links to the individual Community Outcomes reports. A dedicated First Nations interactive dashboard is available on the ADII website, providing detailed survey results.

mappingthedigitalgap.com.au

mtdg@rmit.edu.au

@MappingTheDigitalGap

linkedin.com/showcase/mapping-the-digital-gap

ABOUT THIS 2025 REPORT

This 2025 Outcomes Report builds on the foundation of the 2024 report,[6] which provided a comprehensive summary of survey data and interviews collected over three years in partnership with local First Nations organisations and co-researchers. It provides updated analysis and case studies for the core elements of Access, Affordability, Digital Ability and Media and Information Services.

The 2024 report also highlighted the most significant change observed in each research site over the three years, showing the impact of new technologies and community-driven programs to improve digital inclusion in each community.[7] In this 2025 report, these sections have been updated with a summary of progress against the local digital inclusion plans for each community, demonstrating how these plans serve as a powerful tool for supporting community-led and place-based solutions. Digital inclusion plans bring together research evidence, local knowledge and partnerships between local and regional agencies, governments and industry to address identified issues or barriers.

The main update in this report is the inclusion of 2025 ADII Index results. While changes to the way the ADII measures Affordability limit comparison to previous years,[8] the analysis in the report outlines how Index scores compare between the research sites, as well as with national non-First Nations averages and First Nations scores in other contexts. The aim of this report is to identify where further investment, and programs can most effectively strengthen digital inclusion in remote and very remote communities.

Mapping the Digital Gap 2024 Outcomes Report: http://doi.org/10.60836/xspj-w062

Djamika Ganambarr conducting a survey with Gawumala Gumana at Yirralka Ranger base in Gäṉgaṉ NT

PROJECT IMPACT AND EXPANSION

Mapping the Digital Gap Phase 2

The outcomes and insights from the first phase of the project led to Telstra funding a second 4-year project from 2024-28. Building on the proven methodology and partnership model, the first round Phase 2 research began in 2025 in 8 new sites while continuing research in three existing sites.

Daniel and Lyndon with co-researchers Lloyd Biljabu and Ronelle Simpson in Punmu WA

Measuring Digital Inclusion for First Nations Australians project

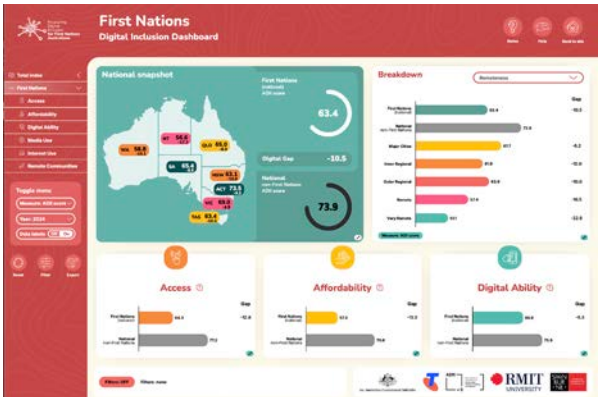
The *Mapping the Digital Gap* findings have played a significant role in strengthening understanding of digital inclusion in remote Australia. However, additional data was needed for First Nations people living in urban and regional areas to accurately measure progress on Target 17. This led to the First Nations Digital Inclusion Advisory Group recommending an expanded data collection project.

In response, the Australian Government funded the ADII team to undertake the Measuring Digital Inclusion for First Nations Australians project. The first round of research was undertaken in 2025, including 1,998 surveys collected nationally by First Nations research company Ipsos Aboriginal and Torres Strait Islander Research Unit and 729 surveys collected in 10 targeted regional sites with local organisations. This supplemented the 807 surveys collected through the *Mapping the Digital Gap* project in 2024.[9]

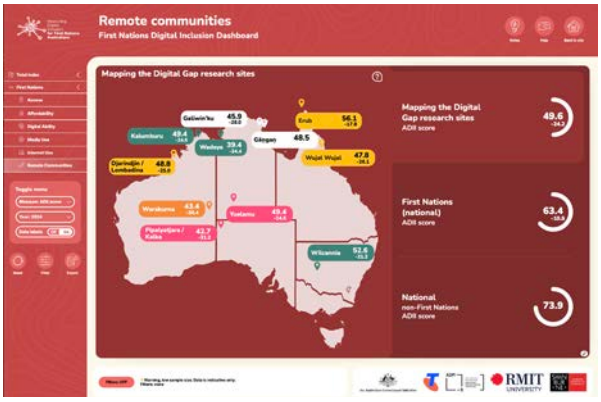
This was merged with the ADII data collection to provide the first comprehensive baseline measure of Target 17, with the first report released in November 2025. A new First Nations dashboard has also been created on the ADII website, enabling analysis of results by dimension, state/territory, Indigenous regions, remoteness and demography.

A second full round of data collection in 2026 will incorporate *Mapping the Digital Gap* Phase 2 data, with the next report and Index update to be completed in 2027.

Heron Loban and Lyndon with ARDS co-researchers Adrian Schmidt Muanm, William Gumbula, and Zowie Bromot, Nhulunbuy NT



First Nations dashboard on the ADII website



Remote communities page on First Nations dashboard

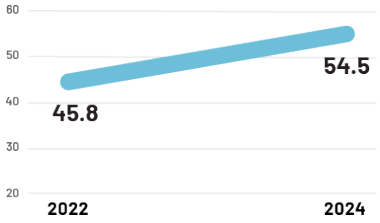
Key Findings

Digital engagement

First Nations people living in remote communities are highly digitally engaged but face significant barriers to digital inclusion

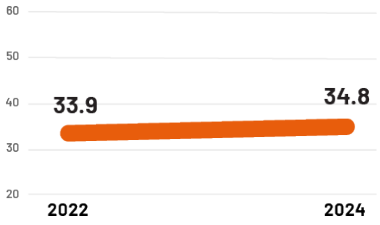
8.7

improvement in Digital Ability



0.9

improvement in Access



These figures show progress in use of digital technologies and online services. New or improved mobile services as well as introduction of community Wi-Fi networks or hotspots in several research sites have helped contribute to improved access.

Meanwhile Digital Ability is improving through increased engagement and digital support by local agencies or family and peer support within communities. Each community visited has been proactive in implementing place-based strategies to improve digital inclusion locally.

However, as the findings in this report show, there is still a long way to go to overcome the barriers to digital inclusion faced by First Nations people living in remote and very remote communities. There are also gaps in access to trusted and reliable media and information services which limit informed decision-making.

6% increase

in **internet users**, from 80% in 2022 to 86% in 2024

19% increase

in **daily usage**, from 44% in 2022 to 62% in 2024

17% increase

in the percentage of respondents who have engaged with an **online activity** in the last 6 months, up from 64% in 2022 to 81% in 2024

62%

used **social media** to keep in touch with family and friends, up from 49% in 2022

58%

used **online banking** in the last six months, up from 52% in 2022

52%

used **online government services** in the last six months, up from 43% in 2022

Digital and sculptural artist Jimmy Thaiday, Erub, Torres Strait, QLD

The First Nations digital gap in 2025

Based on the expanded First Nations data collection, the 2025 ADII found a digital gap of 10.5 between First Nations Australians and other Australians nationally. This gap widens significantly with remoteness[10] to 16.5 for First Nations people living in remote areas and 22.8 for those in very remote areas.

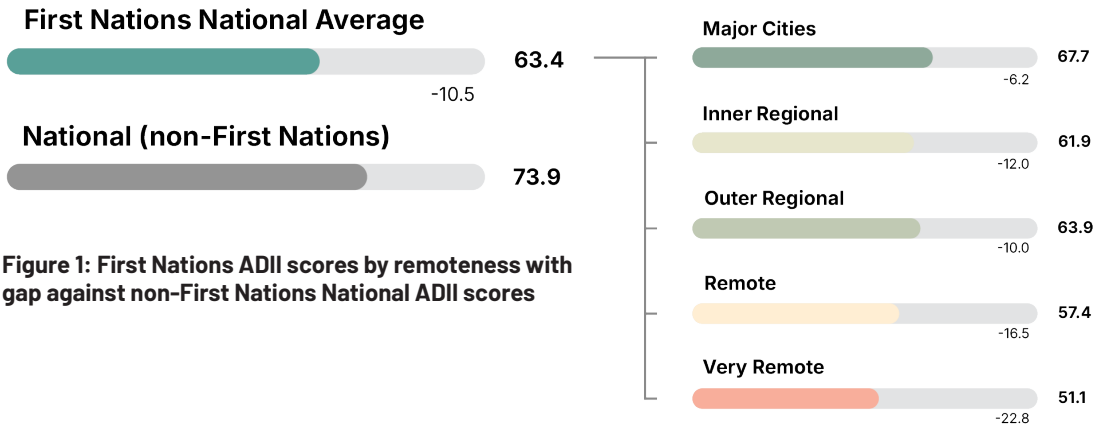


Figure 1: First Nations ADII scores by remoteness with gap against non-First Nations National ADII scores

Digital inclusion rates vary widely with remoteness from state to state

The *Mapping the Digital Gap* data has contributed to a larger national sample of First Nations people in the 2025 Index. This has enabled us to accurately map digital inclusion rates for First Nations people by remoteness in each state and territory.

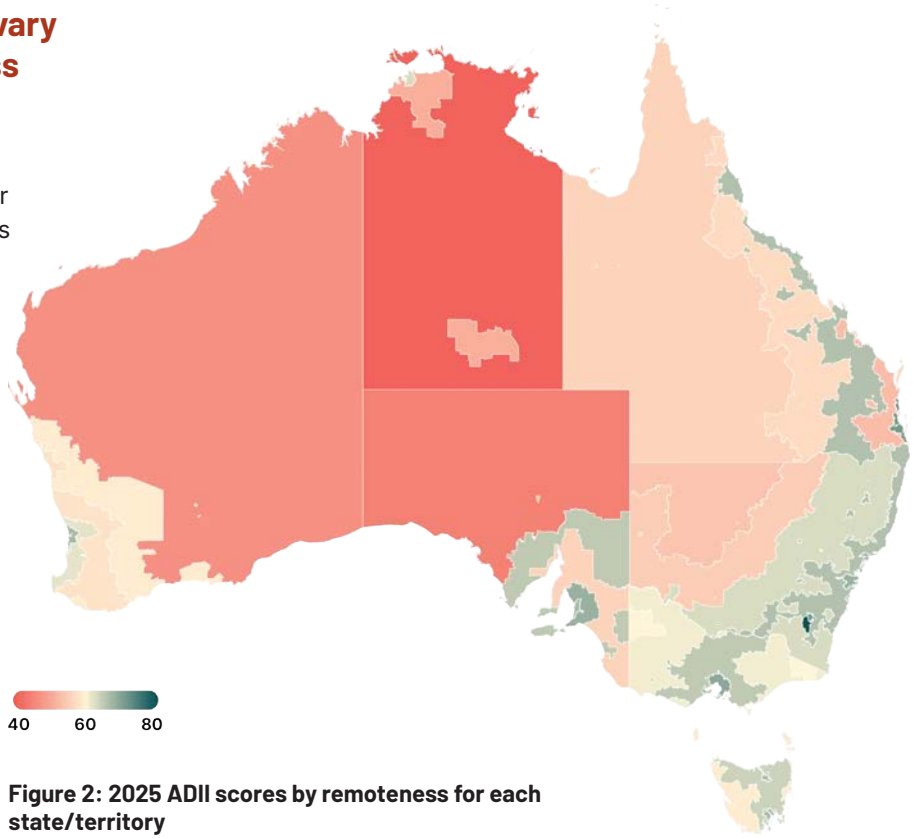


Figure 2: 2025 ADII scores by remoteness for each state/territory

"I live at Fossil Head where there is no phone, internet, TV or radio. We need communications here." (Fossil Head resident)

Key Findings

The First Nations dashboard now shows results by Indigenous Region

With a much larger national First Nations sample, our team can now use small areas estimates modelling to calculate Index and dimension scores for Indigenous Regions.[11]

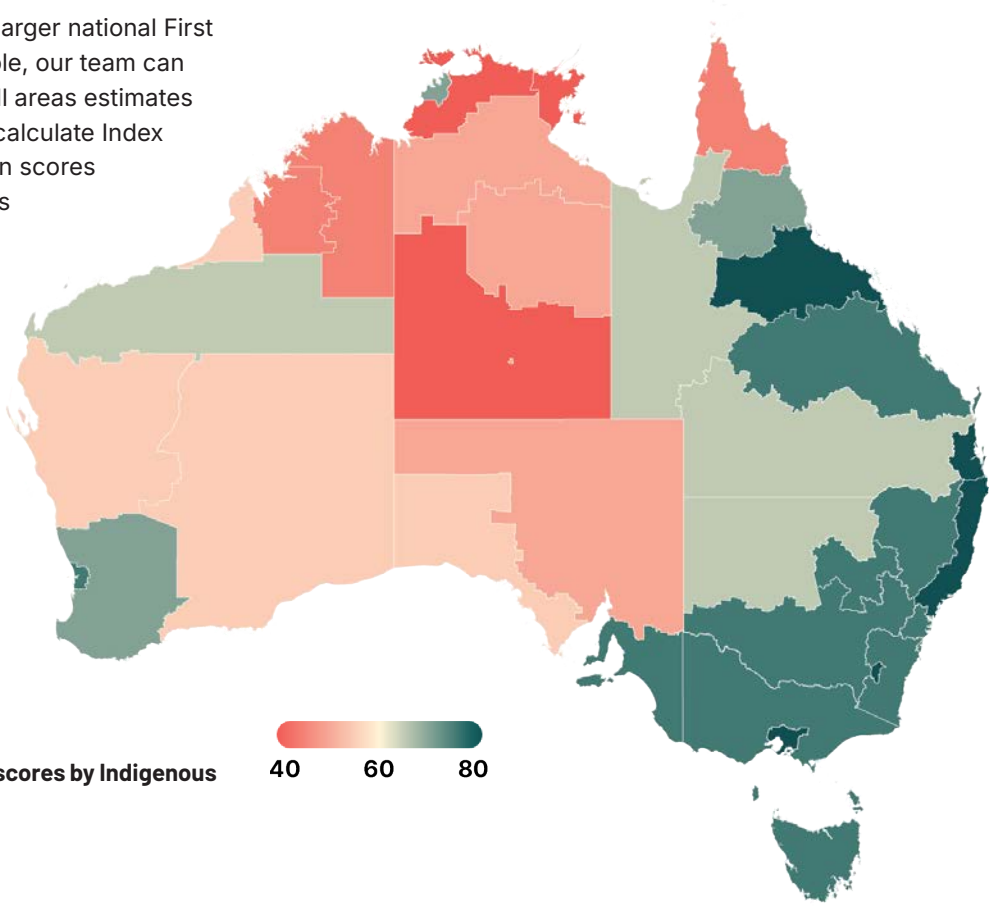
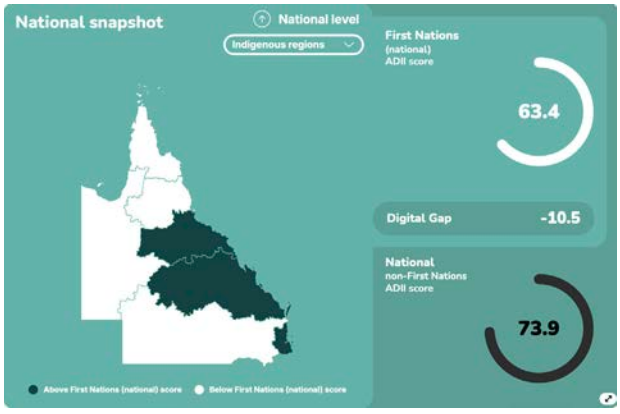


Figure 3: ADII scores by Indigenous Region

This new functionality is now available on the First Nations dashboard, enabling First Nations organisations and communities to analyse the Index results state by state, by remoteness area and by Indigenous region. This is consistent with Priority Reform 4 of the National Partnership Agreement on Closing the Gap which calls for shared access to data and information at a regional level.

The Remote Communities page provides the Index results for each community, enabling comparison between sites and against national First Nations and non-First Nations results, as well as changes since 2022. Data can be analysed by dimension (Access, Affordability and Digital Ability) and for specific demographic groups by using the Filter function.[12]



Indigenous Regions view on First Nations Dashboard

Digital Exclusion

First Nations Australians face digital exclusion at twice the rate (41%) of other Australians (20%).

This rate is even higher in *Mapping the Digital Gap* sites where digital exclusion impacts three in four people (73%). Close to half (47%) are considered 'highly excluded', meaning they face significant barriers to accessing and using digital services and technologies.

The high rate of digital exclusion is due largely to socio-economic barriers that limit access to quality, affordable and reliable connections and devices, and a lack of support needed to develop digital skills and confidence. Digital exclusion is highly contextual, affected by geographic factors, such as remoteness, and demographic factors including age, employment, education, income and disability.

Across nearly all research sites, First Nations residents have very high rates of digital exclusion

To address barriers to digital inclusion, place-based and community-led strategies are needed in each site with support from government and industry. The Research Sites section outlines progress to date on community-led strategies in each Digital Inclusion Plan within community outcomes reports. However, given the scale of the challenge, further collaboration and support is needed.

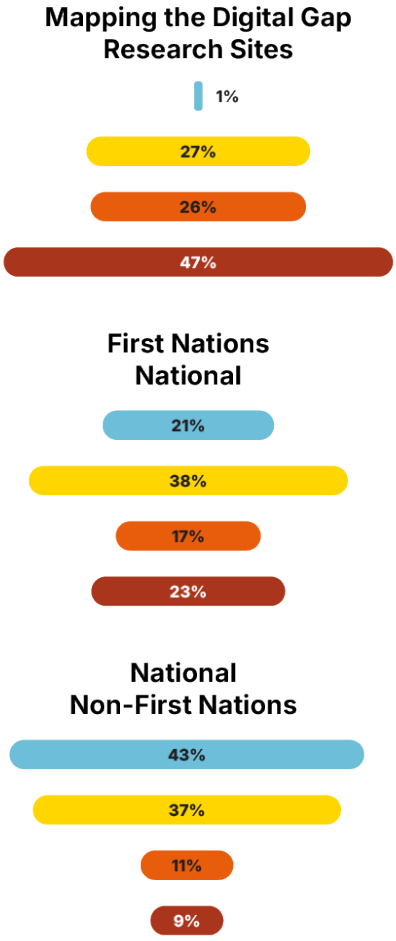
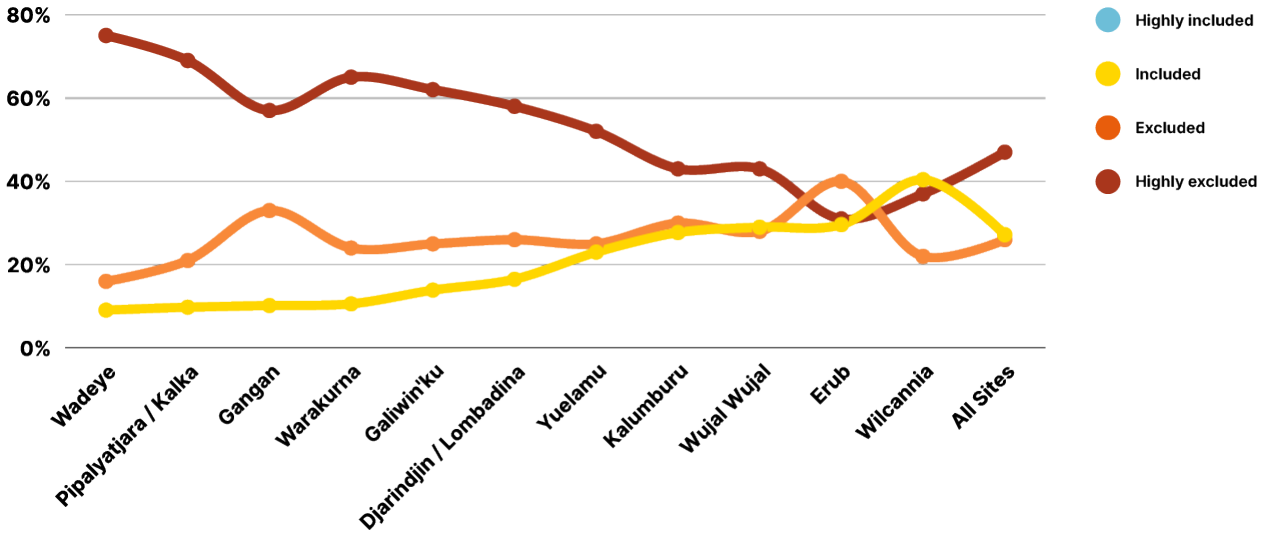


Figure 4: (below) Levels of Digital exclusion by community (%)

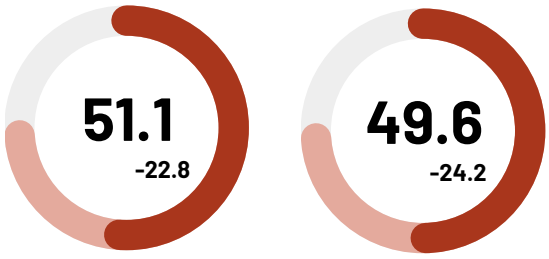
Figure 5: (right) Levels of digital exclusion in research sites and by First Nations status



Key Findings

Mapping the Digital Gap sites

The average digital inclusion score across the 11 Mapping the Digital Gap research sites visited in 2024 was 49.6.



Very Remote
ADII Score,
First Nations

Research Sites
ADII Score

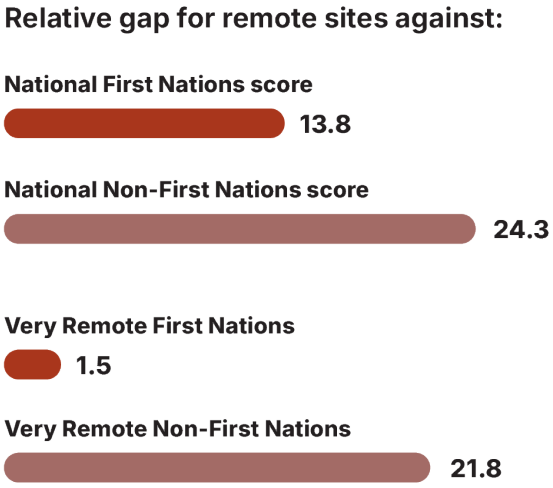
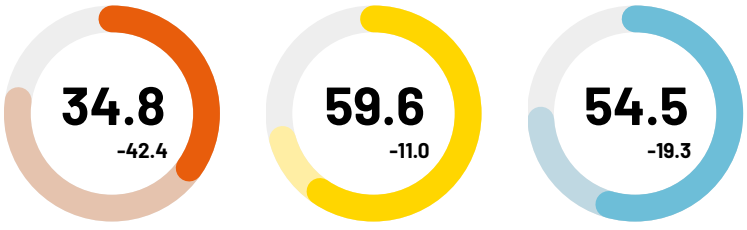


Figure 6: ADII gap for research sites compared against national and Very Remote scores

Gäŋgaŋ homeland NT

While the average digital inclusion score across the *Mapping the Digital Gap* research sites is only 1.5 points below the very remote First Nations average, there exists a significant gap in all three dimensions when compared to non-First Nations people living in remote areas:



Access **Affordability** **Digital Ability**

Figure 7: ADII dimensions scores for research sites, with digital gap to National Average (non-First Nations)

The digital gap varies widely among Mapping the Digital Gap sites

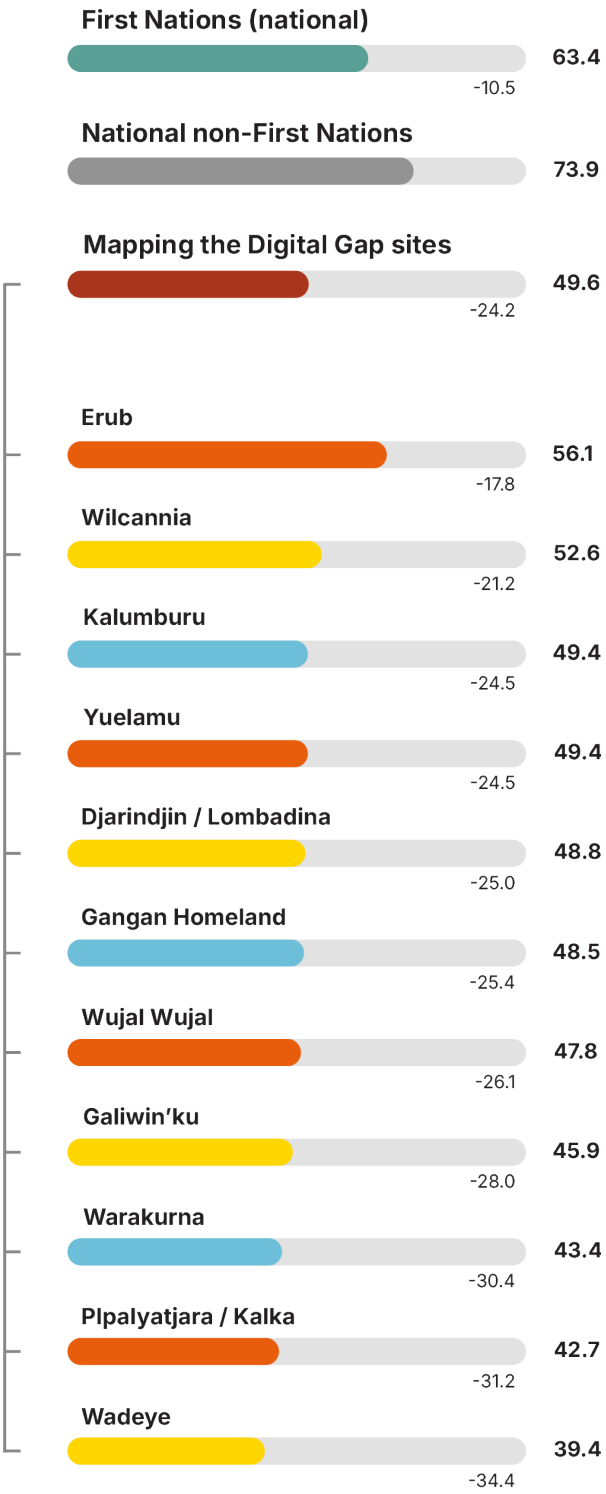
Due to variations in context among research sites, digital inclusion scores ranged widely from 39.4 in Wadeye, NT (gap of 34.4) to 56.1 in Erub in the Torres Strait (gap of 17.8). Key factors impacting digital inclusion include availability and quality of mobile and broadband services, community size, distance from regional centres, Wi-Fi and computer access and digital support options. Socio-economic and demographic variations also play a role.

Wadeye community NT

This variation clearly shows that a variety of contextual factors impact on digital inclusion in remote communities. The most effective solutions will be place-based and community-led, based on local needs and context, and build upon existing services and support.

Public phone at Galiwin'ku NT

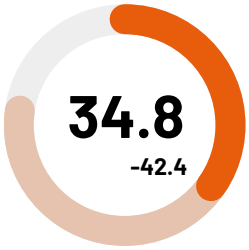
Figure 8: ADII score and gap score for all sites



Key Findings

Access

Access is the greatest contributor to the digital gap in research sites



Average Access score

across Mapping the Digital Gap research sites.

While Access is improving in remote communities, it remains the largest contributor to the digital gap, with a gap of 42.4. This is nearly four times the size of the gap for Affordability (11.0) and more than double that for Digital Ability (19.3).

The Access measure refers to uptake of home broadband and mobile services, use of online services and devices, and data use. While availability of services remains a limiting factor in many small communities and homelands without mobile services, socio-economic factors typically play a bigger role.

We're in the 21st century, but they don't deliver the service, it's poor service. Is there any advantage for people in remote areas - is it only in times of crisis we get free internet, free pre-paid? I would be able to learn better to adapt to technology but I don't get proper access, so what's the point? (Wilcannia resident)

The average Access score for non-First Nations people in very remote areas is 76.9, only 0.3 below the national non-First Nations score. This indicates that broadband service options are available for those who can afford post-paid services, with NBN and Starlink satellite services available throughout remote Australia and fixed line services in most larger communities. Regular internet use has increased but the number of non-users remains substantial.

Access also concerns frequency and intensity of use. Nationally, the proportion of Australians not using the internet has sharply declined over the past decade. In 2024, 95% of non-First Nations Australians are constant to daily internet users with only 2% non-users. The national average for First Nations Australians is 89% constant to daily users and 3% non-users, with these rates reducing to 73% and 9% for First nations people living in very remote communities.

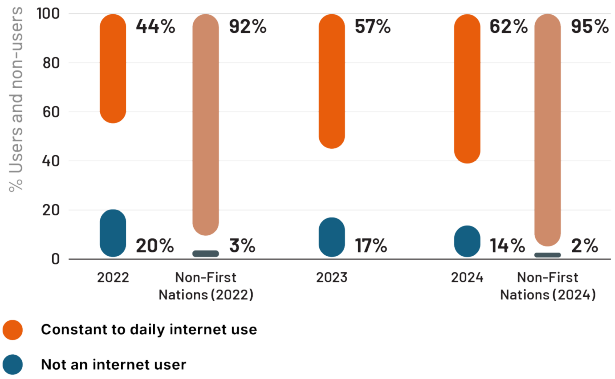


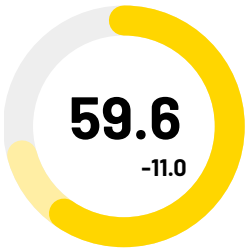
Figure 9:Frequency of internet use in research sites, compared against National non-First Nations, 2022-2024

The frequency of use is dramatically lower for those living in the remote First Nations communities we visited. In 2022, 44% were constant to daily users with 20% not internet users. By 2024, rates of constant or daily use had increased to 62% and non-users reduced to 14%.

This is the most positive indication that digital engagement is improving as a result of increased availability of mobile and Wi-Fi services, combined with increasing digital skills and confidence. It also reflects the increasing necessity of internet use in daily life. This is especially the case in remote communities where many services, including banking and most government services, are not available locally. However, the continued high rate of non-use (14%) highlights the ongoing barriers to internet use in remote First Nations communities, particularly for Elders, those on very low incomes or without housing, those with limited English language and people with disability.

Affordability

Rising affordability challenges since 2022 are a significant barrier to digital inclusion



Average Affordability score

across Mapping the Digital Gap research sites.

Nationally, affordability is the biggest contributor to the digital gap between First Nations Australians and non-First Nations Australians, with a gap of 13.3. Affordability is a major concern for First Nations people living in remote communities. The average monthly household expenditure on mobile and internet services was $271 in 2024, up by $72 since 2022. The increase was greatest for large family households (8-10 people), whose monthly costs had increased by $186 to $407 in 2024.

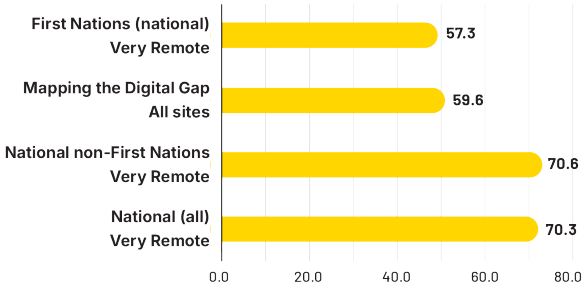


Figure 10: Affordability scores comparison

The 2024 Affordability score across the 11 research sites is 59.6, 11.0 points below the national average for non-First Nations people. However, it is 2.3 points above the national First Nations average of 57.3. This is primarily due to large average household sizes in remote communities, which increases household income relative to the cost of a bundle of internet and mobile services. Note that the ADII has changed its Affordability measure in 2024 to better account for diverse contexts of household make-up and usage patterns, including mobile use by large households.

Nonetheless, growing cost of living pressures have hit First Nations people living in remote communities particularly hard, with increasing household expenditure on pre-paid mobile data adding to very high costs for food, fuel, power, rent and other essentials.

"I only get $400 a fortnight so hard to pay for the phone top up. The free Wi-Fi makes it easier but it plays up sometimes." (Warakurna resident)

In 2024, 69% of survey respondents reported they had made sacrifices or cut back on essential costs in order to afford connectivity, a major increase from 41% in 2022. This compares with 18% of non-First Nations people making sacrifices nationally in 2024. 73% of internet users surveyed reported that they 'made compromises on speed and/or data in order to afford it' in 2024, up from 35% in 2022.

"Mobile data is expensive because everything is on the internet now." (Pipalyatjara resident)

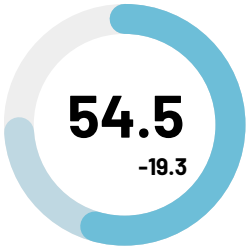
Households are spending a substantial amount of their income on internet and mobile services, with large multi-generational and single-parent households having the greatest affordability challenge. On average across all sites, an estimated 7.3% of household income was spent on communications services, particularly on costly pre-paid mobile data. While this is down slightly from 8.8% in 2022, it is still well above the 2% threshold considered to be affordable.

Mobile phones in Wilcannia Store, NSW

Key Findings

Digital Ability

Digital Ability has improved but there remains a large gap relative to both First Nations and non-First Nations Australians nationally



Average Digital Ability score

across Mapping the Digital Gap research sites.

Significantly, this is 14.0 points below the First Nations national average score, pointing to significant additional barriers for those living in remote communities.

The Digital Ability gap is especially large for those who did not complete secondary school (19.6), for those not in employment (24.3), for language speakers (40.8), and those with disability (34.2). Our research sites also show a gender divide in Digital Ability, with males having a large gap (25.3) compared to the non-First Nations males, while the relative gap for females (11.4) is much lower. A similar gender gap exists for First Nations Australians nationally.

Overall, we saw increased use of online banking, government services and online shopping, with a 17% increase in the percentage of respondents who have engaged with an online activity in the last 6 months (up from 64% in 2022 to 81% in 2024). However, this was not consistent for all communities. Engagement with online services is impacted by lack of identification and difficulties using two-factor authentication due to regular changes in mobile numbers and low use of email services. Other barriers include lack of digital support, language barriers, and concerns about scams and cyber-safety issues.

The rapid uptake of digital technologies among First Nations people in remote communities has strengthened social connections and access to essential services, with 93% actively using social media platforms. However, limited digital ability and cyber-safety awareness increases risk of online harms though scams, misinformation, racism and hate speech, and technology-facilitated abuse. Communities are balancing these opportunities and challenges and local organisations are playing a vital role in building digital resilience and safety. However, there is an urgent need for increased and updated online safety programs to support safe digital participation and cultural safety online.

"It would be good to get internet training to use apps and know about scams." (Galiwin'ku resident)

There is also an urgent need for programs and support to address digital ability, particularly for Elders, people with disability, language speakers, those with limited educational attainment, and those not currently in the labour force. The planned Digital Mentors program included in 2024 Budget measures is a positive development. This provides a culturally appropriate model of digital skills learning and support, building on existing peer support models and support from local service providers. There is high demand for digital mentor support in all the communities visited and urgency for this type of program to be expanded to enable coordinated delivery through local and regional agencies with existing community engagement.

"My kids try to teach me to use the phone and internet but I always forget. I don't have a phone, I just borrow my daughter's phone. They help me with banking or MyGov or anything I need, otherwise I go to the office." (Warakurna resident)

Media and Information

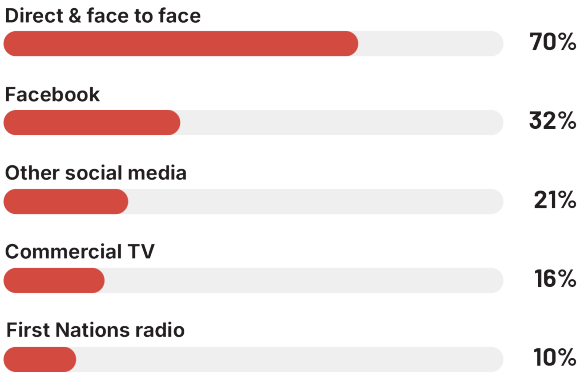
Sources of media and information services in remote First Nations communities include digital, satellite, broadcast and face-to-face channels, with residents using whichever works locally. In 2024, 70% of participants accessed daily news and information through direct and face-to-face communication, followed by Facebook (32%), other social media (21%), commercial TV (16%), community noticeboards (13%), online news (11%) and First Nations radio (10%). Since 2022 we have seen a clear shift towards social media, with Facebook and other platforms increasing as daily news sources while use of First Nations radio, ABC radio, commercial TV and ABC TV has declined.

Emergency information is primarily shared in-person. In 2024, 89% accessed emergency information through direct and face-to-face communication, followed by Facebook (41%), First Nations radio (37%), commercial TV (20%), ABC TV (19%) and online news (11%). This mirrors national trends towards social media and on-demand platforms, but with added risks in remote contexts. Limited content regulation, AI-generated material and rising online racism make it harder to distinguish accurate information from mis- and disinformation.

VAST TV dishes, Wadeye NT

Radio and television services are under significant pressure. First Nations radio is the only local broadcast radio service in 6 of the 12 research sites, yet daily listening fell from 25% in 2022 to 15% in 2024 as people now access radio and music via streaming on phones or tablets. Daily ABC radio listening dropped from 7% to 3%. At the same time, household access to free-to-air TV via VAST has fallen sharply, with 61% of households reporting that their VAST service is not working, mainly due to set-top box failure.

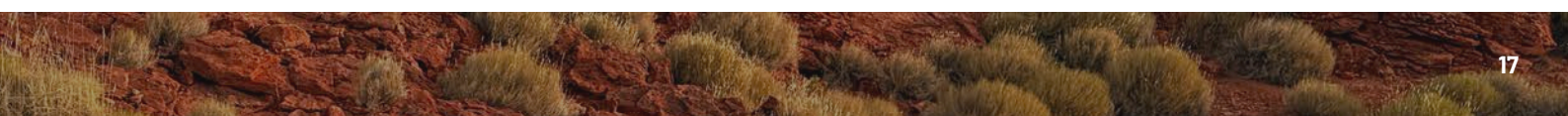
Figure 11: Frequency of news and information access across different channels



Despite reduced use, First Nations radio and TV services remain **critical for local news, emergency messages, language and cultural content, and trusted local voices**. Communities are also using Facebook pages, newsletters, local radio, noticeboards, PA systems and community meetings to share local news and information. There are many examples of local radio programs, video and music production, language and cultural heritage projects, and community archives within communities visited, which demonstrates a level of interest in locally relevant content and applications.

> **"We want our own music and videos and stories on the radio and TV." (Pipalyatjara resident)**

Strengthening First Nations media, restoring reliable TV services and supporting community-controlled information networks are essential for achieving equitable, culturally safe access to reliable and trusted sources of news and information in remote communities.



POLICY ACTIONS

Since 2021, this research has strengthened the evidence base guiding digital inclusion policy and programs and targeted investment in remote communications and media services. This aligns with national efforts to progress Closing the Gap Outcome 17 by the Commonwealth, state and territory governments, community-controlled organisations and industry partners.

A key element in progressing this work was the formation of the **First Nations Digital Inclusion Advisory Group and Expert Panel in 2023** by then Minister for Communications Michelle Rowland MP to provide strong First Nations leadership and cultural governance on progress towards Target 17. The Advisory Group's *Initial Report* in October 2023[13] played a pivotal role in shaping a $68 million investment in the 2024 Federal Budget towards strengthened digital inclusion for First Nations communities, including resources for Wi-Fi mesh networks, a digital mentors network and a First Nations Digital Inclusion Support Hub.[14] Already, NBN has rolled out free community-wide Wi-Fi networks in 23 remote communities, with a further 52 communities to receive Wi-Fi networks under a recent announcement by the Minister for Communications Anika Wells.[15] In December 2024, the Advisory Group released a First Nations Digital Inclusion Roadmap to guide future programs and investment over the coming years, with progress underway on several of the recommendations.

Hon Michelle Rowland MP and co-chair Dot West with First Nations Digital Inclusion Advisory Group

Other Australian government programs, including the Mobile Black Spots Program and Regional Connectivity Program, have included funding for mobile and Wi-Fi services in remote communities, with resilience programs to build network reliability and Triple Zero access during cyclones, floods, fire and other emergencies. The proposed Universal Outdoor Mobile Obligation program will enable voice and text messaging by mobile phones via low earth orbit satellite, improving connectivity and emergency communications in under-served areas.[16]

NBN Sky Muster dishes powering community Wi-Fi network in Kalumburu WA

Industry has also contributed significantly. This includes infrastructure upgrades to improve 4G and 5G mobile services in remote communities following the 3G service switch-off, NBN Wi-Fi hotspots and School Student Broadband Initiative, and a new National Device Bank with Work Ventures. Telstra has introduced a Community Pre-paid Mobile Plan to help reduce expenditure among remote customers, with efforts underway to introduce pre-paid household broadband options. These government and industry programs are contributing to closing the digital gap for remote First Nations communities and providing options to support community-led Digital Inclusion Plans.

While we recognise the significant progress being made towards Target 17, this 2025 Outcomes report clearly shows that a significant digital inclusion gap remains for First Nations Australians living in remote communities. Communities remain strong, resilient and innovative, yet systemic challenges persist in accessing affordable, reliable connectivity, suitable devices, and culturally relevant opportunities to strengthen digital skills. Achieving Target 17 will require continued partnership, investment and culturally grounded approaches that embed First Nations leadership and community-led solutions.

4G tower in Yuelamu Community, installed in 2023

A PARTNERSHIP APPROACH

Collaboration with local First Nations organisations as Research Partners in each site is a foundational element of the *Mapping the Digital Gap* methodology. This ensures cultural authority, and community priorities and decision-making, remain central to the research. It also ensures that the research strengthens cultural governance, upholds local protocols, and builds trust and engagement in the research within the community.

Through a **Collaboration Agreement**, we fund each partner organisation to employ Community Co-researchers as members of the research team, provide vouchers for survey participants, and cover time and expenses relating to involvement in the project. Payment for accommodation, food and supplies needed by the research team also ensures that this investment circulates within local economies.

Organisational staff and local leaders contribute as primary knowledge holders, leading engagement with other agencies and stakeholders, reviewing the reports and providing input and leadership on the Digital Inclusion Plans. This engagement strengths community capability and leadership through improved awareness of communications and media services, needs and support opportunities.

Research team in Wadeye NT: Vincent Jinjair, Jenny Kennedy, Heather Rea, Honorata Narjic, Tracey Leo, Lyndon Ormond-Parker and Daniel Featherstone

"The team were great to work with. It was easy to communicate with them and they were very engaged in the process to ensure they met the needs of our organisation and the community." (Anahita Tonkin, CEO, Yalu Aboriginal Corporation)

Lyndon, Kieran Hegarty and Daniel with Yalu research team, Galiwin'ku NT

"It's been a very good experience ... Maybe there could be a position that remains in community that works in the area of digital learning and leadership." (Nathan McIvor, CEO, Djarindjin Aboriginal Corporation)

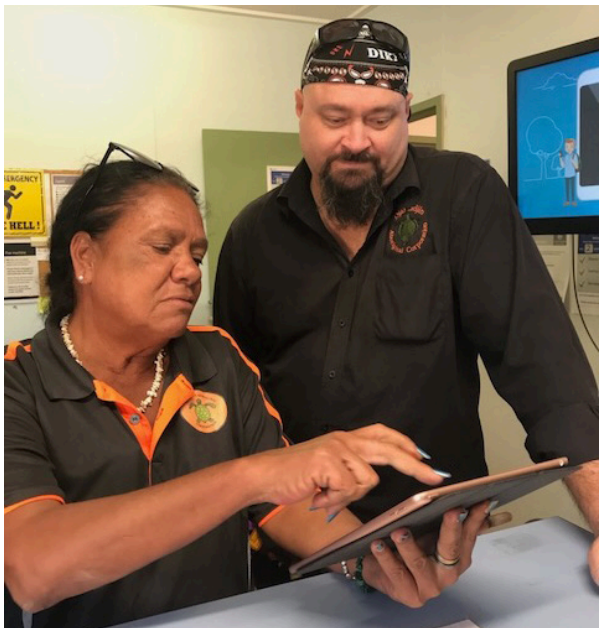
All data is returned to communities through annual outcomes reports, ensuring recipriocity and community control, providing a strong evidence base to support local planning and advocacy for improved digital inclusion outcomes. The Research Sites section outlines examples of community-led outcomes to date against strategies with the Digital Inclusion Plans (see next section).

The partnership model and provision of annual reports represent our commitment to Indigenous Data Sovereignty. We believe this is not only the most effective means of undertaking research with remote First Nations communities and people, but a critical element in the success of the project to date. The success of this project reflects the leadership, expertise and generosity of the partner organisations.

The Role of Community Co-researchers

Community Co-researchers are employed by the partner organisations at each site to assist in the annual research and provide information between visits. Co-researchers support the research team to conduct surveys, interviews and focus groups, in language where required.

Co-researchers provide essential cultural guidance to the research team, liaising and connecting with the local community, facilitating culturally safe engagement in research activities, translating where required, and communicating project information to community members. Training is provided in research protocols and delivering the survey. Co-researchers also key informants for the research team, contributing to our understanding of local context, analysis of research findings, and review of reports. This contribution is acknowledged as co-authors of reports.



Audrey Shadforth with CEO Nathan McIvor, Djarindjin WA

Daniel and Lyndon with Cr Robert Bloomfield & CEO Kiley Hanslow, Wujal Wujal QLD

Co-researchers are remunerated at academic rates in recognition of their expertise. in communication and engagement, language translation where needed and cultural guidance for the team. There are 2-3 co-researchers in each site, typically male and female to ensure gender-based engagement, with over 40 co-researchers.

"The employment of community members as co-researchers during the *Mapping the Digital Gap* visits was very effective, increasing community participation in surveys and understanding in the methods to make improvements in community." (Kiley Hanslow, former CEO, Wujal Wujal Aboriginal Shire Council)

"[The co-researcher model] was a great model that we have since replicated for other research projects. I learnt a lot from the experience and the youth workers who were co researchers were engaged every visit." (Rachel Godley, Youth and Families Services Manager, Laynhapuy Homelands Aboriginal Corporation)

"[Research has] better results because co-researchers are able to provide the grassroots level and understanding." (Nixon Mye, Co-researcher, Erub)

Daniel Featherstone, Leah Hawkins, co-researcher Lala Gutchen, co-researcher Nixon Mye, TSIMA broadcaster Gilmore Johnston, and Lyndon Ormond-Parker, Erub QLD

Digital Inclusion Plans

A Digital Inclusion Plan is a planning tool to support coordinated and place-based responses to locally identified communication or media service needs and barriers to digital inclusion. It provides a useful tool for advocacy and fundraising efforts with governments, industry and other stakeholders.

A proposed Digital Inclusion Plan is included within each of the community outcomes and update reports, compiling suggested strategies and stakeholders to address issues or barriers identified with the research. These plans can also be used as an example for other communities to develop their own place-based plans.

The aim is to empower community-led initiatives by First Nations organisations that are fit-for purpose, culturally appropriate, sustainable and align with existing planning and local programs. By including the plan within the report, alongside the audit of existing services and analysis of survey and interview data, there is a clear evidence base for the proposed strategies and the potential impact. Case studies of existing programs provide further evidence of solutions that have been implemented or target areas for future projects.

The Digital Inclusion Plan structure aligns to the Analysis topics within each Community Report relating to digital inclusion and media use, with additional topics added if needed.

Communications Access

Examples include: improved mobile, broadband or satellite services to address quality or reliability issues; Wi-Fi hotspots or mesh networks to provide affordable internet access; computer access to address mobile-only reliance.

Affordability

Examples include removal of costs for public Wi-Fi; low-cost pre-paid mobile and broadband plans; affordable mobile devices; rugged mobile cases to reduce damage and need for regular replacement.

Digital Ability

Examples include workshops and support for target groups; workplace digital skills training; recruitment of local digital mentors; cyber-safety awareness training; targeted resources to address increased scams and online risks.

Media Access, Production and/or Archiving

Examples include upgrades to First Nations and/or ABC radio services; renewed local RIBS broadcasting and news sharing; reinstatement of free-to-air TV services to address failure of VAST satellite equipment; support for local media or music production, community archives and digital language/culture programs.

"They are useful for the overall direction of the community. [The study] will be used for funding submissions for our LLND programs." (Nathan McIvor, CEO, Djarindjin Aboriginal Corporation)

"I have used the reports for some funding reports and communication with stakeholders." (Rachel Godley, Youth and Families Services Manager, Laynhapuy Homelands Aboriginal Corporation)

The initial plan includes three columns: Identified issue, Possible actions and Potential stakeholders. A fourth section is added to subsequent reports: Progress/Next steps. The proposed strategies are based on consultation with community residents, leaders and stakeholders and are not listed in order of priority nor intended to be prescriptive.

We fully acknowledge the challenges for community organisations in addressing many of the identified needs. Many solutions require government and/or industry investment, with infrastructure rollouts often taking years to implement. Changes in digital inclusion outcomes can also take years to become evident. However, without a plan to address the barriers, First Nations people living in remote areas risk being left further behind and missing out on critical services and opportunities.

Centrelink agency, Wadeye NT

"These have assisted in our advocacy for improvements in communication and digital facilities in Wujal Wujal. [This includes] a better relationship with NBN [which] helped with the upcoming installation of a community-wide Wi-Fi network free of charge for community." (Kiley Hanslow, former CEO, Wujal Wujal Aboriginal Shire Council)

"It is useful that this data can be used in future funding applications, especially within government. [We will] share these outcomes [to] support other local organisations." (Tess Foxworthy, former Acting General Manager, PAW Media)

"Increased visibility of digital inclusion issues within the community, stronger evidence for funding applications, enhanced understanding of digital technologies, improved communications services. The Digital Gap research is also supporting our business case for an Internet Cafe and Digital mentors in community." (Tracey Leo, Deputy CEO, Thamarrurr Development Corporation)

In the Research Sites section, we have included a summary of progress on the local Digital Inclusion Plan, replacing the Most Significant Change summaries in the 2024 Outcomes report. The level of progress or change varies widely for each community based on capacity of local First Nations organisations and agencies, funding and support opportunities, and level of commitment by governments, industry and other stakeholders.

The research team provides support and guidance to local organisations to help implement strategies within the plans, including funding or rollout programs. Common needs have also helped inform policy recommendations of the First Nations Digital Inclusion Advisory Group. However, each community's progress on these plans is entirely the result of local leadership, advocacy and partnerships.

Computers in Warakurna media centre, WA

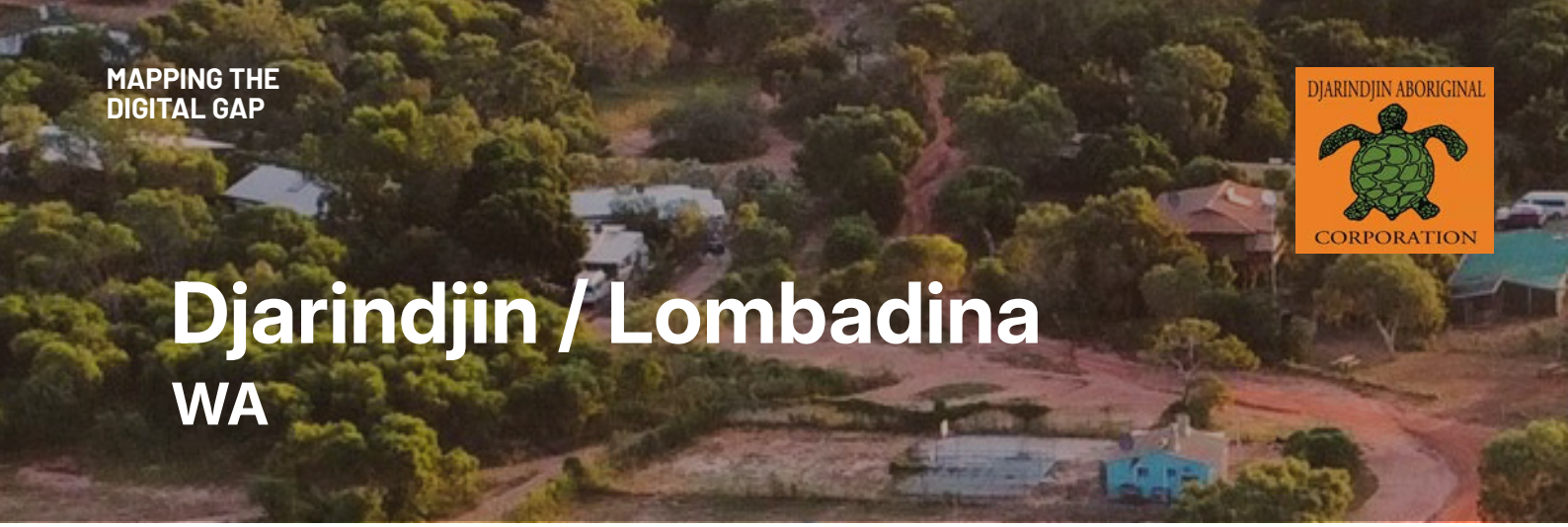
Research Sites

Mapping the Digital Gap visited between 10-12 research sites across remote Australia in 2022-24. Research sites were identified based on criteria to ensure a diverse national sample. The research team works works in partnership with local First Nations organisations on all community-based research and the analysis of results to ensure the project adheres to local policies and cultural protocols, community trust and engagement, and to ensure the research addresses local needs and provides benefit to the community.

In the following pages, we have included specific results from each community, highlighting variations due to communications infrastructure and social, cultural, and geographic context, as well as case studies on the most significant changes.

Figure 12: 2024 Mapping the Digital Gap Research Sites

Note: Tennant Creek was a research site in 2022 and 2023, and is now a Regional Target Site in the *Measuring Digital Inclusion for First Nations Australians* project



Djarindjin / Lombadina
WA

RESULTS

ADII Score

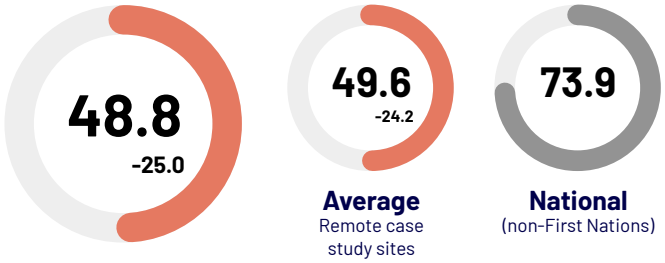


Figure 13: Djarindjin / Lombadina ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

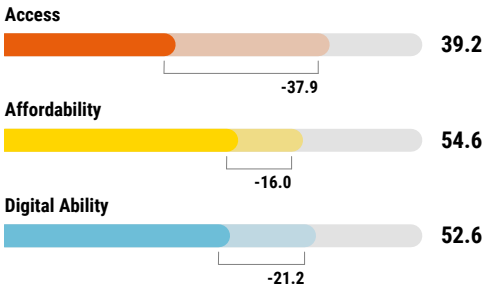


Figure 14: Djarindjin / Lombadina ADII dimension scores compared to National Average (non-First Nations)

AT A GLANCE

Distances	**196km**	to Broome
	1990km	to Darwin
Population	**253**	81.4% Aboriginal and/or Torres Strait Islander[17]
Dwellings	**111**	private dwellings
	3.3	people per ATSI household
Language	**43.2%**	ATSI people who speak an ATSI language
Income	**$360**	median ATSI personal income

Communications and media services (at time of last visit in 2024)

- **Mobile coverage**: Telstra 3G/4G, inc 4G small cell
- **Backhaul**: Fibre optic cable
- **ADSL**: Yes
- **nbn type**: Sky Muster
- **Starlink LEOsat use**: Most agencies, and staff houses
- **Public Wi-Fi**: Near community office, 6am–6pm weekdays
- **Public phones**: 3/4 working
- **Access computers**: 2 (Centrelink, CRC)
- **TV services**: VAST only
- **Radio services**: 2 (ABC, PAKAM)
- **First Nations radio**: PAKAM/ RIBS studio inactive at time of visit

Djarindjin and Lombadina are discrete communities, located adjacent to each other on the Dampier Peninsula in Western Australia's Kimberley region. The Traditional Owners are the Bardi people.

Find out more via the 2023 Community Outcomes Report:

KEY FINDINGS

Access

83% own or share a mobile phone (88% in 2022)

92% of mobile phone users use pre-paid services (88% in 2022)

14% have fixed home internet (6% in 2023); 100% of these are Sky Muster

33% of residents access internet via public Wi-Fi (18% in 2022)

15% use a public telephone for calls (13% in 2022)

28% have access to a computer (32% in 2022)

Affordability

7.7 Affordability score (% household income to cover minimum services bundle)

$226 avg monthly household communications expenditure ($261 in 2022)

$206 avg monthly household pre-paid mobile expenditure ($179 in 2023)

59% cut back on essential household costs to afford internet in past 6 months (65% in 2022)

70% compromise on connection speed or quality due to cost (3% in 2022)

Digital Ability

19.9/30 Digital Skills score for residents in 2024 (18.2/30 in 2022)

82% used the internet in the last week (76% in 2022)

5% have never used the internet (9% in 2022)

78% used online banking in last six months (71% in 2022)

78% used online govt services in the last six months (69% in 2022)

72% keep in touch with family / friends online (66% in 2022)

Media Services

68% listen to First Nations radio (PAKAM) each week (73% in 2022)

74% had the VAST TV service working at their house (84% in 2022)

37% watch YouTube daily (46% in 2022)

31% watch streaming services daily (50% in 2022)

55% get news direct and in-person daily (35% in 2022)

59% get emergency information direct and in-person, 31% from ABC radio, 22% via First Nations radio

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

DIGITAL INCLUSION PLAN PROGRESS

Djarindjin and Lombadina are highly proactive communities, with a range of enterprise ventures and development programs underway. During our first visit in 2022, partner organisation Djarindjin Aboriginal Corporation (DAC) were already working on strategies to address poor mobile coverage, with a small cell mobile tower being installed in Djarindjin. With speed and reliability issues in both the Sky Muster and ADSL services, DAC commissioned fibre optic connectivity to its office with wireless links to distribute the faster service to other facilities. Free NBN Wi-Fi hotspots were available at the community store, roadhouse, Centrelink agency and at the Lombadina office.

Since that time, DAC has introduced Starlink at several local agencies and staff houses, developed the Choosing Your Way workplace skills program, ran cyber-safety workshops through community legal services, and recruited a local Community Resource Centre coordinator to provide digital support, computer access and newsletter production. They have worked with regional media organisation PAKAM on re-instating radio services and developing local media production and music recording and events.

DAC has met with Work Ventures, with 25 laptops planned for Djarindjin.

Djarindjin small cell mobile tower

Work is ongoing to provide affordable but sustainable household broadband access, expand coverage of the small cell mobile tower, and address affordability issues as prepaid mobile data use increases, and improve access to free-to-air TV services.

TSIMA
TORRES STRAIT ISLANDERS MEDIA ASSOCIATION INC.

Erub
Torres Strait, Qld

RESULTS

ADII Score

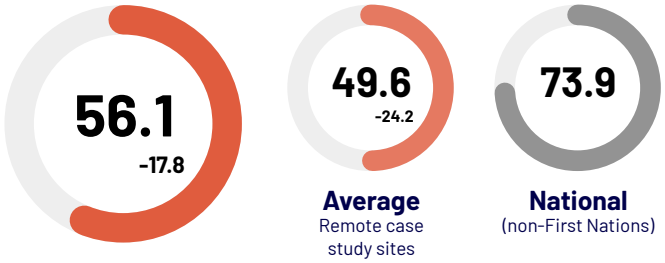


Figure 15: Erub ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

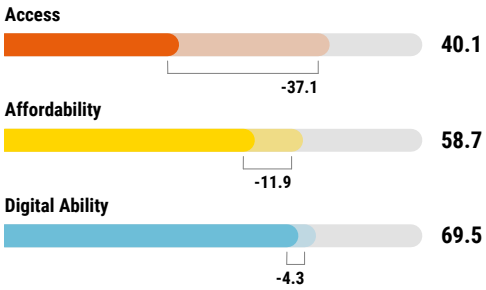


Figure 16: Erub ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**196km**	to Horn Island
	1990km	to Darwin
Population	**326**	90% Torres Strait Islander (6% not stated)
Dwellings	**80**	occupied dwellings
	3.5	people per ATSI household
Language	**91.8%**	ATSI people who speak an ATSI language
Income	**$387**	median ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage** — Telstra 4G macro-cell
- **Backhaul** — Microwave repeaters via Cape York
- **ADSL** — Yes
- **nbn type** — Sky Muster
- **Starlink LEOsat use** — Most agencies, up to 10 staff/ residents houses
- **Public Wi-Fi** — Centrelink/ DHS Wi-Fi for govt services only
- **Public phones** — 2/3 working
- **Access computers** — 1 (Centrelink/ IKC)
- **TV services** — VAST only
- **Radio services** — 2 AM (4MW, ABC regional), 1 FM (4DI/ 4MW)
- **First Nations radio** — TSIMA 4MW/ active local RIBS station 4DI

Erub (Darnley Island) is located in the eastern island group of Zenadth Kes (Torres Strait), near the Great Barrier Reef. The Traditional Owners are the Erub Mer people.

Find out more via the 2024 Community Outcomes Report:

KEY FINDINGS

Access

100% ^
own or share a mobile phone (96% in 2022)

96% v
of mobile phone users use pre-paid services (99% in 2022)

16% v
have fixed home internet (21% in 2023); 100% of these are Sky Muster

43% ^^
of residents access internet via public Wi-Fi (5% in 2022)

28% vv
have access to a computer (50% in 2022)

Affordability

7.4
Affordability score (% household income to cover minimum services bundle)

$376 ^^
avg monthly household communications expenditure ($250 in 2022)

$347 ^^
avg monthly household pre-paid mobile expenditure ($212 in 2023)

63% ^^
cut back on essential household costs to afford internet in past 6 months (50% in 2022)

61% ^^
compromise on connection speed or quality due to cost (26% in 2022)

Digital Ability

19.2/30 v
Digital Skills score for residents in 2024 (23.6/30 in 2022)

89% ^
used the internet in the last week (84% in 2022)

0%
have never used the internet (0% in 2022)

74% vv
used online banking in last six months (86% in 2022)

80% v
used online govt services in the last six months (89% in 2022)

89% ^
used online entertainment in last six months (87% in 2022)

Media Services

11% vv
listen to First Nations radio (4DI / 4MW) each week (down from 41% in 2022)

70% ^
had the VAST TV service working at their house (69% in 2022)

43% vv
watch YouTube daily (58% in 2022)

25% vv
watch streaming services daily (46% in 2022)

46% ^
get news direct and in-person daily (44% in 2022)

66%
get emergency information direct and in-person, 16% via First Nations radio, 11% from

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

DIGITAL INCLUSION PLAN PROGRESS

Erub is near the end of the microwave network providing Telstra mobile and fixed line services to Torres Strait Islands. This impacts on the quality and reliability of communications, with regular dropouts in wet season. Mobile coverage only reaches 3 of the 19 villages on the island, with sporadic signal from neighbouring islands reduced since 3G switch-off in October 2024. Power outages and infrastructure corrosion also add to communications outages. Households have limited broadband access or TV and radio services.

There has been progress on several strategies, however challenges remain with ongoing advocacy to improve mobile coverage and network reliability:

- **Upgrade to regional microwave network** in 2023 to improve speed and data capacity, but reliability an ongoing issue
- **4G mobile service upgraded** in 2024 but coverage remains limited
- **Starlink services** now used by most agencies, with improved education and health outcomes reported and store now able to operate during Telstra network outages

New VAST satellite dish, Erub QLD

- **Backup generators** installed at clinic and store to ensure power reliability
- **Wi-Fi hotspot** installed by NBN next to TSIRC office in 2022, with ongoing demand for Wi-Fi closer to residential areas
- **Indigenous Knowledge Centre re-opened** in 2023 with local coordinator and new access laptops and iPads
- ***Digital and You* skills program** now offered by State Library of Queensland
- **VAST satellite dishes replaced** on about 20 houses in 2023 due to rust damage; set-top boxes remain the primary point of failure
- **School Student Broadband Initiative** taken up by several households with school children of one-year free Sky Muster service

Galiwin'ku
East Arnhem Land, NT

RESULTS

ADII Score

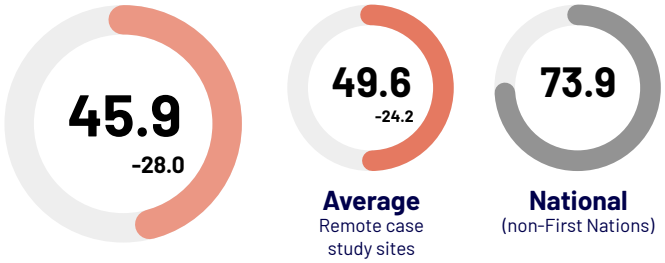


Figure 17: Galiwin'ku ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

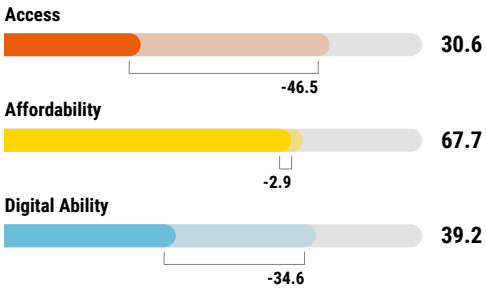


Figure 18: Galiwin'ku ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**150km**	west of Nhulunbuy
	550km	north east of Darwin
Population	**2199**	94% Torres Strait Islander
Dwellings	**369**	occupied dwellings
	6.3	people per ATSI household
Language	**96.9%**	ATSI people who speak an ATSI language
Income	**$338**	median ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage** — Telstra 4G
- **Backhaul** — Microwave link from East Arnhem fibre network
- **ADSL** — Yes
- **nbn type** — Sky Muster
- **Starlink LEOsat use** — Most agencies & non-local staff
- **Public Wi-Fi** — At public library, daily data limits
- **Public phones** — 5/8 working
- **Public computers** — 2 (ALPA Higher Education Centre)
- **TV services** — VAST only
- **Radio services** — 4
- **First Nations radio** — Yolngu Radio; TEABBA / RIBS studio inactive

Galiwin'ku is the largest Yolŋu community in the East Arnhem region.The Traditional Owners are the Djambarrpuyŋu, Gupapuyŋu, and Djinang people.

Find out more via the 2023 Community Outcomes Report:

KEY FINDINGS

Access

85% ⌃⌃
own or share a mobile phone (61% in 2022)

100% ⌃
of mobile phone users use pre-paid services (98% in 2022)

5% ⌃
have fixed home internet (2% in 2023); 100% of these are Sky Muster

51% ⌃⌃
of residents access internet via public Wi-Fi (12% in 2022)

22% ⌃
use a public telephone for calls (14% in 2022)

9% ⌄⌄
have access to a computer (36% in 2022)

Affordability

7.1
Affordability score (% household income to cover minimum services bundle)

$369 ⌃⌃
avg monthly household communications expenditure ($223 in 2022)

$361 ⌃⌃
avg monthly household pre-paid mobile expenditure ($285 in 2023)

80% ⌃⌃
cut back on essential household costs to afford internet in past 6 months (35% in 2022)

92% ⌃⌃
compromise on connection speed or quality due to cost (36% in 2022)

Digital Ability

16.2/30 ⌃
Digital Skills score for residents in 2024 (14.9/30 in 2022)

79% ⌃⌃
used the internet in the last week (52% in 2022)

5% ⌄⌄
have never used the internet (28% in 2022)

58% ⌃
used online banking in last six months (52% in 2022)

52% ⌃
used online govt services in the last six months (43% in 2022)

63% ⌃
keep in touch with family / friends online (54% in 2022)

Media Services

31%
listen to First Nations radio (Yolngu Radio, TEABBA) each week (same as 2022)

15% ⌄⌄
had the VAST TV service working at their house (30% in 2022)

68% ⌃⌃
watch YouTube daily (31% in 2022)

15% ⌄
watch streaming services daily (17% in 2022)

75% ⌃
get news direct and in-person daily (71% in 2022)

96%
get emergency information direct / in-person, 49% via First Nations radio, 14% from ABC radio

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

DIGITAL INCLUSION PLAN PROGRESS

Galiwin'ku is a large community of over 2000 people on Elcho Island in north-eastern Arnhem Land. The mobile and fixed line Telstra services, delivered via microwave from the mainland, were highly congested and slow in 2022, frustrating residents and agencies for many years. There was very poor mobile coverage in Buthan suburb, where nearly 100 additional houses were being built. Wet season conditions made Sky Muster services unreliable, with very low uptake by First Nations households. There was very limited public Wi-Fi or computer access. There was no mobile in most of the Marthakal homelands, with many reliant on a single, often unreliable, satellite Wi-Fi phone.

While progress was frustratingly slow, a series of major upgrades have now been made:

- **Arnhem Fibre network** upgraded in 2023, and microwave link in August 2024, providing faster and more reliable backhaul for mobile and fixed line services
- **4G/5G mobile tower** upgrade in November 2024, improving mobile speed and coverage
- **NBN Community-wide Wi-Fi network rollout** in Galiwin'ku and Buthan in June 2025, providing free internet access in residential areas
- **Small cell services** installed in three Marthakal homelands Banthula, Mapurru and Rorruwuy on mainland
- Many agencies are now using **Starlink** rather than Sky Muster satellite services
- East Arnhem Regional Council is establishing a **community access computer room** in the hall

After years of advocacy, these changes have made a huge difference for Galiwin'ku residents and service providers. However, next level issues remain around addressing affordability of pre-paid mobile services and devices, upgrading TV services due to the high rate of VAST TV failure, and digital ability and cyber-safety issues, with ongoing calls for local digital mentor support. Many homelands still have limited or no connectivity.

Gäṉgaṉ homeland
East Arnhem Land, NT

RESULTS

ADII Score

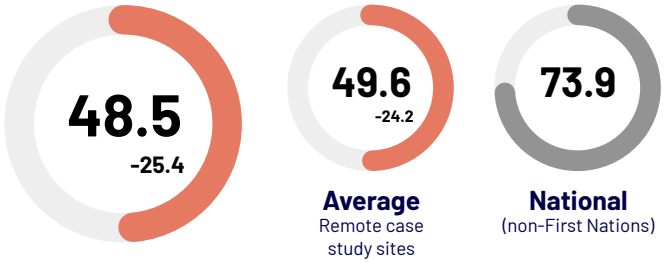


Figure 19: Gäṉgaṉ ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

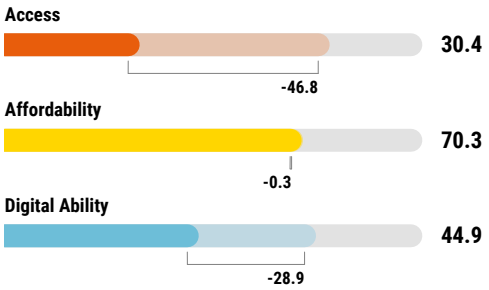


Figure 20: Gäṉgaṉ ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**206km**	south of Nhulunbuy
Population	**100**	100% Aboriginal people (6% not stated)[18]
Dwellings	**13**	occupied dwellings[19]
	7.8	people per ATSI household[20]
Language	**100%**	ATSI people who speak an ATSI language
Income	**$282**	median ATSI personal income (Laynhapuy–Gumatj homelands)

Communications and media services (at time of visit)

- **Mobile coverage** — No mobile service
- **Backhaul** — HCRC microwave repeaters for phone services
- **ADSL** — No
- **nbn type** — Sky Muster
- **Starlink LEOsat use** — Starlink on store for ATM / EFTPOS
- **Public Wi-Fi** — At public library, daily data limits
- **Public phones** — One Telstra public phone, phone at store
- **Access computers** — None
- **TV services** — VAST only
- **Radio services** — Yolŋu Radio (FM)(inactive during visit)
- **First Nations radio** — Yolŋu Radio (FM)(inactive during visit)

Gäṉgaṉ homeland is a small, community-managed homeland located in the East Arnhem region. The Traditional Owners are the Yolŋu / Dhuwala people.

Find out more via the 2023 Community Outcomes Report:

KEY FINDINGS

Access

88% ⌄
own or share a mobile phone (80% in 2022)

100% ^
of mobile phone users use pre-paid services (88% in 2022)

0%
have fixed home internet (same in 2022)

71% ⌄⌄
of residents access internet via public Wi-Fi (91% in 2022)

100% ^
use a public telephone for calls (96% in 2022)

12% ⌄
have access to a computer (22% in 2022)

Affordability

5.5
Affordability score (% household income to cover minimum services bundle)

$266 ^^
avg monthly household communications expenditure ($166 in 2022)

74% ⌄⌄
cut back on essential household costs to afford internet in past 6 months (56% in 2022)

96% ^^
compromise on connection speed or quality due to cost (73% in 2022)

Digital Ability

15.8/30
Digital Skills score for residents in 2024 (same in 2022)

86% ^^
used the internet in the last week (58% in 2022)

12% ⌄
have never used the internet (18% in 2022)

73% ^^
used online banking in last six months (62% in 2022)

61% ^
used online govt services in the last six months (54% in 2022)

84% ^^
keep in touch with family / friends online (64% in 2022)

Media Services

13% ^
listen to First Nations radio (Yolŋu radio) each week (15% in 2022)

0%
had the VAST TV service working at their house (same in 2022)

76% ⌄
watch YouTube daily (43% in 2022)

9% ⌄⌄
watch streaming services daily (34% in 2022)

100% ^^
get news direct and in-person daily (79% in 2022)

100%
get emergency information direct and in-person, 48% via Yolŋu radio

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

DIGITAL INCLUSION PLAN PROGRESS

During our three visits, Gäŋgaŋ community was largely offline, with no mobile service or internet access in the 13 dwellings. With no local services beyond a small shop, part-time clinic and school, residents have a 4-5 hour drive to Nhulunbuy to access government and banking services. Residents rely on the Telstra public phone and the free Wi-Fi at the shop, available from 2-8pm daily. No houses had TV services, with the Yolŋu radio service a primary source of news and information. A community-wide Wi-Fi project funded under the Regional Connectivity Program was delayed and eventually cancelled.

Despite these challenges, partner organisation Laynhapuy Aboriginal Corporation has worked on improving communications in Gäŋgaŋ and the other Laynhapuy homelands. This includes installing a Starlink service on the Gäŋgaŋ health clinic and shop to improve reliability and free Wi-Fi hotspot access. The ranger stations now have Sky Muster and phone connectivity, along with HF and UHF radio. Efforts are underway to upgrade TV services, however funding support is needed. Laynhapuy School is also supporting digital skills as well as improving online safety awareness for children.

Starlink dish on Gäŋgaŋ clinic

The major upgrade has been the introduction of a free community-wide Wi-Fi mesh network at Gäŋgaŋ and Wandawuy homelands as part of the NBN Community Wi-Fi program. Installed in October 2024, the Wi-Fi network is getting very high usage with up to 1.6TB monthly data use. Feedback from residents is very positive, although with wet season coming, there is interest in having in-house access.

Kalumburu
East Kimberley, WA

RESULTS

ADII Score

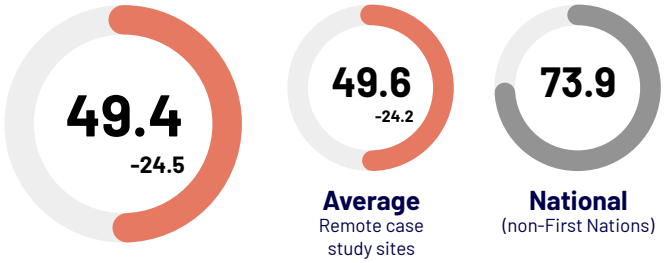


Figure 21: Kalumburu ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

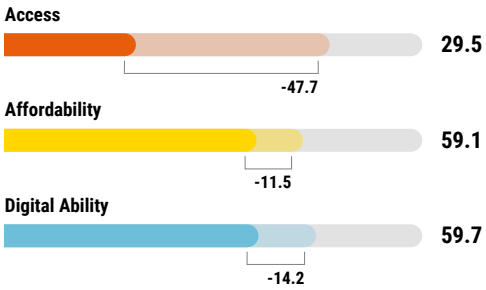


Figure 22: Kalumburu ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

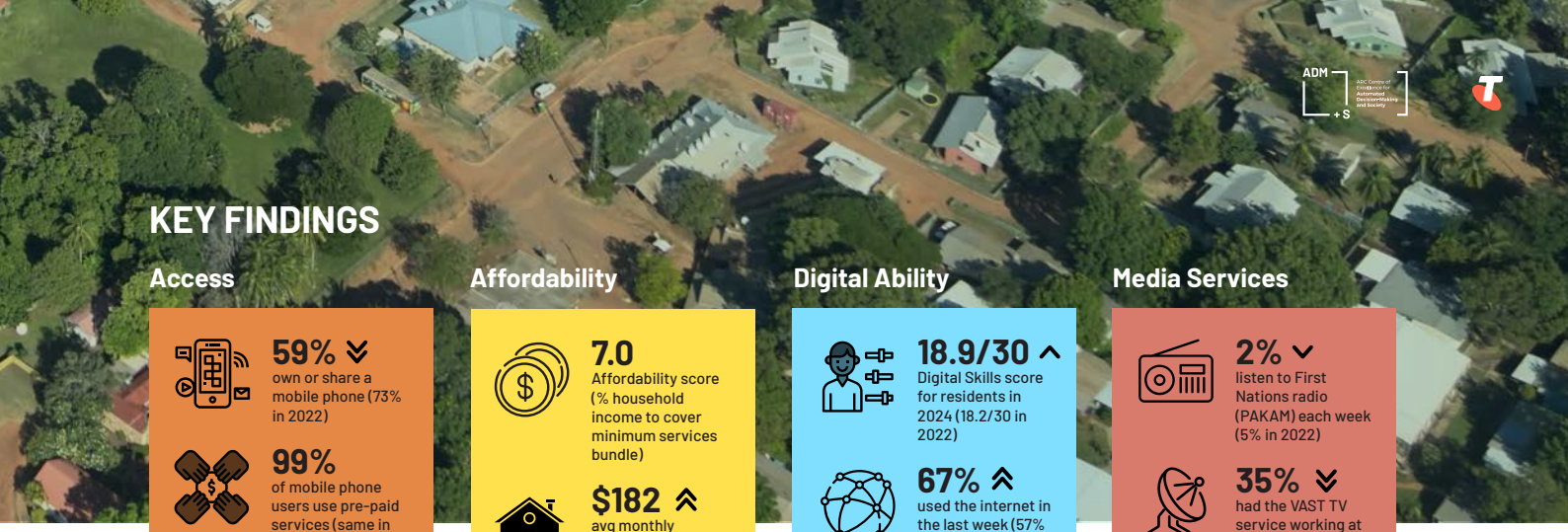
Distances	**279km**	north west of Kununurra
Population	**388**	87.6% Aboriginal people
Dwellings	**85**	occupied dwellings
	4.4	people per ATSI household
Language	**14.9%**	ATSI people who speak an ATSI language
Income	**$296**	median ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage**: 4G (Optus satellite small cell)
- **Backhaul**: HCRC microwave network
- **ADSL**: No
- **nbn type**: Sky Muster
- **Starlink LEOsat use**: By store, school, police, CDP office, staff
- **Public Wi-Fi**: Free Activ8me Wi-Fi community mesh & hotspots
- **Public phones**: 2/5 working
- **Access computers**: 2 (Centrelink, CRC ($5/hr)
- **TV services**: VAST only
- **Radio services**: 2 (ABC, PAKAM)
- **First Nations radio**: Pilbara and Kimberley Aboriginal Media / RIBS inactive during visit

Kalumburu is a very remote community situated on the banks of the King Edward River in the Wyndham-East Kimberley Shire. The Traditional Owners are the Kwini and Kulari people.

Find out more via the 2023 Community Outcomes Report:



KEY FINDINGS

Access

59% own or share a mobile phone (73% in 2022)

99% of mobile phone users use pre-paid services (same in 2022)

7% have fixed home internet (14% in 2023); 100% of these are Sky Muster

87% use the free public Wi-Fi for internet access (64% in 2022)

39% use a public telephone for calls (65% in 2022)

19% have access to a computer (38% in 2022)

Affordability

7.0 Affordability score (% household income to cover minimum services bundle)

$182 avg monthly household communications expenditure ($109 in 2022)

$169 avg monthly household pre-paid mobile expenditure ($145 in 2023)

13% cut back on essential household costs to afford internet in past 6 months (43% in 2022)

10% compromise on connection speed or quality due to cost (63% in 2022)

Digital Ability

18.9/30 Digital Skills score for residents in 2024 (18.2/30 in 2022)

67% used the internet in the last week (57% in 2022)

15% have never used the internet (34% in 2022)

70% used online banking in last six months (59% in 2022)

68% used online govt services in the last six months (57% in 2022)

58% keep in touch with family / friends online (53% in 2022)

Media Services

2% listen to First Nations radio (PAKAM) each week (5% in 2022)

35% had the VAST TV service working at their house (61% in 2022)

74% watch YouTube daily (16% in 2022)

68% watch streaming services daily (11% in 2022)

75% get news direct and in-person daily (88% in 2022)

90% get emergency information direct and in-person, 4% via ABC radio

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

DIGITAL INCLUSION PLAN PROGRESS

A community Wi-Fi mesh network was installed in Kalumburu several months prior to our first visit in June 2022. To address low household broadband and affordability challenges, all 128 dwellings had an in-house Wi-Fi repeater and free VoIP phone installed, with data vouchers available for $3 per GB.

Beyond this, communications access was via the three public phones and an Optus small cell mobile service, which was highly congested during peak hours and often unreliable. Most agencies used Sky Muster satellite services but reported slow speeds and regular dropouts in wet season. While the local Community Resource Centre was well used as a post and service centre, the two access computers needed replacement. Very high cost of living made affordability a major challenge.

Several key actions from the Digital Inclusion Plan have been undertaken or are in progress:

- The **Wi-Fi network upgrade** to Sky Muster Plus Premium in 2023 led to improved speed and unlimited data. The removal of vouchers led to dramatic increase in data usage. Network repairs also improved reliability
- **Starlink installed** by most local agencies, staff and some First Nations households in 2024, improved speed and reliability in wet season
- The **PAKAM radio service** was repaired and remote monitoring equipment was installed; efforts continue to recruit a local broadcaster
- **Rugged dual-SIM Opel mobile phones** with a rubber case supplied by store to reduce high turnover of phones
- **Optus has upgraded** the mobile service to reduce congestion, with a Telstra mobile service also planned for Kalumburu
- **Satellite Wi-Fi phones** have been installed by APN in six nearby homelands to provide voice and data access and emergency calls

Outstanding actions include upgrade of VAST TV services, improved mobile coverage and capacity, affordable pre-paid and device options, ongoing demand for digital skills training and cyber-safety awareness and improved computer access.

Ngaanyatjarra Pitjantjatjara Yankunytjatjara Women's Council

Pipalyatjara / Kalka
Aṉangu Pitjantjatjara lands, SA

RESULTS

ADII Score

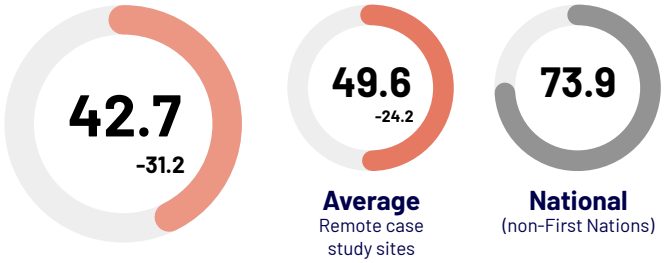


Figure 23: Pipalyatjara / Kalka ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

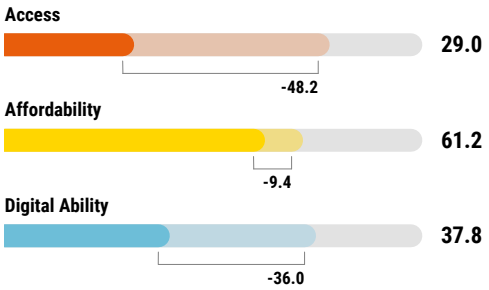


Figure 24: Pipalyatjara / Kalka ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**700km**	south-west of Alice Springs
Population	**159**	82% Aboriginal and/ or Torres Strait Islander people
Dwellings	**39**	occupied dwellings
	4.1	people per ATSI household
Language	**88%**	ATSI people who speak an ATSI language (Pitjantjatjara 74%, Ngaanyatjarra 5%)
Income	**$293**	median weekly ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage**: 4G macro-cell
- **Backhaul**: Fibre optic cable
- **ADSL**: Yes
- **nbn type**: Sky Muster
- **Starlink LEOsat use**: By Pilayatjara clinic, art centre
- **Public Wi-Fi**: Free NBN Wi-Fi at PY Ku centre 6am-6pm; DHS Wi-Fi at Centrelink
- **Public phones**: 0/1 working
- **Access computers**: 1 (PY Ku centre)
- **TV services**: VAST only
- **Radio services**: 2 (PY Media, ABC)
- **First Nations radio**: Pitjantjatjara Yankunytjatjara (PY) Media (no RIBS studio)

Pipalyatjara and Kalka are neighbouring remote communities at the westernmost edge of the Aṉangu Pitjantjatjara lands in SA near the tri-state with WA and NT. The Traditional Owners are the Pitjantjatjara people.

Find out more via the 2025 Community Outcomes Report:

KEY FINDINGS

Access

88% own or share a mobile phone

100% of mobile phone users use pre-paid services

1.9 avg number of phones per household

0% have a fixed home internet service

48% use the free public Wi-Fi for internet access

8% use a public telephone for calls

15% have access to a computer

Affordability

7.3 Affordability score (% household income to cover minimum services bundle)

$135 avg monthly household communications expenditure

$135 avg monthly household pre-paid mobile expenditure

81% cut back on essential household costs to afford internet in past 6 months

46% compromise on connection speed or quality due to cost

Digital Ability

17.7/30 Digital Skills score for residents in 2024

87% used the internet in the last week

8% have never used the internet

85% used online banking in last six months

85% used online govt services in the last six months

73% keep in touch with family / friends online

90% used online entertainment in last six months

Media Services

28% listen to First Nations radio each week

81% had the VAST TV service working at their house

56% watch YouTube daily

43% watch streaming services daily

45% watch commercial TV services daily

37% get news direct and in-person daily

53% get emergency information direct and in-person, 34% via First Nations radio

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

DIGITAL INCLUSION PLAN PROGRESS

Pipalyatjara has had a mobile service since 2019, which is relatively fast and reliable. A fibre optic network through the APY lands provides fixed line phone, ADSL and business-grade services, however most agencies were using Sky Muster satellite services during our first visit in 2024. Residents made good use of a free NBN Wi-Fi hotspot at the community store, as well as the Centrelink Wi-Fi and access computer at the PY Ku Centre next door. Very few Aṉangu households had broadband access, with primary reliance on pre-paid mobile adding to cost of living challenges.

Neighbouring Kalka community has very limited services in comparison, with no mobile coverage, no public phone or Wi-Fi access. Several households had Sky Muster services, which were often shared with other residents due to the lack of communications options. A planned small cell mobile tower had been delayed since 2022.

Since our first visit in early 2024, upgrades have been undertaken in both sites:

- **VAST TV dishes on houses upgraded** by APY Housing in 2024

Workshop, Pipalyatjara SA

- **Installation of NBN community-wide Wi-Fi** network in Pipalyatjara community in November 2024, providing free broadband access in residential areas
- **Installation of Telstra 4G small cell mobile tower** in Kalka in May 2025
- **Upgrade from Sky Muster to Starlink** satellite services by clinic and other agencies, with initial uptake by two Aṉangu households

This progress has been very welcome, however some Pipalyatjara residents requested in-house Wi-Fi access rather than outdoor access only. There were ongoing calls for more computer access, digital skills training and support in use of mobile devices and online services, including by a local digital mentor. There was also demand for radio services to return to Pipalyatjara, with interest in getting support for local media and music production.

Thamarrurr
Development Corporation

Wadeye
West Daly region, NT

RESULTS

ADII Score

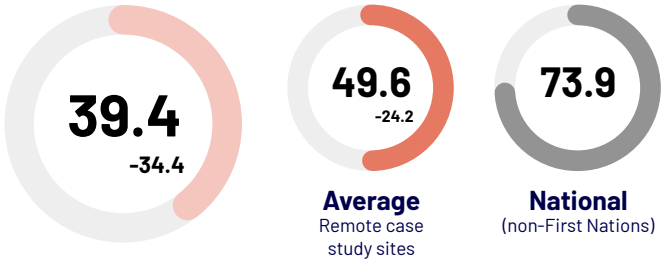


Figure 25: Wadeye ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

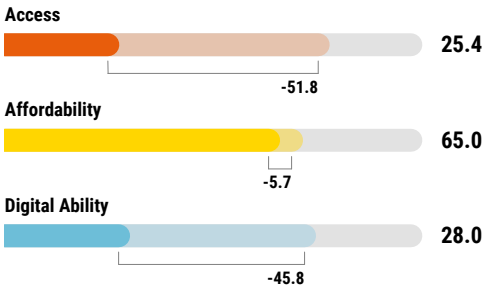


Figure 26: Wadeye ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**403km**	south-west of Darwin
Population	**1960**	86-89% Aboriginal and/or Torres Strait Islander
Dwellings	**339**	occupied dwellings
	5.4	people per ATSI household
Language	**95.5%**	ATSI people who speak an ATSI language
Income	**$161**	median ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage**: Telstra 3G/4G
- **Backhaul**: Fibre optic cable
- **ADSL**: Yes (plus fibre connections to some services)
- **nbn type**: Sky Muster
- **Starlink LEOsat use**: Most agencies, non-local staff
- **Public Wi-Fi**: At WDRC library during opening hours
- **Public phones**: New Telstra Wi-Fi phone in 2024, previously none working
- **Access computers**: 7 (TDC office, Centrelink, Men's Shed)
- **TV services**: VAST only
- **Radio services**: 3 (TEABBA, ABC Darwin, ABC National)
- **First Nations radio**: TEABBA / Wadeye RIBS inactive during visit

Wadeye is a large community made up of 22 Traditional Owner groups, surrounded by 30 homelands and outstations within the Thamarrurr region. The Traditional Owners are the Dinnuman people.

Find out more via the 2023 Community Outcomes Report:

KEY FINDINGS

Access

50% own or share a mobile phone (64% in 2022)

100% of mobile phone users use pre-paid services (99% in 2022)

1% have fixed home internet (2% in 2023); 100% of these are Sky Muster

31% use the free public Wi-Fi for internet access (3% in 2022)

Affordability

7.5 Affordability score (% household income to cover minimum services bundle)

$235 avg monthly household communications expenditure ($202 in 2022)

$233 avg monthly household pre-paid mobile expenditure ($161 in 2023)

78% cut back on essential household costs to afford internet in past 6 months (45% in 2024)

74% compromise on connection speed or quality due to cost (36% in 2022)

Digital Ability

10.8/30 Digital Skills score for residents in 2024 (6.8/30 in 2022)

62% used the internet in the last week (65% in 2022)

25% have never used the internet (11% in 2022)

44% used online banking in last six months (30% in 2022)

32% used online govt services in the last six months (21% in 2022)

52% keep in touch with family / friends online (22% in 2022)

Media Services

19% listen to First Nations radio service (TEABBA) each week (29% in 2022)

48% had the VAST TV service working at their house (52% in 2022)

75% watch YouTube daily (23% in 2022)

23% watch commercial TV services daily (7% in 2022)

68% get news direct and in-person daily (55% in 2022)

89% get emergency information direct and in-person, 39% via First Nations radio, 14% via ABC

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

DIGITAL INCLUSION PLAN

Wadeye has the lowest digital inclusion score among sites visited, with low Access and Digital Ability scores. While Wadeye had existing fibre optic connectivity and 3G/4G mobile services in 2022, locals described congestion and speed issues, with extended outages having impacted service delivery and food security. With very low household uptake of fixed broadband (1%), residents rely on pre-paid mobile for calls and internet use, creating affordability issues. High device turnover and low awareness of low-price plans add to the cost burden. There was limited computer access or public Wi-Fi, and limited digital skills training or support, with a prevalence of cyber-safety issues and scams.

Since 2022, actions by local organisations have included take-up of Starlink by agencies to improve reliability of services; local agencies working with partners (including Telstra and NT Government) on communications solutions for Wadeye and surrounding homelands; the mobile service upgraded to 5G; and a public phone and Wi-Fi hotspot installed near the library, with communications needs being considered via Homelands Upgrade Planning. Partner organisation, TDC, has been very active, with:

- **T-House Digi Hub** opened in 2025, providing IT access and digital mentor support
- **Additional laptops** being supplied by WorkVentures
- **RIBS broadcaster** recruited in 2025 to reinstate local radio broadcasting
- **Regular newsletters** sharing community news, events and project outcomes
- TDC Rangers have run **digital skills workshops and installed a UHF repeater tower** to enable communications while working in homelands
- **Digitisation** of Kanamkek Yile Ngala Museum collection and photo archive (ongoing)
- **Archive content now accessible** at Da Ngimalmin Family Centre
- **Ongoing language resources** produced by school

Work is ongoing to address priority areas: homelands communications, more Wi-Fi access in residential areas, workplace skills training / cyber-safety awareness, improved affordability, TV services upgrade after VAST failure, and ABC radio upgrade.

Ngaanyatjarra Council Group

Warakurna Community Council

Warakurna

Ngaanyatjarra Lands, WA

RESULTS

ADII Score

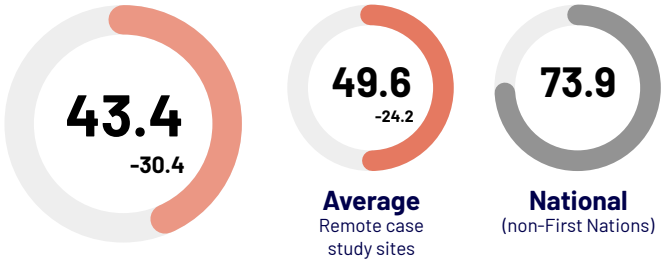


Figure 27: Warakurna ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

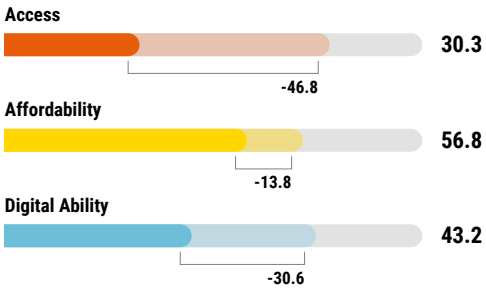


Figure 28: Warakurna ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**780km**	west of Alice Springs
Population	**185**	86% Aboriginal and/or Torres Strait Islander
Dwellings	**69**	occupied dwellings
	2.8	people per ATSI household
Language	**85%**	ATSI people who speak an ATSI language
Income	**$305**	median ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage** — Telstra 3G/4G
- **Backhaul** — Fibre optic cable
- **ADSL** — Yes
- **nbn type** — Sky Muster
- **Starlink LEOsat use** — Most agencies, non-local staff
- **Public Wi-Fi** — At Centrelink office
- **Public phones** — 2/2 working
- **Access computers** — 2 (Centrelink)
- **TV services** — VAST Only
- **Radio services** — 2 (Radio NGM, ABC Alice Springs)
- **First Nations radio** — Ngaanyatjarra Radio

Warakurna is situated in the foothills of the Rawlinson Range in the Ngaanyatjarra Lands of Western Australia. The Traditional Owners are the Ngaanyatjarra and Ngaatjatjarra people.

Find out more via the 2025 Community Outcomes Report:

KEY FINDINGS

Access

90% ⌃⌃
own or share a mobile phone (78% in 2023)

100%
of mobile phone users use pre-paid services (same in 2023)

4%
have fixed home internet (same in 2023); 75% NBN Sky Muster / 25% Starlink

100% ⌃⌃
use the free public Wi-Fi for internet access (72% in 2023)

44% ⌄⌄
use a public telephone for calls (11% in 2023)

8% ⌄
have access to a computer (14% in 2023)

Affordability

7.7
Affordability score (% household income to cover minimum services bundle)

$234 ⌃
avg monthly household communications expenditure ($163 in 2023)

$229 ⌃⌃
avg monthly household pre-paid mobile expenditure ($164 in 2023)

71% ⌃⌃
cut back on essential household costs to afford internet in past 6 months (43% in 2023)

71% ⌃⌃
compromise on connection speed or quality due to cost (29% in 2023)

Digital Ability

17.5/30 ⌃
Digital Skills score for residents in 2024 (13.6/30 in 2023)

64% ⌄
used the internet in the last week (72% in 2023)

8% ⌄
have never used the internet (10% in 2023)

79% ⌄⌄
used online banking in last six months (66% in 2023)

75% ⌃⌃
used online govt services in the last six months (46% in 2023)

57% ⌃⌃
keep in touch with family / friends online (45% in 2023)

Media Services

38% ⌃
listen to First Nations radio (Radio NgM) each week (29% in 2023)

32% ⌄⌄
had the VAST TV service working at their house (71% in 2022)

73% ⌃
watch YouTube daily (70% in 2023)

39% ⌄⌄
watch streaming services daily (68% in 2023)

77% ⌄
get news direct and in-person daily (80% in 2023)

95%
get emergency information direct and in-person, 61% via First Nations radio, 29% via ABC radio

Weighted analysis of surveys with respondents who identified as Aboriginal and/or Torres Strait Islander

Note: 2023 to 2024 only

DIGITAL INCLUSION PLAN PROGRESS

Warakurna had a good range of communication services during our first visit in 2023, with a 3G/4G mobile tower and fixed broadband services connected via the Ngaanyatjarra fibre optic network; community-wide Wi-Fi service (one of four NBN pilot sites since 2021); three public phones; access computers in the Centrelink office; and digital support by office staff. Ngaanyatjarra Media was upgrading the media centre with community access computers and reinstating local radio services. We heard calls for improved mobile coverage at the roadhouse as well as improved TV access.

While the Wi-Fi network has been well used by residents, there was demand for in-house Wi-Fi access, especially due to extreme summer heat. As a result, the WA Government are seeking funding for RCP funding through the Australian Government to extend the life of the Wi-Fi network beyond the NBN pilot program, with upgrade to in-house access to align with other WA sites.

While progress on some of the plan has been limited by lack of regional coordination, staff changes and funding constraints, there has been some progress:

+ **Centrelink computers and digital support** provided by community office, with digital skills workshops provided by CDP
+ **Starlink uptake by most agencies**, with more reliable store and roadhouse sales; community office and other agencies planning to move to Starlink
+ **Media centre upgraded in 2023** by Ngaanyatjarra Media to include six access computers and local coordinator to support training and production (closed in 2024 due to lack of funding and staff housing)
+ **First Nations Radio NGM service** reinstated with RIBS studio upgraded, but no local broadcaster to date
+ **VAST satellite dishes replaced** on most houses, but set-top boxes remain the primary point of failure; strong interest in digital TV broadcast model
+ **Tjumalumpatju regional archive** now used in Ngaanyatjarra Lands schools

REDI.E
Learn Employ Engage

Wilcannia
Central Darling Shire, NSW

RESULTS

ADII Score

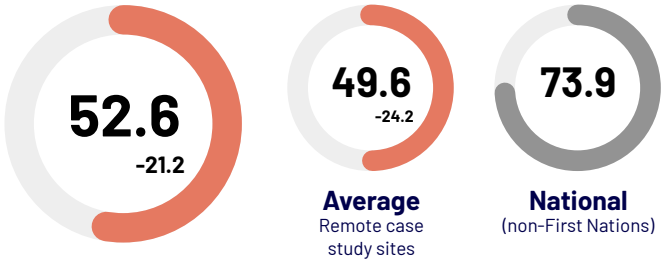


Figure 29: Wilcannia ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

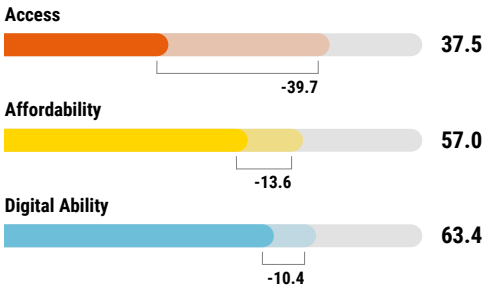


Figure 30: Wilcannia ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distance	197km	to Broken Hill
	557km	to Dubbo
Population	735	75% Aboriginal and/or Torres Strait Islander
Dwellings	189	occupied
	3.3	people per ATSI household
Language	3.8%	ATSI people who speak an ATSI language
Income	$442	median ATSI income

Communications and media services

- **Mobile coverage**: Telstra 4G, small cell near hospital
- **Backhaul**: Fibre optic cable
- **ADSL**: Yes
- **nbn type**: Sky Muster
- **Starlink LEOsat use**: Many agencies, non-local staff, some residents
- **Public Wi-Fi**: At Centrelink office, REDI.E, Wings drop-in centre
- **Public phones**: 2/3 working
- **Access computers**: 4 (Centrelink, Wings drop-in centre)
- **TV services**: Broadcast
- **Radio services**: 5
- **First Nations radio**: Wilcannia River Radio

Wilcannia is located in the Central Darling Shire. The Traditional Owners are the Barkindji people.

Find out more via the 2024 Community Outcomes Report:

KEY FINDINGS

Access

84% own or share a mobile phone (93% in 2022)

97% of mobile phone users use pre-paid services (100% in 2022)

19% have fixed home internet (8% in 2022); 100% of these are Sky Muster

40% use the free public Wi-Fi for internet access (20% in 2022)

7% use a public telephone for calls (30% in 2022)

30% have access to a computer (66% in 2022)

Affordability

7.3 Affordability score (% household income to cover minimum services bundle)

$233 avg monthly household communications expenditure ($180 in 2022)

$199 avg monthly household pre-paid mobile expenditure ($136 in 2023)

40% cut back on essential household costs to afford internet in past 6 months (35% in 2022)

51% compromise on connection speed or quality due to cost (45% in 2022)

Digital Ability

20.1/30 Digital Skills score for residents in 2024 (19.2/30 in 2022)

79% used the internet in the last week (72% in 2022)

12% have never used the internet (15% in 2022)

73% used online banking in last six months (80% in 2022)

72% used online govt services in the last six months (63% in 2022)

76% keep in touch with family / friends online (79% in 2022)

Media Services

34% listen to First Nations radio (Wilcannia River Radio) each week (76% in 2022)

60% watch YouTube daily (44% in 2022)

63% watch streaming services daily (48% in 2022)

60% watch commercial TV daily (67% in 2022)

66% get news direct and in-person daily (28% in 2022)

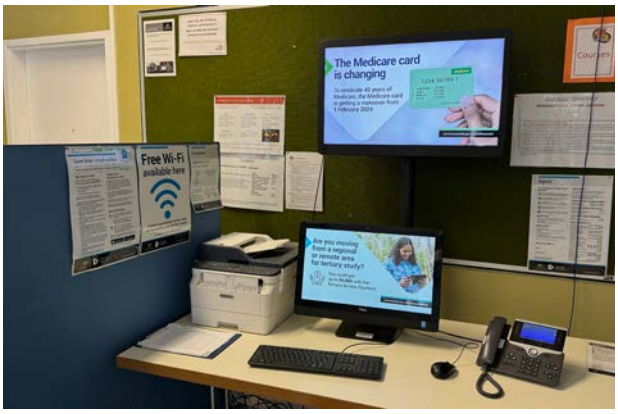
82% get emergency information direct and in-person, 17% via First Nations radio, 5% via ABC radio

DIGITAL INCLUSION PLAN PROGRESS

In our initial visit to Wilcannia in 2022, residents called for improvements to the patchy and congested mobile service, affordable home broadband options and more Wi-Fi hotspots. There was also demand for public access computers and more IT skills training and support, including cyber-safety awareness. The full Wilcannia Digital Inclusion Plan is in the 2024 Update Report.

Several projects have helped address service quality and access issues, with infrastructure upgrades planned to provide more affordable household access:

- **Upgraded Telstra 4G/5G towers in 2024**, improving coverage, speed and in-house access (further in-fill needed)
- **OneWiFi multi-carrier mobile/microwave tower** installed 2024 under NSW Government funding; Pivotel to provide mobile and pre-paid household broadband
- **Wi-Fi hotspot** installed by NBN at the new REDI.E office in 2023, with high public usage
- **Community access computers** now provided by REDI.E and Wings Drop-in centre,
- **First Nations Device Bank Pilot**—6 laptops donated to residents and 28 to Wilcannia TAFE by Work Ventures and NBN July 2025
- **New Baaka Cultural Centre** opened in May 2025, with cultural media production and local archive plans in progress
- **NBN fixed wireless tower** planned for Wilcannia under NSW Government Gig State project in 2026, replacing satellite delivery



Community access computer at REDI.E office

Wujal Wujal
Cape York, Qld

RESULTS

ADII Score

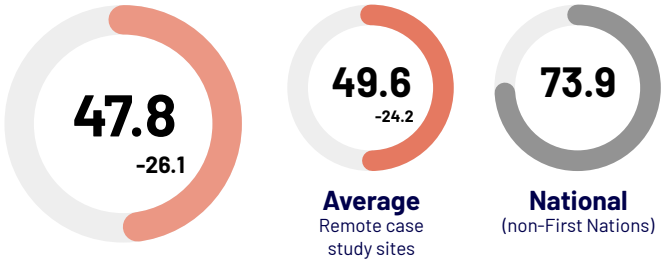


Figure 31: Wujal Wujal ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

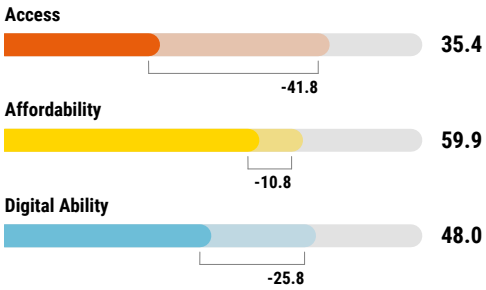


Figure 32: Wujal Wujal ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**170km**	north of Cairns (338 km by road)
Population	**276**	94% ATSI population
Dwellings	**73**	occupied dwellings
	3.4	people per ATSI household
Language	**39.9%**	ATSI people who speak an ATSI language
Income	**$332**	median ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage**: Telstra 3G/4G
- **Backhaul**: Fibre optic cable
- **ADSL**: Yes
- **nbn type**: Sky Muster
- **Starlink LEOsat use**: Key services and some staff houses
- **Public Wi-Fi**: At Centrelink office, REDI.E, Wings drop-in centre
- **Public phones**: 1 (in town centre)
- **Access computers**: 4 (3 at IKC, 1 at Centrelink)
- **TV services**: VAST only
- **Radio services**: 2 (Black Star Network, ABC FNQ (AM))
- **First Nations radio**: Black Star (Queensland Remote Aboriginal Media) / Wujal Wujal RIBS (destroyed by flood)

Wujal Wujal is an Aboriginal community located on the Bloomfield River in Cape York, North Queensland. The Traditional Owners are the Eastern Kuku Yalanji people.

Find out more via the 2024 Community Outcomes Report:

KEY FINDINGS

Access

88% own or share a mobile phone (97% in 2022)

95% of mobile phone users use pre-paid services (80% in 2022)

17% have fixed home internet (9% in 2022); 100% of these are Sky Muster

52% use the free public Wi-Fi for internet access (2% in 2022)

3% use a public telephone for calls (27% in 2022)

19% have access to a computer (43% in 2022)

Affordability

7.1 Affordability score (% household income to cover minimum services bundle)

$237 avg monthly household communications expenditure ($111 in 2022)

$213 avg monthly household pre-paid mobile expenditure ($159 in 2023)

91% cut back on essential household costs to afford internet in past 6 months (26% in 2022)

73% compromise on connection speed or quality due to cost (26% in 2022)

Digital Ability

16.4/30 Digital Skills score for residents in 2024 (15.7/30 in 2022)

65% used the internet in the last week (53% in 2022)

19% have never used the internet (34% in 2022)

62% used online banking in last six months (61% in 2022)

61% used online govt services in the last six months (52% in 2022)

62% keep in touch with family / friends online (58% in 2022)

Media Services

58% listen to First Nations radio (Black Star/ Wujal Wujal RIBS) each week (18% in 2022)

76% had the VAST TV service working at their house (70% in 2022)

49% watch YouTube daily (14% in 2022)

76% watch commercial TV daily (31% in 2022)

65% get news direct and in-person daily (38% in 2022)

88% get emergency information direct / in-person, 40% via First Nations radio, 14% via ABC radio

DIGITAL INCLUSION PLAN PROGRESS

Since the devastating 2023 flood event following Cyclone Jasper, Wujal Wujal has been seeking to build more resilient and reliable communications infrastructure, along with affordable household internet access and a robust emergency warning system (destroyed in flood). Efforts are ongoing to improve reliability of the 4G mobile service from Mt Pearce which has limited coverage and speed, and is impacted by weather events.

As well as community rebuild works and repair of the fibre optic cable, several communications upgrades have been undertaken:

- **Community-wide Wi-Fi network** installed 2024, providing free in-house connectivity and phone access (NBN/APN partnership with Regional Connectivity Program funding)
- **Starlink services** replaced or supplemented Sky Muster and fixed broadband by most agencies, with improved speed, reliability and reduced costs
- **Wi-Fi hotspots installed by NBN** in 2023 at the Rural Transaction Centre and Bana Yirriji Art Centre (since destroyed by flood)

IKC Coordinator Shinane Doughboy

- **Indigenous Knowledge Centre** replaced with First Nations coordinator providing digital training and support
- **Digital and You skills program** now offered by State Library of Queensland
- **Emergency flood warning system** replaced with new technology
- **First Nations Device Bank Pilot**—22 laptops donated to residents April 2025
- **RIBS radio studio** rebuilt, providing Black Star radio network and daily local shows
- **School Student Broadband Initiative** taken up by several households

Yuelamu

Central Desert, NT

RESULTS

ADII Score

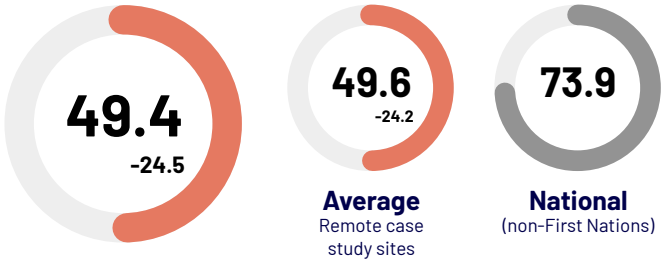


Figure 33: Yuelamu ADII scores compared to National Average (non-First Nations) and Very Remote First Nations scores

Dimension Scores

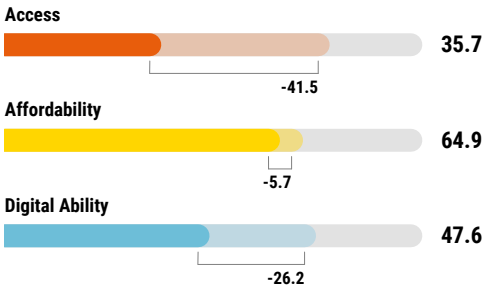


Figure 34: Yuelamu ADII dimension scores compared to National Average (non-First Nations) and Very Remote First Nations scores

AT A GLANCE

Distances	**50km**	east of Yuendumu
	300km	north west of Alice Springs
Population	**149**	94% Aboriginal and/or Torres Strait Islander
Dwellings	**35**	occupied dwellings
	4.8	people per ATSI household
Language	**99%**	ATSI people who speak an ATSI language
Income	**$254**	median ATSI personal income

Communications and media services (at time of visit)

- **Mobile coverage** — Telstra 4G (installed 2023)
- **Backhaul** — HCRC micro-wave network (for phones only)
- **ADSL** — No
- **nbn type** — Sky Muster
- **Starlink LEOsat use** — Council office, CDP, childcare, some staff houses
- **Public Wi-Fi** — Centrelink (for services), Activ8Me hotspot / rec hall (via vouchers)
- **Public phones** — 2/3 working
- **Access computers** — 2 (Centrelink, recreation hall for youth)
- **TV services** — VAST only
- **Radio services** — PAW Radio (FM); ABC (AM- faint signal)
- **First Nations radio** — PAW Media / Yuelamu RIBS not active at time of visit

Yuelamu community is a small community located in the Central Desert region of the Northern Territory. The Traditional Owners are the Anmatjerre people.

Find out more via the 2024 Community Outcomes Report:

KEY FINDINGS

Access

95% ⌃⌃
own or share a mobile phone (67% in 2022)

100%
of mobile phone users use pre-paid services (same in 2022)

5% ⌄⌄
have fixed home internet (30% in 2022); 100% of these are Sky Muster

44% ⌃
use the free public Wi-Fi for internet access (39% in 2022)

30% ⌄⌄
use a public telephone for calls (55% in 2022)

12% ⌄⌄
have access to a computer (33% in 2022)

Affordability

7.8
Affordability score (% household income to cover minimum services bundle)

$258 ⌃⌃
avg monthly household communications expenditure ($198 in 2022)

$253 ⌃⌃
avg monthly household pre-paid mobile expenditure ($187 in 2023)

73% ⌃⌃
cut back on essential household costs to afford internet in past 6 months (26% in 2022)

76% ⌃⌃
compromise on connection speed or quality due to cost (22% in 2022)

Digital Ability

13.4/30 ⌃
Digital Skills score for residents in 2024 (13.3/30 in 2022)

80% ⌃⌃
used the internet in the last week (54% in 2022)

19% ⌄⌄
have never used the internet (33% in 2022)

63% ⌃
used online banking in last six months (59% in 2022)

57% ⌃
used online govt services in the last six months (51% in 2022)

55% ⌃
keep in touch with family / friends online (54% in 2022)

Media Services

79% ⌃⌃
listen to First Nations radio service (8PAW) each week (45% in 2022)

35% ⌄⌄
had the VAST TV service working at their house (60% in 2022)

80% ⌃⌃
watch YouTube daily (25% in 2022)

51% ⌃⌃
watch streaming services daily (22% in 2022)

99% ⌃⌃
get news direct and in-person daily (50% in 2022)

97%
get emergency information direct / in-person, 88% via First Nations radio, 4% via ABC radio

MOST SIGNIFICANT CHANGE

Yuelamu was one of the least serviced of all communities visited in 2022, with no mobile service, limited Wi-Fi access, one working public phone, one access computer in the Centrelink agency, and a CAT hotspot dish where users can access a mobile signal from Yuendumu. After years of advocacy, Telstra had received NT /Australian Government co-funding to install a 4G mobile service, with microwave backhaul from Yuendumu, however this had suffered multiple delays.

By 2024, the communications services and digital support had improved significantly:

- **Telstra 4G tower** activated June 2023, providing fast, reliable mobile access around Yuelamu, with rapid uptake. However, affordability challenges have increased with rising pre-paid data use and reduced household Sky Muster services.
- **Activ8me Wi-Fi hotspot** switched to Sky Muster Plus Premium and free access (replacing costly vouchers) in late 2023

Satellite dishes on Central Desert Regional Council office, Yuelamu

- **Starlink services** now used in all Central Desert Regional Council facilities, improving speed, reliability and videoconferencing use in meeting room
- **Community access computers**, Wi-Fi and digital support now provided at CDP office
- **Cyber-safety awareness** improved through local effort and PAW Media radio messages, with Office of e-Safety developing local language resources
- **Music studio** upgraded at school for local recording, supported by PAW Media

ABOUT THE FIRST NATIONS DASHBOARD

The new First Nations dashboard on the ADII website provides the data collected through the Measuring Digital Inclusion for First Nations Australians project across seven pages:

- First Nations (key findings)
- Access
- Affordability
- Digital Ability
- Media Use
- Internet Use
- Remote Communities

The Remote Communities page provides the results for the 11 Mapping the Digital Gap research sites visited in 2024.

Data from *Mapping the Digital Gap* research has been used throughout the dashboard. Results can be filtered within a tile or for all tiles on a page using the Toggle Menu and Filter icons on the left side. This enables finely detailed analysis of the data by remoteness (capital cities, inner regional, outer regional, remote, very remote) and for different demographic groups, down to individual age groups or household types.

The new First Nations dashboard enables users to access, analyse and download data in accordance with Closing the Gap Priority Reform 4 and our commitment to Indigenous Data Governance. Data is presented visually with charts and maps to make it easy to understand and analyse within the dashboard. There are interactive tiles on each page presenting different elements of the data. The tiles can be expanded to full screen, with exploration of the national map on the front page possible by state and Indigenous Regions within each state.

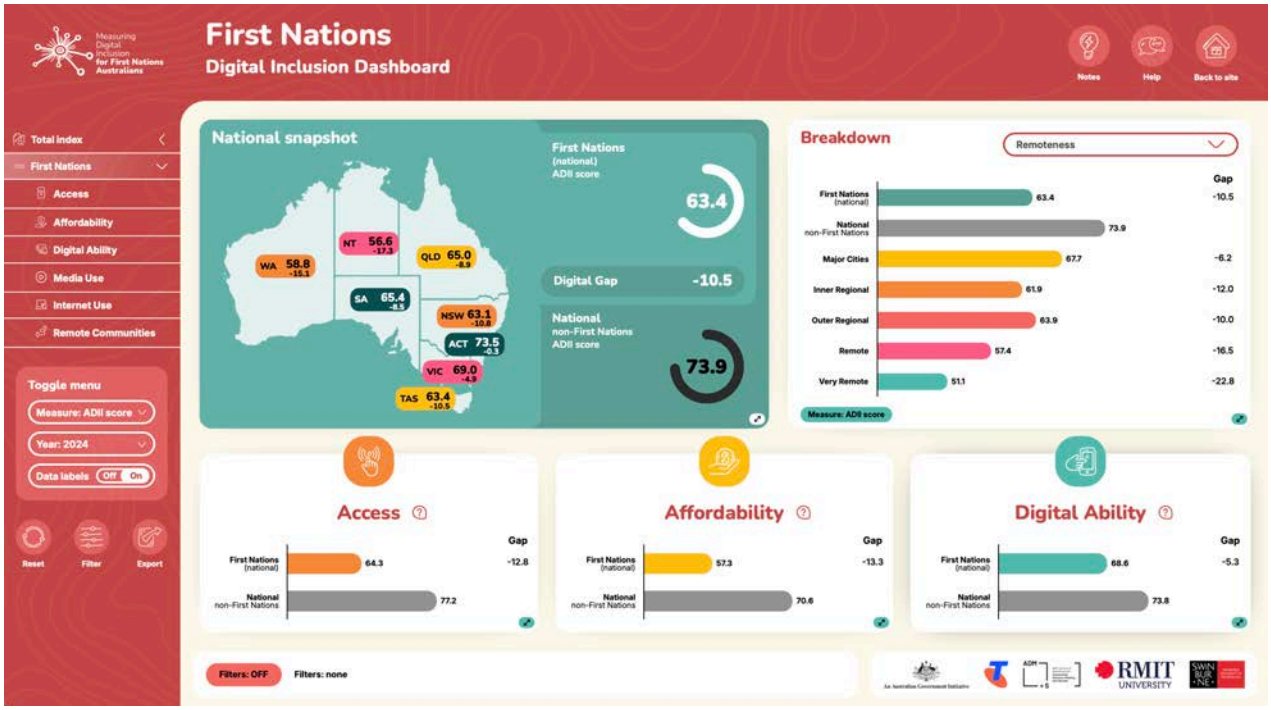


Figure 35: First Nations Dashboard on the ADII website

First Nations data can also be accessed from other dashboards throughout the main ADII dashboard, enabling comparison against other demographic groups. More information is available by clicking on the 'Info' button in each tile.

Aerial photo of Wilcannia

Analysis | Access

Average Access score

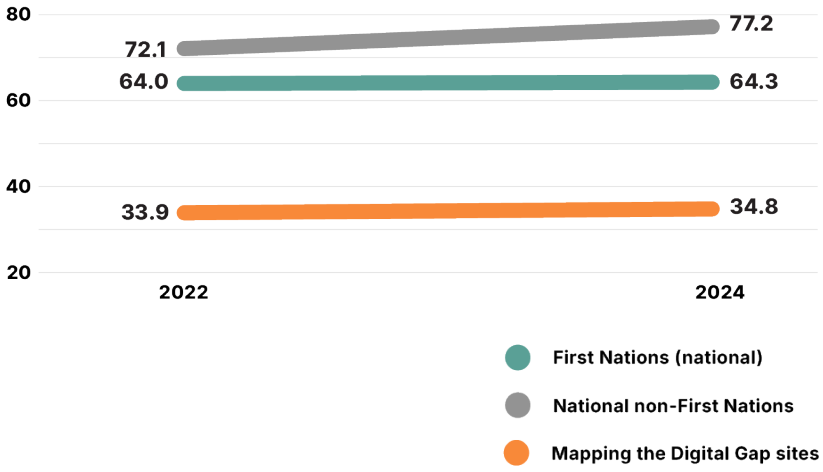
across Mapping the Digital Gap research sites.

Access is the largest contributor to the digital gap, with a gap of 42.4. This is nearly four times the size of the gap for Affordability (11.0) and more than double that for Digital Ability (19.3).

0.9

increase since 2022

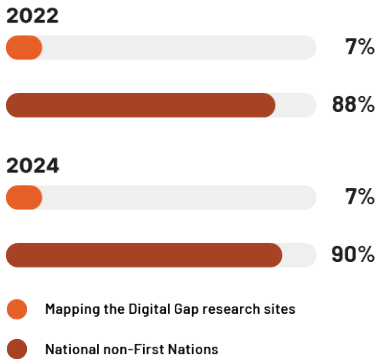
The average Access score rose from 33.9 in 2022 to 34.8 in 2024. While this improvement is welcome, the Access gap is currently widening with the national non-First Nations Access score up 5.1 points over the same period.



Why are Access Scores so low?

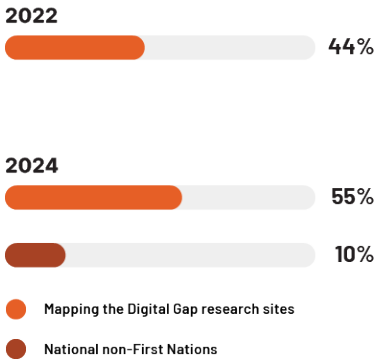
7%

of households have fixed broadband, compared with 90% of non-First Nations households nationally, same rate as in 2022



55%

have mobile-only internet access, up from 44% in 2022 (10% of non-First Nations people nationally) in 2022.



19%

reduction in First Nations households with a computer, down from 34% in 2022 to 15% in 2024.

57%

of households don't have enough digital devices to meet their needs. This has increased by 8% since 2022

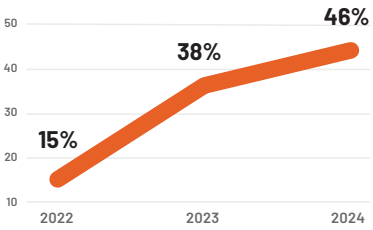
20%

often or always experience connectivity issues

What is improving?

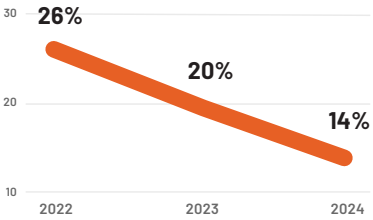
31%

increase in those accessing the internet via Wi-Fi in public spaces, up from 15% in 2022 to 46% in 2024.

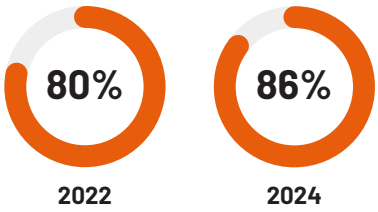


12%

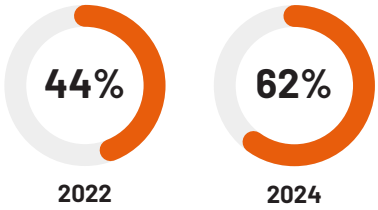
improvement in internet access. The number of people without any form of access reduced from 26% in 2022 to 14% in 2024.



6% increase in internet users



19% increase in regular internet use (daily or more)



98%

owned or shared a mobile phone in 2024, up from 71% in 2022. Comparatively, 99% of other Australians owned a mobile phone in 2024

98%

of mobile phones used were smartphones in 2024, up by 9% since 2022.

The ADII's Access dimension is based on opportunities for a reliable internet connection and use various digital devices, alongside frequency of online access. We measure:

- **Frequency and intensity of use, ranging from no use at all to daily use**
- **Connection type, such as fixed broadband or mobile-only**
- **Data allowance and speed**
- **Types of devices, including desktops, laptops, smartphones, tablets and an array of smart home devices**

Understanding the Access Gap

This section provides updated analysis on the Access dimension of digital inclusion, supplementing the following topics and case study outlined in the 2024 Outcomes report.

While updating previous analysis, we look at why the Access score has had such limited improvement, and how Index scores vary by community (including those with new infrastructure) and changes across demographic groups. We also include a new case study looking at the rapid uptake of Starlink by service agencies, staff and households that can afford it, improving services but contributing to localised digital divide.

2024 Report Topics

- Internet access is primarily via smartphones in remote First Nations communities
- Access is improving, but mobile services continue to be congested and intermittent
- The number of people not using the internet has decreased but remains substantial
- Access on homelands is critical, but community-led solutions are needed
- Case Study on Wi-Fi mesh networks in remote First Nations communities.

Analysis | Access

Expanded Wi-Fi and mobile services are improving internet access and use

Over the last decade, there has been targeted investment in mobile and Wi-Fi infrastructure in remote First Nations communities, including in several of our research sites in recent years. For example, community Wi-Fi mesh networks have been installed in Kalumburu, Warakurna and Pipalyatjara, and more recently in Wujal Wujal (2024), Gäŋgaŋ (2024) and Galiwin'ku (2025). There has been expansion of mobile services under national and state co-investment programs, with a Telstra mobile tower installed in Yuelamu in 2023, small cell towers in Djarindjin (2022) and recently in Kalka (2025), and upgraded mobile service in Galiwin'ku in 2024.

There have also been Wi-Fi hotspots installed in about 110 sites and upgrades of community Wi-Fi phones in about 300 homelands nationally. Communications Minister Anika Wells also recently announced that 52 more remote communities will receive Wi-Fi networks under the Australian Government's Community W-Fi program,[21] building on the NBN rollout of Wi-Fi networks to 23 communities in 2024-25 under the 2024 Budget measures.[22] Telstra and Optus also upgraded existing mobile services in many remote communities in the lead-up to the 3G switch-off in October 2024, including upgrading to 5G services in some larger communities.

Mobile tower with repeater dishes, near Djarindjin WA

These infrastructure programs are providing significant and much-needed improvement in phone and internet access, while contributing to improvements in Digital Ability and Affordability measures. However, further work is needed to address the needs of hundreds of small communities and homelands with limited or no communications services and many communities that still struggle with patchy, slow and unreliable mobile and broadband services.

Of the 1499 remote communities and homelands, roughly 732 have mobile services currently, with 767 without a mobile service. About half of the estimated 1200 homelands have a public phone, while many others have no reliable means of telephone or internet communication.[23]

Sky Muster satellite dishes for community Wi-Fi in Kalumburu WA

However, the impact on Access scores remains limited

The obvious question is why this improved availability of services has not translated into greater improvement in the Access score in the Mapping the Digital research sites, where there has only been a 0.9 increase since 2022 (from 33.9 to 34.8). The answer lies in the way Access is measured by the ADII (as outlined in the Snapshot page). To have a high Access score, a person would have regular and high-intensity internet use, fixed household broadband as well as mobile service, fast and unlimited data allowances, and access via a range of devices. Socio-economic conditions, ecology of use and limited availability of appropriate plan options are key factors in the low Access scores.

Co-researcher Guruwuy Ganambarr on her phone in Gäŋgaŋ NT

Opportunities to access the internet using a range of devices remain very limited in most remote First Nations communities. The predominant use of mobile-only internet use (up 11% to 55% in 2024) instead of combinations of household broadband and mobile services is a primary contributor to low Access scores. Low household uptake of fixed broadband (steady at 7%) and a reduction in computer access (down from 34% in 2022 to 15% in 2024) are also key factors. While community Wi-Fi services are now available in residential areas, these are mostly outside of houses, with Kalumburu the only research site with in-house access as at 2024. The reliance on pre-paid mobile by 99% of mobile users also limits data allowance and speed. These personal usage factors constrain the Access score, with continuation of current models of access likely to see the gap widen rather than narrow.

Several initiatives are improving Access including the WA model of in-house access to community Wi-Fi networks, the NBN School Student Broadband Initiative, Telstra's Community Pre-paid mobile plan and the NBN Work Ventures First Nations Device Bank pilot project. Expansion of these types of programs is needed in response to community demand and leadership.

Going forward, more structural solutions are required to improve Access scores:

+ **affordable household broadband with pre-paid and low-income plans**
+ **more affordable pre-paid mobile plans to enable increased data use**
+ **affordable or donated computers and laptops to increase household access**
+ **community Wi-Fi services supporting in-house access.**

Apps on mobile phone, Galiwin'ku NT

Analysis | Access

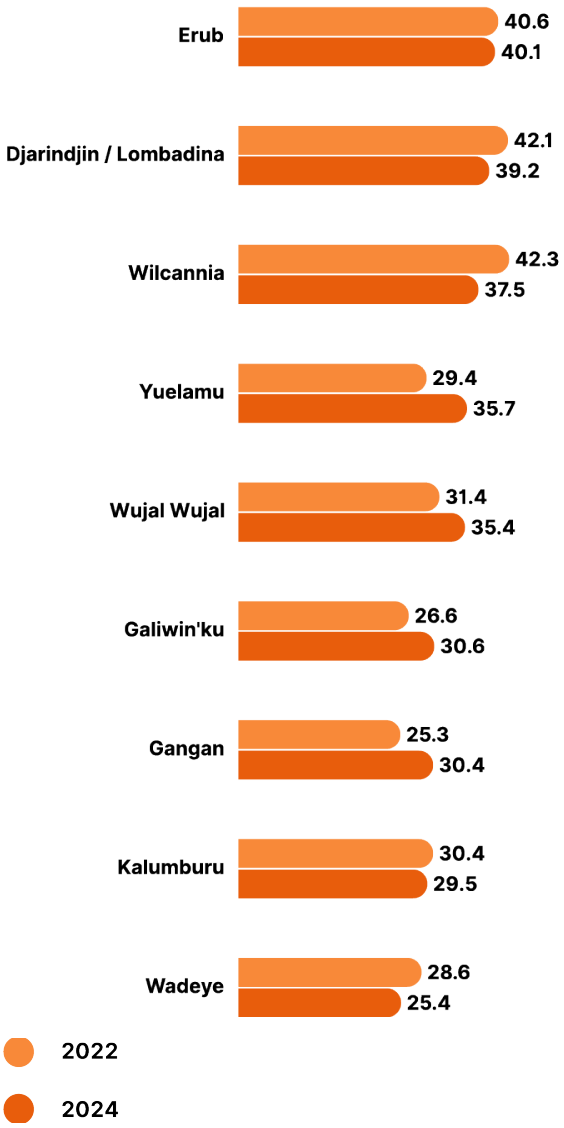
Access scores between sites are varied but show systemic barriers

The variations in Access between the 9 research sites visited in both 2022 and 2024 is shown in Figure 36 below, with 2024 scores ranging from 25.4 in Wadeye (gap of 51.8) to 40.1 in Erub (gap of 37.1). The average Access score across the nine sites (35.1) is well below half the national non-First Nations average of 77.2. This points to ongoing systemic barriers to internet access for First Nations people living in remote communities nationally.

Four of the nine sites had improved Access scores since 2022. Very limited internet access in Yuelamu and Gäŋgaŋ homeland was reflected in low scores in 2022 (29.4 and 25.3 respectively), however both had major improvements by 2024 (6.3 and 5.1 points). For Yuelamu, this is due to increased digital engagement since the introduction of the mobile service (internet use increased from 54% to 80%), whereas Gäŋgaŋ was likely due to increased Wi-Fi hotspot capacity improving regularity and diversity of internet use. While Galiwin'ku was still awaiting mobile and community Wi-Fi upgrades in 2024, and there was no household broadband uptake, increased mobile internet use slightly increased its very low score of 26.6 to 30.6. In Wujal Wujal, a 4-point rise in Access followed residents being evacuated to regional centres following the flood that reflected an increased number of internet users (up 15%) and weekly internet use (up 12%) while away from the community.

Meanwhile, some communities with a range of mobile and fixed broadband services available experienced setbacks. Wadeye had a 3.3-point drop in Access since 2022, likely due to congestion in mobile services, ongoing reliance on in-person services and low number of people with mobile devices (50% in 2024). Wilcannia saw a 4.8-point reduction for similar reasons, with an 11% increase in household broadband offset by a 9% reduction in mobile ownership and 36% reduction on computer use. Djarindjin and Lombadina had a 2.9-point reduction in Access scores, again driven by reduced mobile ownership and computer use.

Figure 36: Access scores by community, 2022-2024



Erub and Kalumburu also saw slight reductions (0.5 and 0.9 respectively), likely due to reduced uptake in household Sky Muster services with preference for Wi-Fi or mobile services. Erub continues to have the highest Access scores, despite its extreme remoteness and very limited mobile access, due to having more households with Sky Muster services (16%), 100% mobile ownership and high use of digital services. Erub also has the highest Digital Ability score (69.5), reflecting strong linkages between these two dimensions.

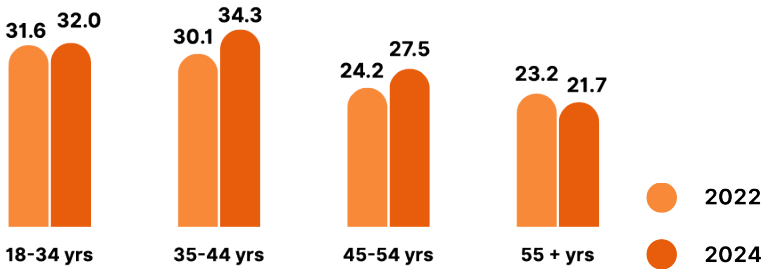
Access in communities is shaped by age

From 2022 to 2024, there have been small improvements in Access scores across all age groups up to 54 years. Averaged across the 11 communities, we found the greatest improvements in Access in the 35-44 age group (4.2) and 45-54 (3.3), with slight improvements for the 18-34 age group (0.4). This suggests increased digital engagement by those in the 35-54 age range.

However, those aged 55 years and over had slightly reduced Access scores over this period, down 1.5 points from 23.2 to 21.7. This shows that, while Access is improving for younger people, Elders face ongoing barriers in accessing and using broadband, online services and digital devices.

Anyupa Martin on her mobile phone, Pipalyatjara SA

Figure 37: Access scores for research sites by age, 2022-24



However, the age variations differ between communities. In Yuelamu, where the mobile tower was installed in 2023, those aged 55 and above had increased Access scores from 2.5 points to 26.7 in 2024. In Galiwin'ku, there was a significant increase of 20.4 points for the 45-54 age group between 2022 and 2024 (up from 14.0 to 34.4) and 15.3-point increase for the 35-44 age group (from 18.3 to 33.6). This shows that digital engagement is increasing among the middle age groups despite low broadband uptake and poor-quality mobile services.

In Kalumburu, there was a similar increase of 16.2 points for the 45-54 age group (from 16.8 to 33.0), most likely driven by improved access via the community Wi-Fi network.

While Yuelamu had a 3.3-point average increase in Access following the mobile tower installation, this varied widely between age groups. There was a significant decline of 15.9 points among the 35-44 age groups (from 50.5 down to 34.6) but a 24.2 increase for those 55 and above. The reduction for the 35-44 age group may be a result of several households removing Sky Muster services following the introduction of mobile coverage.

Other unusual variations occurred on Erub where Access scores among the 45-54 age group dropped by 22.6 points (from 58.9 to 36.3) despite overall increase, in Wadeye the 55 and above age groups saw a 12.5-point decrease (from 21.7 to 9.2), while in Gäŋgaŋ scores for those 55 and over dropped by 4.4 points (from 8.2 to 3.8), the lowest among all

Analysis | Access

Improvements in Access scores align with educational attainment

Across all sites, there was with a 5.3 increase in Access for those who had completed secondary schooling (from 25.0 to 30.3) and 5.8 for those who had undertaken further training (such as Certificate or Diploma). However, for those who had not completed secondary school, there was a 0.8 decline in Access scores between 2022 and 2024.

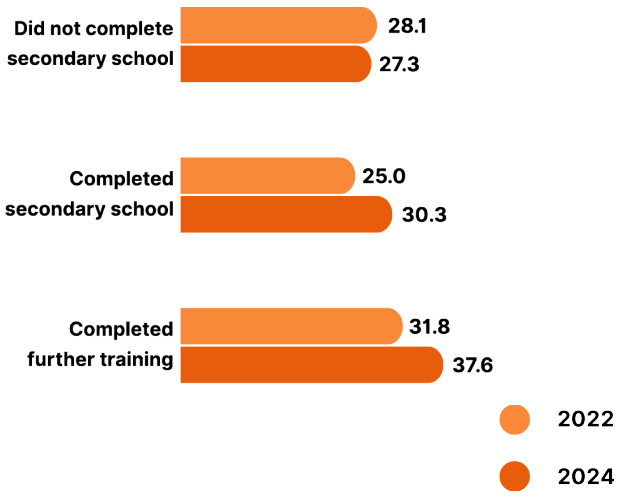
The largest increase in Access was in Wilcannia, where those who obtained further training improved from 30.7 to 54.5 (up 23.8 points), while those without secondary schooling dropped by 9.2 points.

Ngaanyatjarra Lands School, Warakurna WA

Similarly, in Kalumburu Access scores for those with further training rose by 23.3 points (from 33 to 56.3). This suggests that greater digital skills and confidence obtained as part of formal education contribute to higher Access scores, along with improved employment and subsequent affordability of broadband services among these groups.

In contrast, those who had completed secondary school in Wujal Wujal had Access scores reduce between 2022 and 2024 (14.1 decrease from 50.3 to 36.2), whereas scores for those without secondary school increased 7.5 points (from 21.3 to 28.8). Relocation to regional centres following the flood is a likely contributing factor, where mobile phones and data were provided to residents to support access during this period.

Figure 38: Access scores for research sites by education, 2022-2024



Other demographic and structural factors impact Access

These are just two examples of how Access varies across demographic groups. Across all sites, we saw lower Access scores among those not in the labour force (23.5 compared with 35.1 for those employed), people with disability or long-term health condition (21.7 compared to 31.2 for those without), those who speak a First Nations language at home (28.5 compared with 34.8 for those speak only English), and males (28.2 compared with 30.9 for females).

Our data shows the Access measure goes beyond infrastructure, demonstrating how socio-economic and demographic factors impact on where and how people use digital services, applications and devices. It highlights that contextual factors such as local resources, connectivity and culturally appropriate training can either amplify or constrain the benefits of digital inclusion. Access also has strong linkages with the Affordability and Digital Ability measures, which will be covered in the next section.

Case study: The uptake of Starlink and an emerging localised digital divide in remote First Nations communities

Starlink Low Earth Orbit (LEO) satellite services have had rapid uptake by agencies and some residents in remote First Nations communities since their introduction in 2022. Offering higher speeds, lower latency, unlimited data and relatively reliable service even during extreme weather, Starlink has outperformed legacy technologies like ADSL and Sky Muster in many places. However, the high upfront and ongoing costs have limited uptake to a small number of users – mostly agency staff and those on higher incomes. This has led to a new form of digital divide, not just between communities but within them.

Starlink was introduced to northern Australia in 2022, and by 2024 had been adopted across most research sites. In Wadeye, Warakurna, Wilcannia and Wujal Wujal, Starlink services were used by schools, health services, police, councils and cafes to overcome previous issues of congestion, outages and weather-related dropouts. In Wujal Wujal, following the devastating flood, Starlink was used to restore communications during emergency recovery efforts. Starlink now operates as backhaul for a community-wide mesh Wi-Fi system, rolled out in 2025 to address affordability and mobile coverage issues.

The benefits of this technology have been significant, with agencies reporting improved service quality, particularly for high-bandwidth tasks like video conferencing. "There's just no lag," said Acting Sergeant Martin Higgins from Wujal Wujal Police:

> *"Before we were having a few issues. It was a little bit hit and miss [with] Sky Muster; as soon as you had any cloud cover it's basically non-existent. [With] Starlink, you don't seem to have that problem ... When you get extreme weather events it does still sort of take a toll [but not if it is] overcast, raining, it doesn't affect it."*

In Wilcannia, Shona Cook from the local cafe explained that they installed Starlink to ensure reliability. "[It] never goes out, not even if it's pouring down rain. The customers that come in to use the internet, they've got Wi-Fi here, the television runs on Wi-Fi, the till runs on Wi-Fi, the EFTPOS runs on Wi-Fi, everything and anything that you need."

Despite widespread uptake by agencies, Starlink remains out of reach for most households. Across all research sites, only 1.2% of First Nations households had adopted the service by 2024. Cost is the main barrier. Monthly charges of at least $139 and equipment costs up to $600 are unaffordable for households relying on prepaid mobile data. In 2024, 99% of First Nations mobile users were on prepaid plans, with many spending over $280 per month to support household access. Large family households can face average costs exceeding $400 per month, even while compromising on speed and quality.

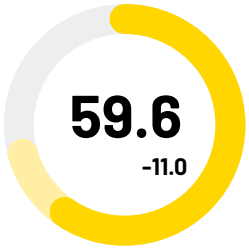
This pattern of uptake has created a localised digital divide. While several agencies, staff and contractors, and residents on higher incomes can now access faster and relatively reliable internet through Starlink, others remain dependent on slow, expensive alternatives. As one Wilcannia resident explained:

> *"Now that we've got Starlink I can send massive files within two minutes ... It's that fast and that much more reliable. We've tested it even in the storms, it still worked really good ... My wife and kids just love it.* ***But if there was a cheaper way where we could still get the same speeds, we'd definitely look at that.****" (Robert Clayton, WRR, 2024).*

Agencies and community leaders have proposed collective solutions, including community-shared Starlink infrastructure or cost-sharing across multiple homes. However, these models are not yet widespread. In the meantime, the local divide in access risks entrenching further inequalities.

Starlink and other LEO services due in coming years have the potential to be a transformative technology in remote First Nations communities, providing reliable, high-speed internet in areas long under-served by legacy infrastructure. However, without targeted affordability and access strategies, it risks creating new divides within communities. Bridging this gap requires policy attention to pricing, prepaid options, and community-based access models, ensuring the benefits of new infrastructure are shared equitably and can help underpin community-led digital inclusion for First Nations people.

Analysis | Affordability



Average Affordability score

across Mapping the Digital Gap research sites.

The average affordability score is 11 points lower than the national average for non-First Nations Australians (70.6). However, it is 2.3 points above the First Nations national average (57.3), reflecting larger household sizes and sharing of income in remote communities.

HOW WE MEASURE AFFORDABILITY HAS CHANGED

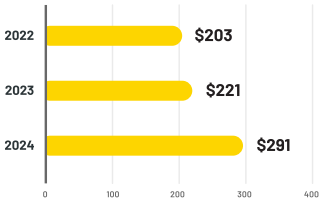
The Affordability measure is based on the share of a household's monthly income needed to buy an adequate internet bundle tailored to its composition and remoteness. The ADII updated its model for measuring Affordability to account for different contexts and household types and sizes. This enables a better understanding of how Affordability impacts digital inclusion across the geographic and demographic spectrum. This means, Affordability scores in 2024 are not directly comparable to previous years. The 2025 ADII report outlines how Affordability is calculated by different household make-up (Appendix A).

Our 2024 survey found that:

$291

average monthly household expenditure on mobile phone and internet, up by $88 since 2022

Avg monthly household communications expenditure



The increase was greatest for large family households (8-10 people), whose monthly costs had increased from $226 to $407 in 2024.

99%

of those with mobile phones use pre-paid data (up from 97% in 2022)

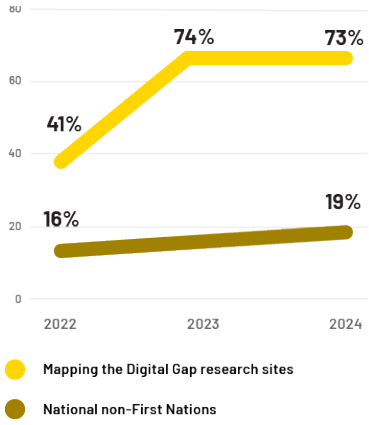
2 in 3 people

said they have had to sacrifice or cut back on essential costs (food, bills) to afford the internet in 2024

This is an increase of 28% since 2022.

73%

of internet users surveyed in 2024 said they 'made compromises on speed and/or data in order to afford it', an increase of 35% since 2022.



This compares with 19% nationally in 2024.

The 2024 Outcomes report provided analysis on the Affordability dimension of digital inclusion under the following topics.

In this section, we update this Analysis with Index results using the new measure for Affordability. We look at how Affordability varies by community and between household types and other demographic groups.

- The rising cost of living has hit remote First Nations communities particularly hard
- More than 1 in 3 people in remote First Nations communities report internet costs as too expensive, compared with around 1 in 20 nationally
- 3 in 5 households in remote First Nations communities have fewer devices than required to be digitally included
- Household size impacts on affordability

Our Affordability Index measure enables national comparison of what a quality bundle would cost in 2024.

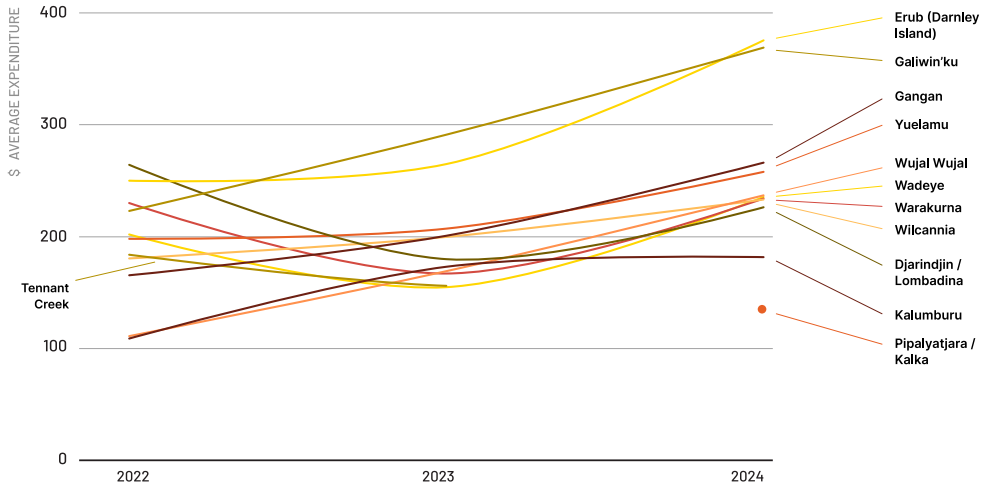
We also show how actual household expenditure has increased over time. **The average Affordability score of 59.6 across the Mapping the Digital Gap research sites is 11.0 points below the national average** for non-First Nations Australians (70.6), but 2.3 points above the First Nations national average (57.3). As the Affordability Index uses a new measure, we cannot compare 2024 results with the previous Index results from 2022.

As outlined in the Snapshot, **the ADII measure of Affordability has been changed to better account for the context of large household sizes with multiple income earners and different connectivity options** in remote First Nations communities. It is a derived score based on the share of a household's monthly income needed to buy an adequate internet bundle.

The high score, relative to First Nations Australians nationally, is due to larger household sizes in remote communities. With more income earners increasing household income, there are potential economies of scale when paying for broadband and mobile services. However, the low rate of household broadband and primary reliance on pre-paid mobile data means that these potential savings are not being realised. The Affordability Index score does not consider the actual mobile and broadband services currently used by households or actual expenditure. It also does not account for other cost of living factors.

In reality, Affordability is a critical barrier as indicated by the rising monthly household expenditure. Our three-year survey results show that monthly household expenditure on mobile phone and internet services has increased between 2022-24 by $89 to $291. This increase was greatest for large family households, whose monthly costs increased by 80% from $226 to $407 in 2024. Our survey shows increases across almost all research sites.

Figure 39: Average household expenditure on mobile and internet services by community, 2022-24



Analysis | Affordability

Primary use of pre-paid mobile services and increased data use is increasing expenditure

Despite potential savings with post-paid mobile plans and fixed broadband services, the overall trend is toward higher uptake of pre-paid services. Across the research sites, use of post-paid mobile plans has reduced from 3% to 1% of mobile users since 2022, with 99% now using pre-paid services. The most commonly used recharge costs $39 for 15GB of data.

While prepaid arguably offers poorer value for money, there are barriers to accessing postpaid services, including a lack of identification, issues with credit ratings, and fear of bill shock. Bettina Cooper of financial support organisation Mob Strong Debt Help, described pre-paid rates as the 'poverty premium'.

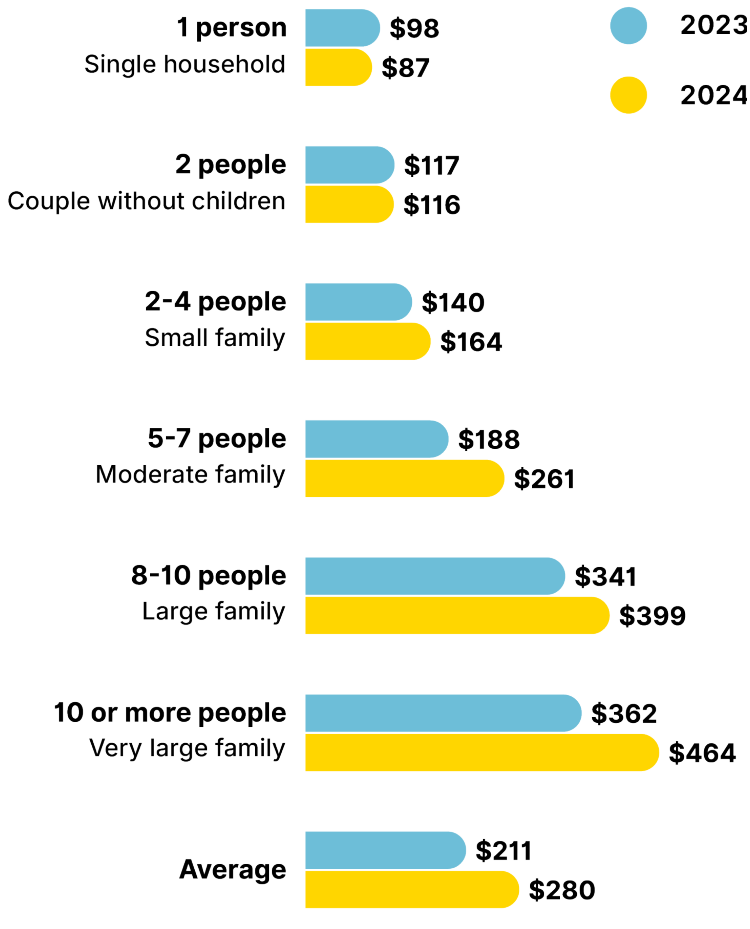
"First Nations people pay the poverty premium. [Remote households] have to do pre-paid electricity [which is at] a higher rate. [And they do] pre-paid for phones [and pay] more than the person who's earning $100,000."

The increase in pre-paid recharge costs is adding to cost of living expenses

Our survey found that average household spending on pre-paid mobile data increased from $210 in 2023 to $280 per month 2024 in our research sites. This increase was highest in large family households with a $58 monthly increase for families of 8-10 people and a $101 increase in households of 10 or more. With increases to the cost of data recharge vouchers in July 2023 and again in October 2024,[24] along with greater data usage by households, the cost of pre-paid mobile data is a significant affordability concern among other cost of living pressures.

"Mobile data is expensive because everything is on the internet now." (Pipalyatjara resident)

Figure 40: Affordability scores for research sites by household, 2022-2024



Cost of living affects affordability of essentials including communications

Affordability of mobile phones and devices, pre-paid mobile data and household connections is an ongoing concern in remote First Nations communities. **With cost of living pressures continuing to increase nationally, remote communities are disproportionately affected with very high costs for food, fuel, power and rent, as well as primary reliance on pre-paid mobile data.**[25] This is made more challenging by low household incomes, with the average First Nations household income in very remote areas $459 per week, less than half that in major cities of $982 per week.[26]

The cost of food and essentials in remote community stores is also very high due to high cost of freight and long supply chains. A 2024 Choice study found that a basket of food costs more than double the price in an urban supermarket.[27]

"Everything costs too much in Kalumburu, for power, food, fuel, phone, people can't afford it." (Kalumburu resident)

ATM at Wujal Wujal

To improve affordability of essential groceries, a recent government initiative capped the price of 30 key food items in remote community stores signed up to the program.[28]

"I use Boost which costs $150 for 150GB for a year. It's cheaper ...I do a lot of online shopping to save money, because shipping is free." (Erub resident)

Additionally, the cost of energy, transportation, and housing has increased greatly, and both the rising cost and shortage of labour have resulted in rising costs for installation and maintenance of essential infrastructure.

Community store

On top of other costs, households pay for electricity via smart power meters, now used in most remote communities nationally. A recent report raised the issues of unaffordability of pre-paid power delivered to houses in most states via smart meters, leaving houses regularly without power during the hottest and coldest times of the year and food spoiling when power is off.[29]

Similar initiatives are needed to ensure First Nations households have access to another essential service – communications. In the context of very high prices for basics such as transportation, power and food, the lack of affordable connectivity in remote communities undermines not only progress toward Closing the Gap Target 17, but other targets relating to access to healthcare, education, employment and services.

Analysis | Affordability

Affordability varies widely between communities and by household income

The Affordability scores vary widely across the 11 research sites, ranging from 54.6 in Djarindjin and Lombadina to 70.3 in Gäŋgaŋ homeland, with other sites in the mid-50s to mid-60s range.

The Affordability gaps are visible in the share of household income needed for internet access. Figure 41 below shows the percentage of household income needed to pay for a standard internet bundle, with 2% considered the threshold for affordability. Only 1% of households in our research sites fall under that threshold with 57% paying between 5% and 10% and more than a quarter (27%) paying over 10% of household income. In contrast, 5% of non-First Nations households in very remote Australia would need to pay more than 10% of their total income for internet services.

Figure 41: Percentage of household income needed for a standard internet bundle for research sites and by First Nations status

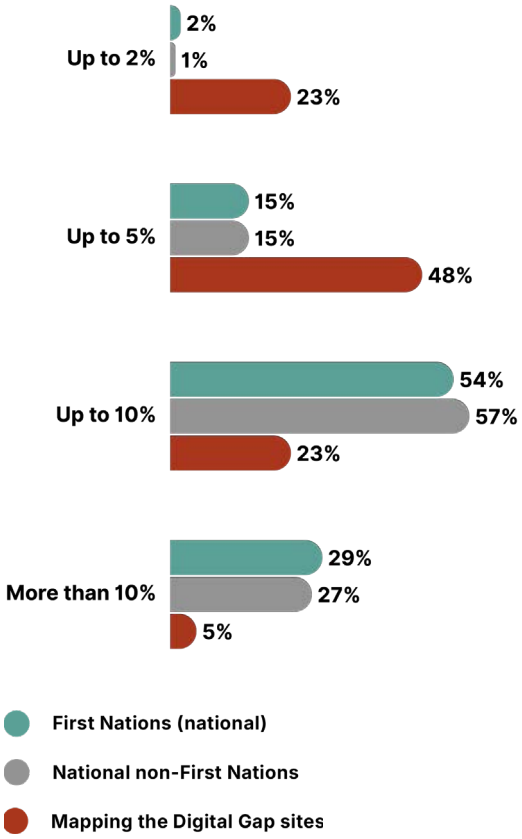
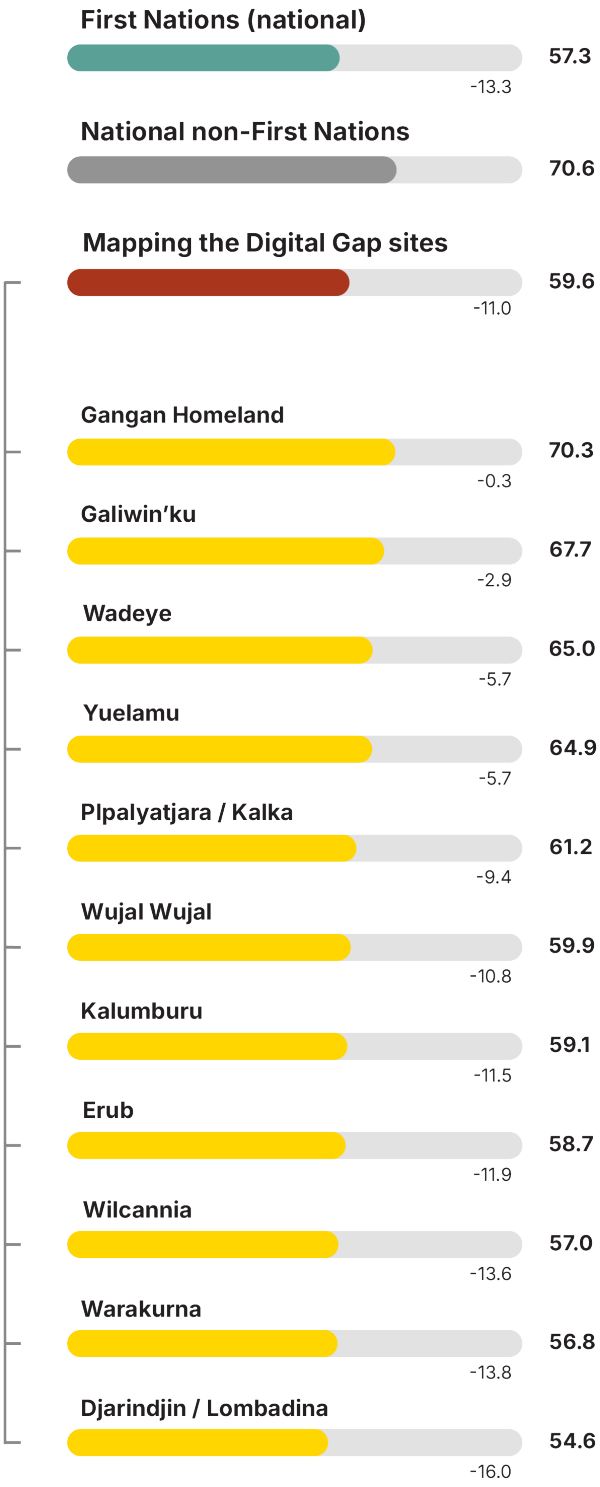


Figure 42: Affordability scores and gaps for research sites and by community, and comparison between National Average of First Nations and non-First Nations



Device affordability is also a challenge

There is a relatively high turnover of mobile phones in remote communities with no means of repairing damaged screens in communities, and limited access to protective cases. Some people explained that they replace their mobile phone three to four times a year. It is common for people to get a new SIM with a new phone as SIM replacement is incentivised with bonus data. However, with mobile numbers required to log into many online services and for two-factor authentication, the regular replacement of mobile numbers adds an additional barrier to use of online services.

With the most popular phones costing about $200-$500, replacement cost is a large proportion of average weekly income. This can lead to people being without a phone for extended periods while saving to purchase a new phone, as we heard in many of the survey comments.

Damaged screens is a primary reason for device replacement

Sharing of devices within families or couples is commonplace as an affordability measure and feature of a sharing economy, as is giving devices to family members. However, this can cause issues in terms of privacy and security in using online services and, in some domestic situations, control over a person's access to communications.

Some Elders deliberately choose to purchase non-smart phones to reduce demand from family members to use up pre-paid data on games and entertainment.

Alleviating Affordability pressures is critical to address digital exclusion in remote First Nations communities

For First Nations Australians nationally, Affordability is the greatest barrier to digital inclusion with a gap of 13.3. As outlined above, cost of living pressures and high reliance on pre-paid mobile data mean that Affordability is a defining factor in decisions about digital services, devices and applications used by households in remote and very remote First Nations communities.

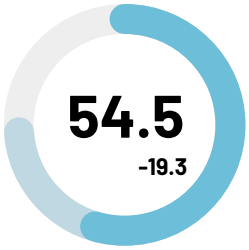
Free community Wi-Fi networks are helping to overcome the lack of household connectivity in communities such as Kalumburu WA

There have been a number of effective measures implemented to address these challenges. The expansion of free Wi-Fi hotspots and community Wi-Fi networks in communities over recent years has been aimed to address both affordability and access, including to online services, when pre-paid data has run out. These programs have been very successful with our 2024 survey finding 45.6% of people used free public Wi-Fi to access the internet, up from 14.5% in 2022.

In October 2024, Telstra introduced a new low-cost pre-paid Community Mobile Plan for remote First Nations customers, providing 25GB of data for $25 with a 14-day expiry. This reduces the cost of data from $2.33/GB to $1/GB and will hopefully reduce household expenditure and the number of additional recharges needed per month. Telstra has also provided free monthly data allocations to thousands of vulnerable customers.

With affordability a critical and ongoing barrier to digital inclusion, measures like these are welcome. However, innovative policies (including broadband as part of social housing provisions) would go further to improve digital inclusion and reduce affordability stress in remote communities.

Analysis | Digital Ability



Average Digital Ability score

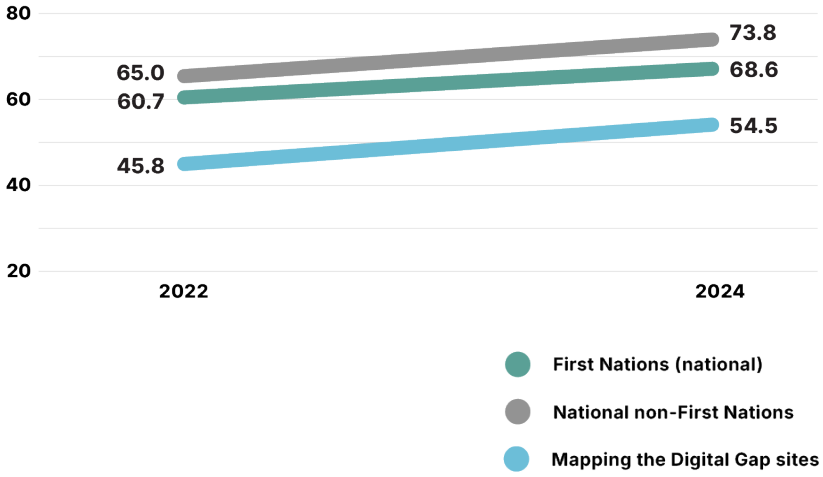
across Mapping the Digital Gap research sites.

8.7

increase since 2022

This is a significant improvement, aligned to improved scores for First Nations Australians (7.9) and non-First Nations Australians (8.7) over the same period.

However, Digital Ability remains 19.3 below the national non-First Nations average (73.8), 14.1 below the First Nations national average (68.6) and 2.3 below the very remote First Nations average (56.8).

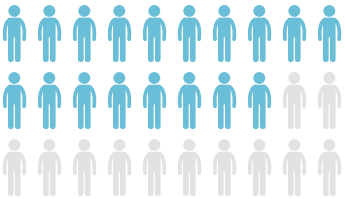


The increased Digital Ability score is due to increasing engagement and confidence in online activities:

19% increase in daily usage of the internet

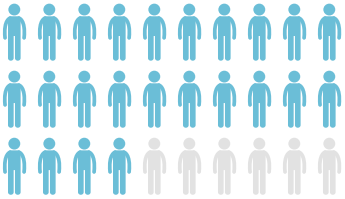
3 in 5

respondents in 2022 (44%)



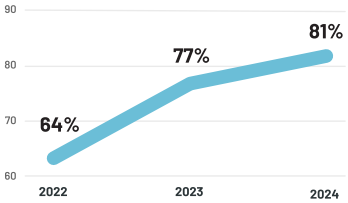
4 in 5

in 2024 (62%)



17%

increase in participation in online activities



62% used social media to keep in touch with family and friends, up from 49% in 2022

58% used online banking in the last six months, up from 52% in 2022

52% used online government services in the last six months, up from 43% in 2022

Across the 11 sites visited in 2024, we found some significant demographic gaps in Digital Ability scores among those surveyed:

25.0 Education Gap

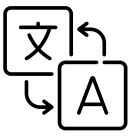
between those who had completed further training (59.7) and those who had not completed secondary school (34.7). This illustrates that education is a key determinant of digital ability

32.8 Age Gap

between 18-24 (48.9) and 55+ age (16) groups in 2024

24.7 Employment Gap

between those who are employed (52.8) and those in not in the labour force (28.1)

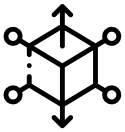


23.4 Language Gap

between those who speak a First Nations language at home (36.8) and those who do not (60.2)

14.8 Disability Gap

between those who have a disability or long-term health condition (28.9) and those who do not (43.7)



6.7 Gender Gap

with females having higher average levels of Digital Ability (43.9) than males (37.2)

Understanding the Digital Ability Gap

The 2024 Outcomes report provided analysis on Digital Ability in the Mapping the Digital Gap sites under the following topics and case study.

In this section, we supplement this with new analysis of Index data and outline how it varies by community and across demographic groups. We also provide a new case study about the impacts of online safety risks in remote communities.

- Being mobile-only limits digital skills development
- Digital skills are improving for some groups, particularly younger people, Elders and those that have completed secondary school
- There is an increase in online activities, particularly for entertainment and cultural activities
- Younger people are more likely to engage in online activities, with 9 in 10 people under 45 now engaging
- Because of the increasing use of online platforms and services there is a need for culturally appropriate and personalised assistance
- Case study: Use of social media for social and cultural activities in remote communities

Analysis | Digital Ability

Digital Ability is improving in most communities, but gaps remain

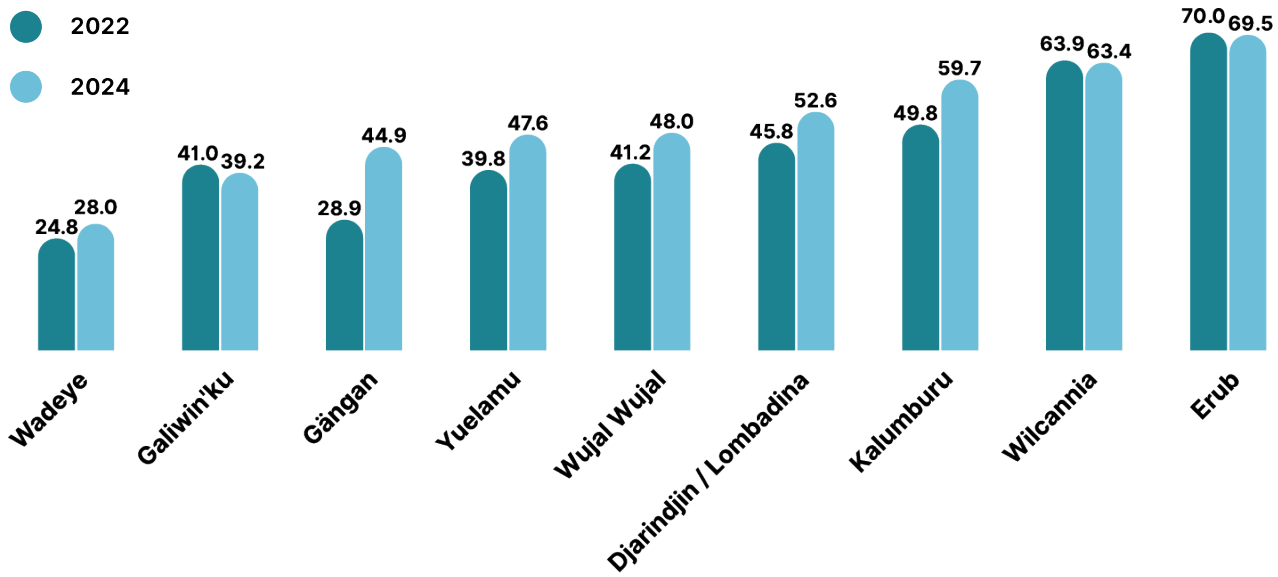
Digital Ability concerns what opportunities people can take up using digital technologies and the internet, and the ability to avoid harms that may flow from its use. As digital devices and services become more embedded in daily routines, having the skills and literacies needed to navigate them effectively is crucial to ensuring safe and equitable access to essential services and online opportunities.

Digital Ability levels increased by an average of 9.7 points across the nine communities visited in both 2022 and 2024, slightly above the national rate of improvement (8.7 points).

However, this rate varied between sites, with three having similar results (Erub, Wilcannia, Galiwin'ku) while others experiencing strong growth. For example, Gäŋgaŋ Homeland (NT) saw a 16-point increase to 44.9 in 2024, Kalumburu improved by 9.9 points, Yuelamu by 7.8 points and Wujal Wujal by 6.8 points.

This improvement aligns with a 6% increase in first-time internet users during this period and 19% increase in daily internet use, showing the linkage with Access results.

Figure 43: Digital Ability scores by community, 2022-2024



Co-researcher Mel Langdon doing survey with resident Billy Stafford, Yuelamu NT

Despite overall progress, the average Digital Ability score across all Mapping the Digital Gap sites (54.5) remains 19.3 points below the national non-First Nations average score (73.7). This varies widely, with Wadeye having a very large gap of 45.8. While Erub is above the First Nations national average (68.6) and Wilcannia 5.2 points below, most other communities remain well below these benchmarks.

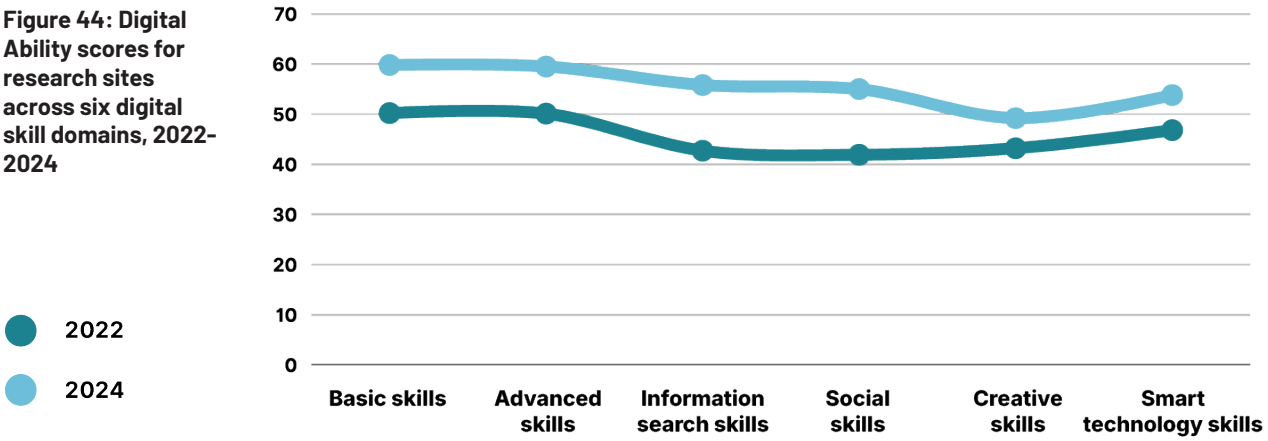
These disparities are driven by differences in access, education, language, and broader structural barriers to digital skills development. Below, we will explore in more detail the variations by demographic groups to help determine where targeted support is needed to drive improvement.

Digital Ability has improved across all six skill areas

The ADII's Digital Ability dimension measures proficiency across six domains of device and internet use: Basic Skills (e.g. logging in, file download, password use); Advanced Skills (cloud download, privacy settings, device settings); Information search (browser use/navigation, finding trustworthy information); Social skills (i.e. safe sharing on social media, managing contacts, online communications); Creative skills (editing and posting content); Smart technology (connection and settings for smart technologies).

Across the nine research sites visited in both 2022 and 2024, all six digital skill domains show clear improvement, with increases ranging between 5.9 to 13.1 points. Most gains are around information search and social skills, followed by basic (9.5) and advanced (9.3) skills. This shows strong abilities to interact online and to perform foundational and more complex digital tasks. There is also improvement in smart technology skills (7) and creative skills (5.9).

Figure 44: Digital Ability scores for research sites across six digital skill domains, 2022-2024



While the upward trend is encouraging, Digital Ability in these communities still lags well behind national averages of both non-First Nations and First Nations people. The findings highlight both positive momentum and ongoing areas for targeted support, with particular focus needed on basic skills for new users and advanced skills and information search for more experienced users.

Janice Daisy with co-researcher Marie Shipton in Wujal Wujal

Analysis | Digital Ability

Digital Ability decreases with age, with scores reducing for younger and older age groups from 2022 to 2024

As with national trends, Digital Ability levels decrease with age and Elders typically face the greatest barriers to uptake of digital technologies and developing digital skills. Those in the 55 and over age groups, who did not grow up with digital technologies, continue to face significant barriers with a score of 16.0 in 2024. This is a gap of 32.9 compared with the 18-34 age group, and a gap of 57.8 below the national non-First Nations average, pointing to the ongoing need for targeted digital support for Elders in the communities.

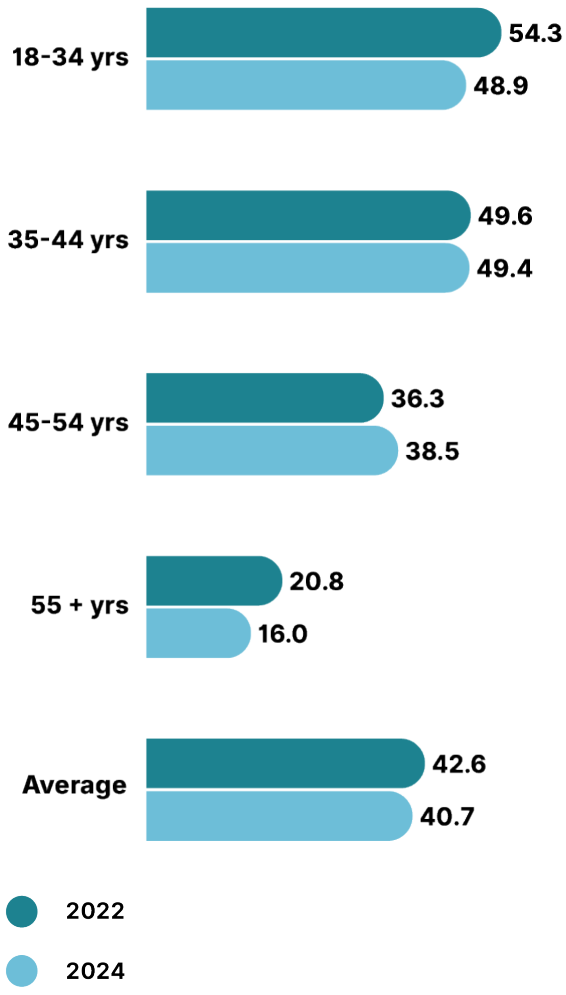
Between 2022 and 2024, we saw a 2.2-point improvement in the Digital Ability score for the 45-54-year age group, with the 35-44 age group unchanged. Moreover, there was a decrease in average scores for both younger and older age groups. The decline in the 18-34 age group of 5.4 points is likely due to persistent barriers around internet access and affordability of data and devices. While the decrease of 4.8 points for those 55 and over reflects ongoing issues around confidence and trust in using internet and online services, device access and affordability challenges.

"My kids try to teach me to use the phone and internet but I always forget. I don't have a phone, I just borrow my daughter's phone. They help me with banking or MyGov or anything I need, otherwise I go to the office." (Warakurna resident)

Renisha Yates on mobile, Warakurna WA

Charlie Bloomfield on phone, Wujal Wujal QLD

Figure 45: Digital Ability scores for research sites by age, 2022-2024

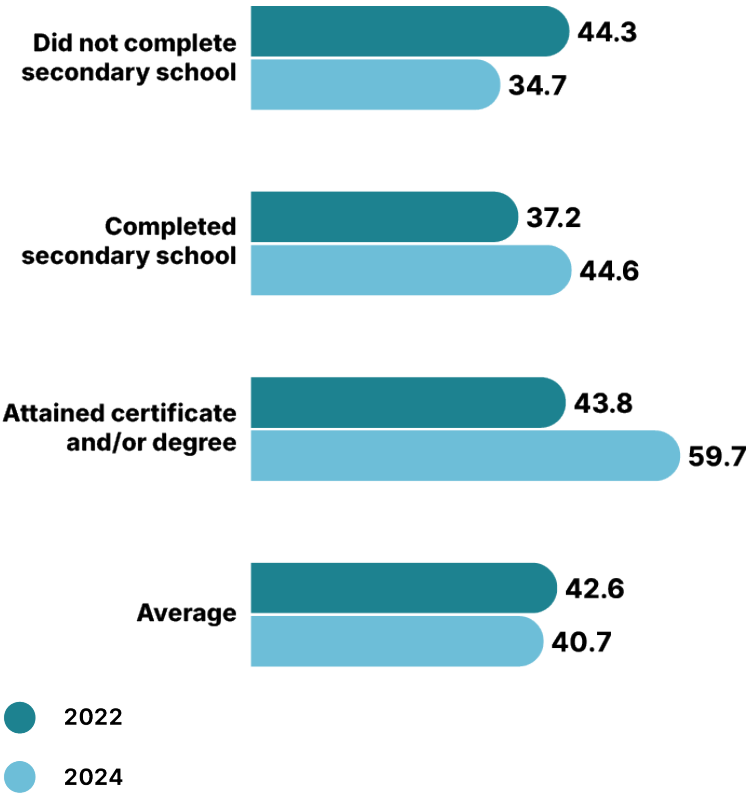


Digital ability scores align closely to formal education attainment

In remote communities, there are a range of barriers that impact on participation in schooling, including language barriers, family and cultural responsibilities, mobility between sites, hearing impairment, and cross-cultural communication. Local schools often go up to primary or Year 10 levels, with further participation often requiring boarding away from family and community. Boarding school attendance is more common among Torres Strait Islands, Cape York, Arnhem Land and Kimberley communities, with relatively low rates in central Australia. With limited education pathways available in most smaller communities, the size of community and cultural expectation around education are also factors.

Bloomfield River State School, Wujal Wujal QLD

Figure 46: Digital Ability scores for research sites by education, 2022-2024



In Djarindjin and Lombadina, Erub, and Wilcannia, those with further qualifications have average Digital Ability scores above 70. This is near the national non-First Nations average of 73.8 and exceeds the national First Nations average of 68.6. However, in Yuelamu and Wadeye, even those with qualifications beyond secondary school record Digital Ability score below 50. This points to the impact of contextual factors outlined above, as well as cultural and socio-economic factors, on both education and digital ability.

TAFE SA Kalka and Pipalyatjara Learning Centre, Pipalyatjara SA

Analysis | Digital Ability

Digital Ability is constrained by limited access to computers

Digital Ability is strongly linked to the types of devices used. In remote First Nations communities, the ubiquity of smartphones as the primary (and often only) mode of access shapes what skills are, and are not, developed. This pattern has led to stronger proficiency in social skills in many settings while limiting skill development in activities that require access to computers or laptops. Between 2022 and 2024, there was a 13.1-point improvement in the 'social skills' domain across communities, with particularly large improvements in Gäŋgaŋ Homeland (30.2) and Yuelamu (21.6). These two communities also made considerable improvement in information search skills between 2022 and 2024.

Instructional posters at Warakurna CRC

Beyond smartphone use, access to computer or laptops remains limited in many First Nations communities. This restricts the range of digital activities individuals can perform and the digital skills they can develop and maintain. Being solely dependent on mobile devices means it is difficult to complete important tasks such as completing forms, participating in online learning or creating and uploading resumes. These activities are particularly challenging to accomplish on small-screen devices in areas with limited connectivity. Across communities, those with a computer in their home scored significantly higher in digital ability, in contrast to those without a computer, highlighting the opportunities for skill development if resources and support were more accessible.

"We need a place to learn to use computers, with an Aṉangu [Aborginal] helper." (Pipalyatjara resident)

While First Nations people in remote communities are adept at configuring technology to meet daily needs, there are persistent gaps in skills required for formal study, administrative tasks and employment-related activity. As former Central Australian Youth Link-Up Service (CAYLUS) Coordinator Jennifer McFarland explained, First Nations users have "become very savvy about using technologies in ways that suit them" and there are "areas where their expertise is off the scale" yet also "other areas where they don't venture into at all". The implication is not that communities lack capability, but that the environment in which skills are formed encourages some uses and discourages others.

"We need more training and support for people to learn to use the internet and create their own websites and online media and start businesses. I want to start my own company." (Yuelamu resident)

Skills are developed on devices people are familiar with and with applications that are relevant and user-friendly. Many systems and online services assume users will have fast and uninterrupted connectivity, private devices, and individual email addresses. These conditions do not exist for many people living in remote First Nations communities.

"I would like help to learn to do online shopping and other things. I use the CRC to fax forms, print photos and other things." (Djarindjin resident)

Warakurna Community Resource Centre

There is demand for trusted, on-demand and local support

Across sites, people prefer practical on-demand help from someone they know. In most sites visited, we heard about demand on local community-based agencies to provide digital support on top of existing service provision (see Case Study on page 72). This points to the need for dedicated program and mentor support.

Newly reopened Erub IKC in 2024

In Queensland, the State Library's Indigenous Knowledge Centres program, delivered in partnership with Indigenous Shire Councils in remote and regional communities, combines local library services with public computer and internet access, spaces for preserving and sharing local knowledge, and staffed community hubs where residents can get practical, on-the-spot support with devices and online services in a familiar, trusted environment. This model could serve as an example in other states and territories.

The inDigiMOB digital mentors project was an example of digital support designed by and for remote First Nations communities:

> **"[inDigiMOB] was a tremendous initiative [to support the] community [with] digital mentors, Warlpiri people [helping] others to learn the basic skills and be able to pass them on, and to be able to help their families and friends. [People found it] great [to have] someone who you knew and trusted [to] help get you online and show you the ropes with solving these problems." (Jeff Bruer, former General Manager at PAW Media)**

Flyer for launch of T-House Digi Hub & Adult Learning Centre in Wadeye NT

Demand for this peer support model is widespread. Madeline Gallagher-Dann, CEO at Kalumburu Aboriginal Corporation, explained that a digital mentor would "help with time-consuming [tasks and] training" and give "someone in the community a job that has a purpose, and that's assisting where we're lacking". Kalumburu CDP Site Coordinator Natalie Perry emphasised that this would be "pretty much a full-time job", because "the same people" return for help repeatedly and skills take time to build.

An Australian Government funded project to support a network of digital mentors, supported by a First Nations digital resource hub in remote First Nations communities over three years is scheduled to roll out in 2026. This welcome initiative will build upon several existing programs including the Indigenous Knowledge Centre network in Queensland, Telstra's Tech Savvy Seniors program and the Be Connected digital mentors program for older Australians run by Good Things Australia. While the inDigiMOB program is no longer operating, it is hoped that learnings from this project will support development of the new digital mentors program.[30]

The Mapping the Digital Gap research has found that successful digital support programs are place-based models delivered by community controlled organisations, building upon existing trust and engagement and recruiting local people as mentors. We encourage further investment in programs that support this community-led delivery model.

Case study: Online harms are increasing with demand for place-based cyber-safety support

The rapid expansion of digital technologies has reshaped how First Nations people interact, learn and access essential services. Nationally, 93% use social media to stay connected, demonstrating strong digital engagement and adaptability in rapidly changing technological environments. However, high uptake of social media and digital platforms brings risks of online harms such as scams, racism, bullying and mis- and disinformation. A recent e-Safety survey found 86% of First Nations adults reported at least one negative online experience in the past year, including being targeted because of their cultural identity.[31]

Poster in Galiwin'ku NT

Across research sites, residents are actively balancing opportunities and challenges of digital participation. With rapid uptake of digital devices, social media and online services in daily life, scams have become increasingly prevalent, sophisticated and targeted. During visits, we heard many stories of financial and romance scams, particularly affecting women and people in older age groups.

> *"We've got two [adult] clients [who are] evidently being used for financial abuse through technology. They've got these boyfriends [they've met online] that [are supposed to] exist in Melbourne ... one woman would have spent $40,000." (Laura Crossfield, Wadeye Women's Safe House, 2022)*

In all sites, we heard demand for more training and education around scams, especially for vulnerable groups

> *"Scamming is a big thing, especially for older people out here. [Increased] education on that would be good." (Lara Smith, Warakurna Artists, 2023)*

Agencies and community leaders raised concerns about young children being exposed to pornography, grooming, sexting and cyberbullying, with limited parental supervision and awareness of how to manage content and privacy on devices. Former CEO of NPY Women's Council Liza Balmer described how social media can quickly lead to violence, exploitation and bullying, with some children copying aggressive behaviour seen online.

Our 2024 surveys showed high reliance on social media for communications, news, information and entertainment, with 62% using social media to keep in touch with friends and family, 49% to connect with community online, and 32% to access news and information daily.

Cyber-safety awareness resource, Gäŋgaŋ NT

However, social media use increases exposure to harmful content and misinformation, increasing risk of emotional, financial, psychological or physical trauma. Platform design and business models can further amplify this, with algorithms that promote sensational or inflammatory content and limited content moderation in First Nations languages or remote community contexts. This was particularly

the case during the Voice to Parliament referendum, with high levels on online hate speech and racism continuing unabated since then.

Inappropriate content sharing also affects how communities are portrayed to outsiders, often resulting in negative stereotyping and distress for Elders.

> *"[Some young people are] doing bad things [like] going into town, stealing cars, [fighting, and posting it on] Facebook ... When they mention Wadeye [on the news], it makes me feel sad inside, really bad for my country and for my people." (Margaret Perdjert, Traditional Owner, Wadeye, 2023)*

While First Nations people continue to show strong agency in using digital technologies and navigating online spaces, more support for online safety awareness and measures that ensure online platforms actively mitigate harms are needed. In communities visited, organisations are driving place-based solutions and messaging, including local language resources in Gäṉgaṉ and Galiwin'ku; newsletter messages in Wadeye; online safety resources and advice from access centre coordinators in Erub, Wujal Wujal and Warakurna; and women's cyber safety workshops in Djarindjin. Media organisations like PAW Media, Ngaanyatjarra Media and Wilcannia River Radio produce and broadcast targeted radio messages about scams, cyberbullying, online gambling and other harms.

The Office of e-Safety has also created dedicated First Nations resources, including in 17 languages, for online use or sharing through community channels.[32] However, with online risks constantly evolving, First Nations communities and organisations require additional resourcing to provide in-person and context-specific support and awareness of new scams, fake or AI generated content, privacy and security settings, copyright and cultural knowledge risks and more. At the same time, platforms that profit from engagement with this content need to be held accountable through stronger moderation of racist and abusive material, more effective action against scam accounts and misleading content, and safety tools that work in remote settings and First Nations languages.

Scam awareness poster in Galiwin'ku NT

A proven model is employment of local digital mentors, equipped with the relevant cyber-safety skills, resources and tools to share information locally. Elders also want support to transfer cultural authority to the digital space. A targeted digital ability program is urgently needed to support community-led efforts to strengthen digital skills, promote online safety and build community trust, confidence and well-being in an evolving digital landscape.

"It would be good to get internet training to use apps and know about scams." (Galiwin'ku resident)

"We want to stop the gambling online, it's wasting our money." (Galiwin'ku resident)

"I closed internet banking and changed password to stop kids trying to rob me." (Yuelamu resident)

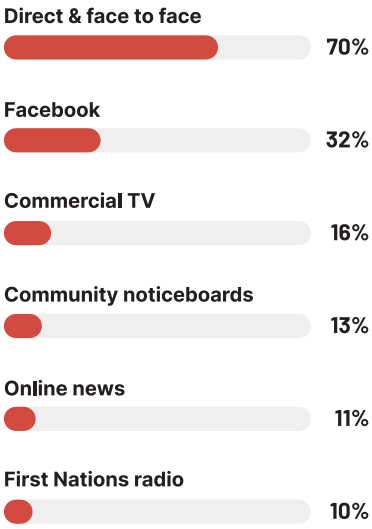
Analysis | Media and Information

As well as use of digital and online technologies, the Mapping the Digital Gap research looks at how media, news and information are accessed and produced by remote First Nations people, in line with Outcome 17 indicators.

Some of the key findings for media and information are:

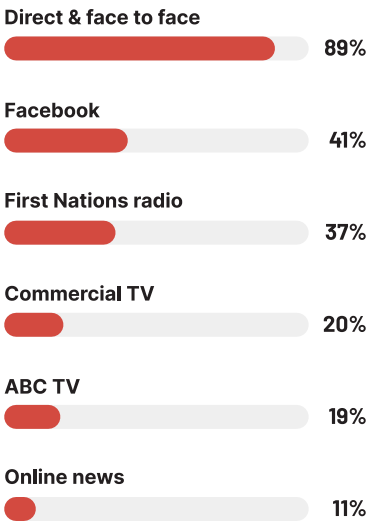
70%

accessed daily news and information through direct and face-to-face communications in 2024



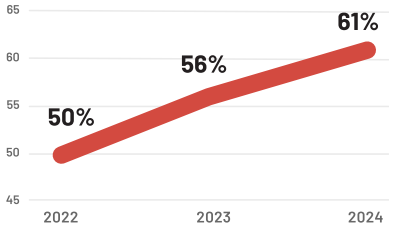
89%

accessed emergency information through direct and face-to-face communications in 2024



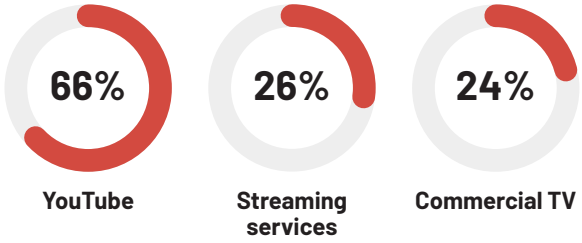
61%

did not have VAST services working at home in 2024



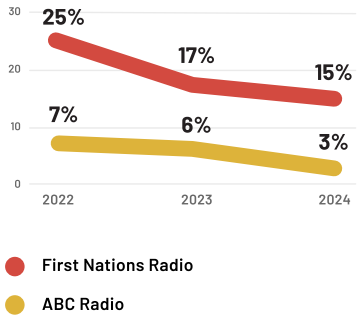
66%

used YouTube daily to access TV and online media services in 2024, up from 30% in 2022; this was followed by streaming services and commercial TV



15%

listened to First Nations radio daily in 2024, down from 25% daily in 2022; 3% listened to ABC radio daily, down from 7% in 2022



1 in 2 people

access radio and music via streaming services on a mobile phone or tablet

News and information are mostly sourced via social media and online sources

First Nations broadcasting and local information networks play a vital role in ensuring access to reliable, relevant and culturally appropriate news and information.

Our 2024 survey results found that 70% accessed daily news and information through direct and face-to-face communications. This was followed by Facebook (32%) and other social media (21%), then commercial TV (16%), community noticeboards (13%), online news services (11%) and First Nations radio (10%).

Since 2022, we found increased use of social media for daily access to news and information, with Facebook rising from 27% to 32% and other social media from 15% to 21%. Over the same time, use of traditional sources of news and information has reduced, with First Nations radio dropping from 19% to 10%, ABC radio from 9% to 5%, commercial TV from 19% to 16%, NITV from 10% to 8%, and ABC TV from 10% to 7%.

Community noticeboard

The shift towards use of social media as a source of news and information rather than traditional sources is similar to national trends. However, with limited content regulation, news content is embedded alongside posts spreading misinformation and disinformation, with AI generated content making it more difficult to discern factual content. There have also been recent reports highlighting increases in online racism and hate speech.[33]

The availability of radio and TV services is likely a contributing factor to their reduced use, with increasing failure of TV services (outlined below) and unreliable access to broadcast radio services in several communities visited. Upgrades are needed to ensure reliable access to trusted, locally relevant news and information sources in remote communities.

Mel Langdon doing survey with CDP supervisor Cliffy Tommy, Yuelamu NT

Analysis | Media and Information

Lyndon and Daniel with TSIMA CEO Diat Alferink talking on Radio 4MW with broadcaster Gilmore Johnson, Waiben (Thursday Island), QLD

General radio use is reducing, but First Nations radio remains a primary service

In six of the 12 research sites, First Nations radio is the only local broadcast radio service available, making it an essential service, with listeners valuing the local language content and trusted voices. ABC FM radio services are no longer available in 8 of the 12 communities visited.

Across the 11 communities, radio listenership has reduced since 2022, however First Nations radio remains popular. 15% of those surveyed listened to First Nations radio services daily in 2024, down from 25% in 2022, whereas weekly listenership had risen from 9% to 12%. Only 3% listened to ABC radio daily in 2024, down from 7% in 2022, with weekly rates consistent at 9%. Commercial radio is only available in 5 of the 11 communities, but listenership had reduced from 4% to 3% daily and 8% to 3% weekly.

Robert Clayton broadcasting on Wilcannia River Radio, Wilcannia NSW

"We want to see the media going in Pipalyatjara. I did that work for a long time to keep the culture and language strong." (Pipalyatjara resident)

Radio is good but we need more Warakurna stories." (Warakurna resident)

In 2024, the main ways of accessing radio services were via car radio (68% of radio or streaming on a phone or tablet (48%), with lower rates for radio at home (21%) or via the VAST TV service (9%). 28% of respondents never listen to the radio, up from 24% in 2022.

Reduced radio listenership follows national trends towards use of online and on-demand media platforms, however this reduction is also partly due to radio services not working in several communities visited. To address this ongoing challenge, several remote media organisations have installed remote monitoring systems to reduce downtime of radio services. Recruitment of local media workers is also a challenge with part-time salary and limited support. Increased funding is needed for media workers to work in digital and broadcast media, as well as funding to maintain remote broadcast facilities.

"I like the radio because it's in my Yolngu language and I hear the news." (Gäṉgaṉ resident)

VAST television services are not working in 61% of households

Households in most remote communities are reliant on Viewer Access Satellite Television (VAST) for access to free-to-air television services.[34] However, in those communities, household access to TV via VAST has reduced from 50% in 2022 to only 39% in 2024.

The primary cause of this ongoing decline is set-top box failure (79% in 2024), followed by satellite dish or cabling failure (58%). Failure rates vary between communities, from 85% in Galiwin'ku to 19% in Pipalyatjara, with Gäŋgaŋ homeland having no houses with TV access.

VAST set-top boxes cost up to $600 in remote community stores

"We need TV working to make it easy to get news and save money on mobile for watching." (Pipalyatjara resident)

"We would like TV again but the set-top box is too expensive. We want to see what happening around the world." (Galiwin'ku resident)

"We don't have TV because the set-top box costs over $600 and breaks too easily or kids take the smart card. The smart TV is over $800 for a small one. Everything costs too much." (Kalumburu resident)

"[I've got] no set-top box for TV. The black box cost over $600. We should go back to having TV broadcast like before so we can get TV again." (Kalumburu resident)

"I don't have VAST TV working. I got two new set-top boxes but couldn't get them working, too hard to activate, so I gave them away. It should be easier." (Warakurna resident)

The reduced access to free-to-air TV results has several impacts:

+ increased cost to consumers using pre-paid mobile data to access online content, adding to affordability challenges
+ increased demand on mobile or Wi-Fi networks, adding to existing network congestion and reducing speed and usability
+ primary reliance on social media and online platforms for news and information, which can lead to high rates of mis- and dis-information.

Despite a government-led audit in 2023 to look into this issue, no solutions have yet been put in place to reinstate free-to-air TV services in remote communities. Some communities have had VAST satellite dishes replaced (e.g. Erub, Warakurna, Pipalyatjara). However, this has had limited impact due to the primary issue being the high cost of set-top boxes and issues with smart card activation.

Analysis | Media and Information

TV and media viewing is mostly via YouTube and commercial TV

Many of the sites visited have content stored in some The lack of working VAST TV services is a key contributor to reduced TV viewing in remote communities, with mobile or Wi-Fi services used instead to access media content. This leads to greater expenditure on mobile data as free-to-air TV is replaced with content access via online platforms.

Based on 2024 survey results, the primary daily source of TV and media content in remote communities is commercial TV (17%), the same rate as in 2022. Other TV services have lower viewing rates–ABC TV (5% daily, down from 14% in 2022), NITV (5%), ICTV (5%) and SBS (5%)–with subscription streaming services slightly lower at 4%.

Co-researcher Nixon Mye conducting a survey with Harry Pilot Jr

However, YouTube is now watched by 16% daily, up sharply from 4% in 2022, with further weekly viewing of 17% making it the most regular source of media content. The increase in use of YouTube, TikTok, and other online content platforms reflects national trends towards preference for on-demand and short-form content. It also points to the predominance of mobile devices for individual viewing rather than group viewing via a TV.

Community archives enable access to vital cultural heritage, but can be costly to maintain

Many of the sites visited have content stored in some form of local or regional audio-visual archive. The Ara Irititja archive project, developed in the APY lands of South Australia in the 1990s, contains over 300,000 historic and contemporary photos, videos, audio and documents. It provides an irreplaceable regional repository of social, cultural and political history, despite ongoing funding challenges.

Donna Lantjin browsing archival photos on access computer in library, Wadeye NT

The cloud-based Keeping Culture content management system, developed for Ara Irititja to enable community access controls, is used by dozens of organisations nationally to support community archive access. These include Central Land Council, Ngaanyatjarra Council (Tjumalumpatju archive) and PAW Media, with research sites accessing these collections. However, the cost of maintaining community archives, including high license and support fees, makes their sustainability difficult for many organisations. Many NT communities can no longer access local collections.

Other archive systems include the open source Mukurtu software, originally developed in Tennant Creek, which is now used internationally and by the State Library of NSW and PAKAM in WA. State libraries in Queensland, WA and NT play a role in supporting community access to digital archive collections, however these are typically centrally managed with limited local controls for sensitive or cultural content.

With increasing local content being produced, but limited means of storage, community archives are critical for preserving social and cultural histories. More support is needed to provide affordable, user-friendly archiving systems that enable local cultural management and sustainable access for future generations.

Case study: Emergency communications in remote First Nations communities

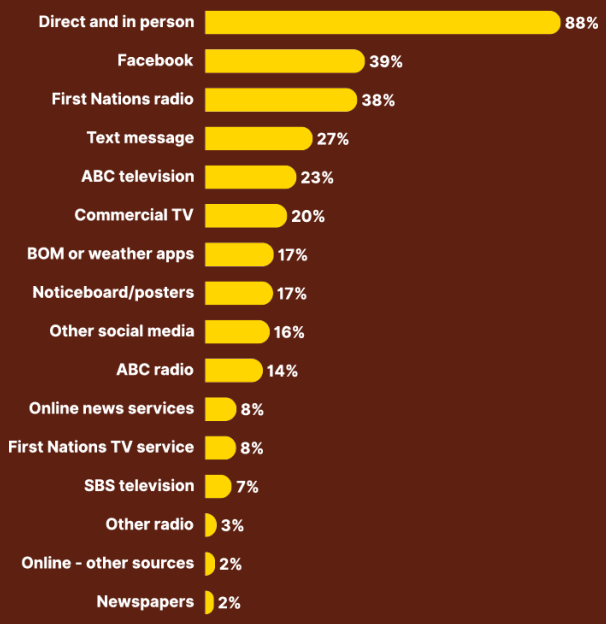
For remote communities, reliable communications are critical for safety and survival. Yet in regions where wet season flooding and cyclones are common, essential systems such as mobile networks, satellite services and power supplies can fail when they are needed most.

This was the case for Wujal Wujal in Far North Queensland. In December 2023, ex-Tropical Cyclone Jasper brought catastrophic rains, with the river rising to 13.8 metres and destroying over 40% of houses and most agency buildings. Communications collapsed: the fibre optic line was cut by landslides, satellite services failed due to heavy cloud, and the solar batteries powering the mobile tower lasted only two days. With emergency equipment washed away, the community was left completely cut off, unable to contact authorities to arrange evacuations. This event highlighted the devastating impact of communications failure and urgent need for backup communications and power generators. Starlink dishes were sent to provide a more reliable service during the long recovery period.

Other remote research sites struggle with unreliable communications during wet season, including Erub in the Torres Strait, Kalumburu in WA's north Kimberley region and Wadeye in north-west NT. These sites have reported communications and power outages lasting many days, leading to food security issues, social unrest, and health and safety risks with no access to emergency calls.

With increased risk of cyclones, floods, fire and emergency events, it is critical to understand the sources of emergency information used by remote First Nations people. Our survey includes a dedicated multiple-choice question, showing that in-person communication remaining the most trusted source of emergency information in 2024, with 88% of respondents relying on communication with family, neighbours and service providers. 38% cited First Nations radio as a trusted channel, with high use of Facebook (39%), weather apps (17%) and other social media (16%), particularly among younger people. Other media channels include ABC TV (22%), commercial TV (20%) and ABC radio (14%). Community noticeboards (17%), posters and PA systems remain important in smaller communities, demonstrating the enduring value of low-tech solutions.

Figure 47: Usage of emergency information sources in remote communities



While mobile phones are the most common device for accessing emergency information, their effectiveness depends on having reliable network reception, available pre-paid credit and electricity to charge the device. With weather events often causing network and/or power outages, and high turnover and sharing of devices, mobile access cannot be guaranteed in an emergency.

For this reason, no single communication channel can be relied upon. As extreme weather events become more frequent, warnings and emergency messages require a multi-channel approach that recognises the fragility of telecommunications infrastructure and the importance of social infrastructure that is sustained through trusted relationships and face-to-face engagement.[35] Reliable delivery of emergency services requires sustained investment in both forms of infrastructure.

Analysis | Service Provision

Many government, banking and other services are now delivered online as part of digital transformation, making digital inclusion a must-have, not a nice-to-have.

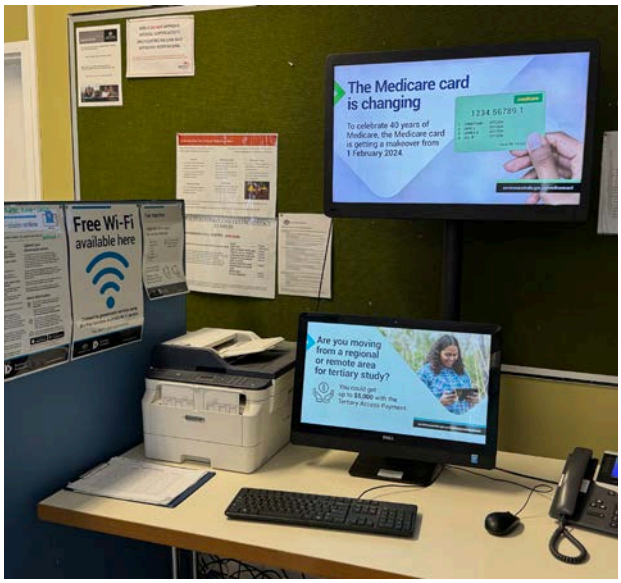
With banks, post offices, licensing and other physical services being gradually removed across remote and regional Australia, First Nations people need reliable and affordable online access, skills and support when needed to access online services. This is particularly important in remote First Nations communities where there is already limited access to face-to-face services and support. Our case study looks at how community-based organisations are carrying the burden of digital support due to the shift to digital service delivery.

Centrelink office in Wilcannia, NSW

Use of online services has increased but more support is needed

Outcome 17 includes a measure of progress as 'proportion of Aboriginal and Torres Strait Islander people using the internet to access government services'.

Our 2024 survey found use of online government services– such as social security, health, taxation and bill payment–had increased across all sites visited. An average 52% of remote First Nations respondents accessing government services online in the last six months in 2024 compared with 43% in 2022.



Centrelink access computer in REDI.E office, Wilcannia NSW

However, this is significantly lower than the rate of online service use by First Nations Australians nationally (86%) and for other Australians (92%) in 2024. With high rates of Centrelink clients in communities, many people still rely on face-to-face support through Centrelink agencies located in most medium to large remote communities.

Average use of online banking had also increased, from 52% in 2022 to 58% in 2024. Again, this is well below 2024 rates of online banking use by First Nations Australians nationally (92%) and other Australians (95%). A case study in our 2024 report, as well as our submission to the 2024 Senate Inquiry into Bank Closures in Regional Australia, outlined the multiple challenges that people face in accessing and using banking services as physical services are increasingly withdrawn.

Use of health services online is relatively low. Our survey found that only 16% had booked a medical appointment or accessed a health service online in the last six months, unchanged since 2022. While this is largely due to having face-to-face clinics in most communities, it is very low compared with First Nations Australians nationally (62%) and other Australians (82%) in 2024.

Telehealth is being increasingly used but experiences vary widely

Use of telehealth has increased in remote communities since 2022 as broadband quality has improved. Telehealth can improve health outcomes through more immediate diagnosis and treatment, reduced patient travel for consultations, reduced emergency evacuation flights, and expert support for clinic staff.

Clinic managers and staff offered many positive accounts of telehealth:

"Telehealth is certainly embraced by both the community and the doctors in Cairns. It's invaluable and it saves us a lot of money and patient travel services and expense. [Clients] don't have to travel to Cairns [for a] half-hour consult with the doctor, it can be done on telehealth. [In an emergency a] medical officer [supports our staff via] the video conferencing." (Mary-Louise Wilkinson, Acting Director of Nursing, Wujal Wujal Primary Health Care, 2023)

However, we have also heard mixed experiences, with many clients preferring face-to-face consultations with someone they know and slow acceptance of telehealth by some clients. Technology challenges, communication barriers with remote specialists and design factors can also lead to a negative experience.

"We are a long way from having a broad-base community understanding of telemedicine [and] telehealth [and] comfort with it. [We need to] get the end-users involved in the development and [design]. I get an older person from this community in their 70s or 80s coming in to see a doctor on a screen but they haven't had their glasses fixed or they can't hear properly. [We need] better surround sound [and] good size screens." (Elizabeth Durose, Registered Nurse-Clinical Manager, Maari Ma Health, 2024)

.

Insufficient broadband quality impacts the effectiveness of telehealth in many remote community clinics. Gäŋgaŋ is one of 30 Laynhapuy homelands in East Arnhem Land supported by Laynhapuy Health, with weekly visits by staff to support local health workers. The clinic relied on phone access via the Telstra HCRC microwave network and internet via Sky Muster satellite, neither of which was described as reliable. Lonnie Dentith, a roving Nurse with Laynhapuy Health, described the connectivity challenges, resulting in the use of FaceTime on a mobile phone for telehealth rather than using the high-definition equipment in the clinic:

"We have landlines, which are on and off, [with internet access] through the Sky Muster network satellite. [We] use that for all sorts of things within the clinic, FaceTime-ing doctors for medical consults or communication with the office and other people. It's not particularly fast and it comes and goes. [If] there's bad weather [heavy clouds] around it doesn't work."

As with clinics in several other sites visited, the Gäŋgaŋ clinic had been upgraded to Starlink by our 2024 visit. Laynhapuy Health and Communities Manager Ebony Tinirau described how this change had enabled improved teleheath capability, with new camera technology being trialled in Laynhapuy clinics.

"By having consistent connectivity [we're now] trialling a [new telehealth] system that sits within the clinics [with a button on the wall that they push that activates the camera. [A] Senior Medical Officer sitting in hospitals at RDH Adelaide [can] triage the patient without having any medical staff onsite. [They can remotely] determine the need of retrieval or even the need of treatment that could be provided by the health worker]."

Analysis | Service Provision

Schools are a key site of digital learning but require good connectivity

As in urban and regional areas, remote schools have adopted digital technologies and applications within classrooms. Some remote schools have the best broadband connectivity within the community. For instance, the Christ the King Catholic School in Djarindjin and Lombadina has a fibre optic broadband link, networked to each classroom, with a satellite backup system. Principal Sharon Leray told us:

> **"We [have] equal capacity as [schools in] Perth [with] the same technology. Our bandwidth and our speed is excellent. We also have a backup satellite so if anything does go wrong, we are able to keep it running."**

Sharon described how a wide range of digital technologies are used as learning tools within most subjects.

> **"Digital literacy is [part of] the general [coursework] rather than [a stand-alone subject]. Our whole school learn all different apps each term. [In] Term 2, we look at digital learning [and in] Term 3 we do robotics. And then Term 4 it's more about the [online safety]. [Students learn] to use green screen ... stop motion, iMovie [and] oral language template apps [like] Book Creator [to] create stories [or comic strips]."**

Unfortunately, this is not the experience for many of the remote schools we visited. We heard many reports of uneven internet speed and reliability, limiting use of digital technologies and learning resources in classrooms, impacting on digital skills development for students.

During our 2024 visit to Erub, the Head of Campus described a recent six-week local network outage which impacted school operations and prevented use of online learning applications and resources.

> **"At the end of last year, we had no internet or intranet [for] six weeks ... Every day was a battle ... We were meant to be doing digital technologies [with the students] making videos [but] couldn't do that because hot spotting [a mobile phone for] 18 kids online didn't really work. So, there's a lot of things that we couldn't accomplish for the kids." (Acting Head of Campus, Erub School, 2024)**

The school was awaiting an upgrade to Starlink at the time of our visit. The Bloomfield River State School (BRSS) near Wujal Wujal was considered a 'low bandwidth school' by Education Queensland, meaning that NAPLAN tests were done offline. In 2023, BRSS Principal Michael Anderson outlined the challenge for students and staff:

> **"Our internet is rubbish [but nothing is] happening about it. The teachers agree that it's actually a critical piece of infrastructure that could really be game-changing for the students. [Many students are already] behind academically [because] English is their second language [and some come] from a trauma background, have hearing issues [or have moved between schools. To then use] a computer-based test for kids with low literacy [and] very limited digital expertise [is] not really closing a gap. [It's] not for lack of effort from people on the ground."**

BRSS upgraded to Starlink connectivity in 2024, describing it as a 'game-changer'. BRSS now has Wi-Fi and computer access in classrooms, use of digital training resources and applications, and successful use of online NAPLAN tests.

Students must have access to reliable internet and digital technologies as part of schooling. With low rates of fixed household broadband (7%) and computer access in homes (15%), and limited computer access and training options in many communities, the school is often the best resourced facility in the community. This is where most digital skills development occurs, needed for using online services and employment, and safely navigating the online world.

Case study: Community organisations are bearing the burden of shift to 'digital-by-default' service delivery

As government and essential services increasingly shift online, many remote First Nations communities are being left without viable face-to-face support to access banking, Centrelink and other vital services. Access to online services depends on stable internet, up-to-date devices and the digital skills to navigate complex and often changing systems. But in remote First Nations communities where connectivity is limited, costs are high and digital skills are uneven, these services remain out of reach for many. This is combined with a lack of trust in centralised government services and service providers.

In the absence of formal support, local governments and community organisations are forced to step in to help. Across research sites, we found that councils, community centres and other service providers are informally assisting residents with essential digital tasks. These include uploading documents, resetting passwords, creating email accounts and reporting income to Centrelink. This kind of support is vital but precarious. It is often delivered without mandate, funding, training or backup, relying instead on the dedication and familiarity of a few trusted people in each community.

In Erub, council staff have helped residents retrieve lost MyGov logins, apply for official ID documents and navigate online forms. This was particularly important during the COVID-19 pandemic, when timely access to government documents and information was essential. In Wadeye and Warakurna, local organisations regularly assist with accessing Centrelink, banking and NDIS services.

Former Warakurna Community Development Advisor, Gina Livesay Sutton, described a mix of requests for help, particularly from older residents and people with limited English or complex needs:

> *"We tend to [get requests from the] elderly and where English is very, very limited [or] where people may have mental health issues. [We help them with] their banking [or] Medicare [or] myGov, it could be 'can you ring up and check when my license is due' ... anything at all that we take for granted [but] it's such a challenge for a lot of people."*

Posters at Warakurna CRC

Similarly, CDP Case Worker at Ngaanyatjarra Council, Chloe Anderson, explained that "the older generation aren't great at computers [so they ask] us to help them log into banking, MyGov, all that sort of stuff..."

These intermediaries are supporting the community despite often having limited connectivity, a shortage of devices and a lack of spaces for private conversations. In Warakurna, co-researcher Bernadette Newberry described residents walking between service providers to 'shop around' for help when an upload failed or a password reset didn't work on a phone:

> *"[If people need] help [with MyGov or] internet banking [they go to] the community office, CDP office [or] down to the school or the art centre to get help, or just come and ask young people [to help] learn them so they know how to do it themself."*

These examples reflect a broader structural issue. Digital service delivery is being rolled out without ensuring the conditions are in place for people to use it. The result is that responsibility for access is being pushed down onto under-resourced local organisations and the people who rely on them most. At the same time, the online services themselves remain complex, inflexible and often inaccessible.

In remote communities, the shift to 'digital-by-default' service delivery has not eliminated costs. It has simply redistributed them. Burdens have been shifted away from formal service channels and onto the people and agencies still willing to provide face-to-face help. If digital transformation is to be equitable, government agencies, banks and service providers need to provide resources for in-person options and local intermediaries must be recognised, resourced and supported as part of the service delivery system.

POLICY IMPACT

The *Mapping the Digital Gap* research has provided the most comprehensive data on communications and media use in remote and very remote First Nations communities across Australia to date. By combining quantitative survey data that integrates with the national ADII research with extensive place-based and community-informed qualitative data, it provides a clear picture of the lived experience in remote communities. The project has been undertaken during a period of rapid digital transformation, telecommunications policy and program renewal, and cost of living and equity challenges.

The individual Community Outcomes Reports have provided a spotlight on the diverse and contextual nature of digital inclusion in remote First Nations communities. The 27 annual reports to date detail each community's communications and media infrastructure and usage, the critical barriers and challenges faced by residents and service providers across all fields, the innovative uses of digital technologies for social, cultural and economic development, and the community-led strategies to address identified barriers.

By working with community partner organisations and co-researchers in each site, returning all data for local planning and advocacy and providing ongoing support, the outcomes of the project extend well beyond the time of our involvement. This is evidenced in the Digital Inclusion Plan summaries outlined for each research site.

However, the impacts of the research expand beyond the microcosm of the sites visited, with the collective results providing a representative macro view to inform policy and program needs across the 1506 remote communities and homelands nationally. By providing broader regional analysis within Outcomes reports and contributing to mapping of infrastructure, programs and services available in other communities,[36] this project has helped fill a gap in available data about digital inclusion in remote First Nations communities.[37]

This timely research has also aligned with the introduction of Closing the Gap Outcome 17, filling a gap in data needed to measure progress and guide appropriate policy solutions. With the formation of the First Nations Digital Inclusion Advisory Group and Expert Panel in early 2023, our research findings have helped inform and support First Nations leadership on national policy and program development aimed at closing the digital gap. This research has also provided tangible evidence of the critical linkage of Outcome 17 with other Closing the Gap targets in health, education, employment, justice, language revitalisation and economic opportunity.

As outlined on page 18, the Advisory Group's initial report resulted in $68 million in Budget measures in the May 2024 Budget, including $40 million for Wi-Fi mesh networks in 75 communities, $22 million for a digital mentors program and First Nations support hub. The FNDIAG has since released a First Nations Digital Inclusion Roadmap in December 2024 to guide policy.

First Nations Digital Inclusion Roadmap

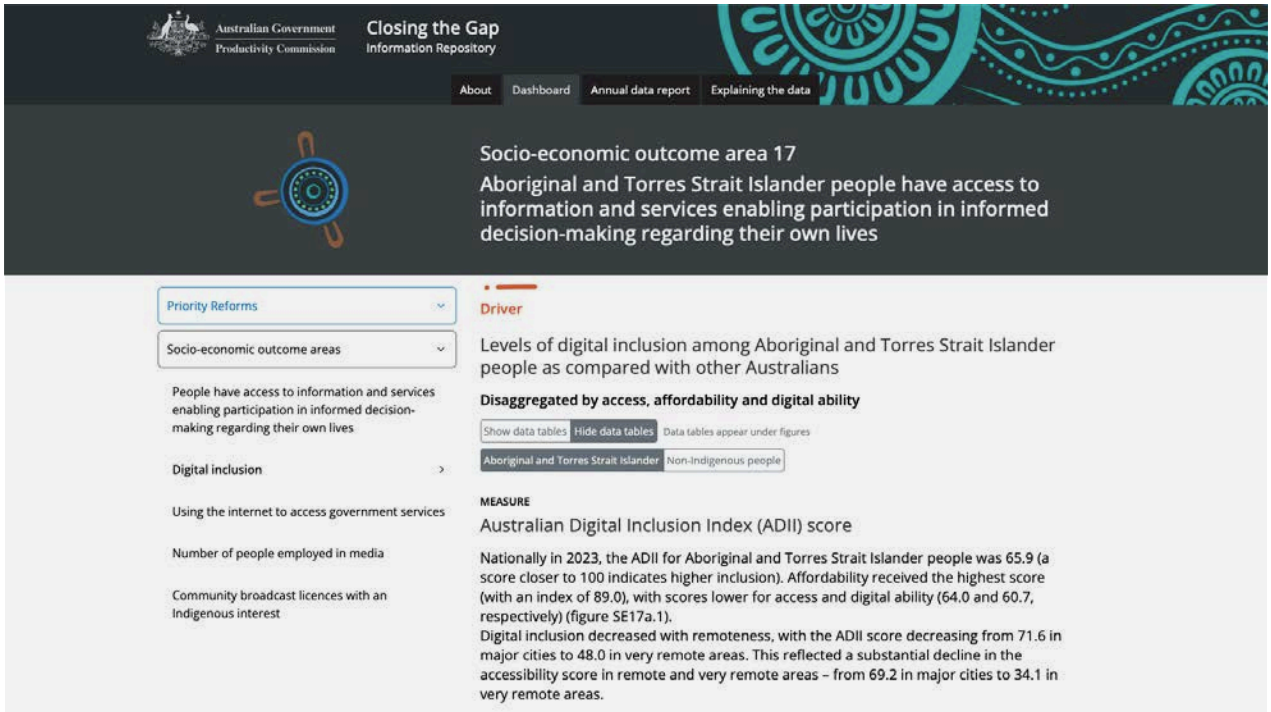
As Co-Chair of FNDIAG with Dr Dot West, research co-lead Professor Lyndon Ormond-Parker has worked directly with Communications Ministers Rowland and Wells, as well as State and Territory Ministers and agencies, industry leaders and a broad range of First Nations communities, organisations and peak bodies, on collective efforts to address Outcome 17. The Expert Panel, which includes Dr Daniel Featherstone and Lauren Ganley (Telstra), have supported the FNDIAG in developing and progressing initiatives from the Roadmap, with Lauren leading a First Nations Telecommunication Working Group to coordinate further industry engagement.

The 2024 Budget measures also include $6 million for the ADII to accurately measure progress on Closing the Gap Target 17 by expanding on the *Mapping the Digital Gap* with additional surveys of Aboriginal and Torres Strait Islanders across urban and regional Australia. This first round of the Measuring Digital Inclusion for First Nations Australians project, which draws on the *Mapping the Digital Gap* methodology and First Nations leadership model, was undertaken in 2025, with the 'Counting on Connectivity' outcomes report and new First Nations dashboard launched on 12th November 2025.

More broadly, the research findings and data have been cited in numerous government reports and submissions by industry and advocacy groups. The research team has contributed to multiple policy and program reviews, including the Regional Telecommunication Review, Universal Services Review, Bank Closure Inquiry and Digital ID review. The team has participated on the Regional and Remote Television Audit working group, among others (see Appendix 1). The data has also been used on the Productivity Commission's Closing the Gap website as a supporting indicator in measuring Target 17.[38]

Lyndon Ormond-Parker presenting at CONVERGE Media Summit July 2025

In the last year, the *Mapping the Digital Gap* and related First Nations digital inclusion research have been cited in a range of government reviews and parliamentary inquiries and used by industry and advocacy organisations in policy submissions (see Appendix 1). The team has also participated in multiple Federal and State working groups and committees in the communications, technology, digital inclusion and regulatory spaces, providing First Nations experience and research-based evidence to support decision making. Team members have attended and presented at multiple conferences, government and industry events, and symposia (see Appendix 1) to highlight key findings and promote community-led approaches to closing the digital gap.



Productivity Commision Closing the Gap Dashboard

NEXT STEPS

This report marks the conclusion of phase one of *Mapping the Digital Gap* research project, with the final round of research visits completed in 2024. The final update reports from 2024 visits have been completed for six research sites with the remaining five to be completed by early 2026.

Since late 2024, we have focused our efforts on implementing the second phase of *Mapping the Digital Gap*, funded by Telstra from 2025 to 2028. In 2025, our team have undertaken research trips to six new sites across Australia–Ampilatwatja NT, Areyonga (Utju) NT, Kowanyama Qld, Maningrida NT, Mowanjum WA, Punmu WA–in partnership with First Nations organisations in each, while completing final research visits to Warakurna WA and Wujal Wujal Qld and a second last trip to Pipalyatjara/Kalka SA. In 2026, we will visit nine sites including Oak Valley in SA and an additional Queensland site. The Community Outcomes reports and digital inclusion plans for Phase 2 sites will combine results from the first two visits, and will be published from the second half of 2026.

Aerial photo of Phase 2 site Utju (Areyonga) Community

The ADII team will continue work on the *Measuring Digital Inclusion for First Nations Australians* project in 2026-27 in conjunction with the *Mapping the Digital Gap* Phase 2 research. This project builds on the *Mapping the Digital Gap* and ADII research to expand the First Nations data collection in urban and regional Australia to accurately measure progress on Closing the Gap Target 17 nationally. The first round of data collection was undertaken in 2025 in partnership with First Nations survey company to align with the ADII data collection.

The 2025 report and new First Nations dashboard was launched on 12th November 2025 by the Minister for Communications Hon Anika Wells MP. Additional data collection was undertaken in 2025 with First Nations partner organisations in 10 target regional towns, with a separate report to be released in March 2026. The second round of national data collection will be undertaken in the second half of 2026 and final report released with the next ADII round in 2027.

Yasmin Johnson and Daniel Featherstone presenting at the launch of the Measuring Digital Inclusion for First Nations Australians launch

The new First Nations Digital Inclusion Dashboard is a rich resource that allows First Nations communities, governments, industry and service providers to explore digital inclusion data and track progress towards Closing the Gap Target 17 by geography, demographic group and dimension. The *Mapping the Digital Gap* website is being constantly expanded to share research findings, community profiles, case studies, reports and publications, and links to relevant research.

Our research team will continue to share our findings in a range of conferences, forums and committees, including with First Nations communities and peak agencies, governments, industry and the broader research community. We will also continue to contribute research-informed advice to support policy and program planning, with a focus on community-led strategies and capacity building. Further details of the project outcomes and impact to date are outlined in Appendix 1.

Through these initiatives, we hope to contribute to closing the digital gap and helping foster agency and self-determination across Australia's remote First Nations communities.

ENDNOTES

1 Thomas, J., McCosker, A., Parkinson, S., Hegarty, K., Featherstone, D., Kennedy, J., Ormond-Parker, L., Morrison, K., Rea, H, & Ganley, L. *Measuring Australia's Digital Divide: 2025 Australian Digital Inclusion Index*. Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, RMIT University, Swinburne University of Technology, and Telstra.

2 Department of the Prime Minister and Cabinet, "7B. Table B: Outcome 17 | Closing the Gap", accessed: 12 September 2023, https://www.closingthegap.gov.au/national-agreement/national-agreement-closing-the-gap/7-difference/b-targets/b17.

3 Rennie, E., Thomas, J., & Wilson, C. (2019). Aboriginal and Torres Strait Islander people and digital inclusion: What is the evidence and where is it?. *Communication Research and Practice*, 5(2), 105-120.

4 National Health and Medical Research Council (NHMRC). (2018). *Ethical conduct in research with Aboriginal and Torres Strait Islander Peoples and communities: guidelines for researchers and stakeholders*. Commonwealth of Australia. https://www.nhmrc.gov.au/about-us/resources/ethical-conduct-research-aboriginal-and-torres-strait-islander-peoples-and-communities

5 Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) (2021). *AIATSIS code of ethics for Aboriginal and Torres Strait Islander research*. AIATSIS. https://aiatsis.gov.au/research/ethical-research/code-ethics

6 Featherstone, D, Ormond-Parker, L, Parkinson, S, Hegarty, K, Hawkins, L, Thomas, J, Kennedy, J, Ganley, L. (2024). *Mapping the Digital Gap: 2024 outcomes report*. ARC Centre of Excellence for Automated Decision-Making and Society. https://apo.org.au/node/329174

7 Due to changes to the capacity of the partner organisation, Tennant Creek was only visited twice in 2022 and 2023. Warakurna was visited twice in 2023 and 2024, and Pipalyatjara/Kalka was visited once in 2024.

8 In 2025, the Affordability dimension was revised to consider the changing needs across households and to accommodate more varied household composition and geography. This means that unlike Access and Digital Ability, Affordability and total Index scores cannot be compared with previous years. For more details, see the ADII website: https://digitalinclusionindex.org.au/about-the-index

9 An interactive map showing the research locations for each type of data collection is available at: https://www.admscentre.org.au/measuring-digital-inclusion-for-first-nations-australians

10 ADII uses the *The Remoteness Structure* aligned with the Australian Bureau of Statistics, which has five remoteness areas: major cities, inner regional, outer regional, remote and very remote and are based on distance to services. https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/remoteness-structure/remoteness-areas

11 Australian Bureau of Statistics. (Jul2021-Jun2026). *Indigenous Regions*. ABS. https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/indigenous-structure/indigenous-regions

12 In some cases, small sample sizes may limit the level of detailed analysis in some communities.

13 First Nations Digital Inclusion Advisory Group. (2023). *First Nations Digital Inclusion Advisory Group: Initial report*. First Nations Digital Inclusion Advisory Group. https://www.digitalinclusion.gov.au/sites/default/files/documents/first-nations-digital-inclusion-advisory-group-initial-report.pdf

14 First Nations Digital Inclusion Advisory Group. (2024). *First Nations digital inclusion measures*. First Nations Digital Inclusion Measures. https://www.infrastructure.gov.au/sites/default/files/documents/first-nations-digital-inclusion-advisory-group-first-nations-digital-inclusion-measures-5june2024.pdf

15 https://minister.infrastructure.gov.au/wells/media-release/new-developments-narrow-digital-gap-first-nations-australians

16 https://www.infrastructure.gov.au/department/media/news/universal-outdoor-mobile-obligation-improve-outdoor-mobile-coverage-across-australia

17 Unless otherwise stated all population statistics in research site pages (p. 20-39) refer to: Australian Bureau of Statistics (ABS), "Search Census data", (2021), accessed: 12 September 2023, https://www.abs.gov.au/census/find-census-data/search-by-area.

18 Laynhapuy Homelands Aboriginal Corporation, survey data.

19 Laynhapuy Homelands Aboriginal Corporation, survey data.

20 Laynhapuy Homelands Aboriginal Corporation, survey data.

21 https://minister.infrastructure.gov.au/wells/media-release/new-developments-narrow-digital-gap-first-nations-australians

22 https://www.infrastructure.gov.au/media-communications/first-nations-digital-inclusion

23 Source: Geospatial Services Section, DITRDCSA

24 Crismale, D. (2025). *Telstra and Boost Mobile prepaid plans increase from today*. https://www.whistleout.com.au/MobilePhones/News/telstra-boost-mobile-plan-price-increases

25 Vyver, J. (2025, 16 Oct 2025). 'No understanding': The extreme cost of living crisis affecting Australia's most remote communities. ABC News. https://www.abc.net.au/news/2025-10-16/cost-of-living-crisis-aurukun-australia-remote-communities-/105879078

26 https://www.indigenoushpf.gov.au/reports/summary-reports/summary-report/5-tier-2-%E2%80%93-determinants-of-health/income

27 McLeod, C. (2024). *Remote Indigenous Australians paying more than double capital city prices for everyday groceries*. The Guardian. https://www.theguardian.com/australia-news/2024/oct/31/remote-indigenous-australians-paying-more-than-double-capital-city-prices-for-everyday-groceries

28 National Indigenous Australian Agency. (2025, 3 Oct 2025). *Remote community stores now selling lower-cost essentials*. NIAA. https://www.niaa.gov.au/news-and-media/remote-community-stores-now-selling-lower-cost-essentials

29 Original Power. (2025). *The right to power: keeping First Nations communities on prepayment connected*. https://apo.org.au/node/332739

30 Guenther, J., Holmes, C., & Williamson-Kefu, M. Principles of Successful Digital Inclusion Initiatives in Remote Australia. *Australian Journal of Social Issues*, n/a(n/a). https://doi.org/https://doi.org/10.1002/ajs4.70064

31 eSafety Commissioner. (2025). *Fighting the tide: Encounters with online hate among targeted groups*. Australian Government. https://www.esafety.gov.au/sites/default/files/2025-02/Online-hate-report_Main-Feb25.pdf?v=1744173084349

32 http://esafety.gov.au/first-nations

Fish traps on Erub at low tide

33 eSafety Commissioner. (2025). *New findings show online hate spreads harm far and wide* https://www.esafety.gov.au/newsroom/media-releases/new-findings-show-online-hate-spreads-harm-far-and-wide

Reconciliation Australia. (2025, 18 June 2025). 2024 Australian Reconciliation Barometer: Racism and First Nations Peoples. Reconciliation Australia. https://www.reconciliation.org.au/publication/2024-australian-reconciliation-barometer-racism-and-first-nations-peoples

34 The Viewer Access Satellite Television (VAST) service is a satellite television platform that provides digital television and radio services to remote and rural areas. See: https://www.infrastructure.gov.au/media-centre/publications/viewer-access-satellite-television-vast-fact-sheet

35 Klinenberg, E. (2002). *Heat Wave: A Social Autopsy of Disaster in Chicago*. University of Chicago Press.

36 https://www.digitalinclusion.gov.au/first-nations-data-map

37 Rennie, E., Thomas, J. & Wilson, C. (2019) Aboriginal and Torres Strait Islander people and digital inclusion: what is the evidence and where is it?, Communication Research and Practice, 5:2, 105-120, DOI: 10.1080/22041451.2019.1601148

38 https://www.pc.gov.au/closing-the-gap-data/dashboard/se/outcome-area17

APPENDIX 1 - PROJECT OUTPUTS TO DATE

BACKGROUND PAPER

Featherstone, D., Thomas, J., Holcombe-James, I., Ormond-Parker, L., Kennedy, J. (2022). *Mapping the Digital Gap Background paper: Project objectives, context and methods*. ADM+S Working Paper 005: August 2022. https://doi.org/10.25916/fazn-eh86

ADII REPORTS

Thomas, J., McCosker, A., Parkinson, S., Hegarty, K., Featherstone, D., Kennedy, J., Ormond-Parker, L., Morrison, K., Rea, H., & Ganley, L. *Measuring Australia's Digital Divide: 2025 Australian Digital Inclusion Index*. Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, RMIT University, Swinburne University of Technology, and Telstra. https://doi.org/10.60836/mtsq-at22

Thomas, J, McCosker, A, Parkinson, S, Hegarty, K, Featherstone, D, Kennedy, J, Holcombe-James, I., and Ormond-Parker, L. *Measuring Australia's Digital Divide: Australian Digital Inclusion Index: 2023*. Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, RMIT University, Swinburne University of Technology, and Telstra, 2023. https://doi.org/10.25916/528s-ny91

OUTCOMES REPORTS

Featherstone D, Ormond-Parker L, Parkinson, S, Hegarty K, Hawkins, L, Thomas J, Kennedy J, Valenta L, Ganley L (2024). *Mapping the Digital Gap: 2024 Outcomes Report*, Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/xspj-w062

Featherstone, D., Ormond-Parker, L., Ganley, L., Thomas, J., Parkinson, S., Hegarty, K., Kennedy, J., Holcombe-James, I., Valenta, L., Hawkins, L. (2023). *Mapping the digital gap: 2023 outcomes report*. Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.25916/A01G-FP91

MEASURING DIGITAL INCLUSION FOR FIRST NATIONS AUSTRALIANS

Featherstone D, Parkinson S, Hawkins L, Barton A, Louie Y, Ormond- Parker L, Loban H, Johnson Y, Thomas J, Hegarty K, (2025) *Counting on Connectivity: Measuring Digital Inclusion for First Nations Australians in 2025*, Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/qjpb-0579

First Nations dashboard and webpage on ADII Website

COMMUNITY OUTCOMES REPORTS

Featherstone, D, Ormond-Parker, L, Hawkins, L, Parkinson, S, Bawden, S, Barton, A, Thomas, J, Hegarty, K, Kennedy, J, Yates, T (2025) *Mapping the Digital Gap: Warakurna WA Community Update Report 2025*. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne. https://doi.org/10.60836/czac-ej11

Featherstone, D, Ormond-Parker, L, Kennedy, J, Hawkins, L, Parkinson, S, Bawden, S, Thomas, J, Hegarty, K, Barton, A, Fox, T (2025) *Mapping the Digital Gap: Pipalyatjara and Kalka WA Community Outcomes Report 2025*. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne. https://doi.org/10.60836/spvv-g735

Featherstone, D, Ormond-Parker, L, Hawkins, L, Parkinson, S, Thomas, J, Kennedy, J, Hegarty, K, Bawden, S, Barton, A (2025) *Mapping the Digital Gap: Wilcannia NSW Community Update Report 2024*. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne. https://doi.org/10.60836/anns-zy06

Featherstone, D, Ormond-Parker, L, Hawkins, L, Parkinson, S, Thomas, J, Kennedy, J, Hegarty, K, Bawden, S, Barton, A (2025) *Mapping the Digital Gap: Wujal Wujal QLD Community Update Report 2024*. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne. https://doi.org/10.60836/9rx0-y540

Featherstone, D, Ormond-Parker, L, Hawkins, L, Parkinson, S, Thomas, J, Hegarty, K, Kennedy, J, Bawden, S, Barton, A Gutchen, L, Mye, N (2025) *Mapping the Digital Gap: Erub, Zenadth Kes Queensland Community Update Report 2024*. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne. https://doi.org/10.60836/dbwv-kk85

Featherstone, D, Ormond-Parker, L, Hawkins, L, Thomas, J, Parkinson, S, Hegarty, K, Kennedy, J, Bawden, S, Barton, A, Langdon, M (2025) *Mapping the Digital Gap: Yuelamu NT Community Update Report 2024*. ARC Centre of Excellence for Automated Decision Making and Society: RMIT University, Melbourne. https://doi.org/10.60836/9vve-5m62

Featherstone, D., Ormond-Parker, L., Hawkins, L., Thomas, J., Parkinson, S., & Kennedy, J. (n.d.). *Mapping the digital gap: Tennant Creek, NT 2023 community update report*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/GSRJ-G371

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2024). *Mapping the digital gap: Gäṉgaṉ NT 2023 community update report*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/TWFK-9Q41

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2024). *Mapping the digital gap: Galiwin'ku, NT 2023 community update report*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/6S6J-BD71

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2024). *Mapping the digital gap: Yuelamu NT 2023 community update report*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/3B0G-S164

Featherstone, D., Thomas, J., Ormond-Parker, L., & Hawkins, L. (2024). *Mapping the digital gap: Djarindjin and Lombadina, WA 2023 community update report*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/XAC6-JG29

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2024). *Mapping the digital gap: Kalumburu, WA community update report 2023*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/XZ2E-2G30

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2024). *Mapping the digital gap: Erub (Darnley Island), Zenadth Kes (Torres Strait), Queensland 2023 community update report*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/W1WQ-4D36

Featherstone, D., Ormond-Parker, L., Hawkins, L., Thomas, J., Parkinson, S., & Kennedy, J. (2024). *Mapping the digital gap: Wadeye, NT 2023 community update report*. Melbourne, Australia: ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/TQG0-WS75

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2023). *Mapping the digital gap: Warakurna, WA 2023 community outcomes report*. ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/DT8K-JE45

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2023). *Mapping the digital gap: Wilcannia, NSW 2023 community update report*. ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/TQYT-V573

Featherstone, D., Ormond-Parker, L., Hawkins, L., & Thomas, J. (2023). *Mapping the digital gap: Wujal Wujal, Queensland 2023 community update report*. ARC Centre of Excellence for Automated Decision-Making and Society. https://doi.org/10.60836/3KC3-WP92

Featherstone, D, Holcombe-James, I, and Ormond-Parker, L. *Mapping the Digital Gap: Wilcannia, NSW community outcomes report 2022*. Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2022. https://doi.org/10.25916/tkgz-bj76

Featherstone, D, Holcombe-James, I, and Ormond-Parker, L, Hawkins, L. *Mapping the Digital Gap: Wujal Wujal, Queensland community outcomes report 2022.* Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2022. https://doi.org/10.25916/ah26-m948

Featherstone, D, Holcombe-James, I, and Ormond-Parker, L, Hawkins, L. Mapping the Digital Gap: *Erub (Darnley Island), Zenadth Kes (Torres Strait), Queensland community outcomes report 2022*. Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2022. https://doi.org/10.25916/13hs-3h71

Featherstone, D, Ormond-Parker, L, Holcombe-James, I, Hawkins, L, Thomas, J and Kennedy, J. *Mapping the Digital Gap: Tennant Creek, Barkly NT Community Outcomes report 2022.* Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2022. https://doi.org/10.25916/ad1n-mw04

Featherstone, D, Ormond-Parker, L, Holcombe-James, I, Hawkins, L, Charles, D, Thomas, J and Kennedy, J. *Mapping the Digital Gap: Yuelamu, NT Community Outcomes report 2022*. Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2022. https://doi.org/10.25916/h8yh-f780

Featherstone, D, Ormond-Parker, L, Holcombe-James, I, Hawkins, L, Ganambarr, G, Ganambarr, D, Thomas, J and Kennedy, J. *Mapping the Digital Gap: Gäṉgaṉ, East Arnhem Land NT Community Outcomes report 2022.* Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2023. https://doi.org/10.25916/tqzj-wf36

Featherstone, D, Thomas, J, Ormond-Parker, L, Holcombe-James, I, Hawkins, L, and Kennedy, J. *Mapping the Digital Gap: Djarindjin/ Lombadina, Kimberleys, WA, Community Outcomes report 2022.* Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2023. https://doi.org/10.25916/knvr-0g72

Featherstone, D, Ormond-Parker, L, Holcombe-James, I, Hawkins, L, Thomas, J and Kennedy, J. *Mapping the Digital Gap: Kalumburu, Kimberleys, WA, Community Outcomes report 2022.* Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2023. https://doi.org/10.25916/fn75-4n95

Featherstone, D, Ormond-Parker, L, Holcombe-James, I, Hawkins, L, Bukulatjpi, Y, Bukulatjpi, C, Thomas, J and Kennedy, J. *Mapping the Digital Gap: Galiwin'ku, East Arnhem Land NT Community Outcomes report 2022.* Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2022. https://doi.org/10.25916/vjtt-mb25

Featherstone, D, Ormond-Parker, L, Holcombe-James, I, Hawkins, L, Thomas, J and Kennedy, J. *Mapping the Digital Gap: Wadeye, NT, Community Outcomes report 2022.* Melbourne: ARC Centre of Excellence for Automated Decision-Making and Society, 2023. https://doi.org/10.25916/svqb-3j44

JOURNAL ARTICLES

Featherstone, D, Thomas, J, Holcombe-James, I, & Ormond-Parker, L. "Closing the digital gap for remote first nations communities: 5G and beyond?" *Media International Australia.* (2021). https://doi.org/10.1177/1329878X231201746

Featherstone, D, Stuchbery, C, Huebner, S, Ormond-Parker, L, and Dodd, A. (2021). "Archiving First Nations media: The race to save community media and cultural collections." *Australian Aboriginal Studies,* (1) (2021): 53-68.

BOOK CHAPTER

Featherstone, Daniel. "Dirt Tracks off the Superhighway: How COVID widened the digital gap for remote First Nations communities in Australia," in *Digital Inclusion,* eds. Simeon Yates and Elinor Carmi. Palgrave Macmillan, 2023.

EDITORIALS / NEWS STORIES

'Measuring digital inclusion to increase equitable access for all' RMIT Research Impact case study on ADII and Mapping the Digital Gap. https://www.rmit.edu.au/research/impact/digital-inclusion-equitable-access

Featherstone, D., Ormond-Parker, L. (2023) *'Digital inclusion' and closing the gap: how First Nations leadership is key to getting remote communities online.* The Conversation, 23/11/2023. https://theconversation.com/digital-inclusion-and-closing-the-gap-how-first-nations-leadership-is-key-to-getting-remote-communities-online-216085

Featherstone, D., Ormond-Parker, L., Thomas, A. (2022). *Natural disasters and the COVID-19 pandemic reveal the crucial role of First Nations media.* The Conversation, 16 March 2022. https://theconversation.com/natural-disasters-and-the-covid-19-pandemic-reveal-the-crucial-roleof-first-nations-media-178769

Featherstone, D. (2022). *Mapping the Digital Gap coming to Erub.* News story for Torres News. 29/3/22

POLICY SUBMISSIONS

ADM+S submission to the Senate inquiry into bank closures in regional Australia 2024

ADM+S submission to the Regional Telecommunications Review 2024

ADM+S submission to the Better Delivery of Universal Services Review 2024.

House of Representatives Standing Committee Inquiry into Co-investment in multi-carrier regional mobile infrastructure – Witness in public hearing, Alice Springs May 2023.

ACCC Regional Mobile Infrastructure Inquiry 2022 – in-person submission.

Featherstone, D. *Indigenous Digital Inclusion Plan: ADM+S Response to NIAA Discussion Paper.* 5 November 2021.

REPRESENTATION

First Nations Digital Inclusion Advisory Group and Expert Panel: The FNDIAG was established by Communications Minister Michelle Rowland MP to provide First Nations leadership on Closing the Gap Target 17. Associate Professor Lyndon Ormond-Parker is the Co-Chair of the FNDIAG, with Dr Daniel Featherstone and Lauren Ganley (Telstra) are on the Expert Panel supporting the Advisory Group. (Website link: https://www.digitalinclusion.gov.au/)

In his capacity as FNDIAG Co-Chair, Lyndon is also on the following committees: ACMA Consumer Consultative Forum, NBN Co Regulatory Proposal Forum, Low Earth Orbit Satellite Working Group.

Lyndon is also Deputy Chair of National Film and Sound Archive of Australia's Indigenous Connections Committee, Chair of Return Reconcile Renew Archive Governance Board, Australian National University, a Member of the University of Sydney's Library Cultural Collections Reference Group, and Member of Informit's First Peoples' Lens Steering Committee.

Australian Communications Consumer Action Network (ACCAN): Distinguished Professor Julian Thomas was Chairperson of ACCAN until September 2024. Dr Daniel Featherstone was elected to the ACCAN Board in September 2024.

Dr Daniel Featherstone is also a member of the NSW Closing the Gap Data Development Advisory Group (2023-4), State Library of Queensland Digital Inclusion Working Group (2023-24), ACCAN Indigenous Steering Group (2013- 2024), DITRDCA Remote and Regional Television Audit Working Group (2023-4).

Other team members also have extensive representation on academic and professional committees as well as ADM+S Centre working groups.

FORUMS AND PRESENTATIONS

2025

- ADII 2025 Report Launch, Hobart/Melbourne
- ADM+S Symposium on Social Services, University of Queensland, Brisbane
- ADIA Meetup, virtual presentation of project outcomes
- Bureau of Meteorology Research and Development Workshop, Melbourne
- First Digital Media and Digital Technologies Preserving First Nation Heritage, at World Archaeological Conference, Darwin
- Shared Value Summit, Melbourne

2024

- ACMA Radcomm Conference, Melbourne
- ADM+S Symposium on Mobilities, UNSW Sydney
- CONVERGE First Nations Media Conference and Digital Inclusion Forum, Canberra
- Public Sector Communications Conference, Canberra

2023

- ADII 2023 Report Launch, Adelaide
- ACCC/ AER Regulatory Conference, Brisbane
- ADM+S News and Media Symposium, Sydney
- State Library of Queensland Future Libraries symposium, Brisbane
- NetThing Conference, Brisbane
- CONVERGE First Nations Media Conference, Canberra
- Amplifying Indigenous News Symposium, University of Canberra
- 13 other academic forums and industry events in 2023

2022

- ACMA Radcomm Conference, Melbourne
- Digital Inclusion for Low Income Families Symposium, Brisbane
- Understanding Inclusion and Exclusion: Perspectives on ADM in Australian Society, Melbourne
- Digital Inequalities and ADM Workshop, Melbourne
- Australian Digital Inclusion Alliance forum
- Automation, Wellbeing and Harms in a COVID Age, Melbourne
- 11 other academic events and industry forums

2021

- Digital Inclusion Policy and Research Conference (DIPRC), UK, 2021 (online)
- ADM+S News and Media Symposium, Brisbane
- Community Network Exchange Asia Pacific conference
- CONVERGE / Indigenous Digital Leadership Forum, Lismore
- 10 other academic events and industry/ community briefings

The team have also delivered numerous presentations to federal and state government agencies, peak bodies, community organisations, land councils and service providers.

FILMS / MEDIA OUTPUTS

End of the Line (2024) A 15 minute documentary about communications on the remote Torres Strait island of Erub, through the eyes of language teacher / fisherperson / NAIDOC Award winner Lala Gutchen. Co-production between ADM+S and Torres Strait Islander Media Association. https://www.youtube.com/watch?v=kV153RJbXOM

Mapping the Digital Gap in Erub (2022) 5 minute video with co-researchers at Erub in the Torres Strait. https://www.youtube.com/watch?v=G9tlhu_yWw4

Mapping the Digital Gap in Wilcannia (2022) 6 minute video with co-researchers at Wilcannia in western NSW. https://www.youtube.com/watch?v=G9tlhu_yWw4

Project Brief: Mapping the Digital Gap. Podcast Episode by ADM+S as part of series on Phase 2 projects within the Centre. https://open.spotify.com/episode/6JNwM2G3sHiOjh5xTgj1s1

ONLINE PRESENCE

Websites

Project website: http://mappingthedigitalgap.com.au

ADII website: https://www.digitalinclusionindex.org.au

First Nations ADII Dashboard: https://dashboard.digitalinclusionindex.org.au/firstnations/home

Social media

LinkedIn: https://www.linkedin.com/showcase/mapping-the-digital-gap

Facebook: https://www.facebook.com/MappingTheDigitalGap

AWARDS

Mapping the Digital Gap was recognised at the 2023 RMIT Research Awards by winning the Vice-Chancellor's Award for Research Impact and Engagement - Team category.

In 2022, Daniel Featherstone and Lyndon Ormond-Parker won the Dean's Award for Indigenous Engagement in the School of Media and Communications.

APPENDIX 2 – KEY NEWS STORIES

Ganley, L. (2024). Understanding digital inclusion in remote First Nations communities. Telstra feature story. 27 May 2024

Burdon, A. (2023). Conquering the digital divide Issue' Magazine article featuring interview with Daniel Featherstone. Issue #149, 16 May 2023. https://www.outbackmag.com.au/conquering-the-digital-divide/

How, B. (2023). 'First Nation's digital inclusion lags despite national improvement. InnovationAus online article about Mapping the Digital Gap findings. https://www.innovationaus.com/first-nations-digital-inclusion-lags-despite-national-improvement/

Johnstone, R. (2023) 'Closing the digital gap in Australia's least connected communities'. Case Study in 2023 Telstra Sustainability Report 'Bigger Picture', p.46. https://www.telstra.com.au/content/dam/tcom/about-us/community-environment/pdf/Telstra-Bigger-Picture-Sustainability-Report-2023-Remediated.pdf

Johnstone. R. (2022). 'The communities in Australia where digital inclusion is going backwards'. Telstra Sustainability News. May 2022. Key interviewee for article on Mapping The Digital Gap Project. https://exchange.telstra.com.au/the-communities-in-australia-where-digital-inclusion-is-going-backwards/

Parke, E. (2022). 'Australia's digital divide means 2.8 million people remain 'highly excluded' from internet access'. ABC Online feature article and Video story, featuring interview with Daniel Featherstone, 16 October 2022. https://www.abc.net.au/news/2022-10-16/australia-digital-divide-millions-cannot-access-internet/101498042

Weekes, M. (2022). 'How lack of connectivity entrenches the digital divide. ABC RN Life Matters, interview with Julian Thomas on ADII, and findings from Mapping the Digital Gap. https://www.abc.net.au/radionational/programs/lifematters/how-lack-of-connectivity-entrenches-the-digital-divide/101543654

MEDIA COVERAGE

Mapping the Digital Gap 2023 Report launch - Team members conducted over 20 interviews following 2023 Outcomes report launch. RMIT Media tracked 430 media stories, with highlights including ABC radio and online, Channel 7 and 9 News, Koori Radio, The West Australian, National Indigenous Times, SBS, The New Daily, community radio and Koori Mail.

In 2023 and 2024, Daniel Featherstone has done over 30 radio and print article interviews on the following topics: Mapping the Digital Gap research findings, the switch-off of 3G, regional bank closures.

APPENDIX 3 – ACRONYMS

ABC	Australian Broadcasting Commission
ABS	Australian Bureau of Statistics
ACCAN	Australian Communications Consumer Action Network
ADII	Australian Digital Inclusion Index
ADM+S	ARC Centre of Excellence for Automated Decision Making and Society
ADSL	Asymmetric Digital Subscriber Line
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
AIUS	Australian Internet Users Survey (used by the ADII team)
AM	Amplitude Modulation (radio broadcast mode)
APN	Australian Private Networks
APY	Anangu Pitjantjantjatjara Yankunytjatjara
ARC	Australian Research Council
ARDS	Aboriginal Resource and Development Service
ATM	Asynchronous Transfer Mode
ATSI	Aboriginal and/or Torres Strait Islander
CAAMA	Central Australian Aborginal Media Association
CAYLUS	Central Australian Youth Link-Up Service
CfAT	Centre for Appropriate Technology
CRC	Community Resource Centres (WA)
CTG	Closing the Gap
DITRDCSA	Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts
DSS	Department of Social Services
EFTPOS	Electronic Funds Transfer at Point of Sale
FM	Frequency Modulation (radio broadcast mode)
FNDIAG	First Nations Digital Inclusion Advisory Group
FNMA	First Nations Media Australia
FNQ	Far North Queensland
GB	Gigabyte
GenAI	Generative Artificial Intelligence
HCRC	High Capacity Radio Concentrator (microwave telephony system)
HF	Higg Frequency (radio)
ICTV	Indigenous Community Television
IKC	Indigenous Knowledge Centre
Kbps	Kilobits per second
LEO	Low Earth Orbit (satellites)
LOTE	Language Other Than English
Mbps	Megabits per second
MBSP	Mobile Black Spot Program

NBN	National Broadband Network
NIAA	National Indigenous Australians Agency
NITV	National Indigenous Television service
NPA	National Partnership Agreement (on Closing the Gap)
NSW	New South Wales
NT	Northern Territory
NTG	Northern Territory Government
PAKAM	Pilbara and Kimberley Aboriginal Media
PAW Media	Pintubi Anmatjere Warlpiri Media and Communications
PC	Productivity Commission
PY Media	Pitjantjantjatjara Yankunytjatjara Media
REDI.E	Regional Enterprise Development Institute
RIBS	Remote Indigenous Broadcasting Service
RIMO	Remote Indigenous media organisation
RMIT	Royal Melbourne Institute of Technology University
SA	South Australia
SBS	Special Broadcasting Service
SLQ	State Library of Queensland
STAND	Strengthening Telecommunications Against Natural Disasters program
TSIMA	Torres Strait Islander Media Association
TV	Television
UHF	Ultra High Frequency
UOMO	Universal Outdoor Mobile Obligation
USO	Universal Service Obligation
VAST	Viewer Access Satellite Television
VoIP	Voice over Internet Protocol
WA	Western Australia

Kalumburu WA and King Edward river

APPENDIX 4 – COMMUNITY PARTNERS

Djarindjin Aboriginal Corporation

Djarindjin/ Lombadina

djarindjin.org.au

Julalikari Council Aboriginal Corporation

Tennant Creek

julalikari.org.au

Kalumburu Aboriginal Corporation

Kalumburu

kalumburu.org

Laynhapuy Homelands Aboriginal Corporation

Gäŋgaŋ

laynhapuy.com.au

NPY Women's Council

Pipalyatjara / Kalka

npywc.org.au

Pintubi Anmatjere Warlpiri Media and Communications

Galiwin'ku

pawmedia.com.au

Regional Enterprise Development Institute Ltd

Wilcannia

redie.org.au

Thamarrurr Development Corporation

Wadeye

thamarrurr.org.au

Torres Strait Islanders Media Association Inc

Erub

tsima4mw.org.au

Warakurna Community Council

Warakurna

ngaanyatjarra.org.au/warakurna

Wujal Wujal Aboriginal Shire Council

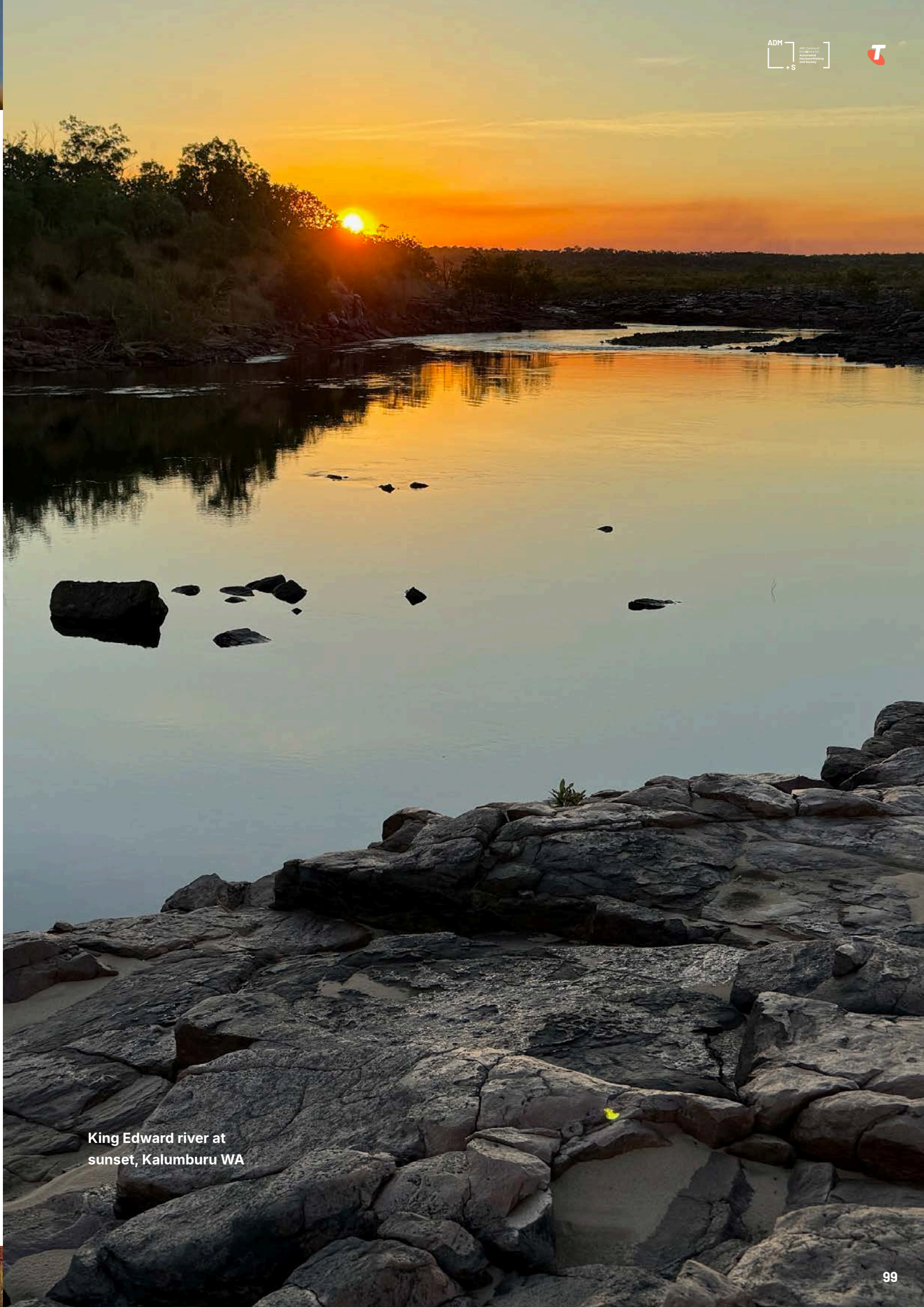
Wujal Wujal

wujalwujalcouncil.qld.gov.au

Yalu Aboriginal Corporation

Yuelamu

yalu.org.au



King Edward river at sunset, Kalumburu WA

MAPPING THE DIGITAL GAP

CONTACTS

E: mtdg@rmit.edu.au

Daniel Featherstone

Senior Research Fellow

E: daniel.featherstone@rmit.edu.au

Website

mappingthedigitalgap.com.au

ADM + S

ARC Centre of Excellence for **Automated Decision-Making and Society**