

Understanding and addressing digital disadvantage in Wimmera Southern Mallee

RESEARCH REPORT

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Executive Summary

Background

The *Understanding and addressing digital disadvantage in Wimmera Southern Mallee Project* (the project) explored the challenges Wimmera Southern Mallee residents, focusing on low-income individuals and families, small/micro businesses and migrant groups have in accessing and effectively engaging with digital technology to help guide future regional actions.

The project team interviewed 31 people from across five Local Government areas in the Wimmera Southern Mallee (Hindmarsh, West Wimmera, Northern Grampians, Horsham Rural City and Yarriambiack) who have low engagement with digital technology and/or limited internet access, as well as a representative sample of those who work to support those with low digital literacy.

Ethnographic research was undertaken to understand the factors that impact on digital engagement and accessibility across the three key demographic groups in the study area.

The research investigated people's access to hardware (e.g. computers, phones and tablets) as well as networks (internet plans and connections – broadband, satellite, mobile etc.). Understanding the challenges in engaging with and interpreting digital technology will help inform future advocacy and policy responses for this region. The research will also facilitate better targeting of information and support to Wimmera Mallee residents to actively improve uptake, access, and engagement. This is important, as the region has been identified as having the lowest digital literacy of any area in Victoria (Australian Digital Inclusion Index 2020).

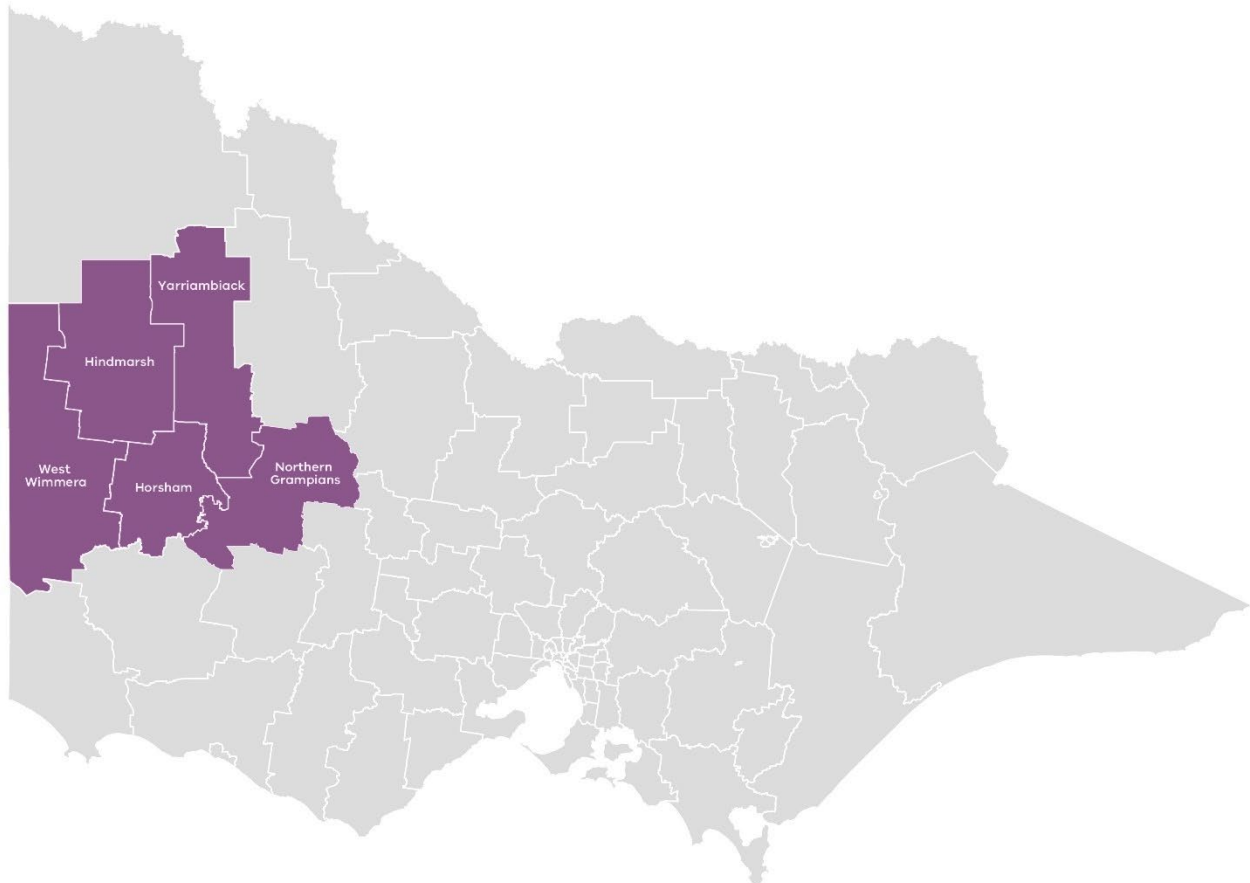


Figure 1: Victorian Local Government Areas – Local Government Areas included in research study are highlighted. (Engage Victoria, 2022).

This research project forms part of a Wimmera Development Association Project, funded by the Victorian Government's Regional Digital Fund. The intent of this work is to improve regional understanding of issues relating to the provision of digital services and support in the Wimmera Southern Mallee.

A primary aim of this research was to identify any similarities in the challenges the target groups for the research experienced, so that responsive effort is targeted to multiple areas where digital literacy is a concern. This will assist private sector, educational, social welfare, and business support groups to provide effective resources and support to facilitate improved uptake of digital technology in the region.

Research Questions

The project considered the following research questions:

1. What are the challenges low-income families, small/micro businesses and migrant groups have in accessing and effectively engaging with digital technology?
2. Are there similarities in these challenges, and, if so, can similar supports be identified that will help these key demographic groups in our region?
3. Are the current evidence-based resources and support actions to improve digital literacy and engagement effective for rural and remote regions?
4. What supports are best applied in the Wimmera Mallee to assist these communities to reduce the growing potential for digital divide and further disadvantage?

Method

The research approach was informed by a literature review targeting issues of digital access and service provision from a rural perspective, where possible.

The research uses an ethnographic approach to explore structural barriers and inefficiencies that are limiting digital connectivity and service within the study area. The research team individually interviewed thirty-one (31) Wimmera Southern Mallee residents from low-income and disadvantaged and backgrounds, small/micro business owners, residents who identify as Indigenous, the CALD community and digital support service providers within the region and people who worked with them. Participants were recruited via local networks and agencies. Prospective participants (service users and service providers) were also identified and recruited by Wimmera Development Association (WDA) Job Advocates employees.

Together, this recruitment approach allowed the research team to capture issues from the perspective of those with low levels of digital engagement, and those who delivered services to support people to engage online.

Interviews were of approximately thirty minutes duration and were conducted in-person and via telephone when COVID-19 restrictions prevented in-person meetings. Participants were asked open ended questions covering issues relating to cultural, structural, and economic challenges in rural digital service provision and inclusion. Participants were also queried on the support and assistance measures available and whether there were systemic changes that would better support efforts to provide digital services in the region.

The research team had intended to engage with local training courses (run by WDA Job Advocates employees) for the identified target communities (migrant, low-socioeconomic and small/micro business) to improve their digital literacy, conducting some participant observation around the performance and engagement of these support mechanisms. However, COVID-19 restrictions in force during the data collection period prevented this aspect of the research project taking place.

Overview of the findings

This study has identified ten key findings from the interviews conducted with low socioeconomic, CALD/migrant, and small/micro business owners in the region. These findings can be communicated as the following themes:

- A lack of infrastructure and technology to support reliable internet connectivity and mobile communication across the region – not just in more rural and remote areas
- Limited one-on-one/face-to-face training and support in using digital technology
- High cost of internet and mobile phone plans, computer, and communications hardware – prohibitive for those experiencing financial hardship
- Discrimination against those from low-socio economic backgrounds and the CALD community
- Loss of independence - particularly for older and elderly residents and CALD community
- An over-reliance on digital and mobile identity – which can lead to data security issues
- Further entrenchment of inequality for low-income families and children in education

Recommendations

There is enough evidence to suggest that the provision of digital services and supports needs to be more deeply considered as a social, economic and equity issue for the region.

This report makes several recommendations for change in response to the research findings to help address the main challenges identified in the report and progress opportunities for digital inclusion in the region.

These recommendations are as follows:

RESEARCH FINDINGS	RECOMMENDED ACTION
People across the Wimmera Southern Mallee remain impacted by limited coverage and quality of internet services	Continue to advocate for and fund additional options to improve fixed line, satellite and mobile internet coverage across the region, including shared infrastructure networks
People from low socioeconomic backgrounds and CALD communities can be solely reliant	Ensure all State and Federal Government websites and forms are mobile phone accessible as this is the <i>only</i> mode of internet access for many WSM people.

<p>on mobile phones for all online activity</p>	<p>Consider options to support low cost/free access to laptop computers via English language and digital literacy programs to improve opportunities for people to use other forms of hardware and build online skills</p>
<p>There is a lack of diversity in mobile phone plans for WSM residents</p>	<p>Engage with mobile phone providers and our political representatives regarding the findings of this report, and explore options for reduced cost data plans for mobile users with limited data access needs</p> <p>Deliver a localised education campaign that teaches people how to assess best value internet and mobile plans</p>
<p>Online subscriptions can add significantly to costs for people engaging online, and limit people's access to local information</p>	<p>Undertake additional research to understand choices made around subscriptions and sources of access to local news information</p>
<p>A loss of independence because of low digital literacy which forces a reliance on others to support urgent online needs</p>	<p>Map existing support networks for CALD community to assess gaps in support and funding at local sub-regional level, with a particular emphasis on social connection, and literacy, including digital literacy.</p> <p>Advocate for increased investment in rural social workers in the region with digital technology training to support CALD communities.</p> <p>Extend funding for existing digital training options and increasing their profile in non-digital media (e.g., newspapers) to encourage wider participation.</p>
<p>Accessing Government services online is not a workable solution for people with low digital literacy</p>	<p>Investment in alternative and accessible approaches such as dedicated phone and in-person contacts available in region for people to connect with Government services (e.g. Centrelink, Medicare)</p>
<p>People's skills in accessing services online do not keep pace</p>	<p>Local training programs for senior citizens and those with low digital literacy such as the Be Connected</p>

<p>with the rate of change and expectations</p>	<p>program should be more widely advertised to seniors and low socioeconomic groups within the WSM to encourage participation</p>
<p>Digital security is an issue for people with low digital literacy</p>	<p>A far greater investment in active supports (rather than passive reporting approaches such as Scam Watch) to help people with limited digital literacy to spot online risks and scam material and respond appropriately is needed.</p> <p>Additional research to understand the extent of these impacts on WSM residents is also important to quantify the level of personal and financial impact scams are having on people within the region.</p>
<p>Internet access and necessary hardware can be lacking for school students in the Wimmera Southern Mallee outside of school settings, and gaps and learning from home has exacerbated this gap for some children in the region</p>	<p>Ensure all public schools have sufficient dongles, laptops, and iPads so that all children can undertake schoolwork at locations other than school.</p> <p>Supervised safe spaces for children to study if they are unable to study at home due to family violence</p>
<p>Businesses need reliable internet across the region to be competitive</p>	<p>Address mobile blackspots and cost of access for rural internet services</p>

Background & Review of the Literature

Significance of the study

This work brings together the broad range of challenges that are impacting on the ability of key demographic groups in the Wimmera Southern Mallee to access digital services and support. Issues including geography, rurality, market failure and responsibility are underdeveloped in the academic literature. From a regional development and community capacity building perspective the availability of digital resources has an impact on education and workforce and participation and the health and wellbeing of the region's most vulnerable and marginalised residents. Issues of inaccessibility to digital connectivity and a lack of digital literacy in rural areas also has implications for equity for rural residents.

For individuals, challenges with digital literacy and engagement also have impacts on social inclusion, independence and physical and mental health and wellbeing. This research has sought to bring together a qualitative understanding of the range of challenges the digital economy presents in the rural setting of the Wimmera Southern Mallee.

Scope of the literature review

The literature review for this research study encompassed local, Australian, and international reports and journals in the areas of digital literacy, digital engagement, advocacy and online access. The research also explored issues of connection for migrant and CALD communities, small business, and low socioeconomic groups. The initial literature was collected via three major databases: Informit online, Wiley Science and SCOPUS. Additionally, a Google Scholar search was performed for relevant peer-reviewed articles examining digital literacy in rural and regional settings. Care was given to focus on an Australian and especially a Victorian, rural context wherever possible. However, literature was also drawn from the US, UK, and Europe in order to examine the broader issue of digital technology access and provision.

Analysis

The articles, reports and papers retrieved were assessed according to their relevance to the key aims of the project. The selected materials were analysed according to four criteria: the theme(s) addressed, the date they were published, their relevance to the context of digital disadvantage and the services the articles related to. Themes were determined based on adherence to the research objectives for the project and contribution to knowledge about challenges and opportunities for reducing digital disadvantage.

Digital disadvantage in Australian academic literature has largely focussed on provision of services within urban centres. Of the studies that have examined the rural experience, most have come from overseas investigations, where geographical and supply issues can be similar, but public policy responses may vary significantly. The intention of this literature review is to provide an overview of the depth of understanding about addressing digital disadvantage in rural communities such as the Wimmera Southern Mallee.

Themes

The digital divide & its role in entrenching disadvantage

Multiple studies have identified that the digital divide is disproportionately experienced by those with “senior age, with lower educational level, positions outside the labour market, and to a lesser extent female and [people] from ethnic minorities” (Serrano-Cinca; Munoz-Soro, Brusca, 2018, p.1409). In addition, our current understanding of the issues surrounding digital participation has largely relied on consultation with largely mainstream, urbanised communities and neglected the marginalised and disadvantaged (Davis, Hespanhol, Farmer, Fredericks, Caldwell & Hoggenmueller, 2017). This has meant that those with the most disadvantage are becoming further marginalised and disenfranchised as the world becomes ever more reliant on a digital economy (Davis et al, 2017).

Wilson, Thomas, & Barraket (2019) observe that how we conceptualise digital inequality has moved beyond a “binary logic” (p.16) of those with access to the internet and those without it. We now recognize that our engagement with it is much more complex. However, there is one binary that remains consistent – online exclusion is closely related to offline exclusion and vice versa, with those from low socio-economic groups the most excluded in both online and offline worlds.

Fisher et al (2020) note that while the expansion of ICT services in Australia has been relatively rapid, uptake has been much slower:

For example, in Australia in 2016-17 around 2.6 million people did not use the internet, and approximately 1.3 million households were not connected (Australian Bureau of Statistics, 2016; Fisher et al, 2020, p.2). The authors found that this discrepancy is largely due to the challenges people experience in using ICT, which include “...reasons such as low income, limited skills, low literacy, having English as a second language, insecure housing or remote location” (p.2).

Information and communications technology (ICT) and telecommunications infrastructure as an essential service

Access to Information and Communications technology (ICT) and next generation telecommunications infrastructure is now widely viewed as an essential component of citizenship engagement with community. Increasingly, we rely on ICT for our medical needs, for employment, to socialise and to access information (Fisher, Freeman, Schram, Baum & Friel, 2020; Lee, 2018). The COVID-19 pandemic has only seen our dependence on digital technology and connection grow; particularly with the rapid advent of remote learning and telecommunication.

Data from a study by Ali, Alam, Taylor & Rafiq (2020) has confirmed a direct link between levels of digital inclusion and quality of life (and vice versa) in Australian households. This suggests that digital disadvantage may indicate – and further exacerbate – other forms of disadvantage already in existence within our communities:

...we take the view that access to ICTs and high-speed broadband (HSB) is very likely to affect population health, precisely because (increasingly) it mediates access to social determinants of health such as income and employment (especially in the context of the growing digital economy), education and social connectedness (p.5).

This is reinforced by others, such as Shradie (2018) who argues that internet access does not support egalitarian democratic participation, but actually “reproduces inequality” (p 53). Shradie explores issues of online participation and volunteerism and argues that organised online participation reinforces societal hierarchies, as digital labour requires ‘expertise’ and time, both of which can be differentially more costly for lower-socioeconomic groups to cultivate and utilise.

Rurality and the digital divide

A local study completed in 2016 by Wimmera Rural Access explored gaps regarding public access, technology and digital skill sets in the Wimmera. This group no longer exists, but was formerly auspiced by Horsham Rural City Council, and the focus of the work was on understanding key issues for people in engaging with internet technology. While elements of this report have been further developed since, such as with the Wimmera Southern Mallee Digital Plan, this report highlights issues for individuals with a disability and/or low skill set in the digital space, to seek support when completing necessary online tasks. The report identified concerns by service providers “about the amount of confidentiality matters that people were relaying to seek assistance with” (Wimmera Rural Access, 2016, p.40). They also note an implicit assumption that businesses and services assume people have the necessary skill set to access their information online, when “in fact, people are missing out on information relevant to their needs” (p.40).

This aligns with other academic research highlighting how rural and regional communities are particularly vulnerable to falling behind in the digital economy (Alam, Erdiaw-Kwasie, Shahiduzzaman & Ryan, 2018; Philip & Williams, 2019; Park, 2017). There are social, economic and cultural factors that influence engagement with information and communications technology and having an internet connection does not necessarily ensure an effective level of literacy for engagement (Angus, Snyder, & Sutherland-Smith, 2003).

Wilson, Thomas, & Barraket (2019) examined data from the Australian Digital Inclusion Index (ADII). According to the authors, the latest ADII indicates that while there has been some improvement in digital inclusion:

In general, rural and regional Australians, older Australians and Australians with low levels of income, employment, and education are less digitally included than their compatriots. For some of these groups the inclusion gap is widening (p.16).

The authors also report that data from the ADII signifies how large digital infrastructure projects, such as the roll out of the NBN, would benefit from a more systematic approach at the policy level. This would include focusing attention on characteristics such as income and education levels as well as the age, overall ‘digital ability’ and geographical location of the population. The study concludes that such an approach would go some way towards bridging the digital inclusion urban/rural divide.

A United States based study by Lai & Widmar (2021) explored issues of rural access during COVID-19. The authors identified a lack of competition as an issue for rural internet service provision, which “forces consumers to accept the limited or insufficient technological offerings provided in their area, further reinforcing the digital divide” (p.460).

Ali, Alam, Taylor & Rafiq (2020) described the direct relational link between digital inclusion and quality of life. They found that those living in remote and rural communities have significantly lower quality of life experiences than their urban and more socially advantaged counterparts.

Refugee and migrant experiences with digital literacy

The Wimmera region has a relatively high level of migration, and several Wimmera Southern Mallee towns support diverse CALD communities. Hindmarsh, Horsham, Yarriambiack and West Wimmera Shire all have more than 20 per cent of their populations with one or more parents born overseas (ABS, 2017). The Northern Grampians Shire has a marginally lower level of migrant diversity at only 15.6 percent (ABS, 2017). While this diversity is lower than in the Australian population overall, it is nevertheless a significant proportion of smaller, Wimmera Southern Mallee communities. Research into digital access and engagement for CALD communities in Australia has relevance for this work.

Gifford & Wilding undertook a study in 2013 that examined how ICT may assist young Karen refugees to feel ‘at home’ in Melbourne. The authors found that access and engagement with ICT that enabled Karen youth to stay connected to their friends and family members throughout the world greatly assisted these young refugees to feel more settled in their adopted country. This sense of feeling connected and part of a larger network online had positive associations with their off-line experience.

A study that focused on migration to a regional centre in Queensland (Kettle, 2018) explored how building voluntary English language tutor’s digital skills greatly assisted adult migrants to both learn English but also engage with ICT. As the English tutorage was undertaken in the migrant’s home by local volunteers, the program also assisted the migrant students for feel more connected with their communities.

Mahoney & Siyambalapatiya (2017) likewise demonstrate in their literature review looking into migrant and refugee inclusion more generally that community-based programs and interventions with active volunteers and mentors significantly improve social inclusion and connectedness in these populations. Importantly, this review found that such programs need to consider communication skills, the target group’s past skills and experience and types of projects – the latter of which needed to facilitate new connections. Such a model may be useful to consider when seeking to enhance digital inclusion in migrant and refugee populations.

Likewise, Alam & Imran (2014) identified a critical link between social inclusion and digital connection, arguing that “access to ICT is considered critical to economic, social and political participation and fundamental to building social capital” (p.348). They argue that there has been limited research on the ways in which refugee migrants themselves have different levels of digital skills and access even within their own communities and how this divide can impact inclusion and participation of the migrant community in the

broader Australian community in which they live. Alam & Imran (2014) argue “digital inclusion and social inclusion are interlinked” (p.358), which is an important consideration for this study.

Another research piece by Shariati, Armarego & Sudweeks (2017) also found that ICT access and engagement was critical for how Iranian refugees to Australia managed their day-to-day settlement needs. Semi-structured interviews with 51 Iranian refugees and 55 refugee support workers provided evidence that ICT can assist in addressing challenges of isolation, marginalisation and increase assimilation within their communities. The authors note that the provision of ICT to refugee groups may assist in bridging the digital divide between refugees and those in established communities.

Indigenous experiences with connection to digital technology

Hunter & Radoll (2020) argue that the retention of digital access is as important to reducing socioeconomic disadvantage as providing access in remote communities. This means policy makers will need to consider aspects such as household income, age and ability, health and education as factors that may impact individual households’ capacity to gain and retain ICT and telecommunication, particularly in remote Indigenous communities.

Du (2017) examined the literature to understand the current landscape regarding the digital divide between Indigenous and non-Indigenous Australians. According to Du, research into how and in what ways Indigenous people access and interact with ICT is limited and much more research needs to be undertaken. Of the extant literature, Du (2017) identified several key barriers Indigenous ICT users in remote communities experience relative to other users:

- Prohibitive costs in accessing and retain ICT connectivity
- Poor or non-existent telecommunications infrastructure and technical support and maintenance
- Low digital literacy, particularly in older users
- Low english literacy
- A deficit in culturally appropriate information and content
- Unstable housing and crowding (p.356).

Du (2017) concludes that future research must concentrate on developing an understanding of how Indigenous people access ICT and the drivers, experiences and cultural values that inform Indigenous people’s information behaviour. Studies into social media use and identifying barriers to access were highlighted as further areas to explore.

Park (2017) identified that the digital divide between Indigenous and non-indigenous users of ICT is linked to the social exclusion that rural and remote communities experience. The author concluded that social exclusion mirrors digital exclusion and contends that any remote community digital inclusion strategies must

consider both supply *and* demand, with levels of education, employment and other socio-demographic measures driving decision making.

Similarly, an analysis of quantitative data from the National Aboriginal Torres Strait Islander Social Survey (NATSISS) and the Census of Population and Housing by Rennie, Thomas, and Wilson (2019) found that Indigenous Australians living in remote areas were less likely to use the internet to access government and other support services. Given that accessing government services digitally is becoming increasingly necessary, understanding why Indigenous people living remotely are not doing so is critical. From the data, the authors concluded that a causal factor was the high use of mobile phones to access the internet in the study population.

...for all their convenience, mobile devices lack some of the technical capacities of desktop or laptop computers. Tasks such as completing complex forms can be difficult; many web pages do not display readily or completely in mobile form; and work-related applications such as word processors may be difficult to access or use (p.115).

Rennie, Thomas, and Wilson (2019) suggest that more research is required to better understand why many Indigenous peoples living in rural and remote areas are accessing the internet over their mobile phones. One possible explanation is that mobile-only access, while often more expensive, requires less infrastructure and hardware and provides more mobility and ability to share data, thus making it more accessible and convenient for those living outside urban areas.

Small business and digital technology

Providing rural and regional small business owners with access to, and encouraging engagement with, digital technology is also seen as essential for sustained economic growth in these communities. Therefore, understanding and addressing the challenges small businesses experience using ICT is central to providing strategic and policy directions.

Philip and Williams (2019) suggest that home based micro-businesses operating in rural locations are unable to take advantage of all that the growing digital economy provides because

“...stubborn social, economic and territorial digital divides continue to create challenges for this sector of the rural economy” (p.306).

The authors examined the impact of satellite broadband on three home-based businesses operating in a remote locality in Britain that was digitally underserved in comparison to more populated areas. From these case studies, Philip and Williams (2019) concluded that it was not lack of internet use, but a lack of digital infrastructure at the local level that was preventing rural and remote home-based micro businesses participation in the digital economy boom:

In a scenario where small businesses' engagements with the state are moving to an online only environment and wider business-customer interactions are increasingly online encounters, this

presents a significant challenge for the bigger rural digital economy picture, one where small and micro-businesses are such important sources of rural employment (p.316).

For rural communities, the importance of providing ICT access and skills to primary producers is vital to sustaining their economies. Marshall, Dezuanni, Burgess, Thomas & Wilson, (2020) advise that our agricultural communities provide not only economic value, but also sustain many small towns and regional cities. ICT and telecommunications infrastructure are fast becoming as important to the agricultural sector as roads, energy, and transport. To understand how ICT is being accessed, engaged with, and used by Australian farmers, the authors analysed data from the Australian Digital Inclusion Index (ADII). Worryingly, this study found that digital inclusion in rural farming communities is low. However, the reasons for these low levels appear to be quite complex, with farmers showing quite different scores across the Access, Affordability and Digital Ability measures compared to non-farmers in similar socio-economic circumstances. The authors attribute this anomaly to limited and unreliable internet access and data speeds. A lack of competition between internet providers in rural communities was also found to attribute to poor scores on the Affordability measure. Low digital ability amongst farmers more generally was also highlighted as a barrier to digital inclusion.

A large survey that examined the Australian agricultural sector's access to and engagement with ICT was undertaken by Zhang, Baker, Jakku & Llewellyn (2017). The purpose of this study was to "...benchmark Australian producers' needs, perceived risks and benefits, and expectations associated with digital agriculture and big data context" (Zhang et al, 2017 p.13). Some of the key findings the authors identified was that:

- Digital and telecommunications infrastructure connectivity was generally available, but mobile reception across entire farms was poor
- Use of on farm technology (such as radio and/or mobile links to weather stations) was very poor, with farmers reporting that maintenance of such devices was very challenging
- Half of the primary producers surveyed relied on family members or themselves to solve telecommunications issues.

Gekara, Snell, Molla, & Karanasios, (2020) investigated the impact of automation on the Australian workforce due to the implementation of emerging technologies. The authors argue that workforce skillsets will need to adapt with the race towards automation to future proof employment and productivity across a range of sectors. The authors examined a group of policies from across jurisdictions and found that the current policy landscape lacked cohesion, and that policies looking at improving workforce digital skills specifically were lacking. This study also suggests that a national approach to accreditation and training is a necessary step in the process of upskilling the workforce in the digital and technological landscape.

Online and remote learning

Regarding remote learning in particular, an Australian study by Drane, Vernon & O'Shea (2020) suggested that in the advent of mass school closures, some four million school children would need to be educated at

home. Of these, around 20% are from disadvantaged backgrounds, which includes much of rural and remote Australia. The authors found that when children from low socioeconomic communities are forced to undertake learning from home, some 800,000 may experience “long-term educational disengagement, digital exclusion, poor technology management and increased psychosocial challenges” (p.3). This is because children from disadvantaged backgrounds are already experiencing disadvantage across most metrics, so removing them from the school setting has significant impacts regarding socialisation, safety (such as from family violence and parental alcohol and drug use) and limits access to ICT software and hardware.

Flack, Walker, Bickerstaff & Margetts (2020) support this view, reporting that the shift to online learning prompted by COVID-19 negatively impacted children at the least advantaged schools much more than their advantaged counterparts. A consequence of this is further entrenchment of the socioeconomic divide.

One method for closing the digital divide in the home learning space is proposed by Hillier (2018). Hillier describes a hybrid offline e-learning platform that provides online content that can be downloaded onto USB sticks and disks which can then be distributed by post:

...the user can optionally download additional learning material, news messages and discussion board messages when a network connection becomes available. The output of student activity such as, replies to forum posts, assessment responses and formative results can be saved to the same USB for later submission and collation. Submission may occur when a network connection becomes available, or by exporting individual assessment responses to secondary storage, to a printer or by sending the completed course on the USB stick back to the institution via the post (p.115).

Hillier argues that an e-learning platform that is not reliant on 24/7 internet connectivity may provide a method for remote learners in remote communities to engage with ICT (2018). While we should not see this as a permanent fix, Hillier argues that it may alleviate digital disadvantage where barriers exist to full ICT connectivity.

Not the access but the engagement

What if those experiencing digital disadvantage throughout the region have access to world class ICT and telecommunications infrastructure but are not actively engaging with it?

Lee (2018) warns of growing digital inclusion gaps emerging within Australia, which have in turn led to emerging digitally excluded groups. It is vital, therefore, to develop an understanding of the lived experience of those experiencing digital disadvantage as a priority. Lee also maintains that ongoing social support for the digitally excluded will be essential in promoting engagement with new technologies and suggests that the digital divide “...should be reframed based on different contexts of use, which significantly shapes experiences of use.” (Lee, 2018 p.11).

Smeaton et al (2017) also argue that the issue is more nuanced and suggest that there is not a clear, direct relationship between socioeconomic disadvantage and digital exclusion. They found that there was an element of distrust in the online information world for some disadvantaged users of ICT. The authors suggest

that overcoming a lack of engagement in ICT will require the promotion and engagement of critical library services for the socioeconomically disadvantaged. The authors found digital illiteracy to be a great hindrance to effective engagement with digital technology and encourages IT professionals and public libraries to themselves be better educated in the nuanced nature of digital exclusion and socioeconomic status.

Hustad, Hansen, Skaiaa, & Vassilakopoulou, (2019) undertook a literature review examining the digital divide in advanced nations with comparable technological and economic status. The authors found that there is more to closing the digital gap than just providing access. Instead, this review indicated that acceptance, engagement and use of ICT are critical to the success or otherwise of reducing digital disadvantage. According to the authors, even apparently disparate factors such as the personal motivation and characteristics of the user and digital skills all had a part to play.

This links to broader international research around socioeconomic divides regarding digital engagement. James (2021) identifies that while developing and middle-income countries are showing a higher number of hours of internet use overall, “the evidence points to the rather paradoxical conclusion that developing countries are given to spending their Internet time on entertainment rather than developmental activities such as searching for information on health, government services, and vacancies for jobs” (James, 2021, pp.26-27).

Strategies for reducing the digital divide

As long ago as 2008, Notley and Foth advised that:

Without a body with a specific mandate to ensure that policies are adaptive to changing needs, cohesive and complementary across the states and most importantly, are effective, digital divide policies will remain fragmented (2008, p.6).

They also noted that at the time, the conversation at the national level was primarily concentrated on addressing challenges on the supply side of infrastructure delivery. Meanwhile, at the state and local government level, demand side challenges were not being focussed on due to a lack of a cohesive framework to guide planning and decision making. It is apparent from the current literature that many of these issues remain today.

In a more recent study examining e-governance at the national, state and local state government level, Freeman (2012) had similar findings to Notley and Foth (2008) – namely, that:

In Australian e-government, one-way information dissemination and improved service delivery practices are often prioritised over contexts for citizen participation (p.27).

As with Notley and Foth (2008), Freeman (2012) suggests that successful e-governance requires a more cohesive decision-making framework that engages with all stakeholders at all levels of government. Freeman concludes that such a framework also requires governments focus on demand side aspects of the digital divide, such as user access to ICT and skill levels.

Findings from a 2018 study undertaken in the Southern Downs region in Queensland indicate that adaptive strategic planning can help mitigate some of the negative internal and external forces at play when planning for digital transformation and enhance regional competitiveness.

Other studies indicate that policy makers need to look beyond access and supply-side challenges to understand and undertake strategies that address demand-side issues, such as building digital skills in the rural and remote communities and ensuring ICT is affordable and sustainable (Ali, Alam, Taylor & Rafiq, 2020).

As noted earlier, a comprehensive literature review by Hustad, Hansen, Skaiaa, & Vassilakopoulou, (2019) indicated that an individual's personality traits may influence engagement and utilisation of digital technology. Based on their findings, the authors argue for a *personality* model that would assist in creating sustainable digital inclusion. The authors envision that this model would work alongside other economic and social models.

Fisher et al (2020) conclude that to be not only successful but truly equitable and affordable, large-scale ICT telecommunications infrastructure projects require:

- Bipartisan political support
- Initial and ongoing close collaboration between government and health and social service agencies
- Public ownership and government regulation of the infrastructure, which would mitigate price rises for users that would inevitably result from market based, commercial pressures.

Research Approach

This qualitative research project primarily used ethnography to explore issues of digital access, engagement, and usage across three target groups in the Wimmera Southern Mallee. The research focused on collecting information to explore the intersection of three identified demographics where challenges in accessing and adopting digital technology internet use/uptake was anecdotally known to be an area of concern. These areas were:

- Migrant/Culturally and linguistically diverse (CALD) communities
- Small business/micro-business owners
- Communities with a high level of digital disadvantage (low socioeconomic, elderly, Indigenous, early school leavers)

The intention of this work was to find areas where actions could provide benefits for all three groups, therefore maximising advocacy, engagement, and investment activity to support improved digital upskilling and connectivity outcomes for these priority groups.

The study was intentionally broad and designed to capture the breadth of issues affecting the provision of digital services and support in the study area. The research also sought to provide an acknowledgement of

the personal and professional impacts of digital connectivity and literacy limitations in the study area on service users. This ensured a holistic understanding of the challenges and impacts of delivering and supporting digital services and supports in the Wimmera Southern Mallee, with the intention of identifying those factors relevant to rural and regional Victorian communities.

The research team interviewed 31 individuals from the key demographics required for this study, with a breakdown as follows:

Migrant/CALD – 11 participants

Small Business/Microbusiness – 5 participants

Individuals from communities identified with a high level of digital disadvantage – 8 participants

The research team also engaged directly with support networks and service providers, such as public library staff, community jobs advocates and migrant support workers, to understand their perspectives on the challenges in providing support to the target groups/individuals for this research. 7 interviews were conducted involving service providers.

To support the research findings from the interviews, the research team also carried out some participant observation in group settings, with a focus on local CALD communities to better understand some of these challenges identified by service providers in providing digital literacy support. This has helped inform some of the case studies in the report.

Ethical approval for this research was granted by the Federation University Human Research Ethics Committee in August 2021 (project number A21-105).

Service providers were recruited to the study through their professional involvement with the communities of concern identified as target groups for this research. Interview participants experiencing disadvantage because of where they live, financial stress, a lack of educational opportunity and access to health services; or identifying as members of the region's Indigenous and CALD communities; micro and small business owners were invited to participate in the study via the professional support networks and through WDA Job Advocates employees undertaking their activities throughout the region.

Prospective participants were contacted via telephone or in person and invited to participate, through these networks and the research team arranged a time to contact each interviewee for an interview. A plain language information statement providing a detailed explanation about the project was provided to each participant via email or in hard copy following initial contact. All interview participants gave written or verbal approval for a telephone or in-person interview to be conducted. Interviews were conducted at an agreed time, using a series of questions developed to capture issues impacting on service. Participants were interviewed along the themes of service provision, delivery challenges, structural issues, staff training, geographical and financial considerations. A series of open-ended questions about issues of digital connectivity and literacy and the personal and professional impacts was used.

Interviews were conducted over a four-week period in early October via telephone to comply with COVID-19 restrictions on research practice and in-person when COVID-19 restrictions were lifted. Some additional interviews were conducted in December 2021, when some local in-person events resumed with key organisations engaging with the target groups for the research.

Limitations of this research in COVID-19 environment

The research was conducted in a COVID-19 active environment and commenced at the end of lockdown six for Victoria. At this time, restrictions, and lifting of restrictions due to increasing vaccination rates in regional areas resulted in rapidly changing rules and requirements for in-person engagement. We acknowledge these restrictions and subsequent risk-management considerations for organisations had some effect on access to participants, however this was mitigated as much as possible by adopting a strategy of broad engagement with organisations and professionals in organisations engaging with individuals within the target groups for the research. However, it should be acknowledged that this approach resulted in the research team having a greater level of access to individuals who were engaged with some regional supports, and the research team had reduced access to opportunistically engage with people who were highly disengaged from support services in the region.

The COVID-19 environment did, however, provide many opportunities to explore the challenges of online engagement for individuals with low digital literacy. The introduction of the Victorian *COVID Safe* app was a good starting point for conversations about the challenges with compliance, and issues with hardware and user skill sets.

The research team attracted a strong diversity of participants with a wide age range, access to CALD communities and Indigenous populations. The research team also engaged with the Wimmera Development Association Jobs Advocates team, and their community connections allowed for a broader range of participants to the study than would have been possible with engagement through service and support organisations. We would like to thank all the organisations and individuals involved in this study for their engagement.

Results and Discussion

The COVID-19 pandemic has been transformational for Wimmera Southern Mallee communities, particularly because of the significant step change required regarding access and engagement in the online space. It has had implications for communication, trade, socialisation, work and engagement with health and wellbeing support. While it can be argued that the shift from paper-based and face-to-face services was already transforming to an online space prior to the advent of COVID-19, the pandemic has hastened the rate of change. In the Wimmera Southern Mallee, many service providers have found it challenging to meet demand for digital support and service users are increasingly confronted as they attempt to navigate new and different technological needs.

This report discusses issues presented by interview participants across the three key themes identified in the Australian Digital Inclusion Index report (2020) - access, affordability, and ability. This is supported by several de-identified case studies which provide real-life examples of the issues the target groups are experiencing. The report also includes a case study that outlines the lived experience of one Wimmera Southern Mallee couple, demonstrating the intersection of digital change with issues of rurality during the COVID-19 pandemic.

Further, the report highlights key areas of difference for each of the target demographics within this study, with a particular focus on CALD communities, where there are significant additional gaps in literacy and engagement online beyond that experienced by the other demographics. If unaddressed, this will continue to result in marginalisation and disadvantage as digital access becomes an increasingly mainstream requirement to access services, socialisation, and employment.

Access

Being able to access the internet is the foundation for any type of digital engagement. For the purposes of this report, “access” is considered to have two components: an internet connection or plan (provision of service) and appropriate hardware (mobile phone, laptop, computer, iPad) to facilitate the online connection. The way in which individuals engaged with both aspects of access was highly individualised.

Interview participants highlighted a range of issues about both provision of service access and access to hardware, which are discussed in turn.

Provision of Service Access

The Wimmera Southern Mallee is characterised by small populations spanning a large geographical area, which creates challenges for infrastructure provision that are not present in more urbanised communities. Infrastructure development to support internet access and related mobile phone coverage is less economic for private providers where there are a smaller number of users, and limited demand. Government investment is required to improve accessibility, and this takes place through a limited funding model, with a partnership investment approach between Government and telecommunications providers. (Australian Government, 2022). While this assistance is vital for rural communities, the necessity for prioritisation of priorities creates winners and losers in terms of geographical access. Individuals and businesses without reliable access need to pay for alternative individualised access solutions, and the quality and availability of these solutions is dependent on an ability to pay (Park, 2017).

There was significant variability in the way in which interview participants across the three key demographic areas accessed ICT. Generally, the type of access they sought depended upon the level of importance they applied to having a reliable internet connection and the level of data use the individual, business or family required. All small business participants viewed internet connectivity as being vital for operating their businesses. While some relied on the internet for administrative purposes, such as banking, invoicing and MYOB, others also relied on the internet for selling and marketing their products:

It gives me access to information. Rapid and reliable communication. You can email people and know that they are going to get it. The internet is actually more useful to me than the phone – mobile phone coverage out here isn't good. I do make use of mobile data occasionally but just as back up. Basically, everywhere north of home I can use the network. Anywhere south of home I can't use [mobile] data.

Generally, access arrangements were either broadband internet (using an existing landline telephone connection), NBN or mobile data through a mobile telephone. A small number of business participants were using satellite broadband. Access was largely linked to availability of services and cost to the user (based on individual needs), with a small number of exceptions in the CALD community, where we found a lack of language skills appeared to impact on the cost and type of plan purchased.

In terms of reliability of access, interview participants raised several issues which were very individualised and directly referenced their own personal internet connection. They highlighted aspects of variability in the quality of home (broadband/NBN) internet connections (particularly speed) at different times of the day. A small number of participants emphasised the weather as also having an impact on their internet service, with rain being a key concern.

Mobile data connections were also said to be variable across the region, with participants reporting patches of variability even within the Horsham township. This was identified to service providers (Optus was noted to have particularly poor coverage near the Horsham hospital), and Telstra was noted to have “dead spots in town [Horsham].” For participants living outside of a township, internet access was having an impact on business performance, with some participants highlighting issues of mobile blackspots slowing responses to new customer enquiries and timely connections with clients.

With all aspects of business administration moving online, micro business owners living in rural areas that are digitally underserved face increasing challenges with banking, invoicing, paying bills, ordering supplies and communicating with customers and financial and government services. Of the 5 micro businesses owners interviewed, all reported experiencing issues with internet connectivity. A primary complaint was that their internet connection was unreliable, with frequent dropouts and unplanned outages. Mobile phone coverage was also problematic, with two owners having little to no mobile phone coverage and one owner unable to choose an alternative provider due to a lack of phone towers in the district. As one participant stated:

I had no phone service for a long time, so customers could leave a message on my phone, but I had to go to Horsham [40 kilometres away] or drive up the hill to retrieve a message. And I couldn't ring them back unless I was in Horsham.

This has severely impacted on this business owner's ability operate on a day-to-day basis and made engaging with customers and potential customers over social media virtually impossible. In addition, this business owner was reliant on email, PayPal, MYOB, and other online platforms to manage the business. Unreliable internet and phone connectivity has meant that this participant was unable to sustain the business and needed to source an income as a part-time employee of another business.

Another business owner ran several micro businesses from their home and relied on the internet and mobile phone to communicate with customers via social media, for banking and for business administration. Intermittent connectivity issues made these tasks challenging on a day-to-day basis:

After hours of battling to get the thing [the internet] to work, I end up giving up and just driving into town to do whatever I have to do.

In terms of regional connectivity, (people's ability to connect to the internet when away from home within the region), interview participants largely recognised that geographically reliable service providers were limited, and most had mobile phone connections with Optus or Telstra. There was slightly more variability in home internet supplier connections, but for many the relationship to a provider was important as this provided some level of in-person technical support for user issues. When interview participants were queried about where they went to for help with internet issues, the service provider was frequently noted as a starting point for information and support, particularly for small business and low socio-economic participants.

The case study below exemplifies the challenges of running a home-based business with inadequate mobile phone connectivity. It also highlights the broader safety issues those living in mobile blackspots can face.

Case Study – Home with no range

Ben set up his home handy man business several years ago in a rural location some 45 minutes drive from a town centre. Despite building a loyal customer base and enough money to maintain his lifestyle, operating his business remained difficult due to living in a mobile 'blackspot.'

The transition from a paper based to a mostly online business system was challenging, as he did not own or use a computer for some years prior to setting up his business. However, he persisted, setting up a satellite internet connection and purchasing a PC. He then taught himself to use several online platforms such as MYOB and internet banking. Eventually he purchased a laptop, printer, and an iPad.

Once he had worked through several minor administrative issues, the only real hinderance to his business was a lack of reliable mobile phone coverage. Like Ben, many of his customers were also in mobile phone blackspots, which meant frequent and costly delays sending and receiving calls and texts. Some of his customers didn't have an internet connection or email addresses either, which made billing very challenging. Sometimes he found it easier to get in his ute to visit them in person to arrange an appointment or to place a paper copy of his invoice with a note in their roadside mailbox.

Of particular concern is that when Ben is out on a job in a mobile blackspot area, he does not have access to any emergency services apps to monitor fire conditions. Given that most of his customers live on bush blocks, bushfires are a very real threat. Ben's mother also lives in a remote, heavily vegetated area and has no mobile reception or internet connection. Ben worries that if a fire threatened the area, his mother will have no way of being notified of the danger she is in.

Access to Hardware

There were a range of issues identified in terms of hardware access to support online engagement. The default piece of hardware used by all participants in the research study was a mobile phone, with varying degrees of utilization by individuals for online activities. Interviews with service providers and service users indicate that many Wimmera Southern Mallee residents have not invested in hardware such as computers, laptops, or printers.

Some participants were able to access hardware through their place of work, with others visiting public libraries and their local Neighbourhood Houses to use printers and computers. One service provider advised that she had several secondary school children who regularly used their service's equipment as they did not have printers or computers/laptops at home. For these children, COVID-19 lockdowns placed them in an even more disadvantaged situation as libraries and other services either limited access or closed altogether.

Several CALD participants identified that their children's school had supported them during COVID with internet access and an iPad for their children to learn with. However, parental interaction with children in using these devices was usually limited, as parents lacked the skills to engage with children using this interface.

Additionally, both service providers to the CALD community and CALD members themselves highlighted concerns with limited hardware access and its impact on developing online skills. Many CALD participants had not invested in a computer or laptop, and this prevented the development of computer literacy skills. This is because their only interaction with this hardware was during English language classes, or in public settings such as the library. Some CALD and low socio-economic participants thought that having access to a computer regularly would be useful and would help them to gain online skills. However, this wasn't identified as a high priority for investment themselves due to the cost and a belief that they were getting by with a mobile phone.

Several participants noted mobile phones were a difficult interface for completing online forms and engaging with some supports. When this was an issue, they tended to seek external support or alternatively, disengaged and did not complete such tasks unless a readily accessible alternative was available (paper form). Service providers noted that they often helped CALD and low socioeconomic participants to complete online forms on a computer when they did not have one at home. Kindergarten forms and passport applications were individually noted by interview participants as areas where a computer was necessary to complete information, and people wanted to make it clear that having a computer to complete online forms was not something everyone had access to, and such forms should be accessible with a mobile phone.

Affordability

Unpacking issues around affordability for internet access across the three demographic areas requires consideration of issues around data plans and mobile phone access options. Product availability is also an important consideration in this space. Individual perceptions of affordability within the study were highly subjective for each interview participant and based on a range of circumstances including the level of

importance placed on internet access, the level of need within the household and, for some, management of a fixed income.

It should be noted here that the limited diversity of reliable plans and access options available to people within the region had an impact on the opportunities available for people to minimize the costs associated with internet access and to personalize workable solutions for individual circumstances. This is more pronounced when the level of digital literacy is low, as people lack knowledge about where to look for workable alternative options.

Mobile Phone Plans

The most basic form of internet access is via mobile phone data. This was a model adopted by most participants, particularly within the CALD community. Within this group, there was a mix of people who had pre-paid mobile phones and phones on a plan. For those who were on a mobile plan, a key issue raised was the limited range of options available in the region. The two main providers of mobile phones (with shopfront access in Horsham) are Telstra and Optus.

Most small business owner participants interviewed stated that they had a limited choice of service provider and plans due to internet and mobile phone coverage/reliability issues. For two small business owners, Telstra was the only provider able to provide some degree of reliability for both internet and mobile phone connectivity, with one of the participants stating that outages were a major concern:

Outages – whether that's because the modem drops out, the computer drops out, the phone's decided it's not connected yet and everything else is... Then you have days were the towers go down. And now we've got to trouble shoot and find out why, whatever, which takes time and energy and is often not in my simple sphere of abilities.

For interview participants in the low socio-economic group, the size of available mobile plans was also identified as an issue. The smallest Telstra plan offers 40 gigabytes of data, and the plan is currently \$55 per month, for SIM only, with additional costs applied if the purchase of a mobile phone is also required. There is no option to go smaller on a data plan (Telstra, 2022). The Optus option had a smaller minimum at 20 gigabytes of data for \$45 per month, (Optus, 2022). Interview participants spoke about not needing this much data, particularly if they also have home internet:

I've got 40 gig data on my phone but there was no option to go lower... so I'm through Telstra and I don't think there was an option to go lower... and I didn't want 40 gig, because I knew that I wouldn't use the data on my phone at home I use the WIFI... I probably only average somewhere between 4 and 8 gig a month in data on my phone

Interview participants felt that it would be helpful to have more personalised options, so people were not paying for data that is not used.

Home Internet Plans

Families with school-age children and small businesses were more likely to have a WIFI connection with a large data plan or unlimited plan. Interview participants were largely consistent in their pricing for home-based plans with unlimited data, stating these ranged between \$60 and \$130 per month, when questioned.¹ Notably it appeared that higher cost plans were more likely to be reported by CALD/migrant and low socioeconomic participants rather than business participants to the research.

Interview participants viewed home internet connections as a fixed cost, that had to be paid, much like electricity and water, and this was particularly notable in families with children and/or business owners:

Internet swamps the phones – we have quite cheap plans for the phones. The phones are about \$20 per month and the internet's about \$50 a month. But they are vital to our work and our business and our child's education.

For others, particularly older people and some CALD community members, internet access was considered a much lower priority and there was less likely to be an investment in home internet. Indeed, prior to the advent of the COVID-19 pandemic, the internet and even mobile phones were not considered a necessity for many older Wimmera Mallee residents as they could go about their daily lives without the need to use either.

Some did not have home internet plans, and relied on visiting other people's houses to access data for their phone:

If she visits some of their friends, they're happy to give her some internet... if visiting someone get chance to use their internet – spoken through an interpreter (referring to the individual being interviewed)

Our people it's a bit different to you know foreign people, in the Karen culture we share stuff - spoken through an interpreter

The following case study illustrates how prior to the advent of the COVID-19 pandemic, one elderly couple maintained their independence with little need for access to digital technology. It is based on interview material, but has been anonymized:

Case study – Joan and Jack's independence 2019

Joan and Jack are a couple in their late 70s living in a Mallee town along the Calder Highway. Joan is reasonably fit and healthy, but Jack is in the early stages of dementia and requires some help from Joan. The couple do not rely on any other person or support service at this stage, but Joan is aware that she will not be able to look after Jack as his dementia progresses.

¹ At the time of writing plans the current advertised price is \$80 per month at Telstra for an unlimited plan (Telstra, 2022) and \$79 per month through Optus (Optus, 2022).

In early 2019, a typical day for Joan and Jack went something like this:

One weekday morning, Joan made an appointment at her doctor for the following day for the couple's annual flu shot. The friendly receptionist reminded Joan to have their Medicare and pension cards with them when they attended the clinic. As neither of the couple drive, Joan also rang the shire council's community car service to pick them up and take them home from their appointment. The community car was staffed by volunteers and the service was provided so that residents like Joan and Jack can attend non-urgent medical appointments.

After some gardening, the couple walked to their favourite café for lunch. After lunch, Jack made his way back home while Joan ran some errands. First, she posted some letters and paid their electricity bill at the post office. Next, she withdrew some cash from the teller at their local bank branch. While she was there, the teller helped her to understand her most recent statement and transfer some money from their investment account to their everyday account. On the way home, she stopped in at the local supermarket for some milk, lamb chops and freshly baked bread.

In the evening, while Jack watched television and read the paper, Joan called her older sister, who lived in Kyabram, and together they planned for Joan and Jack to visit in a few days' time. Joan assured her sister that they were perfectly capable of catching the bus that would take them from their hometown, through Bendigo and onto Kyabram – even though the trip would take several hours. After the call, Joan made a note to buy bus tickets at the local bus depot in town the following day.

Subscriptions and secondary costs

This research study identified a range of secondary costs linked to internet access, which included things such as newspaper subscriptions. There was frustration over subscription requirements to access local news stories, which allows people to keep connected locally. As one interview participant said about the Wimmera Mail Times (local newspaper) subscription: "I hate that everything is paid for – the price of a weekly paper to see one article."

The cost of subscriptions for entertainment, news and other online activities results in significant additional costs to families on fixed income, and choices made around which subscriptions people are prepared to pay for also influence the type of information they can access. Free information comes with significant advertising and pop-ups which people also noted as frustrating and time-consuming. As Olsen and Solvoll (2018) identify, there are also risks associated around paywalls for local news services, and ultimately local community connection:

Customers with lower income and education had reduced their use of local news and started using other sources more. Older customers already subscribing to print newspapers were less prone to changing behaviour, but also reluctant to use paywalled content online, suggesting that newspapers should take good care of print subscribers resisting to be transformed into digital users...the paywall not only reduced use of local news but stimulated use of alternative news sources, particularly among

younger people, local newspapers may consider that even on the local level paywalled content risk substitution (p 188).

This is an important consideration for community connection and engagement to local news and information across different demographics. While the Wimmera Southern Mallee, arguably still retains significant connections to local news through radio and print media, local online news increasingly has paywalls, which encourages alternative and potentially less reliable sources of local communication online, such as through Facebook.

Ability

Ability refers to the skill sets held by individuals in the target groups to access and navigate services and information via the internet independently. A comprehensive skill set includes being able to navigate and update information online, meet government compliance and service requirements and engage in online entertainment and social communications. Judging ability can be subjective, and the research team determined this through the self-assessment of interview participants and a discussion about the ways in which they engaged online.

The research found a range of issues in terms of ability, with a distinct variation between CALD community members and other demographics for the study. CALD community members had significant additional challenges with literacy in English language, and this had a major additional impact on their ability to use digital technology. In this space there were significant individual efforts by service providers to provide supports for individuals to be able to engage online. This included teaching participants to use “Google” as a work around for finding information, although the effectiveness of this was also limited by participants’ English language skills.

Independence

Being free of the control of other people in terms of managing finances, healthcare, and social interactions is a major point of concern for this study. We found that interview participants, particularly within CALD communities and the elderly, had no option but to rely on others to meet necessary online needs, due to limited digital literacy. These people used trusted networks, such as migrant support workers, family members, trusted community leaders and others such as Neighbourhood House workers and library staff to assist with urgent digital access issues.

have to ask a friend to help, or a community member to help, when they send me a message for permit or job – spoken through an interpreter

One woman reported she uses her cousin’s son for help, but this is difficult because she is a single parent and must take her children with her to access this support:

I’ve got my cousin’s son... but it’s hard to go with a kid [her child], I can never go anywhere

When talking to service providers who were assisting people, we found a range of work arounds for people in this space, which stretched the boundaries of privacy compliance, such as having clients share email

addresses and passwords. Individuals struggled to remember and access passwords for email accounts they could not use or monitor without assistance. Many service providers were uncomfortable about having to do this, but also struggled with the alternative, which was not being able to meet client's often urgent needs to access information and communicate online. The hope was that with this support, their clients would develop their skills and one day become self-sufficient:

Every week it's sort of starting the lesson again from the start, over and over again, because simply they don't use it... But still they're coming every week religiously... they drive half an hour for an hour lesson. They want it, they really want to learn, and they know they need it, but it's that repetition it's just over and over, and then they forget their email address, and I say, no wait, I have it here, and do you know your password, oh, no no... I say don't worry, I have it here... so you know I sit here with these people's email addresses and their passwords, but how else?

It was noted that the boundaries of digital support provided by service providers (libraries, migrant support workers and Neighbourhood Houses) often overlapped with activity that should be done by social workers. One provider noted that a social worker was needed to help people understand Government correspondence (e.g., Child FIRST) and assist individuals to respond. There appeared to be a significant gap in available supports for people, particularly in the migrant community to confidently engage with Family Services and respond appropriately. Mapping local services would add value in understanding potential gaps in support activity for CALD communities within the region.

CALD participants did not raise Government services interaction as a priority issue, however, when this issue was prompted, a number did say that they had to rely on others (family, community members or support workers) to explain documents and required actions to them:

how can I do it by myself, I can't even write or speak – I want to be born again so I can speak fluent English – spoken through an interpreter

no-one in my family know how to use [computer]... they don't do study, they work. – spoken through an interpreter

If they [Centrelink] want to talk to me I don't understand, so I don't know if I am in trouble or not. – spoken through an interpreter

every fortnight Centrelink they will catch up with me to talk to me about my situation, and they said, they told me they will call me and I say I don't understand... since then I go to friend's house to ask for help, and since then I never got a call from Centrelink again - spoken through an interpreter

There are some significant issues here around the type of support CALD communities engage with and efforts to encourage upskilling. There were impressive individual efforts made by service providers to support CALD clients individually to upskill, but ongoing issues with literacy and online engagement made this very difficult to progress skill development. For interview participants from CALD communities, there were always more pressing issues than developing computer literacy, such as finding employment and

providing care of children and wider family networks. The type of employment done by CALD participants was low skill and usually involved manual labour. As a result, did not provide opportunities for incidental online skill development. In addition, persistent language barriers, a lack of access to hardware (such as computers), and sporadic engagement in the online space made it difficult to progress skill development at all.

One service provider, who did provide computer skills training, explained difficulties for CALD members in accessing supports and progressing their skill development:

They do night shift, so they sort of sleep during the day and work at night, so its sort of hard for them to then be out and about and sort of finish off their Census, paperwork, because they get home I think at six o'clock in the morning and then they sleep and then they go to work at three o'clock again... so its also sort of the times that they work they find it hard to be in the right place at the right time for the help that they need

Several service providers raised concerns about the level of support that could be provided to CALD communities in the region, as many had arrived after a period of time in Melbourne and were classified as secondary migrants. This was said to limit the Government support that could be provided to assist people with upskilling in English language and digital literacy:

Meant to be people who've been in the country up to five years, but we're pretty loose about that because there's lots of high needs people in the area who have been in Australia more than five years high need groups are going to need longer term face to face to actually get to be able to engage on an independent level... it will definitely take face to face support

In addition, one CALD interview participant said that she received no support at all after her arrival in Australia due to her marital status, but since separating from her husband was trying to get help to learn:

I learn nothing in Australia, because when I came here, I was coming here as a married woman, so when I was with my husband I was always inside, so two years I was inside no study or anything until we separate and then I came here and I started to work, but looking out for like a study, I want to learn something

Low socio-economic participants and retiree participants to the study were a further area of concern, in terms of digital ability and independence. Their limitations stemmed from unfamiliarity with many areas of the internet and concerns about personal risk:

"I'd love to use the internet more - but I'm scared at the moment."

For people in this space, the pace of change in Government services and expectations around assumed skills was impacting on their independence. Issues such as bill payments and engaging with Government services online were key concerns. The requirement to meet Government compliance requirements such as checking in to shops and showing vaccination certificates, were a particular area of anxiety for all groups,

and finding places to engage for assistance were difficult as Government agencies such as Centrelink, which registered vaccination details - referred people to other community groups such as Neighbourhood Houses to support individual issues, despite these organisations receiving no funding to do so:

The service has no capacity to do this work, supporting people with uptake of digital vaccination certificates is a major issue. Other organisations including Council are referring people to neighbourhood houses – taken from WSM Digital Steering Committee Minutes for this project – 8 November 2021.

Linked to this are significant concerns over individual independence and safety for older residents. The case study below illustrates the step change experienced by the elderly couple, Joan and Jack, as digital expectations undergo rapid change:

Case study – Joan and Jack’s independence 2020

Joan and Jack had managed to remain largely self-reliant and independent throughout the early stages of COVID-19 and into 2020, despite Jack’s dementia having progressed to the stage where he cannot be left unattended. Then, in early 2021, their lives were dramatically impacted by two, significant events: the advent of COVID-19 vaccinations and the closing of the only bank branch in the town.

With no car, no mobile phones, no email addresses and no internet access or connection, the couple sought support from their local community service organisation (CSO) for assistance in setting up a MyGov and Medicare account. With their local bank branch now replaced with an ATM, the couple also sought support in obtaining a direct debit card, as there was no public transport to a larger, nearby town that still maintained a bank branch.

Apart for obvious challenges in setting up these various online accounts, the CSO worker also had to help Joan and Jack create the usernames, passwords and PINs they would need to access these services. The CSO worker wrote everything down on a piece of paper for the couple, as they had expressed some fear that they would not be able to remember so much information.

Over the course of the next few months, Joan and Jack would walk to the CSO to ask for assistance when they needed to access their MyGov, Medicare or bank accounts. Each time, they would bring the piece of paper with their usernames, email addresses and passwords with them. Sometimes they would be assisted by the same worker, but sometimes it was a different worker.

Then, in October 2021, the couple approached the counter in some distress – the slip of paper with their personal information had been lost and they needed to download their vaccination certificates prior to Jack attending hospital for day surgery. They couldn’t remember their email addresses or usernames to change their passwords and they had found trying to call the different services using their landline very distressing and confusing.

Over many, long phone calls made over several days that involved Jack and Joan having to relocate marriage certificates, pension cards and similar documents, the CSO worker was able to create new passwords and PIN numbers so that the couple could access these essential services once more.

By mid 2022, Joan was feeling at the end of her tether. Even though many of the COVID-19 restrictions had been lifted, the couple rarely went anywhere or did anything outside the house. A visit to the café meant showing vaccination certificates and filling in sign in sheets and if there were already two tables full, the couple were turned away due to density limits. Not to mention the fear of catching COVID made Joan very anxious.

Even her once cherished nightly phone calls to loved ones had dwindled. The couple's well-meaning son, who lived in Melbourne but visited when he could, had bought her a brand new mobile phone. He had tried to buy the simplest device on the market, but Joan still found it difficult to make a call. Worse, the thing would beep at her throughout the day and night with phone calls from people she didn't know. Her son had warned her not to answer them in case they were scammers. So Joan had resorted to not answering any calls – ever – in case they were just pretending to be from the medical clinic or her friends or relatives.

Despite still being in good health and managing their home and garden, Joan was feeling very lonely and frightened for her and her husband's future.

The loss of independence that the rapid digitisation of services and supports has profound implications for independence and social engagement for the elderly residents of the Wimmera Southern Mallee. Indeed, age-based discrimination preventing engagement and communication with Government services, healthcare and financial services should be a concern for Government, particularly with limited local social welfare supports in the Wimmera Southern Mallee that can provide safe physical assistance.

Similarly, for CALD community members (discussed earlier in this section), pathways to independence are severely constrained by limited digital literacy skills, and limited opportunities to develop these.

Accessing government services

All service providers noted a strong demand for their assistance in using online government services such as MyGov and the Services Victoria app during periods of COVID-19 restrictions. Of those seeking support, the majority were in the 60 and over age range. Both service users and service providers reported many instances of people needing to upgrade their mobile phones to use these services. As many again sought help in learning to use these mobile phones. One small business owner living in a rural location stated that she personally knew of a dozen locals who had been forced to upgrade their mobile phones to use the Services Victoria app, despite their older handsets still being in good working order. This business owner and her partner had also needed to replace their older, though still in good working order, mobile phones as their older phones were incompatible with the Services Victoria app.

By far the biggest challenge all participants experienced was in using the MyGov online service system and the MyGov app. The necessity of having MyGov and Medicare linked before allowing a vaccination

certificate to be accessed and either printed or downloaded was found to be the most problematic issue. Regarding the Services Victoria app, most service users, service providers and small business owners interviewed reported experiencing challenges in uploading their vaccination certificates from Medicare to the app. Few service users were able to perform this function without assistance from family, friends, work colleagues or support services such as libraries. Service providers working with CALD participants spoke of their clients needing significant assistance in this task:

With the vaccination certificates, it's almost mandatory MyGov by stealth. It's something that you really need, but this is the problem, even when people have MyGov accounts they don't necessarily know how to use them and can't engage with them over time or regularly, so then you get to the point of sort of trying to support somebody to re-access a MyGov account and that's like virtually impossible – and sometimes you have to set up a new account or also again with that sort of pay as you go plans things like that people's phone numbers might change and change more frequently, so you lose that continuity, that's a difficult one with MyGov as well because you need that number for your access codes. So, it's sort of understanding, with those kind of digital accounts there's that administration that goes with that that you have to be aware of.

Providing this level of assistance to people is a time-consuming and difficult task, and the complexities of accessing all the required data, including accurate personal details and information to complete the task to assist people in CALD communities was a significant issue for service providers.

One service user reported that he sought help to link his Medicare and MyGov accounts at his local public library. However, the COVID-19 restrictions at that time required all library patrons to provide evidence of their vaccinations before they could enter the building. This meant that despite being fully vaccinated and “trying to do the right thing,” this service user was not able to enter the library for assistance.

A service provider in a small Mallee town explained in her interview how their service had struggled to respond to the demand from older residents needing assistance using MyGov and other online services:

We've been a bit slammed with MyGov enquiries and how people get connected and all that sort of stuff. It's been a bit crazy as we're all working our way through the systems. Some people haven't got a MyGov or someone else has set them up and they don't have an email or don't have a smart phone... one yesterday took two hours, and we just don't have that kind of time.

One reason identified by the service provider for why her service was so busy is that the shire council, Centrelink, medical clinics, and other local services were referring residents to her service.

In an attempt to alleviate some of the demands on herself and her staff, this service provider ran a small workshop on accessing MyGov but described this initiative as ultimately “pointless” because:

...everyone's got a different mobile phone and you know, 'my son set this up for me and I think he used his email address and I don't know what the log in is'. So it's really a case by case situation.

One service provider indicated that older residents and those from lower socio-economic backgrounds were also unfairly disadvantaged by the online/app MyGov platforms, stating that:

People feel a bit helpless, particularly older people whose families might be in Melbourne or away...

Another service provider indicated that accessing MyGov was the primary reason patrons were attending his service centre.

MyGov is the big one at the moment. Even accessing things like Medicare details, Centrelink. Another one for some people is their pay summaries for the financial year, because they're all done through MyGov now. And if you don't have internet, or a mobile phone, it's really hard.

The case study below illustrates the incredible difficulty members of the Wimmera Mallee CALD community face when trying to access MyGov services:

Case Study – Two interpreters, two hours on hold for MyGov access

45-year-old “Max” is a Karen refugee living in a Wimmera community. He has lived in Australia for six years but requires a translator for even basic conversation. He cannot read or write in his own language or in English. He is attending basic English language lessons with the support of an interpreter.

He needs help to display his vaccination status on his mobile phone, to be able to access local shops and services, and to continue to attend language classes.

A local support worker whom he knows well sits with him and downloads the Service Victoria app to his mobile phone. Then they attempt to log in to MyGov to access his vaccination certificate to link it to his phone.

Max does not know his username or password for MyGov. The worker uses their phone to call Centrelink to obtain access, asking the local interpreter to explain what they are doing, so that Max understands. After some time on hold, the worker is able to speak to someone at Centrelink. Centrelink will not provide access to Max's information to the worker and requires an interpreter to speak to Max to ensure he consents to this information being shared.

The worker advises Centrelink they have a local interpreter present who could do this, but Centrelink requires their own interpreter to translate. It takes over 50 minutes to access this support.

The Centrelink translator confirms Max's address and date of birth with him, but his name has been registered incorrectly on his Medicare Card. Max needs to confirm his identity with his bank account details and landline phone number, but he does not know this information, and does not have these details with him. They work through a series of alternative identity options, but Max cannot provide any of these either.

The information on his Centrelink record needs to be amended, and this cannot be done until his identity can be confirmed. Max cannot confirm his identity without additional personal details including financial information, which must be shared with two interpreters and his local support worker.

The conversation with Centrelink is terminated until Max can find and share this additional information. In the meantime, Max is unable to present his vaccination status and due to State Government regulation technically cannot attend his English language classes or visit a migrant support worker to assist him with his Centrelink issues.

The initial process with Centrelink has taken over two hours, and there has been no resolution. Max will have to repeat this process again next week when he is next in town if the local interpreter and migrant support worker are available to help him.

Max has been largely a passive participant in the process, and it is difficult for him to see why this issue is important to resolve. There is a risk that his identity logjam with Centrelink will remain unresolved unless the migrant support worker ensures it is followed up.

An over-reliance on digital and mobile identity

A significant finding of this study was the way in which mobile phones have become fundamentally linked with identity. Smart phones are now one of the primary methods used to authenticate identity when accessing Outlook, Gmail, and other email platforms; for banking and internet transactions; for picking up parcels from the post office or freight service; and now with pandemic restrictions, smart phones are used to 'check in' to organisations and venues. Over time, and intensified by the COVID-19 pandemic, we have come to rely on our mobile phones as critical to accessing in-person and online services that require authentication of identity.

This dependence on mobile devices is problematic for several reasons. Firstly, online, and other services that require primary (for example through the use of QR codes) or secondary (in order to log onto MyGov, MYOB etc) authentication are making the broad assumption that 'everyone' either owns or has access to a smart phone. Yet as is well recognised, the Wimmera Southern Mallee has an aging population and a relatively low socio-economic profile (Australian Bureau of Statistics, 2020). As this research study has found, the elderly and low-income Wimmera Southern Mallee residents generally have less access to, or the ability to use, smart phones. As one service provider noted:

Older people use their mobile phones for getting a text and talking to the kids. Doing anything more than that confuses them, so they come in here to get help. But there's only so much we can help them with.

A rise in the number of services requiring mobile phone authentication may therefore be further marginalising a sizable portion of the region's population. Members in the CALD communities interviewed used mobile phones similarly to elderly participants, with a focus on texting and phone calls, with some other limited entertainment use such as YouTube.

Another issue for Wimmera Southern Mallee residents is mobile phone blackspots. As previously outlined, many participants in this study live in areas with little or no mobile phone service and this isn't just an issue

for the more rural and remote communities. Those in mobile blackspot areas commonly rely on internet connection to communicate, work, undertake business, shop, and pay bills etc. But many of these services now require mobile phone numbers as secondary authentication. For example, some workplace email accounts now require workers to confirm their identity when logging into their email account by sending a code to their mobile phone number. This 'double' authentication has been adopted as a defence against malware, spyware, and scammers from accessing an organisation's email server. Obviously, this system is problematic for those with little or no mobile phone coverage at home.

Regarding identity more generally, one service provided noted that many older people whom she assisted in accessing their MyGov accounts found the necessity to upload and download identification documentation particularly difficult:

So if they've got to upload their driver's licence and that sort of stuff, they don't know how to do it. You used to take it to the library, photocopy it, staple it to the form and send it off. Not anymore.

Not only has proving an identity become 'digitised', but it requires access to computers, printers and scanners and the know-how to use this technology. As well, seeking assistance from others to perform such functions also has implications for peoples' privacy and data security.

Perhaps the most concerning issue in regard to the growing reliance on mobile phone authentication systems is that a person's identity is now increasingly being linked to a particular eight-digit phone number. Unlike a vehicle licence, Medicare, or passport number, which remain fixed, mobile phone numbers can be changed by the user. The reasons for needing to change numbers vary, but generally, it is not a task people undertake lightly. Like changing a physical address, changing a mobile phone number can be time consuming and onerous, as various people and organisations need to be provided with the new number. But primary and secondary authentication systems have added another level of complexity and difficulty. This can further disadvantage those who need to change their mobile phone numbers for security and safety reasons.

The case study below demonstrates this phenomenon and highlights the many difficulties the linking of identity to a number can create.

Case Study – mobile identity

Alisha is young working woman living in West Wimmera. After many attempts, Alisha successfully escaped an abusive relationship and relocated from the small town where she lived into a larger centre some distance away. To make it harder for her ex-partner and his extended family to harass her, Alisha had purchased a new pay-as-you-go mobile phone with a new number and destroyed the SIM card and her old mobile phone.

As she couldn't afford to have the internet connected at her new unit, she needed to phone the various services and businesses to have her new number recorded and her old number deleted. This process took several days over her lunch breaks and much of this time was spent on hold. By far the most difficult and frustrating issue she encountered was when she tried to access her MyGov account to download her

COVID-19 vaccination certificate. Using a friend's Wi-Fi, she downloaded the Services Victoria and MyGov apps to her phone. But when she tried to log onto MyGov, she realized that the app was sending a security code to her old mobile phone number – which no longer existed.

After several, frustrating attempts, Alisha was forced to create an entirely new MyGov account, which took several more hours. It also meant creating an entirely new email address as her old address was permanently linked to her old MyGov account.

Digital security

The rise in digital communication, whether by phone, email or online, is presenting many digital security challenges. For those with little or no digital literacy, their digital security is easily compromised due to the sophistication of many malware, spyware and scammer programs.

All participants in this study reported a sharp increase in phone and email scams during the COVID-19 pandemic. One of the most common was where service users would receive a text purportedly from Australia Post advising them that there was a parcel waiting for collection at the post office. The user was then asked to click on a link, which led them to a scam site.

One service provider stated that some people accessing her service were not even aware that they were being scammed:

We get people coming to the counter saying, 'I have to do da da da da because I got an email saying I have to.' And we say, no you don't. Do you actually know this person?

We did get this one older woman a couple of weeks ago who was actually standing at the counter when she got a phone call. And she said to us, 'they're saying I have to put in my bank number' and we just said to her 'hang up!'

This same service provider also described another occasion with a different, older woman who had responded to an email scam and sought help to 'undo it.'

Other participants highlighted concerns around parcel scams, bill scams, and unsolicited credit card charges on their statements which had to be addressed:

I got my bankcard statement and I noticed that there was a small amount coming out of my credit card account to Apple, and anyway I thought that's strange I reckon I've paid one of those before and I checked it out and in the prior month it was the same... I think it was for \$13.99, something like that, and I rang Apple... and he said we have not got an account for you and certainly we don't have that credit card number on your account, so anyway he said what I'd suggest is you scrap your credit card, somebody's got your number somehow

A further concern identified was unsolicited offensive spam material to email addresses which couldn't be prevented without a change of email address:

Somewhere along the line, somebody got hold of my email address and I'm now getting, not abusive, but they're pornographic type text messages regularly every day, every night, I've always got to clear between 30 and 90 at a time, I've got to clear them, I'm just getting sick of it. I've been to Telstra and they won't do anything...

There was a strong level of frustration and fear expressed about where they can go to for in person advice and assistance. Participants consistently said that there's nothing you can do about it, and a high level of vigilance is required to prevent being scammed and to address threatening, abusive, and pornographic material they may receive unsolicited.

A further issue around digital security is that of identity security, which is often shared with service providers assisting low socio-economic and elderly community members seeking help in creating MyGov accounts and doing online activities such as banking:

We have to help them set up an email, that we know they will never use again, and then they have the problem with coming up with an email name and a password – something that they are going to remember. And we try to explain to them, 'look, we don't need to know your business. Your privacy is the important thing here'. And they're like, 'oh, I don't care, I trust you.'

Same with online banking. They come in and want you to pay a bill for them. We have to say well we can't really do that for you. Trying to explain that if I type in a wrong number, their money might go to someone else.

This quote demonstrates that not only is the service provider privy to vulnerable people's private information, but that they are being entrusted with it, which places the service provider in a morally and legally precarious position. The quote also indicates that this service provider is spending a great deal of time assisting people undertake their everyday business and other activities. Notably, this service provider stated that assisting customers manage their 'online' lives was now the most time consuming and intensive work her staff undertook daily – and such work was not the organisation's core business.

Further entrenchment of inequality for low-income families and children in education

Having to home school children during the COVID-19 lockdowns was particularly challenging for low-income families. Many families could not afford internet access and/or did not have the necessary hardware, such as computers, laptops, iPads, and printers. Where such items were supplied by the school, parents were anxious about equipment breakages or losses. As one working parent observed,

At one stage we had one [an iPad] from the school but it just ended up being something else to worry about. Until we feel [our daughter] is really, really responsible, we don't want to send her on the bus with thousands of dollars' worth of equipment. She's too little and does silly things sometimes.

Other parents were concerned about online safety and security. For younger children, supervision while they were online was less problematic, but for older children and teenagers, parents worried about them

accessing inappropriate material. For some low-income households, parents were themselves experiencing low digital literacy so did not feel confident setting up parental security systems on their children's devices. However even those parents with high digital engagement were aware that standard parental security systems are relatively easy to by-pass.

Service providers spoke of how secondary school children relied on their service for accessing computers, printers, and scanners and to access the internet for research. One provider observed that while some children have access to the internet over their mobile phones,

...it's impossible to study using a phone and they don't have the data to hotspot to a laptop or whatever.

This same service provider also reported that some children attended her service to do schoolwork because they couldn't study at home due to family violence, substance abuse and other issues.

Of particular concern is that some low socioeconomic and CALD families had little or no access to the internet for home schooling. As one participant observed, their children's school could not supply internet dongles to every family who needed them. This family made the decision to prioritise internet access at the cost of other household expenses so that their children could be home-schooled:

Currently I pay \$130 [per month] and sometimes I struggle to pay it... home-schooling, that's what actually made us get the WIFI and broadband put in because we just had the internet use through our phones but it wasn't fast enough for the school it kept cutting in and out and stuff like that

For this family, access to the internet is clearly a high-priority necessity, on par with water and electricity. This finding was replicated across all targeted groups, except for the elderly and some migrant community members.

Moving forward – opportunities for the future

This research study has highlighted several challenges and opportunities for the Wimmera Southern Mallee in addressing digital disadvantage in the region. Analysis of the data collected for this study indicates that the COVID-19 pandemic has further entrenched digital disadvantage among those who are already disenfranchised and marginalised. These can be summarised as:

- A lack of infrastructure and technology to support reliable internet connectivity and mobile communication across the region – not just in more rural and remote areas
- Limited one-on-one/face-to-face training and support in using digital technology
- High cost of internet and mobile phone plans, computer and communications hardware – prohibitive for those experiencing financial hardship
- Discrimination against those from low-socio economic backgrounds and the CALD community
- Loss of independence - particularly for older and elderly residents and CALD community

- An over-reliance on digital and mobile identity – which can lead to data security issues
- Further entrenchment of inequality for low-income families and children in education

Issues of internet access were also highlighted strongly in another recent Wimmera Southern Mallee research study into home-schooling during the first lockdown during the 2020 COVID-19 outbreak in Victoria.

More options for communication and connection

Recent studies have found that video platforms such as Zoom can reduce loneliness, isolation and depression in older people (Daly, Depp, Graham, Jeste, Kim, Lee & Nebeker, 2021; Shapira, Yeshua-Katz, Cohn-Schwartz, Aharonson-Daniel, Sarid, & Clarfield, 2021). For the Wimmera Southern Mallee's aging rural population, isolation (due to distance from services and a lack of public transport) was already a factor for many elderly residents. Therefore, interactive communication tools could offer reasonably affordable and accessible ways for the region's elderly to keep in touch with family and friends, as well as with medical professionals and other support services.

Likewise, for those living in mobile phone blackspots, satellite NBN can ensure rural residents have real time access to emergency services (such as bushfire and pandemic alerts). They can also communicate via text-based communication applications such as What's App, Messenger and Signal and video platforms such as Skype and Zoom – all of which can operate using an internet connection rather than mobile phone networks.

Cheaper and more wide-reaching marketing opportunities and online financial management systems for micro and small businesses

With many small businesses forced to move some or all of their business activities online during the pandemic, some have realised that using social media, free website programs (such as Wordpress) and subscription emails has become a very effective way to market their products and boost sales. For those who offer services rather than goods, the ability to digitally sign and send documents (using software such as DocHub) and online scheduling platforms (such as Doodle) can save on the need to travel to access hardware such as printers and scanners, make phone calls and send texts.

One small business owner's sales had increased considerably during the COVID-19 lockdowns primarily because of the necessity to move her marketing online:

All of the venues where I would normally have work weren't going to be open... so I needed to market myself somehow and just use Facebook, and I've done more commissions in the last 18 months than I'd done in the previous 10 years. [Online marketing] is better targeted and therefore more useful.

For this participant, the internet gave her the marketing reach more traditional venues such as local farmers markets simply cannot. She was also able to put less time, effort and money into marketing and selling her product. Similarly, this small business owner used Facebook Messenger, email, and texts as her primary methods for communicating with her customers, rather than making phone calls. She described phone calls as being more intrusive, with customers able to choose if and/when they respond to texts and emails.

Online digital and ICT training platforms

While service users, service providers and small business owners all reported negative experiences with accessing and using government services apps, several service providers interviewed spoke highly of a Federal Government online training program, Be Connected. According to the website, the Be Connected program is a Federal Government funded initiative run by the eSafety Commissioner designed to assist all Australians to gain and develop their digital skills. The program is a free, self-paced and ranges from topics for absolute beginners (what is a computer and what is a mobile phone; using the internet, setting up and using an email account) to more advanced courses, such as how to avoid scams, using Zoom and choosing an internet plan. The Be Connected program can be undertaken in the region at locations such as public libraries, Neighbourhood Houses, and other non-profit community-based organisations.

Service providers sign up for the program as partners and are then provided some training and funding to run the program. All service providers interviewed said that the program was user-friendly and particularly beneficial for elderly users and those from low-socioeconomic backgrounds who may be either unfamiliar with digital technology or who for a variety of reasons did not have a computer or mobile phone (such as those on low incomes or those with low cognitive skills or other abilities).

As one service participant noted,

It's probably for those [seniors] who aren't comfortable with technology but realise they have to get comfortable so that they can still control their own lives in this day and age. But in the case of the low socio-economic groups, they don't have their own computers or internet access or enough internet access at home to be able to do it at home. I think also it's easier if they come in here and do it because there's no distractions and if they lock in a time to do it then it's like school I guess.

Another service provider used the example of their partner to illustrate how user-friendly the program is:

... my partner, who is older than me and hadn't learned a lot about computers, he found it really beneficial. It allowed him to just sit down and just play in a safe environment. And if he tried something out but wasn't sure, he could go back to the video and revisit it anytime.

When asked about engagement with the Be Connected program, service providers advised that advertising was predominantly through word-of-mouth and internal advertising via their existing networks. This suggests that service users would need to be engaged with either the community service provider itself, or another local service or service user with links to the service provider to be aware of the program. The issue here is that those who are already disengaged and/or marginalised within their community may be missing out in participating in the program and the opportunities for digital engagement that it may provide.

To foster positive engagement, one service provider had signed up a local seniors walking group:

They go on their little walk and then come in here and do their Be Connected programs, with their coffee, then they go home. And they seem to like it.

This service provider indicated that the walking group was predominantly made up of recent retirees who prior to retiring were quite digitally engaged, but with the pace of change, particularly during the COVID-19 restrictions, they were seeking support in understanding and using the newer technology.

From discussions with service providers, it would seem user friendly and free programs such as *Be Connected* may be of assistance in addressing digital disadvantage for Wimmera Southern Mallee residents. However, further investment in engagement strategies will need to be made if the most marginalised and disengaged residents are to take advantage of such programs.

It must also be noted that these opportunities can only advantage those in most need of these services if the necessary digital technology and infrastructure is *available, accessible, and affordable*.

Recommendations for future work

There is little doubt that the advent of the COVID-19 pandemic has reshaped how and in what ways people go about their daily lives here in Australia and throughout the rest of the world. This extends to the digital world and how digitization has changed how we shop, socialise, conduct business, and manage our health and wellbeing. While there was already a shift underway towards the 'digitization of everything,' the pandemic has hastened this shift and extended its reach considerably. Along with the many opportunities such a shift has created, it has created several challenges: particularly for the elderly, low socio-economic and CALD communities. This research study has identified several ways in which already digitally disadvantaged Wimmera Southern Mallee residents have become further disenfranchised in the move to an 'everything online, all the time' economy.

The research interviewed participants from three key demographic areas in the Wimmera Southern Mallee to complete this research, low-income families and individuals, small/micro businesses, and CALD/migrant groups. The report found that there were key areas of overlap for all groups in terms of access, and affordability, with all groups challenged by connection access and the limited range of service providers, and internet/mobile phone options. However, there were also a range of concerns around ability, which showed a significant difference based on English language comprehension and literacy in CALD groups, when compared with and small business and low socioeconomic groups. Exploring the scope of ability as an issue revealed that there is some overlap between this group and elderly users, but literacy is a key factor in supporting inclusion.

To address some of these concerns, 16 recommendations have been made about how to reduce this gap for people, to best support everyone in the Wimmera Southern Mallee to stay independent, engaged and connected to the services they need, when they need them.

RESEARCH FINDINGS	RECOMMENDED ACTION
<p>People across the Wimmera Southern Mallee remain impacted by limited coverage and quality of internet services</p>	<p>Continue to advocate for and fund additional options to improve fixed line, satellite, and mobile internet coverage across the region, including shared infrastructure networks</p>
<p>People from low socioeconomic backgrounds and CALD communities can be solely reliant on mobile phones for all online activity</p>	<p>Ensure all State and Federal Government websites and forms are mobile phone accessible as this is the <i>only</i> mode of internet access for many WSM people.</p> <p>Consider options to support low cost/free access to laptop computers via English language and digital literacy programs to improve opportunities for people to use other forms of hardware and build online skills</p>
<p>There is a lack of diversity in mobile phone plans for WSM residents</p>	<p>Engage with mobile phone providers and our political representatives regarding the findings of this report, and explore options for reduced cost data plans for mobile users with limited data access needs</p> <p>Deliver a localised education campaign that teaches people how to assess best value internet and mobile plans</p>
<p>Online subscriptions can add significantly to costs for people engaging online, and limit people's access to local information</p>	<p>Undertake additional research to understand choices made around subscriptions and sources of access to local news information</p>
<p>A loss of independence because of low digital literacy which forces a reliance on others to support urgent online needs</p>	<p>Map existing support networks for CALD community to assess gaps in support and funding at local sub-regional level, with a particular emphasis on social connection, and literacy, including digital literacy.</p> <p>Advocate for increased investment in rural social workers in the region with digital technology training to support CALD communities.</p>

	Extend funding for existing digital training options and increasing their profile in non-digital media (e.g., newspapers) to encourage wider participation.
Accessing Government services online is not a workable solution for people with low digital literacy	Investment in alternative and accessible approaches such as dedicated phone and in-person contacts available in region for people to connect with Government services (e.g. Centrelink, Medicare)
People's skills in accessing services online do not keep pace with the rate of change and expectations	Local training programs for senior citizens and those with low digital literacy such as the Be Connected program should be more widely advertised to seniors and low socioeconomic groups within the WSM to encourage participation
Digital security is an issue for people with low digital literacy	<p>A far greater investment in active supports (rather than passive reporting approaches such as Scam Watch) to help people with limited digital literacy to spot online risks and scam material and respond appropriately is needed.</p> <p>Additional research to understand the extent of these impacts on WSM residents is also important to quantify the level of personal and financial impact scams are having on people within the region.</p>
Internet access and necessary hardware can be lacking for school students in the Wimmera Southern Mallee outside of school settings, and gaps and learning from home has exacerbated this gap for some children in the region	<p>Ensure all public schools have sufficient dongles, laptops, and iPads so that all children can undertake schoolwork at locations other than school.</p> <p>Supervised safe spaces for children to study if they are unable to study at home due to family violence</p>
Businesses need reliable internet across the region to be competitive	Address mobile blackspots and cost of access for rural internet services

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