Homeless and Connected:

Mobile phones and the Internet in the lives of homeless Australians

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EXECUTIVE SUMMARY

This project set out to research how a group of consumers – people experiencing homelessness – access and use mobile phones and the Internet (covering fixed and wireless Internet sources). The aim was to provide the evidence to inform the delivery of public services by community, welfare and government agencies to this group of consumers, and to develop and improve on telecommunications policies and initiatives that address the needs and challenges of consumers facing hardship, including homelessness.

Traditional approaches to researching homelessness and digital technology have focused on barriers or 'gaps' in accessing technology, known as the 'digital divide'. This project goes beyond this approach by recognising that many people experiencing homelessness are already mobile phone and Internet consumers that have unique patterns of ownership and use, which correspond to their homeless circumstances (Newman, Baum and Biedrzycki, 2010, 2012; Le Dantec, 2010; Yoshida, 2010). A confluence of trends –shifting patterns of connectivity, and a push to online and mobile delivery of all high volume or 'heavy user' government services – has made researching these patterns an urgent priority.

The project involved working with the support of the national peak advocacy body for people experiencing homelessness, *Homelessness Australia*, and seven homelessness accommodation and support services in inner and outer metropolitan Sydney and Melbourne.

In summary, it was found that for the 95 families, young people and adults who participated in the study:

- A mobile phone was essential – the most important uses of the mobile phone, after contacting friends and family, were: contacting emergency services (52%); support services (49%), and medical assistance (48%).
- Most had a mobile phone – 95% had a mobile phone and 77% reported having a smart phone.
- Staying connected was difficult – shortage of credit, service and power restrictions, number changes and handset loss resulted in partial or restricted access to one or a number of mobile and Internet services.
- Significant impacts resulted from connectivity limitations – such as not being able to contact essential support and emergency services, being at physical risk without the ability to reach help and not meeting basic eligibility requirements of some government services.
- Users had a wide range of connectivity and affordability strategies – using a pre-paid mobile service and alternative Internet sources such as free Wi-Fi hotspots and Internet access in public libraries and accommodation centres were key measures for keeping costs down and staying connected.
- Mature male adults who were single and experiencing long-term homelessness were more likely to be without a mobile phone and not use the Internet – this group made up 60% of those with no mobile phone access and of these 40% reported they didn't use the Internet at all.

- Vulnerable consumers with complex needs, that is, with a set of overlapping health and support needs[†], had the most payment difficulties and debt relating to mobile phone services.

For agencies in the process of, or embarking on the reform of their services, these findings point to the potential to use online and mobile platforms to deliver services to and engage clients who are experiencing homelessness. Many in this group are not laggards in technology – indeed when it comes to mobiles – they are leaders. At the same time, while having a mobile phone is commonplace for many people experiencing homelessness, staying connected is a struggle and access is not guaranteed. Moreover, within this population, there are some who are especially likely to be without any form of mobile or Internet technology and experience serious difficulties with the cost and terms of post-paid plans.

It is important to recognise that the imperative to have a mobile phone is not primarily driven by a desire to own or upgrade to the latest gadget. For people experiencing homelessness this is a matter of survival – there is no ready alternative like a household telephone or broadband connection to use when homeless. A wide range of activities which constitute fundamental forms of social and economic participation, including accessing emergency services, medical help and crisis support, hinge on ready access to a phone. With large-scale patterns of changing social connectivity and the shift of government and other services to online modes of delivery, the need to have a mobile phone – with access to the Internet – is greatly magnified.

This imperative comes with a cost. For online and mobile services to be accessible and beneficial to this group, the cost of access and the specific barriers and limitations facing consumers who are homeless must be addressed. There are a number of ways that providers of mobile services as well as government and support services can contribute to this goal.

A set of recommendations aimed at these groups, and guided by the principles of *continuity of service*, *affordability* and *flexibility of access,* are detailed in the final section of this report. In summary these are:

Recommendations for Mobile Service Providers:

1. Specify homelessness in financial hardship policies adopted by mobile service providers and ensure that customer service operators are aware of the special need for people affected by homelessness to maintain continuity of service when negotiating bill extensions and payments.
2. Ensure cost effective methods for consumers to reach staff and teams with responsibility for hardship across multiple platforms such as direct contact through 1800 number[‡], web form, call back options, Live Chat, Facebook, apps and via Financial Counselling and Homelessness services.

[†] Rankin and Regan (2004) provide a definition of 'complex needs' as not related to individual characteristics but a "framework for understanding multiple, interlocking needs that span health and social issues" (p. 1).
[‡] Dependent on the implementation of the new framework for call charges from mobile phones to 1800 numbers developed by ACMA and the Telecommunications Industry.

3. Introduce new aid and subsidy programs (or extend existing programs such as Telstra's 'Access for Everyone' program) to support access to mobile and data services (for example, handsets, credit recharge, discount options and Wi-Fi access).
4. Consider ways assistance programs can be provided that works effectively across all mobile service providers, for example a way for community agencies to recharge their clients mobile service, a card with call and data credit that can be used with any pre and post paid mobile service and provider, or a subsidised or free voicemail and inbox messaging service, again, for use with any pre and post paid mobile and service provider.
5. Offer more widely assistance programs and available discounts through existing partnership programs (for example, the SMS/call packages for support providers through the *Youth Connected Program* from Vodafone Australia Foundation (VAF)) and initiate outreach programs in collaboration with homelessness services (including specialist legal clinics) to, for example, provide on the spot assistance to clients with telecommunications matters.
6. Work in partnership with support and housing providers, libraries, local councils and users of these services to develop and promote affordable Internet access and provisioning solutions that integrate with where and how people experiencing homelessness use digital technology (for example, Internet access points and self-service terminals, Wi-Fi hotspots, options to switch to available Wi-Fi services, low cost and pay-per-use mobile broadband, power recharge stations and shelters for securely storing equipment).

Recommendations for Government Agencies and Support Services:

1. Ensure cost effective contact methods and multiple access points to services (especially for high volume services) such as 1800 or 13/1300 numbers[§], call back options, Facebook, Live Chat, SMS and other social media, web-based platforms and apps.
2. Build digital capacity of homelessness services through adequate funding and resourcing to integrate mobile, social media and other web-based platforms into regular contact and support activities (if any of these are considered to raise privacy concerns, these should be addressed as early as possible in development).
3. Equip staff of homelessness services with the skills and resources to provide information and referrals on telecommunications bill, contract and debt matters, and to be able to make direct and immediate contact with the specialist hardship teams of mobile service providers on behalf of their clients.
4. Preserve non-digital contact and service points for customers who are non-Internet users and those without access to mobile and online technologies.
5. Work in partnership with mobile service providers, libraries, local councils and service users to develop and promote affordable Internet access and provisioning solutions that integrate with where and how people experiencing homelessness use digital technology (for example, fixed Internet access points and self-service terminals, Wi-Fi hotspots, options to switch to available

[§] As above.

Wi-Fi services, low cost and pay-per-use mobile broadband, power recharge stations and shelters for securely storing equipment).

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INTRODUCTION

Mobile phones and Internet access have become central to the lives of Australians – for communicating with friends and family, making new social connections, for safety and security, for accessing online services in health, housing and education, as a financial tool and as a platform for entertainment and creativity (Given et al., 2009; ACMA, 2013).

With the widespread growth and take up of mobile digital platforms, including smart phones and other Internet-enabled devices, key questions arise as to how consumers who experience high levels of social disadvantage and marginality are faring in this large-scale transition: what do we know of the access and use of mobile phones and the Internet by these groups and what specific opportunities and challenges come about because of these technologies and the cultures they create? If these technologies can now be considered "essential consumer utilities" (Given et al., 2009), what provisions for securing appropriate and affordable access and use might be required to meet the specific needs of this part of the Australian population?

Homeless Australians encounter multiple levels of social disconnectedness, disadvantage and marginality (Forrest, 1999). In Australia there are an estimated 105,237 people experiencing homelessness, up from 89,728 in 2006 (ABS, 2012). Within the homeless population there are subsets that are especially or doubly vulnerable. Sixty per cent of the homeless population are under 35 years of age and 26 per cent are families with children (26,790 people, or 7,483 families) (ABS, 2006, 2012). A large proportion of homeless youth and families are under-counted because 'couch surfing', staying with friends and family, and living with the threat of violence or in insecure housing are not as visible, or as easily recognisable as homeless experiences, as 'living rough'.

Little is known about the specificities of mobile and Internet access and use among homeless Australians, but there is growing evidence that many are active users of mobile phones and consumers of online media, social networking sites and apps (Adams and McLeay, 2011; LIMAC, 2009; Newman, Baum and Biedrzycki 2010, 2012). Indeed, there are strong indications that mobile phones may not simply complement, add to or replace existing fixed phone and Internet sources – they may be the only form and play a unique role in their lives.

The aim of this study was to find out the role of mobile phones and the Internet in the lives of people experiencing homelessness, with special consideration of whether and what kinds of mobile phones and services are in use, what they are used for, whether and how the Internet is accessed, what services are accessed online and the reasons for their use, the upfront and ongoing expense of a mobile phone and access to the Internet and whether and how these costs are afforded. Knowledge of the digital usage patterns and issues facing homeless consumers is important in the design and delivery of services that don't create new barriers and points of exclusion, and to devise telecommunications policies and assistance programs that are relevant to and appropriate for the needs and situations of this diverse group.

Defining Homelessness

Homelessness is a concept that describes a complex social condition and there is no consistent and universally agreed definition in use. Having said that, in Australia there has been considerable research and collaboration on the definition of homelessness in order to come up with a methodology for accurately measuring the population of Australians experiencing homelessness at any given time and to convey the social dimension of homelessness and the diversity of homeless experiences.[**]

The definition of homelessness adopted for this study is based on the Australian Bureau of Statistics' statistical definition (ABS, 2012), which defines a person as homeless when their current living arrangement is in a dwelling that is inadequate, or has no tenure, or if their initial tenure is short and not extendable. It also covers housing arrangements that do not allow residents to have control of, and access to space for social relations, who do not have access to suitable alternative accommodation and who are living in overcrowded dwellings. An important conceptual distinction that informs the ABS statistical definition is that homelessness is understood as broader than not having a shelter or 'roof over your head'. It is a lack of what most people would think of as the core aspects of a 'home' such as a sense of security, stability, privacy, safety, and the ability to control living space (ABS, 2012).

Homelessness is caused by a number of factors and is not always attributed to low income. Indeed, any person can experience homelessness at some time in their life resulting from an event or situation such as illness, disaster, being the victim of violence, financial problems or a shortage of affordable rental housing (ABS, 2010). Nevertheless interrelated factors, such as poverty, lack of opportunities for education and employment, mental illness, disability and ill health can lead to homelessness, and are oftentimes effects of homelessness, especially long-term homelessness.

People experiencing homelessness interact with a wide range of government services and agencies such as police and medical services, legal services and the courts, health and housing services, Centrelink and specialist homelessness services (SHSs) (Baldry et. al., 2012). In 2012-2013, over 244,000 people received support from specialist homelessness services with an estimated 20,000 accommodated each night (AIHW, 2013). At the same time, cost-of-living pressures on people on low-incomes and policy emphasis on preventing homelessness mean that more than half of the clients of SHSs are people who are *not yet* homeless but rather considered to be *at imminent risk* of falling into that state if steps are not taken to avert it.

While these specialist services provide vital support, assisting people to move out of or prevent homelessness, many people who are homeless don't seek help from formal services: 60% of the 1.1 million adults who had experienced at least one episode of homelessness between 2000 and 2010

** The ABS statistical definition of homelessness was established by the Homelessness Statistics Reference Group (HSRG), which was set up to advise the ABS on a definition and an estimation methodology for counting the numbers of homeless using Census data.

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had not sought assistance from formal services, according to ABS figures (ABS, 2010). Understanding the specific patterns of telecommunication use and challenges this group face can provide the knowledge needed to design more effective services using mobile and online platforms, and to reach out in new ways to those who otherwise might not seek assistance. Furthermore, this knowledge is relevant for delivering services to people on low-incomes in general and those who rely on government support payments for income in particular, groups likely to have a number of similar communication issues and needs.

CONTEXT AND SIGNIFICANCE

Internet Access is Changing

Society-wide technology trends and patterns of adoption shape the context of consumption and engagement that consumer groups have with digital technologies – including homeless consumers. One of the most influential of these trends in Australia in the last half decade has been the growth and uptake of smart phones and other portable devices such as tablets, iPads and portable gaming devices which support access to the Internet while moving about and in settings like the home, café and library. This is sometimes referred to as the mobile Internet. Some of the notable patterns associated with the mobile Internet documented by the Australian Media and Communication Authority (2013) in their *Communications Report 2012-2013* are the:

- **Uptake of smart devices such as smart phones**
  (11.19 million smart phone users at May 2013, up 29 per cent since May 2012)

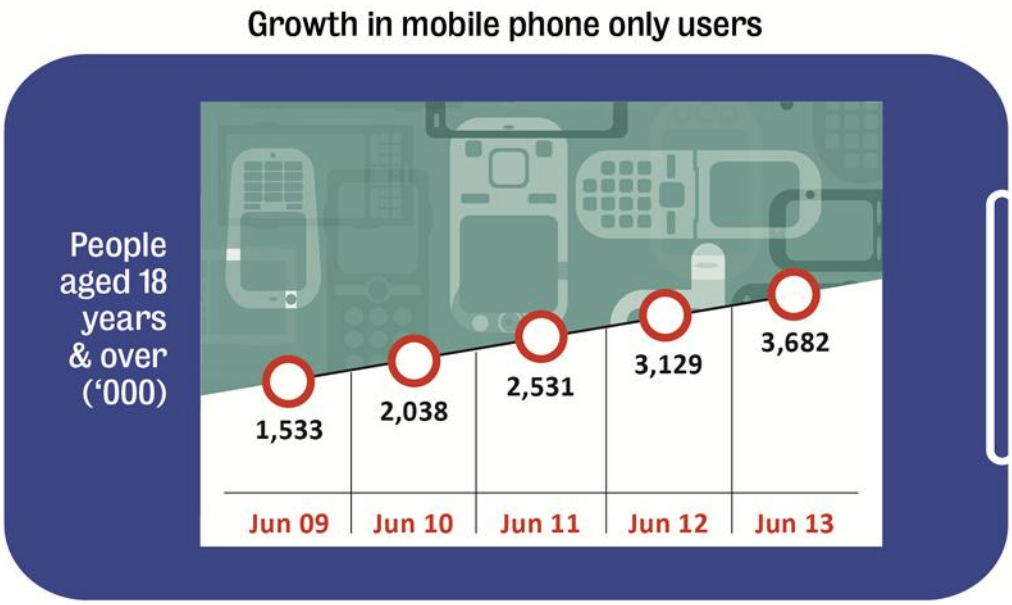
- **Growth in the use of Internet services via mobile phone handsets**
  (510 per cent increase since June 2008 and 33 per cent since 2012 to reach 7.5 million active users at June 2013)

While the focus of industry reports and analysis is often on the technology itself – the devices and applications available through these – the mobile Internet refers to a broader phenomenon that is as much cultural as it is technological. Drawing on results from longitudinal research carried out by the Pew Internet and American Life Center in the United States, Lenhart and colleagues (2010) described this as a change in connectivity, where people use the Internet, connect with others and access information in new ways and through multiple 'gadgets' in a mobile and wireless environment.

A number of related trends have emerged in and through this new environment and culture of connectivity. One of these is the notable decline in fixed line services (ACMA, 2009) and rise of the so-called "mobile only population". Figure 1 below, originally published in ACMA's *Communications Report 2012-13*, shows the rapid growth of this user-group, which ACMA recorded as 3.68 million Australians aged 18 years and older as of June 2013. In other industrialised countries like the United Kingdom, similar patterns are emerging with a recorded decrease in fixed telephone lines in the household and a high rate of ownership and levels of access to the Internet using mobile devices (2CV, 2012).

FIG. 1

Growth in mobile phone only users



Source: Roy Morgan Single Source

Another trend related to the mobile Internet is the increase in online activities for performing everyday social tasks such as banking, shopping, information seeking and entertainment. These online activities are regularly measured and reported on and are considered indicators of participation in the digital economy. In their latest report on communication trends, ACMA identified that 7.92 million Australians downloaded video or audio content, 9.26 million streamed video or audio content, 10.4 million used social-networking sites and 12.86 million banked or paid bills online (ACMA, 2013).

Underpinning the growth and capacity of the mobile Internet is the infrastructure by which Internet access is provided. In Australia, this infrastructure is an heterogeneous array of wireless and fixed arrangements composed of mobile broadband on 3G or 4G networks, mobile network cards, USB modems and portable Wi-Fi, mobile hotspots and wired and wireless broadband in settings like the home, library, cafés and the reception areas of government agencies. This infrastructure is, by its nature, embedded and usually taken for granted by its users (Star and Ruhleder, 1996). Yet, for some, such as those in rural and remote regions, and those without adequate control over their living abode, this infrastructure can become foregrounded, with variable quality, cost and availability impacting on access and use.

The mobile Internet is a focus of this study, including whether and how smart phones are used, the sources and type of Internet access and the activities conducted through mobile phones and other Internet-enabled mobile devices. This initial foray into the mobile Internet is valuable for determining whether and how the shift in Internet connectivity is evident within the homeless population (including differences within this user group). Interestingly, homeless consumers may represent a hitherto uncounted segment of the "mobile only" population – with unique patterns and constraints on whether and how the mobile Internet (including its underlying infrastructure) is accessed. These can, in turn, affect the way that these individuals connect with others and access

information and services, the cost of access, and the potential reach and benefit of new and reformed digital services.

Public Service Reform and Homeless Australians

Trends in the uptake of smart phones and rise of the mobile Internet are some of the main drivers of reform in the delivery of a wide range of public services. The *National Digital Economy Strategy*, initiated by the former Labor government, which included its centrepiece digital infrastructure project, the National Broadband Network (NBN), was accompanied by a number of complimentary initiatives focusing on public service reform. These included the *National Cloud Computing Strategy* and the *Australian Public Service (APS) Mobile Roadmap*, also referred to as 'digital first', with its aim to "require agencies to make key priority services available online, including on mobile platforms, by December 2017" (APS Mobile Roadmap, 2013).

The current federal government's policies on e-government and the digital economy are similarly ambitious in scope with the stated aim to "accelerate Government 2.0 efforts to engage online, make agencies transparent and provide expanded access to useful public service data" (Turnbull 2013, p2). The same election policy document, published just prior to the last Federal election, identifies 2017 as the target date for all interactions that occur more than 50,000 times per year to take place online (Turnbull, 2013).

Similar commitments to online government service delivery are evident in a number of other countries. In the United Kingdom, the 'digital by default' strategy, as it is known, was established in response to the recommendations of Martha Lane Fox in her report *Directgov 2010 and beyond: revolution not evolution.* This strategy promotes the idea that government has to 'think digital' in its approach to government services. The emphasis on the Internet as the default channel for interaction and the strategy's service and design standards are cited as the model for the Coalition's approach to online service delivery (Turnbull, 2013).

For homeless groups, who interact with a wide range of government services, there are opportunities and risks that come with these technology-focused changes in the design and delivery of public services. While lack of access to digital technology (those users without access and those who are non-users) is possibly the number one issue for service reformers to know about to avoid reinforcing existing disadvantage, it is also important to understand the distinct ways that groups such as the homeless are already using and making meaningful contemporary forms of media, the different types and degrees of use, and the capacity to afford and capitalise on future digital technologies.

Many staff in front line agencies providing housing, legal and support services to people experiencing, or at risk of, homelessness have observed the high levels of mobile phone use – to contact clients, to extend service reach and to give clients tools for being more independent (Hensler/Mission Australia, 2003). Similar findings have been observed in research in other countries. Rice et al. (2011) found that young homeless adults use their mobile phone for accessing social support and employers while Guadagno et al. (2013) identified that homeless young adults use social networking sites for communication, especially messaging and blogging.

Despite these obvious benefits, agency staff are keenly aware that their clients oftentimes face difficulties affording and managing mobile phone services, especially with post-paid services. Not only can these issues result in difficulties contacting clients, it may exacerbate or be a leading cause of financial hardship among clients (PILCH, 2011, Wise et al., 2012). Research here and abroad identified similar barriers of access and affordability. Goodwin-Smith and Myatt (2013), in their study of 17 homeless in Adelaide, found that while there was a high level of mobile connectivity, high data costs meant that smart phones were mainly used for calls and text. Along with the limited availability of fixed-point Internet, this could potentially result in locking people out of online services, creating a "service gap" (Goodwin Smith and Myatt 2013). Adding to these barriers related to affordability is the issue of service availability: homeless mobile phone users will sometimes have multiple phones in various states of operation and disrepair (Rice et al., 2011). As Gill et al. (2011) observed of the homeless young people they spoke to who accessed a drop-in centre in Vancouver, Canada, "being able to use digital media is largely, or perhaps always, contingent" (p. 72).

This study responds to the need for a baseline knowledge base within Australia to understand and systematically document the patterns of mobile phone and Internet access and use among people experiencing or at risk of homelessness. The value of this evidence lies in its role for providing insights into a consumer group whose digital inclusion is not a given, and whose methods and practices for making networked connections are little known. Its significance is also in providing a platform for testing the expectations and common sense understandings of support service personnel and managers of government departments tasked with the future design and direction of public services.

Telecommunications Assistance in the Mobile Age

Digital inclusion is now understood as essential for social inclusion and an enabler of human rights (La Rue, 2011; Verdegem, 2011). The definition of digital inclusion goes beyond getting hold of technologies. It extends to long-term affordability, usability as well as the literacy and skills needed for use (Warschauer, 2002, 2003; Bruce et al., 2012). Up until recently the emphasis has been on the Internet as the primary instrument of social and cultural expression and means of social inclusion, but with the global take up of mobile phones and growth of the mobile Internet, there are increasing calls to include mobile telecommunications within this interpretation (Bruce et al., 2012; New Zealand Government, 2013).

A number of assistance and social tariff schemes in Australia and other countries have developed in recognition of the importance of access to affordable telecommunications services for achieving a socially inclusive society. One example of these schemes is Telstra's '*Access for Everyone'* program, which offers a range of assistance services and products to households and community groups such as price discounts for communication services to people on low incomes. Some of the other major network providers in Australia provide a range of assistance services and subsidies for not-for-profit organisations and charities in the form of partnerships, for example the *Youth Connected Program* through the Vodafone Australia Foundation (VAF).

As the modes and means of communication and Internet access shift in the overall population, different access needs and risks emerge that affect the effectiveness and relevance of these schemes. Some initiatives in policy and service development address some aspects of these changes. Financial hardship policies, for example, provide guidelines to mobile service provider staff on how to deal fairly with common forms and instances of hardship. Other examples include call and data usage monitoring tools offered by mobile service providers for users to keep track of their usage. These services and products are not solutions to barriers of access per se but provide a range of methods for users and account holders to better manage and have more control over their mobile services.

Nevertheless, as new patterns of connectivity and digital service delivery becomes the norm, new barriers of access and participation can lead to new inequalities and forms of social exclusion, and this is particularly compounded for some vulnerable groups. A number of key issues emerge with this appraisal: besides the question of whether there is a need to formally recognise mobile phones and mobile Internet access as basic building blocks of digital inclusion, there is the question of what changes to telecommunications assistance and other 'social tariff' schemes are necessary to recognise the needs of groups who experience high levels of social exclusion, such as people experiencing or at risk of homelessness.

The significance of this study is in identifying and documenting these needs and in suggesting directions for telecommunications assistance policy and service development. A number of recommendations are proposed in the final section of this report based on the findings which focus on the affordability and availability of mobile services and Internet access to homeless consumers. In the early research stages of this project, lack of visibility and access to information about these schemes and financial hardship measures were identified as a barrier that could reduce their effectiveness and benefit. For this reason, the recommendations include some suggestions for extending the contact methods and ways that people who are homeless can access this information. In addition, a list of currently available telecommunications products and links to policies relating to low-income customers and financial hardship have been included in the Appendices of this report.

METHODOLOGY AND SAMPLE

A survey and interviews with clients accessing specialist homelessness accommodation, support and education services in Sydney and Melbourne were carried out over February, March and April in 2014. Interviews were also conducted with support workers and managers of program design and delivery units in the Department of Human Services (DHS) and Family and Community Services (FACS)/Housing NSW. The aim of the sampling strategy was to provide an insight into the patterns of access and use of a range of groups within the homeless population to achieve a comprehensive snapshot rather than a representative sample. The sample sought information about users and non-users of mobile phones and the Internet, with a separate survey delivered to those participants who indicated they did not have a mobile phone at the time of the study.

The cohort sampled was made up of youth (15-24), families (defined as single parents with children or couples with children) and adults (over 24) experiencing homelessness and a smaller number who were at risk of homelessness. This is reflective of the clients of homelessness services who may be homeless or at *imminent risk* of becoming homeless (AIHW, 2013). This broader intake for the study also explains the relatively high representation of participants living in private rental (see Figure 3 below), some of whom may have been living in dwellings so severely crowded that they counted as homeless,[††] or were facing a threat of eviction or violence.

Demographic Characteristics

In total, 95 respondents completed the survey. This included 57 young people aged 15-24, 21 families comprising single parents with children as well as couples with children and 17 adults over 24 of which 13 were over 40. A full demographic breakdown of the sample is shown in Figure 2. In depth interviews were conducted with 13 clients and 7 support service and government personnel.

The number of homeless participants recruited represents approximately 0.1% of the total homeless population in Australia, which the ABS estimated as 105, 237 people on 9 August 2011, the date of the most recent Census (ABS 2012). The gender breakdown within the study was 53 (56%) female and 42 (44%) male. 30 (41%) participants were from culturally and linguistically diverse backgrounds (CALD), 10% were Aboriginal or Torres Strait Islanders, 19 (20%) identified as having a disability and 38 (43%) reported having or having experienced a mental illness.

[††] These are dwellings that need four or more extra bedrooms to accommodate everyone properly.

FIG. 2

Demographic characteristics

Demographic Characteristics of the Study Sample N: Total number of people surveyed = 95	N	(%)
LOCATION OF SERVICE		
Inner City / Sydney	24	(25%)
Inner City / Melbourne	16	(17%)
Other metropolitan / Sydney	24	(25%)
Other metropolitan / Melbourne	31	(33%)
SAMPLE GROUP		
Young Person	57	(60%)
Family	21	(22%)
Adult	17	(18%)
AGE RANGE		
Under 15	1	(1%)
15-24	56	(59%)
25-50	28	(29%)
Over 50	10	(11%)
GENDER		
Female	53	(56%)
Male	42	(44%)
Intersex		
Transgender		
IDENTIFY AS LESBIAN, GAY, BISEXUAL OR QUEER	12	(13%)
CALD	30	(41%)
DISABILITY	19	(20%)
EXPERIENCING OR EXPERIENCED A MENTAL ILLNESS	38	(43%)
ATSI	9	(10)%
FAMILY TYPE		
Single Person	53	(56%)
Couple	6	(6%)
Single Person with Children	13	(14%)
Couple with Children	10	(10%)
Other	13	(14%)

Housing Characteristics

The ABS statistical definition of homelessness that was adopted in this study informed the survey questions about participants' current and previous housing arrangements (Figure 3). These housing arrangements encompassed emergency housing, supported housing, staying (temporarily) with a friend or family member, living on the street or in a park, using temporary shelter (for example squatting, camping), living in a boarding house and private rental. Ten survey respondents who were customers of the food van service were found to live in public housing and, although these did not classify as homeless, they were included in the results because they had experienced homelessness recently or in the past.

FIG. 3

Housing characteristics

Housing characteristics of the Study Sample N: Total number of people surveyed = 95	N	(%)
CURRENT HOUSING ARRANGEMENT		
Emergency Housing	8	(8%)
Supported Housing	30	(32%)
Staying with a friend or family member	10	(11%)
Living on the street or in a park	9	(9%)
Temporary Shelter (for example squatting, camping or caravan)	1	(1%)
Boarding House	4	(4%)
Public Housing	10	(11%)
Private Rental	21	(22%)
Other	2	(2%)
LENGTH OF TIME IN CURRENT HOUSING ARRANGEMENT		
Less than six weeks	17	(18%)
6 weeks to 6 months	33	(35%)
6 months to one year	4	(4%)
One year to two years	17	(18%)
Two or more years	24	(25%)
PREVIOUS HOUSING ARRANGEMENT		
Emergency Housing	17	(18%)
Supported Housing	6	(6%)
Staying with a friend or family member	26	(27%)
Living on the street or in a park	9	(10%)
Temporary Shelter (for example squatting, camping or caravan)	4	(4%)
Boarding House	3	(3%)
Public Housing	4	(4%)
Private Rental	16	(17%)
Other – Gaol	1	(1%)
Other - Juvenile Correctional Authority	1	(1%)
Other - DHS Carer Placement	1	(1%)
Other - Lead Tenante Program	1	(1%)
Other – Unspecified	6	(7%)

Strengths and Limitations

Early in the development of the project it was identified that the mobile phone and Internet experiences of groups in regional and rural areas experiencing, or at risk of homelessness, may have distinct patterns and needs. Although the scope of this study was limited to groups living in metropolitan centres in Sydney and Melbourne, this is a subject that warrants further research.

In addition, whether or not a person has received assistance from a formal support service can make a substantial difference to the experience of homelessness, the length of homelessness, the capacity to break the cycle of homelessness and, potentially, the ability to access and engage with digital technology. All the participants in this study were recruited through homelessness services, and for this reason, were receiving some form of support, usually a combination of housing, education, counselling, food and financial assistance. Research on those who don't seek help from formal services (recalling the ABS figure of 60% of the 1.1 million adults who had experienced homelessness over a 10 year period) could reveal different results and for this reason, this group should be included in future research.

FINDINGS AND DISCUSSION

Findings in Summary

- A mobile phone was essential – the most important uses of the mobile phone after contacting friends and family were: contacting emergency services (52%); support services (49%), and medical assistance (48%).
- Most had a mobile phone – 95% had a mobile phone and 77% reported having a smart phone.
- Staying connected was difficult – shortage of credit, service and power restrictions, number changes and handset loss resulted in partial or restricted access to one or a number of mobile and Internet services.
- Significant impacts resulted from connectivity limitations – such as not being able to contact essential support and emergency services, being at physical risk without the ability to reach help and not meeting basic eligibility requirements of some government services.
- Users had a wide range of connectivity and affordability strategies – using a pre-paid mobile service and alternative Internet sources such as free Wi-Fi hotspots and Internet access in public libraries and accommodation centres were key measures for keeping costs down and staying connected.
- Mature male adults who were single and experiencing long-term homelessness were more likely to be without a mobile phone and not use the Internet – this group made up 60% of those with no mobile phone access and of these 40% reported they didn't use the Internet at all.
- Vulnerable consumers with complex needs, that is, with a set of overlapping health and support needs[‡‡], had the most payment difficulties and debt relating to mobile phone services.

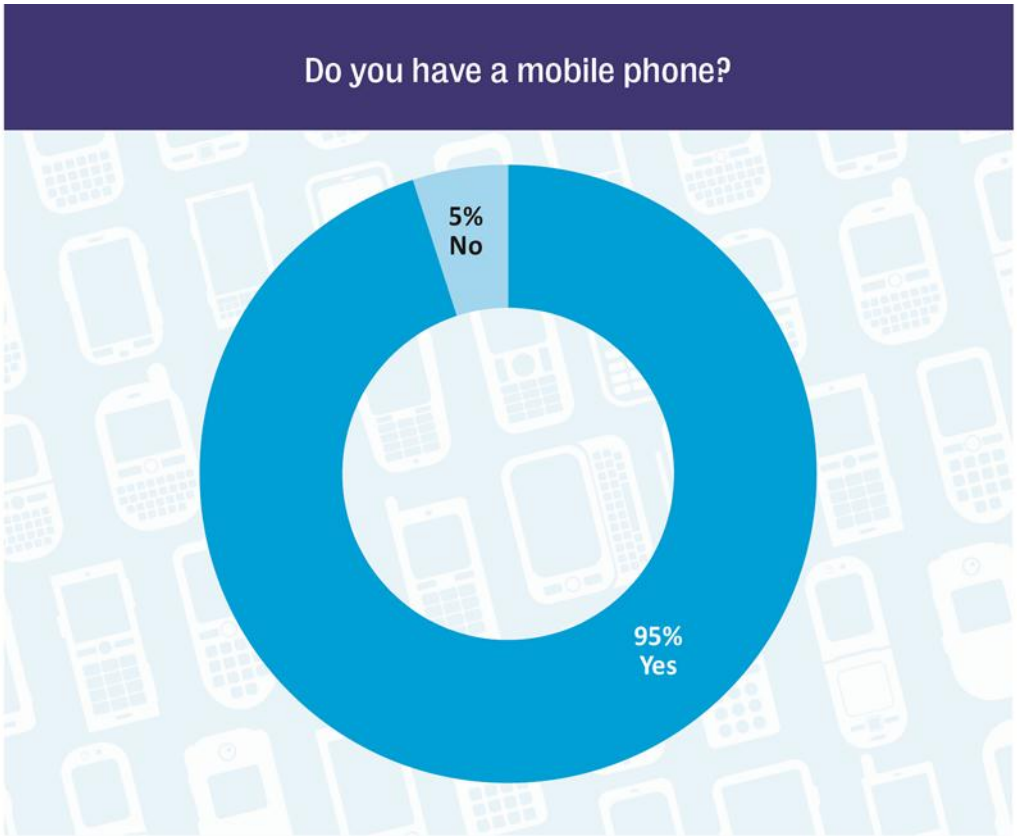
[‡‡] Rankin and Regan (2004) provide a definition of 'complex needs' as not related to individual characteristics but a "framework for understanding multiple, interlocking needs that span health and social issues" (p. 1).

Mobile Phone Ownership

The study found that 95% of the homeless families, youth and adults surveyed had a mobile phone. Of the total group, 90 had a mobile phone and 5 were without a mobile phone at the time of the study (see Figure 4). This is higher rate of ownership than recorded in the general population, which is 92% of all Australians over 18, according to the Australian Media and Communication Authority's (ACMA) Communications Report 2011-2012 Series (ACMA, 2013). The figure is significantly higher than recorded by Anglicare Victoria in their 2013 Hardship survey, which found that 87.5% of the 325 households surveyed who accessed Anglicare Emergency Relief and Financial Counselling services had mobile phones (Wise, 2013).

FIG. 4

Mobile phone ownership



There was one notable difference in mobile phone ownership according to demographic criteria. Of the 5 without a mobile phone, all were single adult males, 3 (60%) were long-term homeless who had been living on the street or in temporary shelter for two or more years, 4 (80%) had experienced a mental illness (compared to 43% in the total sample) and 3 (60%) were over 40. This group relies solely on public pay phones, borrowed mobile phones and phones provided by government agencies and welfare services for making and receiving phone calls.

The results confirm previous studies that have found a high degree of mobile phone ownership in the homeless population. In their Adelaide metropolitan study, Goodwin-Smith and Myatt (2013) found that all of the 17 participants interviewed had a mobile phone. The results also show a conspicuous digital gap for mature, single adults experiencing chronic homelessness. This group also has little or no Internet access – with 2 of the 5 reporting that they don't use the Internet at all and 3 reporting that they access the Internet from a public library or from a friend or family member's

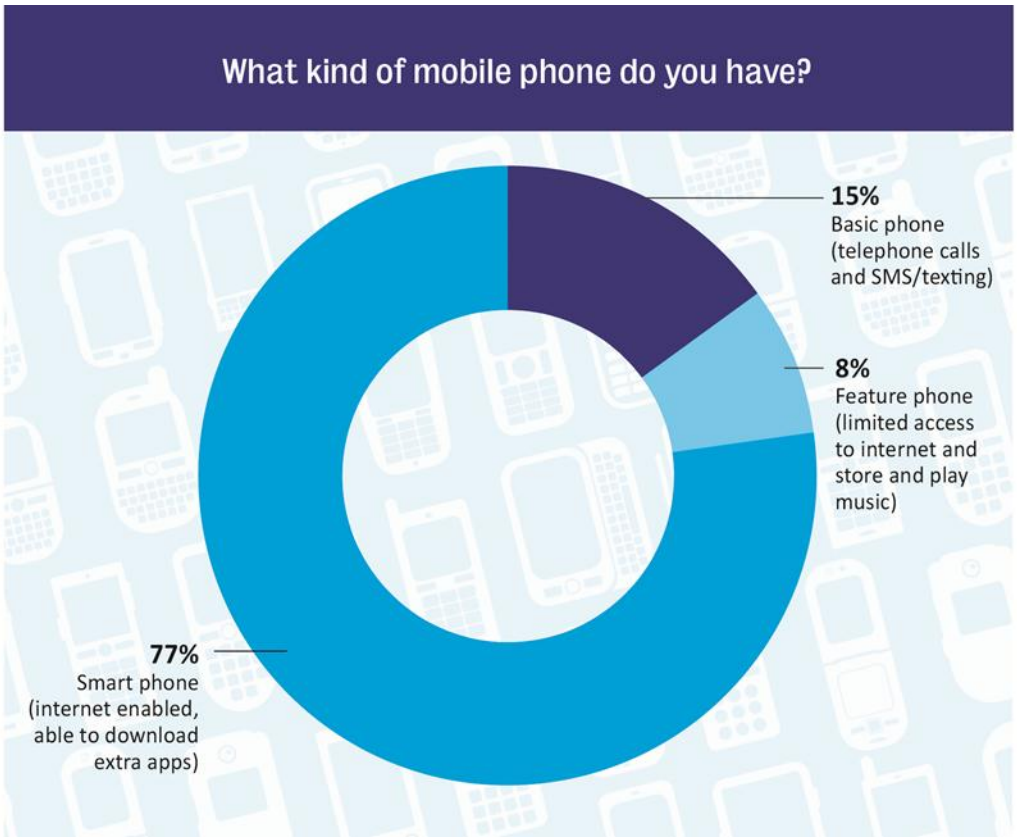
computer. The result provides further evidence that the 'digital divide' (the gap between those who have and those who don't have digital access) is narrowing in Australia, but it is also *deepening* (Ewing and Thomas, 2012) with a small group without access to essential technology and unable to benefit from mobile digital services (also see section *Still Falling through the Gaps*).

Phone Types

Figure 5 shows the breakdown of phone types into *basic phone* (supporting telephone calls and SMS/texting), *feature phone* (supporting limited access to the Internet and store and play) and *smart phone* (Internet-enabled and able to download extra apps). Of those surveyed, 68 (77%) had smart phones, 7 (8%) had feature phones and 13 (15%) had basic phones. This figure exceeds the total number of smart phones in use in the overall Australian population, which ACMA estimated as 64% at May 2013 (ACMA, 2013). The rate of smart phone ownership was also significantly higher than that recorded by Anglicare Victoria in their 2013 Hardship survey, which found that the majority of mobile phone users (57.4%) did not have a smart phone (Wise, 2013).

FIG. 5

Mobile phone type: Basic, Feature and Smart phone



The high level of smart phone use suggests a shift to mobile Internet services (including mobile phone handset Internet, dongle, data card or USB modem services), a pattern identified in the general population and which ACMA (2013) found to be the primary source of growth in mobile services overall for the year 2012-2013. The results also underscore the importance of the smart phone as a facilitator of Internet use. 29% of smart phone users *only* used their mobile phone to access the Internet and 63% used it in combination with another Internet source. This compared to 30% of all *non*-smart phone users who used their mobile phone to access the Internet in

combination with another Internet source and 15% did not use the Internet at all. There are other important links between smart phone ownership and Internet use that are explored further in *How and Where the Internet is Accessed*.

There were few statistical variations in mobile phone ownership according to demographic criteria. However, 12 of the 20 participants *without* smart phones were single persons. Of the 21 families involved in the study, (single persons with children and couples with children), there were only 3 who did not have a smart phone. This result underlines the importance of, and priority given to, the mobile phone – and the smart phone – for maintaining contact with family members and coordinating family life. There are some parallels with findings by Anglicare in their 2013 Hardship survey which found that clients with dependent children had better access to home Internet than clients without dependent children and had reported an extreme improvement in the standard of living as a result (Wise 2013). The significance of phones for different groups within the homeless population is discussed in more detail in the sections *Mobile Phone Use* and *Internet Use*.

FIG. 6

Phone Model and Operating system (OS)

Phone Type: Brand and Model	Operating System	Response Count
iPhone 3	Apple	2
iPhone 4	Apple	14
iPhone 5	Apple	11
iPhone (model unspecified)	Apple	2
Galaxy Note	Android	1
Samsung Galaxy S2	Android	2
Samsung Galaxy S3	Android	7
Samsung Galaxy S4	Android	5
Samsung Galaxy S5	Android	1
Samsung Galaxy ACE	Android	1
Samsung Galaxy Pocket	Android	1
Samsung GT	Android	1
Samsung Galaxy Mini 2	Android	1
Samsung (model unnspecified)	Android	8
Sony Xperia	Android	3
Nokia 728	Windows Phone	1
Nokia 101	Nokia OS	1
Nokia 2310	Nokia Series 30	1
Nokia S60	Symbian OS	1
Nokia Lumia 610	Windows Phone	1
Nokia (model unspecified)	Unknown	5
L3 Optimus LG	Android	1
LG E612	Android	1
LGL 7	Android	1
LG (model unspecified)	Android	5
Huawei (model unspecified)	Android	4
HTC (model unspecified)	Windows Mobile/Android	1
Model unspecified	Unknown	2
TOTAL		85

The brands and models of mobile phone handsets are documented in Figure 6. The study found a large variation in the age and functionality of mobile phones in use and, as previously mentioned, a large proportion of smart phones. In summary, 51% of mobile phone users owned a mobile handset

that ran the Google Android Operating System, 28% had Apple iPhones running iOS and the remaining 21% had a mixture of mobile phones running Windows, Nokia and Symbian OS.

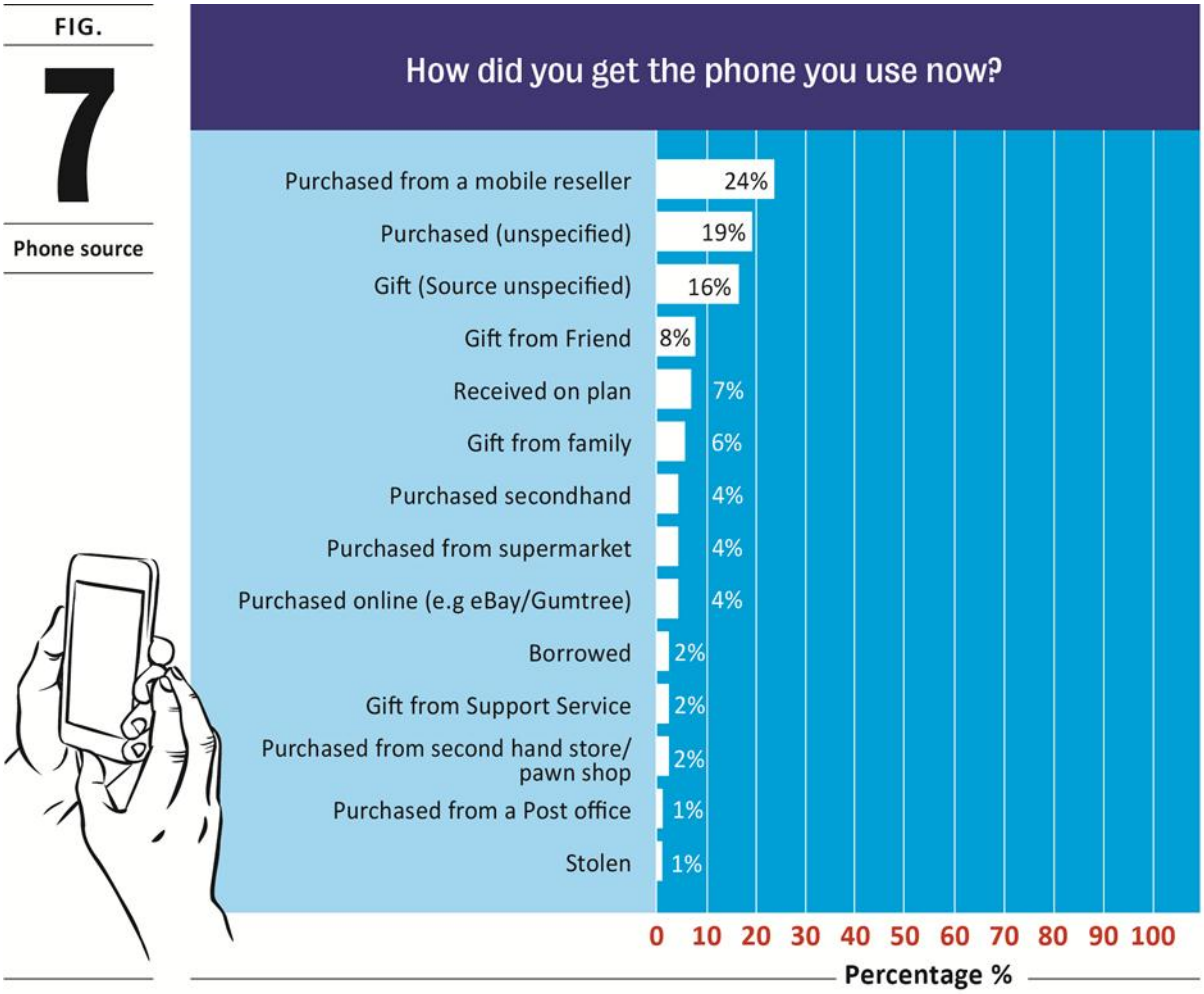
The results showed that despite the high number of smart phones, there were also a wide variety of phones in use spanning a number of generations of handset models. This makes sense when considered alongside the findings on how participants acquired their mobile phones (detailed in the following section), which in brief showed that 45% received their phone as a gift, second-hand, or had been stolen or borrowed.

Acquiring and Sharing Phones

The majority of mobile phone users (57%) purchased their mobile handset new or second-hand from a mobile reseller, second-hand dealer or from an online platform trading in second-hand goods such as eBay or Gumtree. A significant proportion of mobile phone users (32%) obtained their phones as a gift from a family member, friend, support service or other source. Only 6 (7%) of all the mobile phone users surveyed received their mobile handset on a mobile plan. Figure 7 illustrates how users obtained their mobile phone handsets.

FIG. 7

Phone source



This acquisition pattern explains the variety of mobile phone handsets and models in use by the youth, families and adults in the study. It also illustrates a preferred *method of access* adopted by

the majority of participants: a combination of a mobile phone handset owned outright with a pre-paid service (for details see Figure 18). Participants who were interviewed explained that this method was the only way to manage the upfront and ongoing costs associated with a mobile without getting into financial difficulty. Marvin, a young man in supported accommodation captured this approach in his statement: *"I don't really believe in plans or contracts or being locked into any sort of deal"*.

The survey results showed the majority of mobile phone users (82%) had only one phone in use but of the 16 (18%) who kept more than one phone, the main reasons given were: 1) to use as a backup phone in case the current phone became broken or got lost; 2) to give to a child, partner or friend without a mobile phone; 3) to keep personal data such as photos that were not able to be transferred easily, and 4) to use as a dedicated music player.

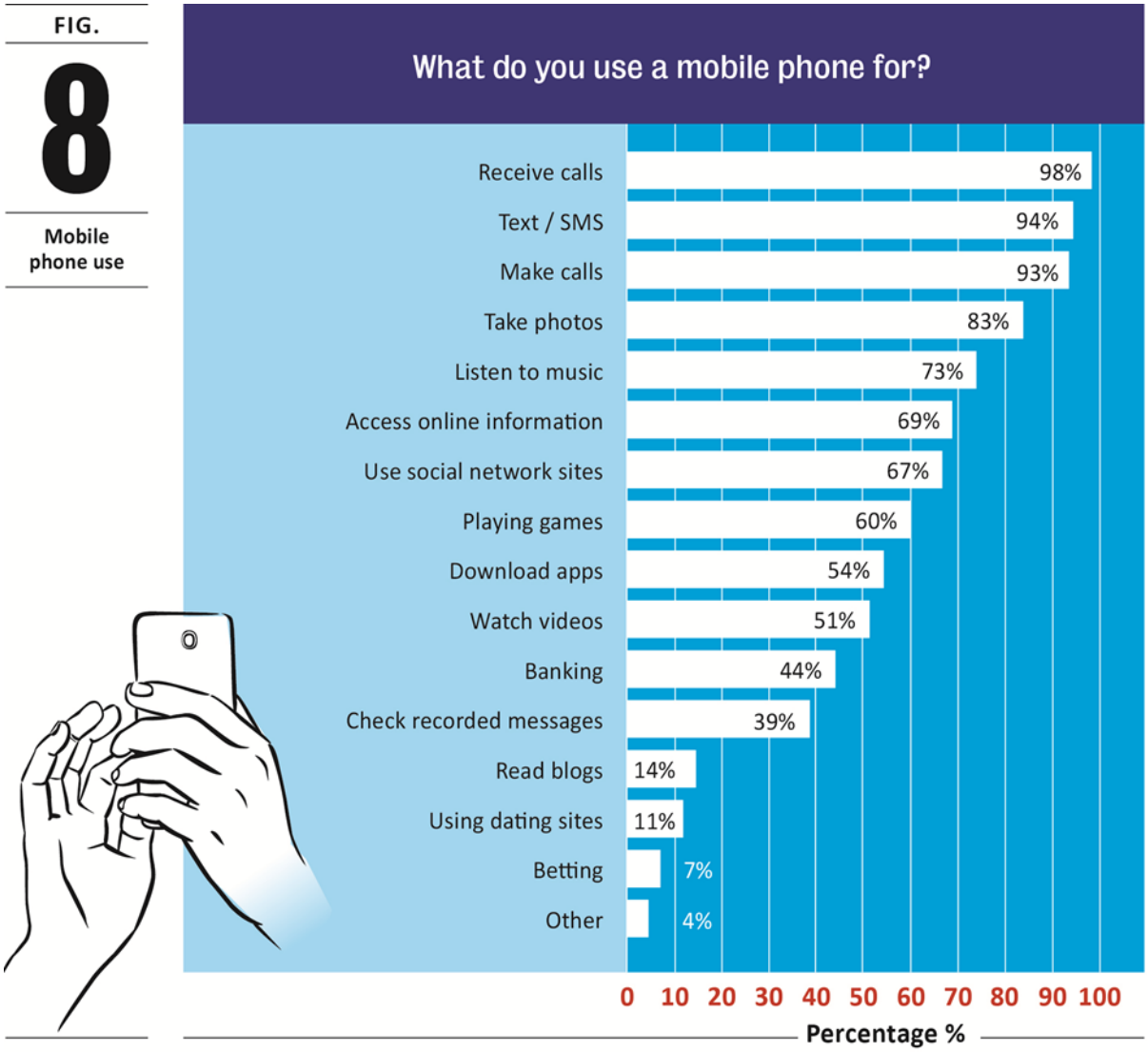
Only a small proportion (9%) of those surveyed shared their mobile phones. Of these, the main reasons cited for sharing phones were to lend their phone to a friend or family member without access especially as a result of loss, malfunction or a lack of credit. Another key reason for sharing phones was to give children access to a phone that supported email, apps and a larger variety of games.

Mobile Phone Use

Study participants identified receiving phone calls (98%), making phone calls (93%) and texting/SMS (94%) as the three main uses of a mobile phone, followed by taking photos (83%) and listening to music (73%). The results also showed that 69% of participants are using their phones to access online information, 67% to access social network sites, 54% to download apps and 44% for banking (see Figure 8 for full details).

FIG. 8

Mobile phone use



The findings demonstrate that users of mobile phones who are homeless are using a wide range of social media and web-based platforms for communicating and accessing information in their daily life. Smart phone users are using the multimedia functions of their phones and engaging strongly in social media and content creation (e.g. photos). The results underline the importance of the smart phone as a facilitator of Internet access and use and for performing consumer activities that support

social and economic participation such as paying bills, finding a job, being contacted by employers and studying. This was especially the case for the families in the study.

While it has become commonplace to remark that media connects young people to the outside world, less discussed is the role that digital media and mobile phones play in providing a means for family members to connect. As previously noted, of the 21 families in the study, only 3 did not have a smart phone. Parents were also more likely to have extra mobile phones and share their own mobile with for their partners and children. The smart phone was also a tool for budgeting, for finding out about and scheduling school activities, accessing government services and for self-study. This latter use was stressed by two of the women with children interviewed, both of whom had recently engaged in formal learning. Melinda, a single parent with a five year old son, living in an outer Melbourne surburb, explained that the school her son attends has an app that lists all the school events and activities which can be searched by grade. Melinda also used her smart phone for price comparisons with groceries:

> *The main things are the school stuff, my banking, job searches. I've got my Centrelink on there. I've got the deals, a lot of shopping deals, OurDeal, CatchofTheDay, Groupon, so if I can always buy something cheaper from somewhere else I'll do that…*

Researcher of family and media life, Schofield Clark (2011), has suggested that as digital and mobile media, including mobile phones, laptops and other mobile entertainment devices change the landscape of family media use, these technologies both "potentially solve, and potentially exacerbate, many dilemmas of family life" (p 324). For Melinda, and other participants in the study, the smart phone was a powerful platform for enabling coordination and running of the family including managing the family budget. At the same time, the smart phone also exposed her, and other families in the study, to an increased risk of debt. The research revealed a higher proportion of families had experienced debt with their mobile phone compared to the other groups in the study (these figures are detailed under *Still Falling through the Gaps*). One of the risk factors associated with smart phone use for families is the high cost of data and difficulty monitoring children's data use and in-app purchases (ACCAN, 2013). Parents interviewed identified this as one of the challenges of smart phones and engaged in a variety of strategies to mediate their children's media use. Melinda, for example, explained how her son had never run up a bill because before he used her iPhone, she turned on aeroplane mode:

> *I've always been smart like that. I'd only give him my phone when I'm driving or he wants to play a game on there and I'm doing something, like when I know no one is going to call me. So it cuts off everything, no one can call me, no one can email me. He can't call out.*

While making and receiving calls were the main uses of mobile phones that had little or no support for web browsing or app downloads, many participants used the tools that came built in with their phones like the 'memo pad' and 'calculator'. Jen, a young person in supported accommodation, offered two examples of how she used these features on her four year old LG phone to satisfy the income reporting requirements of Centrelink and to track her spending while shopping:

I use the memo pad a lot. I write my work hours in my memo pad because I've got to report to Centrelink. So it helps me work how much I got paid because, unless they're really fast with the pay slip, I don't have my pay slip before I have to report…

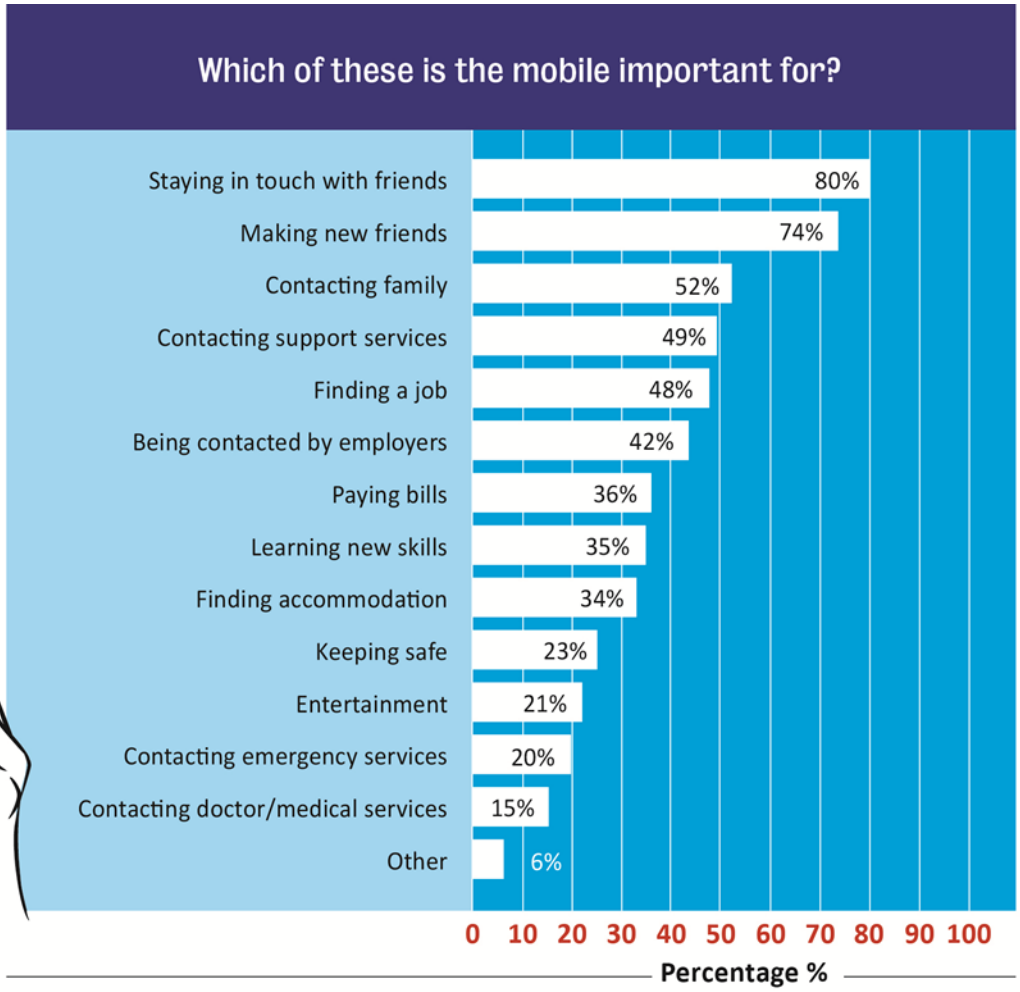
I use the calculator on my phone when I'm doing groceries. I look in my basket and as I'm putting stuff in, I'll calculate and then I'll go back later and go all right, so this is slightly more than I want to spend. So what can I take out? I did that this week because I didn't have a whole lot of money and still had to do food shopping: I was going to buy chocolate. Then I cut out the chocolate because I don't need chocolate and don't really need sandwich meat. I'll just buy a spread for my bread for now and then wait till next week when I get paid again because it's really hard to spread [your payment] out to the second week.

Important Uses of the Mobile Phone

As shown in Figure 9, study participants identified the three most important uses of their mobile phone as *staying in touch with friends* (80%), *contacting family* (74%) and *contacting emergency services* (52%). The high rating of emergency services, followed closely by contact with *support services* (49%) and *a doctor or medical service* (48%), is a strong indicator that the mobile phone is vital, not only for maintaining social ties, but also for surviving in times of crisis and in situations of physical risk (keeping safe was rated at 35%) (see Figure 9 for full details). It is significant that entertainment was positioned sixth among these options suggesting that even though mobile phones are being used for a wide range of purposes, its use for essential communication takes precedence over other activities.

FIG. 9

Reasons for mobile phone use



The ability to control communication – *how and when it happens* – is an important aspect of the mobile's utility as an emergency and safety device. A support service worker who had provided support and assistance to clients escaping family violence explained that this control, and the ability to screen calls easily, is something that landlines don't easily offer:

> *I think mobile phones allow people to see who is potentially calling them by the numbers that come through. If clients don't know a number or it's got no caller ID, they won't pick up the phone. I think that at times this can make my job frustrating but in terms of instances of family violence – changing the home number is a lot more onerous and making it silent – it is a different process and something that just doesn't seem to happen anymore.*

Texting provides a similar ability to control communication as explained by Viv, a manager of a specialist homelessness unit in an outer Melbourne suburb:

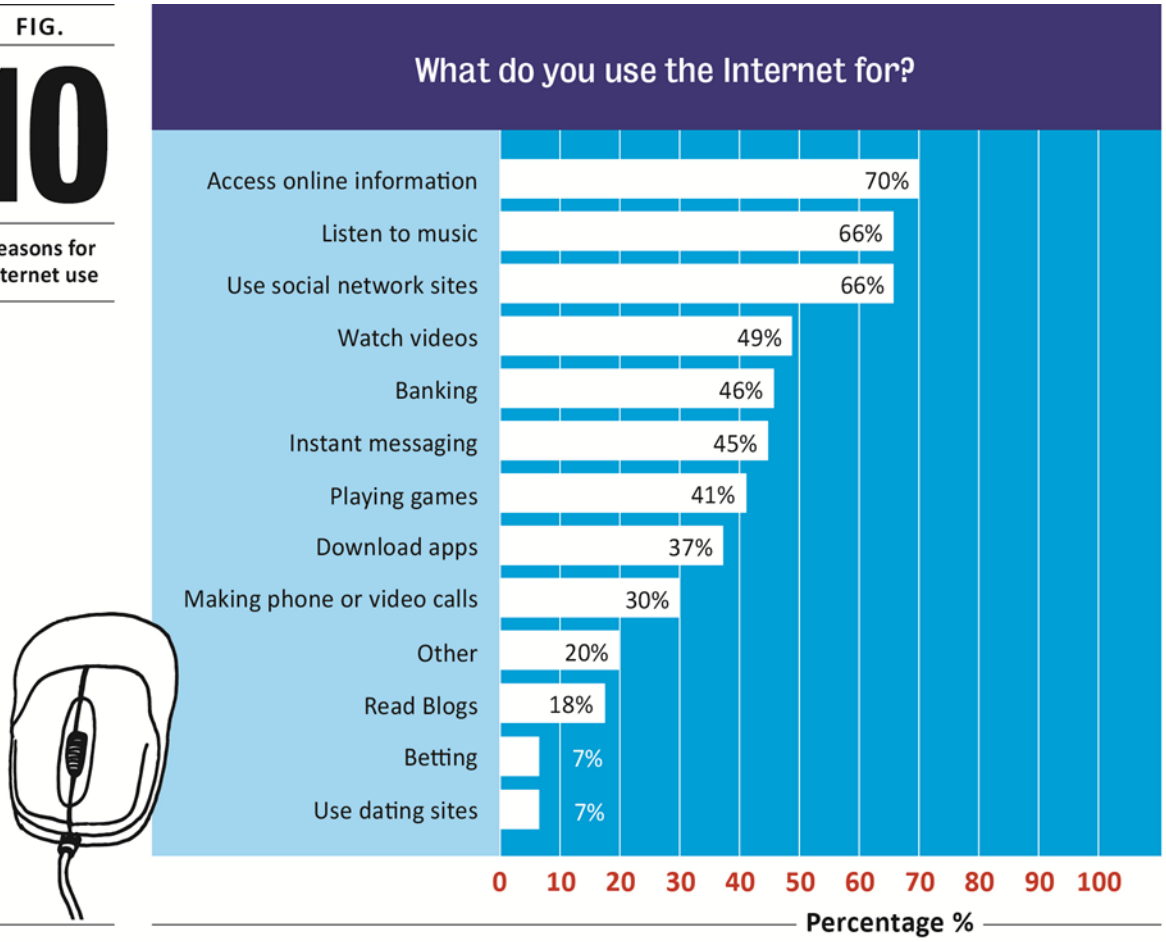
> *Texting is a really important way of engaging with young people because it is less confrontational so you can choose when and how you respond. You might respond immediately, you might leave it an hour or two…It is about doing it in your own time.*

Internet Use

The three top uses of the Internet identified by survey recipients were accessing online information (70%), listening to music (66%) and using social network sites (66%). Instant messaging, watching videos, banking and playing games also rated highly (see Figure 10 for full details).

FIG. 10

Reasons for Internet use



The results confirm that, as for mobile phones, study participants are using the Internet for a wide range of purposes. However, where users with basic and feature phones distinguished between using their phones for making and receiving phone calls and texting, and using the Internet for entertainment-oriented and information-gathering activities, smart phone users adopted a more integrated approach, using their phone as a single platform for the majority of their information and communication activities. Nevertheless, it became apparent in the interviews that some distinctions persisted regardless of phone type: for high volume data and screen-oriented activities such as watching videos, typing and reading online, laptops, tablets and desktop computers remained the preferred platforms.

Internet-based communication platforms, such as Skype, Facebook Messenger and Live Chat were popular among users: 30% of participants used the Internet for making phone or video calls and 45% for Instant Messaging. The interviews made clear their use was a key strategy adopted by

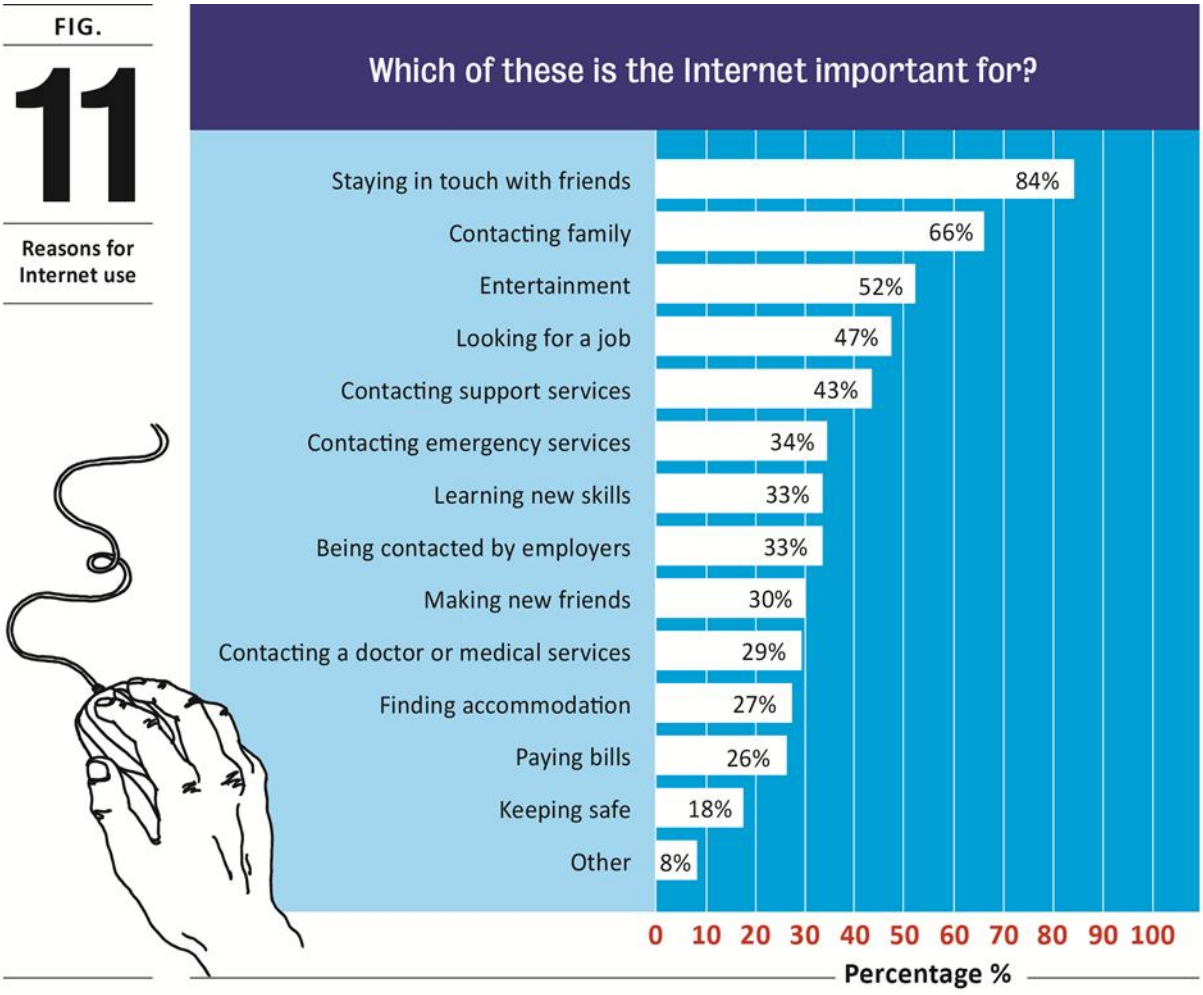
participants to defray some of the costs of data and charged calls, especially to overseas destinations. Facebook Messenger was similarly deployed – a number of participants mentioned using Facebook messenger to talk to their friends and family, and to check whether their friends were online and then to ask them to text them or contact them via Instant messenger. Jen, a young woman living in supported accommodation, explained it like this:

> *Yeah because that's pretty much how I talk to most of my friends like overseas... Or I'll be messaging my mum. If I don't have credit I can still get onto Facebook because there's like Telstra supports this thing called Zero Dot Facebook, which is basically free Facebook for Telstra providers.*

Important Uses of the Internet

Differences in the way the Internet and the mobile phone are used carried across into reasons for use, with 52% of participants identifying entertainment as the *third* most important use for the Internet compared to the *sixth* most important for mobile phones. Staying in touch with friends (83%) and contacting family (66%) were similarly positioned as the *first* and *second* most important use for the Internet (Figure 11).

FIG. 11 Reasons for Internet use



As in the general population, the Internet is important for employment and for maintaining

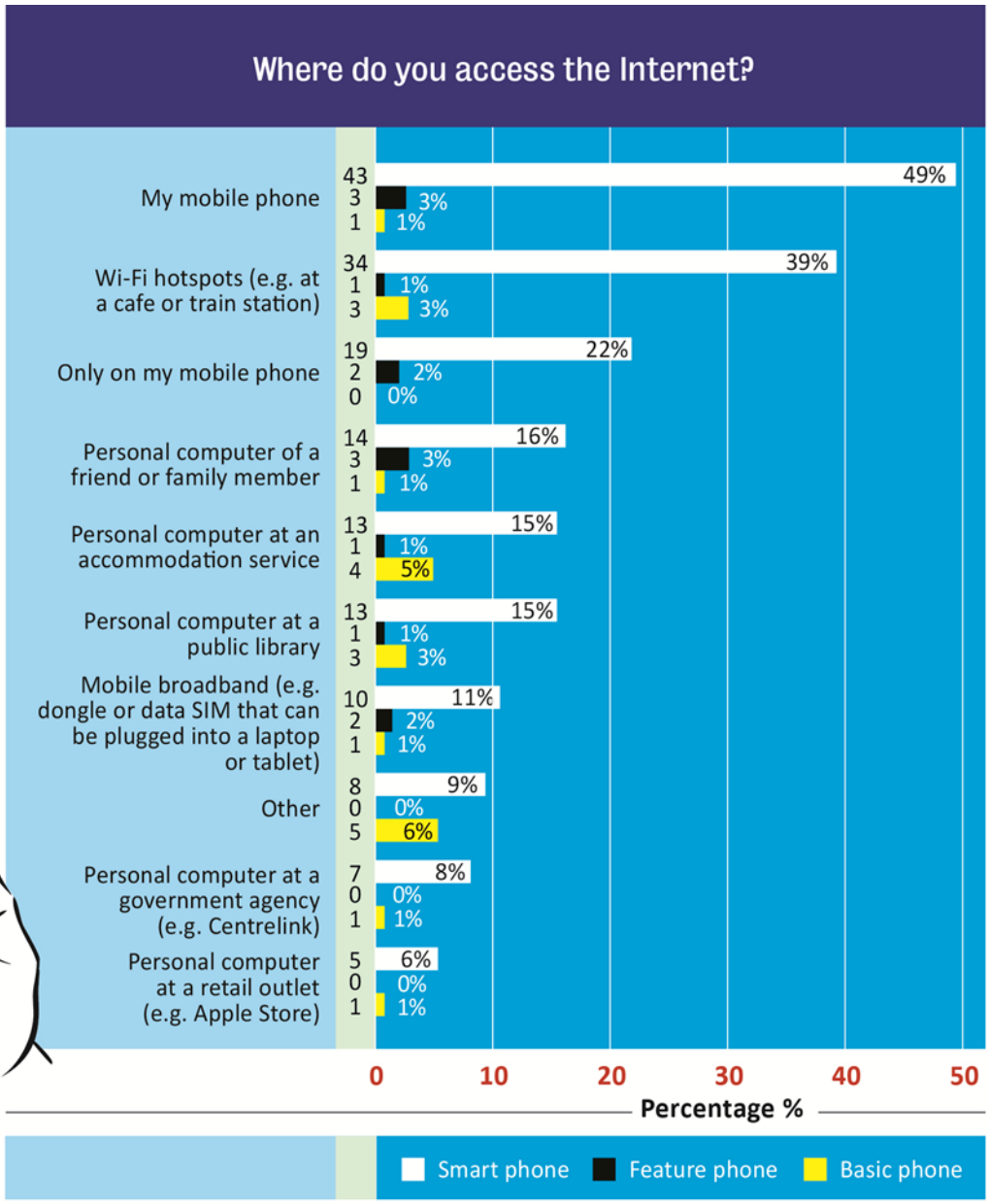
professional ties with 47% identifying the Internet as important for looking for a job, 33% for being contacted by employers and 33% for learning new skills. One of the differences between smart phone users and non-smart phone users was the use of the Internet to expand the options for online communication and greater involvement in social media, content creation and information access. One common example mentioned in the interviewees was the use of YouTube for learning a variety of new skills from general computer skills to car mechanics. In answer to my question "what would you do if you didn't know how to do something?" Fi, a young woman living in supported accommodation said to me: *"I would probably just YouTube it".* Melinda, a single parent with a 5 year old child spoke of YouTube in similar terms: *"If I don't know how to do something like if I couldn't delete a file from my computer, just YouTube it…"* Graham, a 21 year old young man with a mild intellectual disability, also used YouTube for extending his car mechanic skills: *"YouTube, I love it. I'm mechanically minded. I look up stuff on YouTube about how to fix things and so it will show me the video, I'll do it. I'll pause it, I'll do it and then wait for the next step and then do that."*

How and Where the Internet is Accessed

Participants primarily accessed the Internet through their mobile phone in combination with another Internet source. The most common method for accessing the Internet was using a Wi-Fi hotspot with a mobile phone or other mobile device at 43.3%, followed by a personal computer at an accommodation service and a personal computer of a friend or family member at 20%. A sizeable proportion of participants used an alternative device with mobile broadband such as a tablet or laptop for accessing the Internet instead of, or in combination with their mobile phone. 14% of smart phone users had this arrangement, 28% of feature phone users and 8% of basic phone users (Figure 12).

FIG. 12

Source of Internet access according to phone type



How and where people access the Internet was distinguished most according to the degree of Internet access supported through their phone. Somewhat unexpectedly, this pattern was

characterised by a gradation rather than a strict opposition between smart phone and non-smart phone users: 29% of smart phone users only used their phone to access the Internet and 63% used it in combination with another Internet source. This compared to 28% of feature phone users who only used their phone to access the Internet and 43% who used it in combination with another Internet source, whereas 0% of basic phone users only accessed the Internet through their phone while 8% of these used their phone in combination with another Internet source.

Basic phone users, in particular, relied heavily on fixed public Internet access sites and additionally, displayed lower overall levels of Internet engagement: of the 5 participants in total who reported that they did not use the Internet at all, 3 of these had basic phones and 2 were without mobiles altogether.

A clear message that can be taken from the findings is that where there *is* support for the Internet through a mobile phone, even if in a limited way, users will avail themselves of this source of access. This use of mobile phones as an Internet platform had cost implications, however, and users shaped their use accordingly – relying on alternative free or less costly fixed or wireless sources of the Internet such as Wi-Fi hotspots, government centre 'self-service' terminals, networked computers at public libraries and the computers belonging to friends or family members.

Connectivity

Having a mobile phone does not guarantee access. The study revealed that even when the vast majority of participants had a mobile phone, this did not mean that users were always connected. Lack of power, imposed service restrictions, breakdown and loss of mobile handsets, and most of all, shortage of credit for one or more mobile services meant that participants had partial or discontinuous access to phone and Internet services. 32% of participants reported having had difficulty recharging their mobile handset, a basic condition of access that most people take for granted.

A number of participants discussed the need for a reliable power source and described the efforts they went to in order to secure a reliable source. One customer of an inner-Sydney Food Van service talked of a power point at Central station he visited to recharge his mobile phone. Two men who were homeless used a similar power outlet at Wynyard station, as seen below in Figure 13, soon before this photo was taken.

FIG.

13

Power outlet at Wynyard Station in Sydney

While service availability is curtailed by a lack of power, the most common type of connectivity problem was related to a shortage of funds. Without the ability to add credit to a pre-paid mobile service, users were left without the ability to make calls, send texts and access the Internet. If on a post-paid plan, users might have a range of service restrictions imposed or have their service entirely disconnected.

In some instances, connectivity limitations were a result of being homeless and not having the finances to pay off a bill or purchase call or data credit. Barbara, a young woman in supported accommodation explained how, living on the street, when she had her phone stolen, broken or lost, she would then need to get hold of another phone. Signing up to a mobile plan was a way to obtain a mobile handset without having an upfront cost. While this addressed the immediate need for a phone, it ultimately lead to connectivity problems a little further down the track as a result of not being able to make contract payments, as Barbara explained:

> *When I was young I lived on the street. So I'd lose a lot of phones or they'd get stolen from me. Then when I was old enough to get a phone plan I got them and then I had a lot of trouble with that, so they blocked the phone. I'd get rid of the phone and get another one and then they kept letting me sign up for plans that I couldn't pay. Now they've given me a bad credit rating so a friend had to put a phone in their name for me.*

Many participants offered examples that illustrated the impact of these connectivity limitations – which in some instances resulted in immediate risk to their wellbeing and safety, and in general, meant that users were deprived of the ability to communicate with family and friends, obtain

employment, access information and services including support, medical and emergency care and to comply with the contact and reporting requirements of government agencies such as CentreLink.

Limitations on connectivity, were found to be both prevalent and a major source of frustration and suffering among participants. One woman, Robyn, was forced to flee her temporary residence with her children. With no phone credit and no money to recharge her phone, she was left isolated and unable to call for help. Her experience highlights the additional risk to safety that can result from not having a mobile phone in a time of need.

***Robyn's story**:*

Robyn and her two youngest children were living temporarily with friends after she and her husband were divorced. After an incident with a person in the household, and fearing for the safety of her children, she left with her two children in a borrowed car:

It was in the middle of the night… I was driving around and had nowhere to go. Had the phone, but no money inside… My little daughter, she was just one. My son, he has a disability. I put them at the back. It was a winter night. Drove, drove, drove, till I came to the police station.

Without any money and unable to call anyone on her mobile phone, Robyn pulled up outside a police station and went inside to ask for help. The police assisted her to find emergency accommodation for the night but the next day, without any money or phone credit, she was unable to call any of the support numbers given to her by the police. She returned to the police station, and the officers offered the use of the station telephone. She waited four days until she received some emergency funds from a family member. After buying food for her children, she went straight to a shop to purchase credit for her phone.

Robyn says her life has changed as a result of having a mobile phone and she is still very enthusiastic about her mobile phone despite the difficult experiences she's had in the past but periodically Robyn runs out of phone credit. She says that when this happens and she loses her online access she feels "naked". If there's an emergency and she has to use the Internet, Robyn goes to the public library, which provides free Internet or she takes her laptop on her next visit to her College where she can access the Internet using the campus free Wi-Fi. But mostly, Robyn does without Internet access until her next income payment and says she's used to this now: *When there's nothing, there's nothing. I learn to deal with that.*

Affordability

Problems with connectivity are closely related to affordability. Mobile phones represent a significant cost to people experiencing homelessness, and affordability is a key concern. Figure 14 shows the average monthly spend on mobile services by the study participants according to pre-paid or post-paid service, also referred to as a mobile plan. As the amounts show, the average monthly cost of a plan exceeds that of a pre-paid service by roughly $20 a month. The average monthly cost is lower than it would have had there been an average spread of pre-paid and post-paid services among participants.

FIG. 14

Mobile payment costs averaged over the month according to plan type

As previously noted, for this cohort, there is a clear leaning towards pre-paid mobile services as a means to save costs and prevent 'bill shock' thereby bringing down the overall average monthly cost (for more details see *User Strategies for Cost Saving and Staying Connected*). Yet even with these prudent measures in place, a large proportion of users (57%) reported having some difficulty with their mobile phone payments.

FIG. 15

Payment difficulty

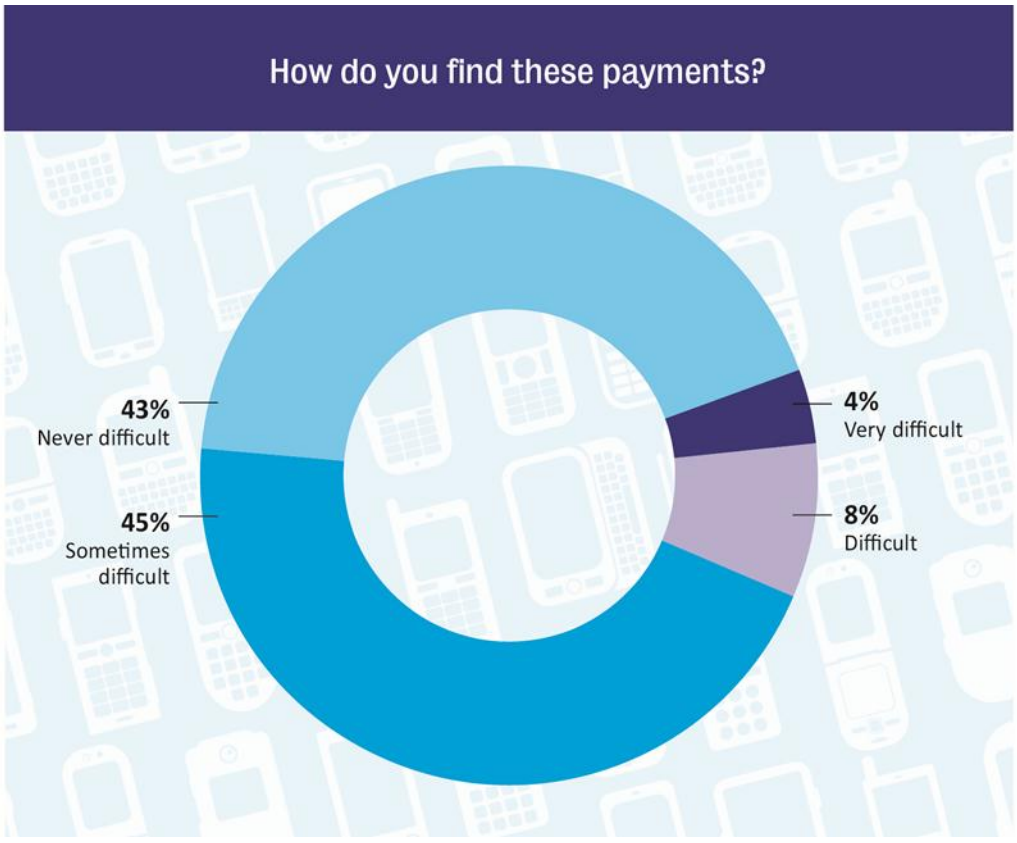


Figure 15 breaks this down further: 43% reported never having difficulty with their mobile phone payments, 45% reported having difficulty sometimes, 8% found their mobile payments difficult and 4% found them very difficult. In the interviews conducted, participants highlighted what many saw and experienced as the high cost of mobile services, particularly handsets. The word cloud in Figure 16 captures the overall sense of participants' feelings about this expense:

FIG. 16

Participants' feelings about the expense of mobile services

In their evaluation of global affordability of Internet access in developed and developing countries, the UN Broadband Commission suggested a target of 5% of an average monthly income for an entry-level broadband service (Internet Society, 2014). Yet, as shown in Figure 14 above, the monthly payment costs for a mobile phone service (which may or may not have Internet capability) as a proportion of monthly government income support exceeds this goal for all but three of the scenarios listed in the table shown in Figure 17.

Even without factoring in extra payments for Internet access (which a number of basic and feature phone users reporting having for their other mobile devices such as laptop and tablet) these monthly payments are considerably higher for a person on a government benefit as a proportion of their annual income than they would be for a person on an average annual salary, calculated to be $61,057.50 post-tax for an Australian adult as of 2013 (ABS, 2013). Significantly, many presenting to specialist homelessness services are on government supported incomes yet a sizeable proportion are *without any income at all*. Of the 193,551 clients aged 15 and over who accessed services in 2012-2103, 10,779 reported no source of income, in many cases because they were escaping situations of family and domestic violence (AIHW 2013).

The affordability of mobile phone and data services must thus be considered not only in light of their cost compared to other utility appliances and services but rather, in light of the overall income needed to meet housing and other essential needs and obligations in society. The UN Broadband Commission has drawn attention to this as a particular challenge of developed countries, where the

Commission's target has been reached on the surface, but "where seeming affordability is masked by deep income inequality, putting the Internet out of reach for many" (Internet Society, 2014).

FIG. 17

Mobile payment costs as a proportion of government income support

Centrelink Income Support (figures as of June 2014)	Maximum monthly payment (4 weeks)	Proportion of payment if on a mobile plan	Proportion of payment if on pre-paid
YOUTH ALLOWANCE (under or older than 18 years with no children who is required to live away from parental home)	$828.80	8.69%	6.39%
NEWSTART ALLOWANCE (a single parent with one or more dependent children)	$1,104.80	6.52%	4.80%
NEWSTART ALLOWANCE (a single person with no children)	$1,021.00	7.05%	5.19%
DISABILITY SUPPORT PENSION (a young person (under 21) with a disability living independently)	$1,065.20	6.76%	4.98%
DISABILITY SUPPORT PENSION (over 21 and with a disability living independently)	$1,532	4.70%	3.46%
AVERAGE MONTHLY SALARY OF AUSTRALIAN ADULT **Based on ABS average weekly earnings, Nov 2013*	$5088.13	1.42%	1.04%

The Cost of Contact

The cost of maintaining contact with services and government agencies represents a significant burden for people on low incomes and those experiencing homelessness. As previously noted, people experiencing homelessness interact with a wide range of government services and agencies (Baldry et al., 2012) and much of this interaction is by phone. As one caseworker at a Sydney housing service put it: *"It's key. Phone contact, and again that might be mobile or landline but predominantly mobile phone. It's probably the key contact point because to even refer to us, it's all done by phone."*

Participants in the study identified 1800 and 13/1300 numbers, which many services use as their primary access point, as a major expense and frustration. In some cases participants talked of attending centres in person just to avoid the cost of the call and wait time. Indeed, it was the combined effect of wait time and the timed nature of these calls that makes this contact method so costly. In one case, a young woman living in a refuge without a pay phone had signed up to a mobile phone contract to try to meet the reporting requirements of Centrelink because her pre-paid mobile service kept running out of credit while on hold, only to end up in financial difficulty at the end of the billing cycle when she exceeded the cap on her mobile plan.

A range of institutions and government departments now recognise the impact of the cost of contact on service users. The Commonwealth Ombudsman, in a report investigating complaints made by customers of Centrelink (now integrated into the Department of Human Services (DHS)) identified access problems as a major cause of complaints to their agency. They found that the cost of calling Centrelink places an especially heavy financial burden on customers calling from mobile phones who have to wait in long telephone queues:

> *People calling from a landline can ring any of Centrelink's telephone enquiry lines for the cost of a local call. However, a call to Centrelink is a timed call for most people using a mobile phone, except in limited circumstances. (Commonwealth Ombudsman, 2014 p16)*

Following reports such as these and concerted public campaigns, awareness of the cost of contact appears to be informing the way some services are being implemented as well as how 1800 numbers are charged. From 2015, all 1800 numbers will be free to call under a framework developed in close consultation with the telecommunications industry and ACMA and the Communications Alliance (ACMA, 2014). Under this framework, individual mobile operators will make 1800 numbers free of charge from pre-paid mobiles (this will include when they run out of credit but only until their service expires). However, 13 and 1300 numbers will continue to be timed, though some mobile providers will offer a 'friendly' plan which consumers can opt to switch over to allowing these call costs to come out of existing call credit (ACMA, 2014).

While these changes will ameliorate some of the costs assumed by the average individual consumer, there are a number of instances where the cost of contact will continue to adversely affect vulnerable consumers. For one, the new charging scheme for 13 and 1300 numbers under the new framework is cumbersome, and calls to these will continue to be timed. Unwittingly, this could lead to further confusion and unexpected charges since organisations such as banks, insurers and mental health support will likely continue to use these popular and easy-to-recall numbers.

Another concern is the impact of digital service delivery by government agencies. As part of a sector-wide program of service reform, many public service agencies are rapidly enlarging the volume and range of transactions that can be performed using online and mobile channels. The Medicare and Centrelink Express apps, launched by the Department of Human Services in 2012, are good examples of this digital reform program aimed, as one Program Director explained, at: *"shifting the bulk of customers away from the face-to-face and telephone channel to what we call 'self-management".* Similar change programs are underway across the public service sector. At the time of the study the Department of Family and Community Services (FACS)/Housing NSW were in the process of rolling out a new state-wide helpline for homelessness, *Link2home*, for all enquiries about homelessness in NSW to be delivered by the FACS Housing Contact Centre.

As options for interacting online and through mobile apps grow, the cost of contact goes up for those who access services using mobile phones. For some, the higher cost of access and data usage might be offset by the savings made by not having to wait for long periods of time on calls or the time spent visiting an office – what one government department employee called an "opportunity cost". Yet, for those already finding their mobile service payments difficult, this new cost comes as an added burden, which may put interacting online out of reach. In the context of digital service

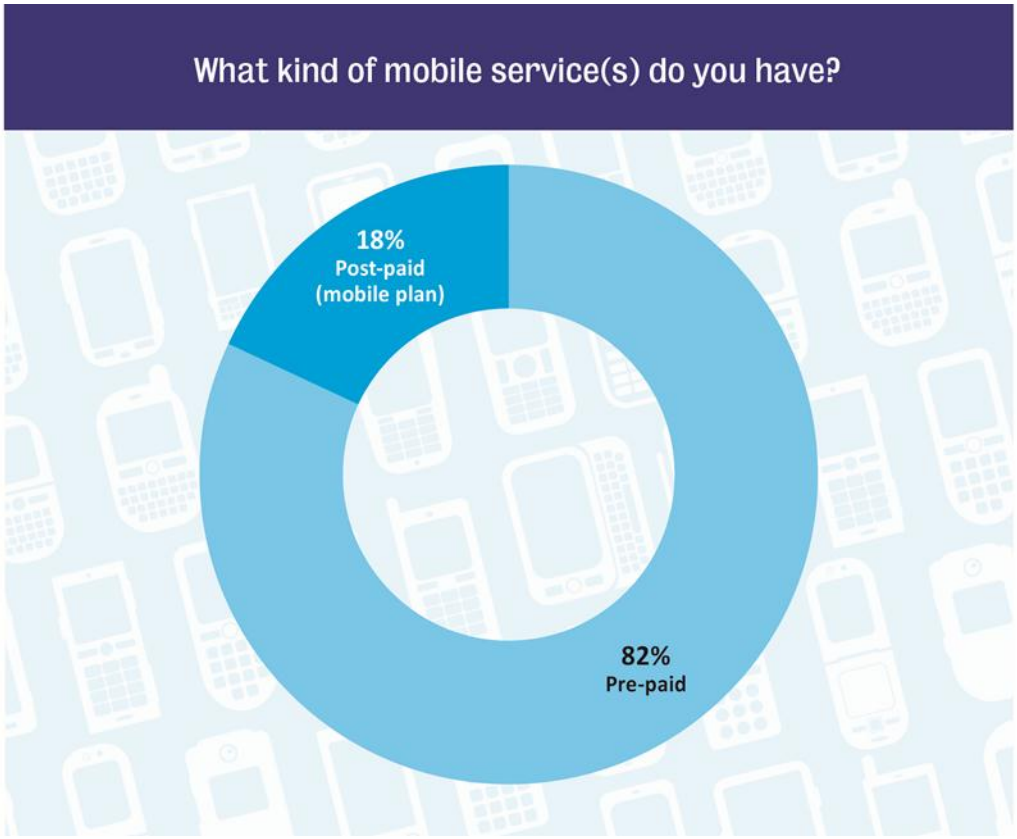
reform, this has some paradoxical effects: directing customers back into telephone based and face-to-face services rather than away from staff intensive services. More to the point – for those users who are otherwise able to and want to interact online, such as many of the participants in this study, this cost may lead to missing out on the opportunities that come with interacting in a mobile environment, and therefore will find it increasingly difficult to comply with contact and reporting requirements.

User Strategies for Cost Saving and Staying Connected

Participants reported a variety of strategies for managing the upfront and ongoing costs of a mobile. As previously noted, one of the key strategies for making phones affordable was using pre-paid services in combination with a mobile handset. Figure 18 shows that 74 (82%) of participants used pre-paid mobile and only 16 (18%) were on a mobile plan. Even though pre-paid services were on average cheaper than post-paid plans at 53 compared to 72 dollars a month, the decision to adopt this mode of access was also influenced by the control that a pre-paid service provided over daily spending and safeguarding from unexpected charges or 'bill shock'. Using free Wi-Fi and other free Internet sources to reduce data spend was another chief cost saving measure: 50% of smart phone users and 43% of all mobile phone users relied on Wi-Fi hotspots (Figure 12).

FIG. 18

Mobile service type: Pre-paid/ Post Paid



Usage monitoring tools like reminder texts sent by the mobile service providers on a fortnightly basis were also identified as a handy and effective way to manage the ongoing costs. Jen provided this explanation:

Generally, if I'm making phone calls I check it up whenever I finish but I check it maybe every few days, like if I'm running low on talk time, it sends me a text message telling me that I've got 60 seconds left or if my data's going to expire, it'll tell me it's going to expire in four days. So it's one of the reasons I like being on pre-paid because they actually do tell you and if you go below $10, it tells you if your credit is low.

Many participants referred to post-paid plans as something to avoid *at all costs.* Young people, in particular, recalled stories from their own childhood or relayed by a friend about mobile plans that had gone wrong, sending the user into deep debt. Marvin, a young man in supported accommodation, identified one of these past experiences as the reason for avoiding mobile plans now:

Plans, if you go over, they'll lock you in and they'll overcharge you and you end up broke and end up calling them and asking for extensions. I mean I've dealt with that when I was 14, 15 and I'm not going back down that road.

Fi, a young woman living in another accommodation residency told of a similar incident:

Back when I didn't know a lot about pre-paid kind of things – and I didn't know a lot about that whole data thing…So I was on this one that was $50 a month but it didn't mean that much data. So that went really quickly and it used to become a problem because I used to just go through my credit just like that.

Stories such as these pointed to a heightened awareness and knowledge of how to manage the costs of mobile services that had come about through personal experience and peer accounts. This inter-peer communication is an important source not only of identity construction but also of digital and consumer literacy, especially for young people. As Bettis and Adams (2005) found in their study of adolescent girls in schools, this peer learning often takes place in informal venues, "outside of school and outside of adult-constructed activities" (p.277), including on the online platforms where stories such as these are retold, reposted and retweeted. In this way, young people not only learn about new products and services available, they also gain knowledge of the traps and pitfalls in the mobile marketplace, and in this way, become more informed consumers.

Several other commonly used strategies for keeping costs down were identified in the interviews with clients. In summary these were:

- Using budgeting tools/apps
- Tethering the mobile phone as an Internet server for other digital devices
- Avoiding downloading/turning off features that use data
- Using Facebook messenger, Live Chat and Skype for free messaging
- Using available public/private power sources for charging wherever possible
- Limiting or avoiding charged voicemail services
- Using SMS/text and call back to contact support services
- Purchasing a low cost basic mobile for temporary use

Significantly, these cost saving strategies had the dual role of maintaining continuity of access. Many of these measures stood in as temporary solutions or work arounds when a connection wasn't available, such as when a phone service was turned off or suspended because of credit shortages. In the example below, Jen explains how she used Facebook Messenger for a period of 3 months when she had just moved to Sydney and was without phone credit:

> *When I first moved to Sydney I had no credit for about three months and my friends were constantly trying to contact me and I was like I can't contact you because I've got no money and I've got no credit…so that's why Facebook was good because I could just message them on there.*

Support service staff confirmed these strategies in use by their clients but also drew attention to the way in which these practices could potentially affect service provision and lead to difficulties with getting in touch with clients leading in turn to the need to adjust communication methods. For example, leaving a message on voicemail was not an option in most instances because most clients did not use this service due to the high cost of retrieving messages. As a result, many service staff used SMS as a way to leave a message after trying to get in contact by phone. The necessity to maintain contact with clients was so important in situations where a client's safety was at risk, that support services often provided mobile phones to those clients who didn't have one or when a phone was broken or lost.

The findings highlight a pastiche of connecting styles that is especially common and possibly unique to people who are homeless. Users draw on a combination of alternative free sources of telecommunications and Internet to maintain continuity and affordability of access. Fixed computers and 'self-service' style terminals in government agencies and accommodation centres, public libraries and free Wi-Fi play a central role as alternate sources of Internet access within this larger media ecology. Staff of support services commented on the heavy use of networked computers offered to clients for use within their premises – and observed their cost saving role. George, a caseworker at a housing service in Sydney for homeless and at risk youth explained:

> *We have two computers in the [back room], but we also have Wi-Fi, so if they're just looking something up they would do it on their phone quickly, so they're not using up their data.*

For those in the study these alternate sources of Internet access were the main way that participants afforded their mobile services and stayed connected. Some support services have identified this need among their clients and are starting to explore ways that they can enhance access to the Internet. One manager of a specialist homelessness service in Melbourne explained how their service was looking at implementing a Wi-Fi hub: *"so they might not be seeing a worker but they can sit there, charge their phone and link in with Wi-Fi to access information about services".* What is novel about this approach is the emphasis of the provision of free Internet as a service in itself rather than as a supplement or compliment to other core support services.

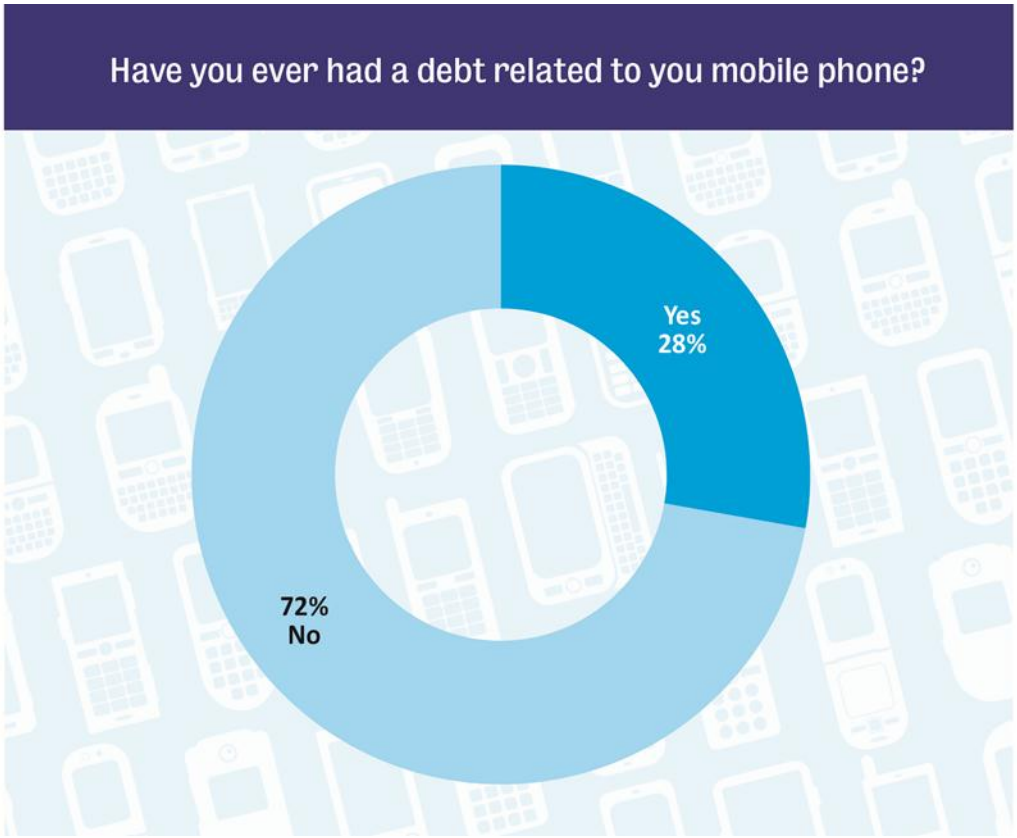
Still Falling through the Gaps

The vast majority of the families, youth and adults in this study made it a priority to have a mobile and were managing the cost of a phone through a range of innovative and technology 'savvy'

strategies. There were two types of participants within the study sample, however, that were noticeably struggling with their mobile phone payments or were going without mobile technology altogether. As shown in Figure 19, a significant proportion had encountered debt.

FIG. 19

Mobile phone debt



Vulnerable customers with complex needs, that is, people whose homelessness overlaps with a number of other support needs, were one category of participants more likely to have reported difficulty paying bills and experiences of debt with their mobile phone. Of the 23 participants who reported a debt, 12 or 57% of these also reported having or having had a mental illness. This compared to 39% of all participants who reported having or having had a mental illness. Within this group of 12, 4 also had a physical disability. Another group who were overrepresented in this group were families: 8 (38%) of the families in the study reported a debt experience with a mobile phone compared to only 11 (19%) of young people and 4 (24%) of adults.

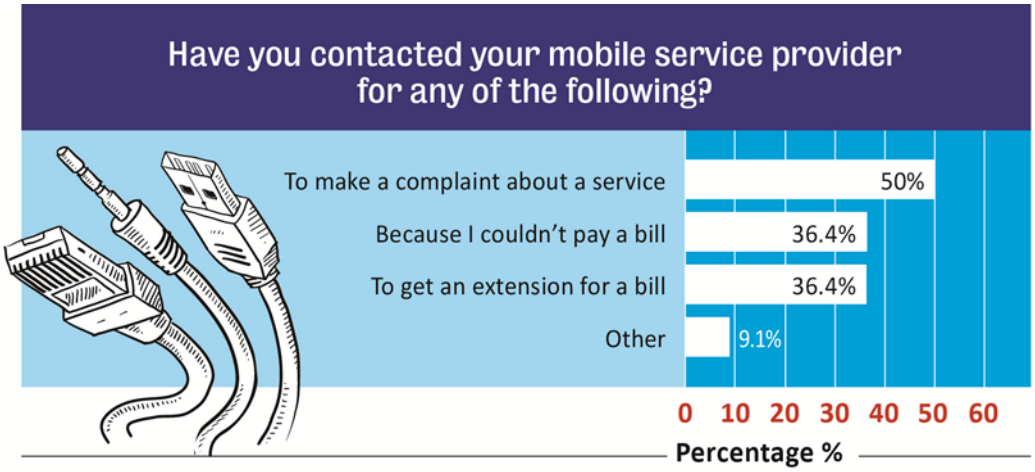
One of the characteristics of participants who had experienced a debt was having a smart phone, pointing to the high cost of mobile Internet as a potential contributing factor of situations of debt and financial hardship. A higher proportion of the participants who reported a debt had smart phones (86%) compared to those participants who reported not having had a debt (75%). Among smart phone users, there was also a heavy reliance on free sources of the Internet, with 57% of the participants who had reported a debt using Wi-Fi hotspots and 26% mobile broadband, compared to 38% of total users who using Wi-Fi, and 14% who accessed mobile broadband.

Participants who had experienced a debt had more contact with mobile phone providers: 14 (61%) made contact because they couldn't pay a bill and 13 to request an extension (57%). This compared

to 1 (1%) of the 59 participants who had never had a debt having contacted a mobile service provider because they couldn't pay a bill and 3 (18%) having requested an extension. Figure 20 below shows the overall percentages for contact made by participants to a mobile service provider for any of these reasons.

FIG. 20

Contact with mobile service provider



The impact of a debt resulting from a mobile plan can be long-term and far-reaching, even for those who have moved on to pre-paid services. A number of the participants interviewed spoke of still paying back or living with the consequences of not being able to meet debt repayments or borrow money for other purchases long after their contracted service has been discontinued. The impact of these experiences of debt could have serious consequences on the mental health of participants, many of whom were already dealing with a prior mental health condition. In one case, a 21 year old young man with a mild intellectual disability, who had spent time in intensive psychiatric care for schizophrenia, signed up to four mobile plans in close succession after his eighteenth birthday. Very soon after, he found himself owing thousands of dollars with a debt he was unable to pay back. Jack explained to me how this made him feel at the time:

> *Yeah it was a lot of stress. A lot of stress and sleepless nights and stuff like that and them saying, "I'm sending debt collectors round to your mum's house". "I'm not living there", my mum's told them that. She'd told them many times when they come to the door, "I don't even see my son".*

Barbara, a young woman in supported accommodation explained how, when living on the street, she signed up to a mobile phone plan that she couldn't afford. Shortly after, she purchased another phone for a friend under her own name from the same reseller and soon she found she was going over the cap in both plans, and unable to pay her monthly bills. Barbara explained to me the effect this had on her at the time, underlining her dealings with the mobile phone provider as a source of her anguish:

> *They made me very depressed and they put me in situations where instead of listening to me they contacted the debt collectors straight away. They've put bans on my name so when I was moving from refuge to refuge and was homeless and the time when I needed a loan for something I wasn't able to. They did a credit check rating and straight away I was blocked.*

Instead of them listening to me, and making a payment plan or something like that, they weren't interested in doing anything like that…

During the interviews with these clients who reported having had a debt, a pattern started to emerge: there are mobile resellers who are signing up very young people to contracts without carrying out the necessary checks to verify age or employment status. Referring to her mobile reseller, Barbara explained:

They just ask you do you work? If you want a phone you just lie so I lied and said yeah, I do work. I gave a fake business and a fake phone number. They didn't call that or nothing but they let me have a phone.

Support service staff backed up these accounts and expressed astonishment and concern that these practices were taking place. On this issue, George, a youth worker observed:

So many of our young people get into financial problems with their mobiles. Even once they owe thousands of dollars they will get offered another plan. I can't understand how someone who's in thousands of dollars of debt, who would never be given a $2000 or $3000 loan because they are on Centrelink, would be able to get into that level of debt through a phone company and then be given another phone before they've even started to pay off that last lot of debt.

A number of clients who had debt experiences and staff who had witnessed and supported their clients through these difficulties spoke of the importance of protecting other young people from getting into a similar situation. One idea proposed by Jack, the young man mentioned earlier, was to put a cap on the amount of phone debt a young person could reach before entering into further service commitments. Another idea was to have an upper limit on how much a young person under 21 could spend on mobile services in a given period. All these ideas have value and would benefit from further consultation among young people and their carers to canvas their ideas and identify measures that could help protect and support early engagement with mobile services whilst preventing an essential utility like a mobile phone becoming a source of additional hardship.

There was another category of participants who were also falling through the digital gap. The research found that single adult males living in emergency housing, boarding houses, on the street or in temporary accommodation were more likely to be without a mobile phone than other participants, indeed, ten times more likely[§§]. Of the 5 without a mobile phone, all were single adult males, 3 (60%) were long-term homeless who had been living on the street or in temporary shelter for two or more years, 4 (80%) had experienced a mental illness (compared to 43% in the total sample) and 3 (60%) were over 40.

This group of non-mobile phone users relied on borrowed phones, public pay phones, phones provided by government agencies and accommodation centres for making and receiving phone calls. This group also had little or no Internet access – with 2 of the 5 reporting that they don't use the Internet at all and 3 reporting that they access the Internet from a public library or from a friend or

[§§] Odds ratio calculated with 95% confidence interval using medicalc at http://www.medcalc.org/calc/odds_ratio.php.

family member's computer. The results provide further evidence that some of the most marginalised Australians are still without access and receive few, if any, of the benefits of digital services. In the context of a shift to a mobile and online service environment, a different set of issues may be more pressing for this group, with the need to focus efforts and measures not only on Internet accessibility and affordability but also on increasing levels of engagement, skill and interest.

CONCLUSION

When this project set out to investigate how people experiencing homelessness access and use mobile phones and the Internet, existing research suggested a high level of mobile phone connectivity was to be expected. The results not only confirmed this, they underlined that for this group, as well as those at imminent risk of homelessness, mobile phones are essential and that having one is a matter of survival. This was demonstrated by the high rates of mobile phone ownership, its use for physical safety, for contact with emergency services, for exiting homelessness, and the commitment to pay for mobile services even when the expense was a sizeable proportion of users' income. In addition, smart phones play a special role in the lives of people experiencing, or at risk of, homelessness because they may be the only method of communicating and accessing the Internet, and the Internet is now imperative for survival.

Despite a large proportion of participants in the study having mobile phones and other mobile devices such as tablets and portable game players, participants in the study also encountered significant difficulties affording and maintaining their mobile services and Internet connections, and these difficulties, though similar for other low income, vulnerable and disadvantaged groups, were also specifically related to the circumstances of homelessness. Restrictions on the availability of power and breakdown and loss of mobile handsets are examples of the commonly identified barriers that exist on top of the issues of affordability discussed below and related specifically to homelessness.

These difficulties were not always obvious, or easily discovered. Indeed, many came to light via the process of delving into daily habits and practices. The hidden nature of these difficulties could lead to a view and expectation that people experiencing, or at risk of, homelessness are as fitted out to participate online and interact with digital services as everybody else. Yet, even though clients of homelessness services rely on their mobiles for daily interactions with support services, access was not always guaranteed. These results confirm the understanding that usage, including access, is shaped by social context. As Wacjman (1999) and other social and cultural researchers of technology have convincingly demonstrated, technology is historically situated and shaped by the social relations. In this instance, a key determinant of this social context is the lack of a secure and stable home. Here, as elsewhere in this report, 'home' refers to more than just a roof or place of shelter – it also describes a high level of control over the space and social relations in which a person lives.

Usage shaped by homelessness

Lack of or inadequate control over space and social relations can significantly affect the ability to access and engage with digital technology. The inability to connect a fixed line service to an address, to make installation decisions about the type of service and products, and not knowing where the closest power outlet is or a safe and dry place to use technology, are all issues which impact on service availability. These are not related to geographical constraints, but rather, to a lack of agency to exert control over space.

As Lally (2002) illustrated through her study of the process of acquiring and incorporating personal computers into the home in the early 2000s, space is not an empty shell, ready to receive an imprint

of meaning. Space already carries meanings and preserves the potential for interaction and placement. In the home, as in the workplace, this potential allows for control and creative appropriation of the objects and social relations within (Haddon and Silverstone, 1996). These pre-configured or 'domesticated' environments carry with them less uncertainty and risk than environments that are encountered in unfamiliar and transient settings (Humphry, 2011).

Consumption is underpinned by and fuels an idea that consumers will be able to domesticate the commodities they acquire in their own space and time, yet for people experiencing, or at risk of, homelessness, this is not usually the case and because of this, some of these technologies remain 'wild'. This ability to make decisions about and adjustments to objects in space as well as to exert personal control over communication and information flows is key to, and possibly, an underestimated aspect of the capacity to engage with and use digital technology, operating alongside other recognised issues such as technological skill and literacy.

Usage shaped by affordability

While homelessness was one of the key factors that shaped this broader social context and the related issues of service availability, income also played a major role in how mobile phones and the Internet were accessed and used by the families, youth and adults in this study. In this sense, usage was also shaped by the affordability of mobile and Internet services, which in turn, is a dimension of the overall cost of living.

In the case of the homeless participants in this study, a number of new practices and innovations emerged in response to having a limited income and needing to carefully watch and monitor costs associated with both mobile and Internet services, as well as other everyday costs. Many participants utilised the functionality of Internet-enabled mobile devices to access apps and online services that could be used, and customised, to address specific cost limitations. For example, it was found that families in particular relied on budgeting and discount tools available through smart phones to keep track of their finances and manage their budgets. At the same time, cost factors curtailed use considerably – what could be used and how often. These findings confirm the understanding that technological innovation and usage is a dialectical process, conditioned by users' power and agency, which includes their ability to afford products and services:

> *Technological innovation, in tandem with prevailing social conditions, allows new social practices to emerge, reconfigures existing practices, or reinforces preexisting social divisions.* (Hackett et al., 2008)

The findings also add to those voices urging a rethink and calling for additional measures to address affordability in telecommunications and broadband Internet more generally (see for example Morsillo, 2012; Goggin, 2014). To some extent social innovations and market shifts (such as lower prices) go some way towards addressing affordability issues but as Goggin (2014) points out, "social exclusion remains a reality and in many places has worsened with economic conditions and restructuring". This research has shown that for people experiencing, or at risk of, homelessness, affordability is a pressing issue – in part because of the integration of mobiles and other digital technologies into everyday interactions but also because of the essential nature of mobiles for

surviving and exiting homelessness. With the delivery of a wide range support and health services, access – and continuity of access – becomes even more important and indeed a key to social inclusion.

Usage co-evolves with changing expectations of connectivity and service delivery

As we've seen in the paragraphs above, specific usage contexts shape and mediate the ways that users access and integrate a technology into their life. Another key context of use for people experiencing homelessness are the support services, government agencies and other essential services like banks and health care institutions with whom many in this group interact on a regular, even daily, basis. As this research has shown, people experiencing homelessness undertake many of these interactions using their mobile phones as well as through other online platforms. Mobiles have already become a normal and expected part of this service relationship. Without a mobile phone, people who are homeless may find it increasingly difficult to access these services and may even become ineligible to receive a service. Needing to have an operating phone number to stay on the eligibility list for public housing (if you are unable to provide a mailing address) or the obligation to update a move of address if on government income support are examples of the new risks arising from not having access to a working mobile phone.

Mobile technologies, norms and practices of mobile connectivity co-evolve – and as mobile technologies and innovations emerge and provide new ways to interact and communicate, services and institutions also respond with new expectations and obligations for users of those services. Digital service delivery change programs taking place across the public service sector add momentum to these already shifting expectations and provide opportunities for connecting and interacting with services. They act like a 'ratchet', a metaphor used by Shove (2003) to give a sense of how practices and technologies become locked-in to a trajectory of development. Connected to this process of ratcheting is the construction of social standards or conventions of normality which reinforce the direction of change.

We know that access to mobile media is understood to be fundamental to social participation and civic identity formation (Arvanitakis, 2013), for accessing essential support and emergency services as well as for achieving better health outcomes (Eyrich-Garg, 2010; Rice et al., 2010, 2011a). Through these, there are many new ways to access and engage with services, build informal support networks and participate in online communication and creation (Rice et al., 2011, Rice and Barman-Adhikari, 2013; Guadagno et al., 2013).

Bure (2005) has made the point, based on her research of homeless subcultures in Scotland, that access to technology by itself doesn't guarantee social inclusion. Moreover, technology access is not the only pressing issue when it comes to digital inclusion. Interest in accessing the Internet, which may be related to a lack of locally relevant content, can be just as important, as noted in the Internet Society's 2014 Global Internet Report: "it is important to differentiate those who could afford to go online, but choose not to, from those who do not have access or could not afford it anyway" (p 12).

Nevertheless, as digital inclusion becomes a pre-condition for social inclusion, there is also a higher risk of social exclusion that comes with new access and participation barriers, and these are particularly compounded for some vulnerable groups. As we've noted, the cost of maintaining contact, such as with support services and government agencies, can in itself be a significant burden for people on low incomes and experiencing, or at risk of, homelessness.

Moreover, this is an ongoing risk, as Helsper and Livingstone (2007) point out, that technological innovation is recurrent and therefore digital inclusion requires a continuing public investment. This latter consideration is particularly relevant in the context of the rollout of the National Broadband Network (NBN) and the risk that groups who have little to no chance of accessing a fixed line infrastructure will be entirely locked out of any benefits it brings.

This study has identified that for people experiencing, or at risk of, homelessness digital inclusion is not just a question of getting hold of new technologies – indeed when it comes to mobile services, a sizeable portion of consumers of mobile media who are homeless can be considered technology leaders. Not only are they able to get hold of technologies, these savvy consumers make use of their platforms in creative and innovative ways.

Issues of inclusion nevertheless remain – these users have fewer options and reduced agency and power when it comes to obtaining and affording digital technology and in navigating the market. These barriers are not necessarily overcome through creative re-appropriations. Indeed, in the context of evolving expectations and demands of connectivity and the push to online and mobile services, this reduced agency can become a new point of social exclusion. Moreover, for some groups within the homeless population, namely mature single adults and those with multiple and complex needs, these limitations are likely to reinforce and exacerbate pre-existing social divisions, extending old "digital divides".

As Le Dantec (2010) has argued, the needs of marginalised communities are "not merely a matter of making cheaper technology, but rather of making fundamentally different technology" (p 1). For consumers who are homeless, we might add: new institutional alliances and forms of collaborative innovation are needed, including creative approaches to support service delivery; and new telecommunications assistance schemes and products to improve availability and affordability and which cater for the needs and circumstances of people experiencing, or at risk of, homelessness.

RECOMMENDATIONS

The study proposes a number of recommendations to inform the direction of policies and initiatives to improve availability and affordability of mobile services and the Internet to homeless consumers, and to inform reform of a range of support, health, banking, and government employment and income-support services using online and mobile platforms. These recommendations are guided by the principles of *continuity of service*, *affordability* and *flexibility of access*.

Recommendations for Mobile Service Providers:

1. Specify homelessness in financial hardship policies adopted by mobile service providers and ensure that customer service operators are aware of the special need for people affected by homelessness to maintain continuity of service when negotiating bill extensions and payments.
2. Ensure cost effective methods for consumers to reach staff and teams with responsibility for hardship across multiple platforms such as direct contact through 1800 number[***], web form, call back options, Live Chat, Facebook, apps and via Financial Counselling and Homelessness services.
3. Introduce new aid and subsidy programs (or extend existing programs such as Telstra's 'Access for Everyone' program) to support access to mobile and data services (for example, handsets, credit recharge, discount options and Wi-Fi access).
4. Consider ways assistance programs can be provided that works effectively across all mobile service providers, for example a way for community agencies to recharge their clients mobile service, a card with call and data credit that can be used with any pre and post paid mobile service and provider, or a subsidised or free voicemail and inbox messaging service, again, for use with any pre and post paid mobile and service provider.
5. Offer more widely assistance programs and available discounts through existing partnership programs (for example, the SMS/call packages for support providers through the *Youth Connected Program* from Vodafone Australia Foundation (VAF)) and initiate outreach programs in collaboration with homelessness services (including specialist legal clinics) to, for example, provide on the spot assistance to clients with telecommunications matters.
6. Work in partnership with support and housing providers, libraries, local councils and users of these services to develop and promote affordable Internet access and provisioning solutions that integrate with where and how people experiencing homelessness use digital technology (for example, Internet access points and self-service terminals, Wi-Fi hotspots, options to switch to available Wi-Fi services, low cost and pay-per-use mobile broadband, power recharge stations and shelters for securely storing equipment).

[***] Dependent on the implementation of the new framework for call charges from mobile phones to 1800 numbers developed by ACMA and the Telecommunications Industry.

Recommendations for Government Agencies and Support Services:

1. Ensure cost effective contact methods and multiple access points to services (especially for high volume services) such as 1800 or 13/1300 numbers[†††], call back options, Facebook, Live Chat, SMS and other social media, web-based platforms and apps.
2. Build digital capacity of homelessness services through adequate funding and resourcing to integrate mobile, social media and other web-based platforms into regular contact and support activities (if any of these are considered to raise privacy concerns, these should be addressed as early as possible in development).
3. Equip staff of homelessness services with the skills and resources to provide information and referrals on telecommunications bill, contract and debt matters, and to be able to make direct and immediate contact with the specialist hardship teams of mobile service providers on behalf of their clients.
4. Preserve non-digital contact and service points for customers who are non-Internet users and those without access to mobile and online technologies.
5. Work in partnership with mobile service providers, libraries, local councils and service users to develop and promote affordable Internet access and provisioning solutions that integrate with where and how people experiencing homelessness use digital technology (for example, fixed Internet access points and self-service terminals, Wi-Fi hotspots, options to switch to available Wi-Fi services, low cost and pay-per-use mobile broadband, power recharge stations and shelters for securely storing equipment).

[†††] As above.

APPENDIX 1: FINANCIAL HARDSHIP POLICIES AND LOW INCOME PRODUCTS

Contacting the Financial Hardship Team	Phone number	Web address	Forms
Optus	Customers experiencing Hardship can contact Optus on 1800 505 201. Financial counselling associations have been provided with the direct contact number for the Optus Financial Advisory Support Team.	http://www.optus.com.au/financialhardship	-
Telstra	13 22 00	http://www.telstra.com.au/aboutus/community-environment/responsible-business/?red=/accessforeveryone	-
Vodafone	1527 from a Vodafone mobile, 1300 650 405 from any other phone	http://www.vodafone.com.au/aboutvodafone/legal/financial-hardship	http://www.vodafone.com.au/doc/vodafone-financial-hardship-form.pdf

Financial Hardship charter and policies	Web Address
Optus	http://www.optus.com.au/financialhardship
Telstra	http://responsible-business/?red=/accessforeveryone
Vodafone	http://www.vodafone.com.au/aboutvodafone/legal/financial-hardship

How companies assess financial hardship	
Optus	Optus considers you to be experiencing financial hardship if you are unable to pay bills, rather than being unwilling to do so. Financial hardship can arise from a variety of situations. Hardship can be either of limited duration or long term. To illustrate, several of the common causes are listed below. Hardship can result from a number of factors including: • Loss of employment by the consumer or family member. • Family breakdown. • Illness including physical incapacity, hospitalisation, or mental illness of the consumer or family member. • A death in the family. • Abuse of the service by customer (e.g. from use of 190X numbers, GPRS). • Abuse of the service by a third party leaving the customer unable to pay the account. • Natural Disaster. Optus will consider your situation on a case by case basis and work with you to tailor a solution to suit your needs. We will regularly review how arrangements are working and stay in contact with you while we are managing your account.
Telstra	Customer situations are considered on a case-by-case basis via direct discussions with the team. Arrangements are based upon tailoring a solution to best meet a customer's particular short or longer term needs at the time and are reviewed regularly.
Vodafone	All front line staff and Collections Advisors are trained to identify customers who could potentially fall under Vodafone's Financial Hardship policy. The indicators to identify Financial Hardship are: • There has been a change in circumstance that has resulted in the customer's ability to pay their account. Examples of this are loss of employment, relationship breakdown, illness, bereavement, natural disaster • The customer is unable to pay the amount owed within 3 months • The customer is unable to pay, rather than unwilling to pay

Cheapest pre-paid and post-paid services	Cheapest mobile pre-paid service	Post-paid plans with lowest monthly spend
Optus	There are several prepaid options available to customers. What works out cheapest for a customer will depend on how they use their service. For details of prepaid plans see: https://www.optus.com.au/shop/prepaid/sim-card/plans Generally, however, the $2 Days prepaid plans are the cheapest, as the cost to the customer is $2 only on the days they use their phone. Details of the inclusions for this (and other prepaid plans) are available via the above URL.	This will depend on the type of plan the customer is taking, e.g. SIM only or with a handset, and on whether the customer has any other Optus services. The cheapest option is currently the $30 My Plan Plus. For details see: http://www.optus.com.au/myplanplus
Telstra	As our plans can change - it is best to keep up to date by going on Telstra.com to view the different products. For full details refer to: http://www.telstra.com.au/mobile-phones/prepaid-mobiles/	For full details refer to: http://www.telstra.com.au/mobile-phones/prepaid-mobiles/
Vodafone	$20 includes: Vodafone to Vodafone Standard National Voice calls, Vodafone to any network Standard National Voice calls Standard National TXT For more information visit: http://www.vodafone.com.au/personal/prepaid/state/recharge-options?lid=v:mm:pers:shop:prepaid:recharge-options	$25 sim only plan: gives you $300 of value each month to spend on plan inclusions, as well as 300MB of mobile Internet data within Australia. $5 Roaming: take your plan with you to 47 countries. You'll only pay on the days that you make or receive a call, send a text or use data For more information visit: http://www.vodafone.com.au/personal/plans/state/no-plan/multi-fit?lid=v:pers:plans---home-page:sim-cards-home:plans-cta:button:sim-only-plans

Credit management options	
Optus	Dependant on the individual circumstances of the customer, Optus looks at a range of options including, but not limited to, long-term payment arrangements, waiver of certain charges, rate plan changes to lower the customer's financial commitment, and transferring customers to prepaid services
Telstra	Some typical options could include extensions of time to pay, longer term re-payment arrangements and tailoring of services in operation to best meet the budget capacity and circumstances of customers. Telstra also offers assistance by the way of vouchers that can be received through community organisations and financial counsellors.
Vodafone	Vodafone offers: • Bill extensions: either automated or through Customer Care or Collections teams. • Payment arrangements, across a mutually agreed timescale • Service restrictions (barring of all outgoing calls or premium rate numbers) • Online spend management tools, to enable customers to monitor their usage (see table below). • SMS alerts as customers reach certain percentages of their monthly plan • Monitoring and alerting customers of any high unbilled amount, outside of the normal spend pattern, based on the customers previous spend/behaviour (SHOX)

Spend and usage management Tools	
Optus	Optus provides several options for customers to track their usage and keep their costs down, such as Optus My Account (online usage meter), My Optus App (via mobile handsets), SMS and email alerts, and prepaid mobile customers can check their usage by calling/texting 1509 from their Optus handset (freecall). See: https://www.optus.com.au/shop/support/answer?answerId=1369&question=How%20can%20I%20control%20the%20amount%20I%20spend?&typeId=2 Also see: http://personal.optus.com.au/web/ocaportal.portal?_nfpb=true&_pageLabel=Template_woRHS&FP=/personal/customerhelp/accountsandbillinghelp/importantinformation&site=personal#Control_Tools
Telstra	Tools to monitor calls and data usage are available on the Telstra website by selecting 'My Account' from the home page (http://www.telstra.com.au). There is also an app available for use on portable devices.
Vodafone	My Vodafone provides customers with the ability to manage their spend: https://www.myvodafone.com.au/auth/login . There is also the MyVodafone app to access this information straight from your handset.

Specialist assistance products and services	Specialist products and services aimed at lower income and disadvantaged customers	Specialist telecommunications products or services available to welfare agencies, charities and support services
Optus	Optus has a large suite of both postpaid and prepaid plans and services available across a variety of price points to suit low, middle and high income earners. All can be accessed via the Optus website www.optus.com.au.	Optus provides free calls from mobiles to Kids Helpline. In addition, during natural disasters, Optus has often distributed prepaid handsets with credit included.
Telstra	Telstra offers a range of concessionary products and services to people on a low income. For full details see: http://www.telstra.com.au/abouttelstra/commitments/access-for-everyone/	Telstra offers a range of programs for community agencies. For full details see: http://www.telstra.com.au/abouttelstra/commitments/access-for-everyone/community-agencies/ Telstra also provides free calling from Telstra mobile services to Lifeline, SES, Kids Helpline and certain other national helplines.
Vodafone		Vodafone Foundation has a number of Charity Partners to whom it provides financial and mobile technology support. For details see: http://www.vodafone.com.au/aboutvodafone/vodafoneaustraliafoundation/charitypartners

*This information has been compiled based on the details provided by representatives of Optus, Telstra and Vodafone in an online survey delivered by ACCAN in February 2014. This information can change frequently and it is recommended that you check the relevant websites (in most cases links are provided) for the most up to date information.

APPENDIX 2: SURVEY QUESTIONS

Demographics and Lifestyle (Mobile Phone Users [A] & Telephone Users [B])

1. What is your age (in years)?

2. What is your gender?
- Female
- Male
- Intersex
- Transgender

3. Do you identify as lesbian, gay, bisexual or queer?
- Yes
- No
- Other _____

4. What sort of living arrangement (family type) best describes you?
- Single person
- Couple
- Single person with children
- Couple with children
- Other _____

5. If you care for children, how many are in your care?

6. What are their ages?

7. What is your cultural or ethnic background?

8. Do you have a disability?
- Yes
- No

If you answered Yes, what is the nature of the disability?

9. Do you have or have you ever experienced a mental illness?
- Yes
- No

10. Are you an Australian Permanent Resident?

- Yes
- No

11. Are you an Aboriginal or Torres Strait Islander person?

- Yes
- No

12. Which of these best describes your current housing arrangement?

- Emergency housing
- Supported housing
- Staying with a friend or family member
- Living on the street or in a park
- Temporary shelter (for example squatting, camping or campervan)
- Boarding house
- Public Housing
- Private Rental
- Other _____

13. How long have you been in this housing arrangement?

- Less than 6 weeks
- 6 weeks to 6 months
- One year to two years
- Two or more years
- Other _____

14. What was your housing arrangement before this?

- Emergency housing
- Supported housing
- Staying with a friend or family member
- Living on the street or in a park
- Temporary shelter (for example squatting, camping or campervan)
- Boarding house
- Public Housing
- Private Rental
- Other _____

Survey for Mobile Phone Users [A]

1. Do you have a mobile phone?

- Yes
- No *Please go to 'Survey for Telephone Users [B]' (page 11)*

2. What kind of mobile phone is it?

- Basic phone (telephone calls and SMS/texting)
- Feature phone (limited access to Internet and store and play music)
- Smart phone (Internet-enabled, able to download extra apps)
- Other _____

3. Please write down the brand and model if you know it:

4. What year did you start using a mobile phone?

5. How did you get the phone you use now? (e.g. received as a gift, purchased from a mobile reseller, borrowed from a friend)

6. Do you have more than one mobile phone?

- Yes
- No

If you answered Yes, what is the reason for keeping another phone?

7. Do you share your mobile phone(s) with anybody?

- Yes
- No

If you answered Yes, can you explain who with and why?

8. What do you use a Mobile phone for? Please select all the answers that apply to you (some of the features may not be available on your phone).

- Make phone calls
- Receive phone calls
- Text/SMS
- Listen to music
- Take photos
- Watch videos
- Access online information

- Read blogs
- Download apps
- Banking
- Play games
- Betting
- Use dating sites
- Use social network sites (like Facebook, Twitter or Instagram)
- Check recorded messages
- Other _____

9. Please select your top *three* uses of your Mobile Phone:

- Make phone calls
- Receive phone calls
- Text/SMS
- Listen to music
- Take photos
- Watch videos
- Access online information
- Read blogs
- Download apps
- Banking
- Play games
- Betting
- Use dating sites
- Use social network sites (like Facebook, Twitter or Instagram)
- Check recorded messages
- Other _____

10. Which of these is the Mobile phone important for? Please select all the answers that apply to you.

- Staying in touch with friends
- Making new friends
- Contacting family
- Contacting support services
- Finding a job
- Being contacted by employers
- Paying bills
- Learning new skills
- Finding accommodation
- Keeping safe
- Entertainment
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

11. Please select the *three* most important for you:

- Staying in touch with friends
- Making new friends
- Contacting family

- Contacting support services
- Finding a job
- Being contacted by employers
- Paying bills
- Learning new skills
- Finding accommodation
- Keeping safe
- Entertainment
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

12. In your own words can you explain if anything about having a Mobile phone has had a big change on your life?

13. Where do you use the Internet? Please select all the answers that apply to you.

- Only on my mobile phone ***Skip to Question 18***
- My mobile phone
- Wifi hotspots (for example at a café or train station)
- Mobile broadband (for example dongle or data SIM that can be plugged into a laptop or tablet)
- Personal computer at a public library
- Personal computer at an accommodation service
- Personal computer of a friend or family member
- Personal computer at a government agency (e.g Centrelink)
- Personal computer at a retail outlet (e.g Apple Store)
- Other _____

14. What do you use the Internet for? Please select all the answers that apply to you.

- Make phone or video calls (for example Skype)
- Instant Messaging
- Listen to music
- Watch videos
- Access online information
- Read blogs
- Download apps
- Banking
- Play games
- Betting
- Use dating sites
- Use social network sites (like Facebook, Twitter and Instagram)
- Other _____

15. Please select your top *three* uses of the Internet:

- Make phone or video calls (for example Skype)
- Instant Messaging
- Listen to music
- Watch videos
- Access online information

- Read blogs
- Download apps
- Banking
- Play games
- Betting
- Use dating sites
- Use social network sites (like Facebook, Twitter and Instagram)
- Other _____

16. Which of these is the Internet important for? Please select all the answers that apply to you.

- Staying in touch with friends
- Making new friends
- Contacting family
- Contacting support services
- Looking for a job
- Being contacted by employers
- Paying bills
- Learning new skills
- Finding accommodation
- Keeping safe
- Entertainment
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

17. Please select the *three* most important for you:

- Staying in touch with friends
- Making new friends
- Contacting family
- Contacting support services
- Looking for a job
- Being contacted by employers
- Paying bills
- Learning new skills
- Finding accommodation
- Keeping safe
- Entertainment
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

18. What is the name of the provider(s) of your Mobile service? (for example, Telstra, Optus, Vodafone, Virgin)

19. What kind of Mobile service(s) do you have? Please select all that apply.

- Pre-paid Mobile (you add credit)

- Mobile plan (you receive and pay a bill)

If you answered Pre-paid Mobile, how often do you add credit to your phone?

- Once a week
- More than once a week
- Once a month
- More than once a month
- Other _____

How much credit do you usually add each time?

If you answered Mobile Plan, what is the minimum monthly payment you must make?

20. How do you find these payments?

- Very difficult
- Difficult
- Sometimes difficult
- Never difficult

21. Have you ever had a debt related to your Mobile phone account?

- Yes
- No

22. Have you ever contacted your Mobile phone company for any of the following reasons?

- Because I couldn't pay a bill
- To get an extension for a bill
- To make a complaint about a service
- Other _____

23. Were you able to quickly resolve the issue you had to your satisfaction?

- Yes
- No

If you answered No, please write down anyone else you asked for help.

24. Where do you recharge the battery of your mobile handset? (for example, where I'm living, at a shop, at the library)

25. Have you ever had difficulty recharging your mobile handset battery?

- Yes
- No

Survey for Telephone Users [B]

1. Where do you *make* telephone calls?

- Public pay phone
- Phone at a public library
- A phone at a government agency (for example Centrelink)
- A phone at an accommodation service
- A household phone (for example of family or friend)
- A borrowed mobile phone
- Other _____

2. Where do you *receive* telephone calls?

- Public pay phone
- Phone at a public library
- A phone at a government agency (for example Centrelink)
- A phone at an accommodation service
- A household phone (for example of family or friend)
- A borrowed mobile phone
- Other _____

3. Where do you use the Internet?

- Wifi hotspots (for example free Internet at a café or train station)
- Mobile broadband (for example dongle or data sim that can be plugged into a laptop or iPad)
- Personal computer at a public library
- Personal computer at a government agency (for example Centrelink)
- Personal computer at an accommodation service
- Personal computer or laptop of a friend or family
- Personal computer or laptop at a retail outlet (for example Apple Store)
- Other _____

4. Have you ever had a Mobile phone?

- Yes
- No

If you answered Yes, why do you no longer have a Mobile phone?

5. What do you use a Telephone for? Please select all the answers that apply to you.

- Staying in touch with friends
- Making new friends
- Contacting family
- Contacting support services
- Calling about a job
- Being contacted by employers
- Paying bills
- Finding accommodation
- Learning new skills

- Keeping safe
- Betting
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

6. Please select your top *three* uses of a Telephone:

- Staying in touch with friends
- Making new friends
- Contacting family
- Contacting support services
- Calling about a job
- Being contacted by employers
- Paying bills
- Finding accommodation
- Learning new skills
- Keeping safe
- Betting
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

7. What do you use the Internet for? Please select all the answers that apply to you.

- Make phone or video calls (for example Skype)
- Instant Messaging
- Listen to music
- Watch videos
- Access online information
- Read blogs
- Banking
- Play games
- Betting
- Use dating sites
- Use social network sites (like Facebook, Twitter and Instagram)
- Other _____

8. Please select your top *three* uses of the Internet:

- Make phone or video calls (for example Skype)
- Instant Messaging
- Listen to music
- Watch videos
- Access online information
- Read blogs
- Download apps
- Banking
- Play games
- Betting
- Use dating sites

- Use social network sites (like Facebook, Twitter and Instagram)
- Other _____

9. Which of these is the Internet important for? Please select all the answers that apply to you.

- Staying in touch with friends
- Making new friends
- Contact with family
- Contacting support services
- Looking for a job
- Being contacted by employers
- Paying bills
- Finding accommodation
- Learning new skills
- Keeping safe
- Entertainment
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

10. Please select the *three* most important for you:

- Staying in touch with friends
- Making new friends
- Contacting family
- Contacting support services
- Looking for a job
- Being contacted by employers
- Paying bills
- Finding accommodation
- Learning new skills
- Keeping safe
- Entertainment
- Contacting emergency services
- Contacting a doctor or other medical service
- Other _____

11. Have you ever needed to get hold of a phone urgently and not been able to get one?

- Yes
- No

If yes, where were you and what was happening at the time?

12. Have you ever owned a Mobile phone?

- Yes
- No

If you answered Yes, why don't you have one now?

If you answered No, and you have tried to buy a Mobile phone, can you explain what happened?

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