B.I.R.R.R

BETTER INTERNET FOR RURAL, REGIONAL & REMOTE AUSTRALIA

#FIXBUSHINTERNET
#DATADROUGHT

Regional Internet Access Survey Results, 2016

The BIRRR Regional Access Survey results – a tool to assist in lobbying for Better Internet for Rural, Regional, and Remote Australia

BIRRR
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www.birrraus.com
www.facebook.com/groups/BIRRR/
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Executive Summary

Better Internet for Rural Regional and Remote Australians (BIRRR) began as a Facebook group (administered by volunteers) in 2014 whose aim was to provide information and support on telecommunications services to those living in rural, remote and regional areas.

The **BIRRR Regional Internet Access Survey** aimed to establish the state of the internet for people in rural, regional and remote areas of Australia, by collecting information about internet use in rural, regional, and remote Australia. The data will be used to work with stakeholders to improve bush broadband. The survey was distributed to approximately 6000 members of the BIRRR membership base.

The survey found that **rural, regional and remote people are severely disadvantaged in terms of access, speeds, cost and reliability of their internet connections, whether they be via mobile broadband or via satellite.**

This has **a dramatic effect on rural, regional and remote people's business, the education of their children and themselves and on their personal well-being.**

There needs to be an **established service guarantee for internet services Australia wide** - **equitable in terms of speed, download capabilities and costs**. **If this does not occur, regional Australia will be left behind.**
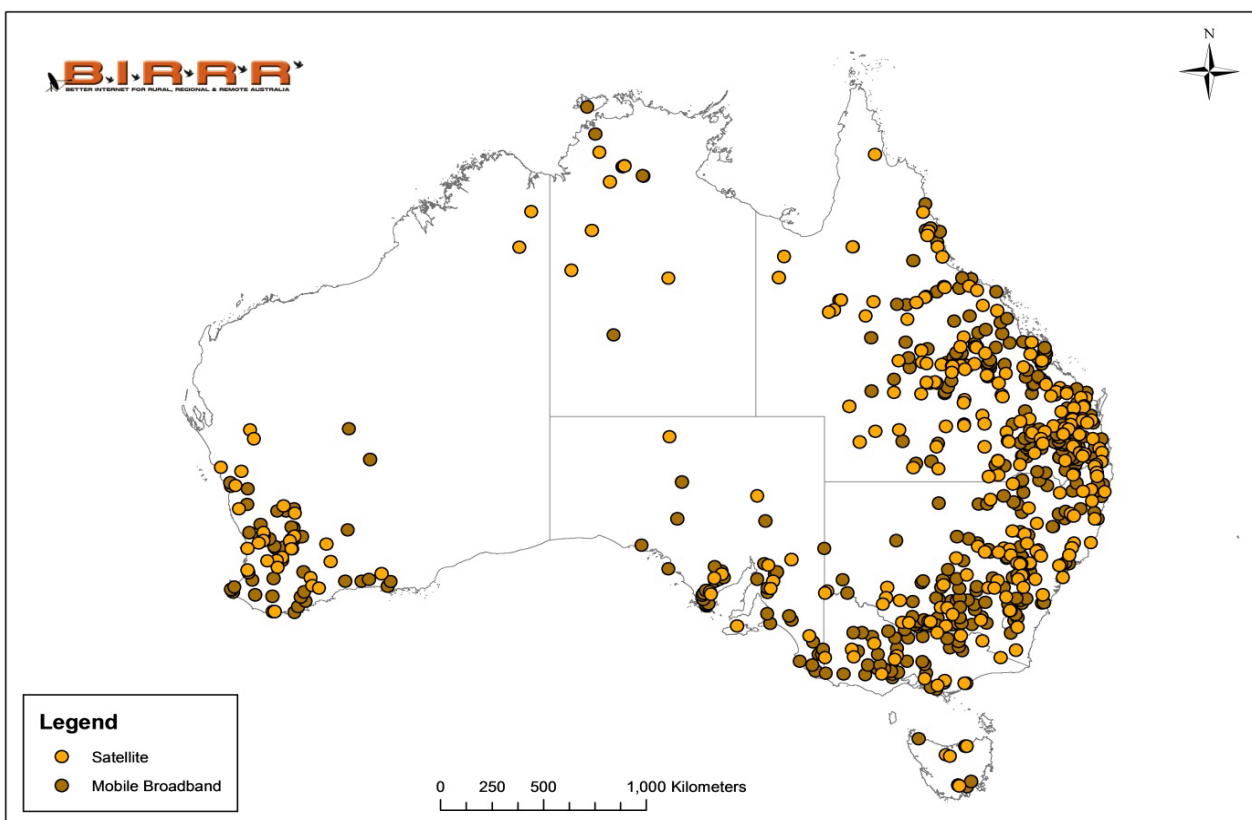
Figure 1: Map of participant supplied addressees for Mobile Broadband and Satellite internet connection from BIRRR, Regional Access Survey

About BIRRR (Better Internet for Rural Regional and Remote Australia)

BIRRR aims to provide information and support on telecommunications services to those living in rural, remote and regional areas.

The BIRRR Facebook group was established in 2014 by Kylie Stretton (Charters Towers) and Kristy Sparrow (Alpha) who were struggling with very limited internet that they used to educate their children and run their bush businesses. Both Kylie and Kristy were experiencing unexplained excessive usage on their mobile broadband data and wanted to know how the rest of rural, regional, and remote Australia was fairing.

As others throughout rural Australia heard about their plight, many joined the Facebook group and it quickly began to grow. With support and online action gathering momentum, administrators Kristen Stahlhut-Coggan (Condamine) & Amanda Salisbury (Monto) joined Kylie and Kristy to help with demand and soon the BIRRR website (https://birrraus.com/) was formed to help answer ever-increasing range of issues and questions.

The BIRRR team gathers information across the often-confusing landscape of bush broadband and delivers it via their website and Facebook group to people in regional and remote areas of Australia.

The BIRRR team will use data collected from their Facebook group, their website and from other activities such as surveys and media coverage, to lobby for better internet for rural, regional, and remote Australia.
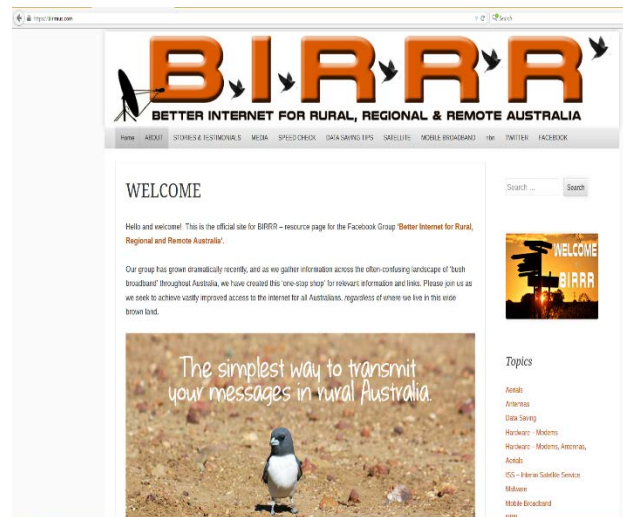
a)   b)

Image 1: Better Internet for Rural, Regional and Remote Australia Facebook group (a), https://www.facebook.com/groups/BIRRR/, and BIRRR website (b), https://birrraus.com/

About the Survey

The survey sought to collect information about **internet use in rural, regional, and remote Australia**. The data will be used to work with stakeholders to improve bush broadband. The survey consisted of 50 questions, of which respondents were to answer questions about either mobile broadband or about satellite, or if they are using both mobile broadband and satellite, they were to respond to all of the questions.

Prior to taking the survey, the respondents were instructed to complete a **speed test** via a given link. They were also asked to have **access to their internet account charges** and their **electoral role details**. Speed tests were requested to be completed at home on the participants' main computer that was connected via a LAN cable connection to their router or modem, rather than to WIFI, where possible.

About the sample

Cluster sampling (Saunders, Lewis, & Thornhill, 2009) was used to distribute the electronic survey via Qualtrics Survey Software (Qualtrics, 2013) to approximately 6000 members of the Better Internet for Rural Regional and Remote Australia (BIRRR) membership base. Members were encouraged to send the link to friends and family who live in rural, regional and remote areas of Australia, hence snowball sampling occurred (Saunders et al., 2009, p. 240). Participants, who voluntarily responded to the survey, lived in NSW, QLD, NT, WA, SA, VIC, and TAS (all states and territories). To maximise representativeness of the #datadrought and to confirm respondents suitability for the study, the 2015 survey was restricted to rural, regional, and remote users of mobile broadband (3G, 4G, Next G and Wireless) and satellite (all types, all ages) connection.

About the dataset

The survey was distributed to approximately 6000 BIRRR members. One thousand eight hundred and thirty-two respondents started the Regional Access Survey, of those 716 respondents completed the survey. Incomplete surveys may be attributed to dropouts (51%) or to failure to complete the survey (possibly due to unstable internet connection or frustration or lack of respondent's knowledge surrounding their connections (61%)).

The questions were broken into two sections – **Section 1: Broadband** and **Section 2: Satellite**. The respondents were also given the option to answer questions if they had both connections. The remaining questions were related to demographic details of the participants.

To test the validity of the data, the sample was grouped into completed surveys (N718) and total surveys (N1832), where completed surveys are identified as those who started and finished the survey. The two groups were analysed separately using frequency analysis, which determined **little difference between the samples.** Therefore, all survey responses (N1832) were used to ensure that those respondents who could only partially complete a survey due to poor connectivity could still contribute to the study. Therefore, it is important to note that percentages quoted in the report text are measured as a percent of total responses for each question rather than the whole sample. We also acknowledge that voluntary response bias where there is an overrepresentation of individuals that have strong opinions about rural, regional and remote internet in Australia.

Results

People in regional areas use internet and mobile services for a **wide array of needs i**ncluding weather forecasts, flood and fire information, education, business, ordering supplies and parts (that may not be available locally), banking, cloud computing including accounting, social networking, health and lifestyle.

Rural people's **reliance on telecommunications differs from those in urban areas**. For example, travelling by car to the bank could involve a 600km round trip for a rural customer, making internet banking a necessity. Areas such as telehealth, educational webinars and cloud accounting would be utilised by more regional customers <u>if </u>their internet services met their needs.

The **first question in the survey** asks about **how** people in rural, regional and remote areas **connect to the internet**. In terms of connectivity**, 55% of respondents** stated that they had access to **Mobile Broadband**, while **31%** stated they had access to **Satellite**. Either, the remaining respondents said they had both broadband and satellite (5%), or they said they had ADSL (7%) or NBN Fixed Wireless (2%), see Figure 2.

Figure 2: Primary Source of Internet Connection (N=917)

Connection Type	Valid Percent
Mobile Broadband - 3G or 4G / Wireless Internet / Next G (2)	55.1%
Satellite	30.9%
ADSL	6.9%
Both Mobile Broadband & Satellite	5.0%
NBN Fixed Wireless	2.3%
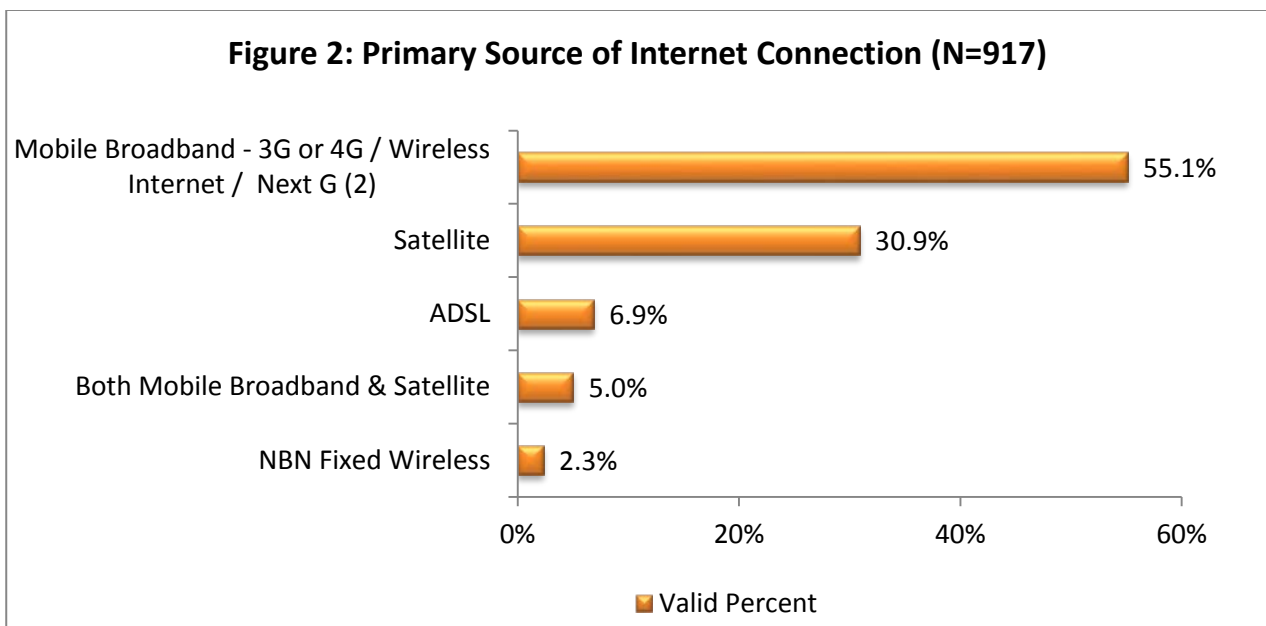
Figure 2: Primary source of internet connection (BIRRR Survey)

Fifty eight percent of respondents identified as living on a rural property less than 40klm from town and 34% identified as living on a rural property more than 40klm from town. Nearly 6% identified as living in a small town and the remaining respondents (2%) lived in a suburb or a large town.

The survey asked respondents to rank **how they use their internet** into six categories (1=most used, 6=least used). A means analysis showed that **rural, regional and remote people mostly use their internet for business** (M=1.74). This was followed by personal or **social use** (M=2.41) which is important to the well-being of people living sometimes vast distances away from friends, family and neighbours.

The next most used category was **education** (M=2.56). Currently children attending school through **distance education** are **severely disadvantaged by limited internet downloads and poor speeds**. With the introduction of a **new national curriculum** and **more on air classes**, a **larger amount of data is required**. This is an ongoing problem, which immediately needs to be addressed.

Education was followed by **health** (M=3.88) as the next most used reason for accessing the internet. This was followed by video streaming (M=4.80) and then Gaming (M=5.61), a close to six score indicates that video streaming and gaming are rarely used, which is a reflection that those in serious #DataDrought could not even consider this option.

Anecdotally, many children in distance education are unable to use webcams and continually drop out (lose connection) from lessons. This also eliminates others in the household from participating in online education or simply accessing services such as YouTube, which may be used to demonstrate new farming techniques especially related to farming technology.

Figure 3 shows a breakdown of students enrolled in distance education or who are completing online studies from survey responses.
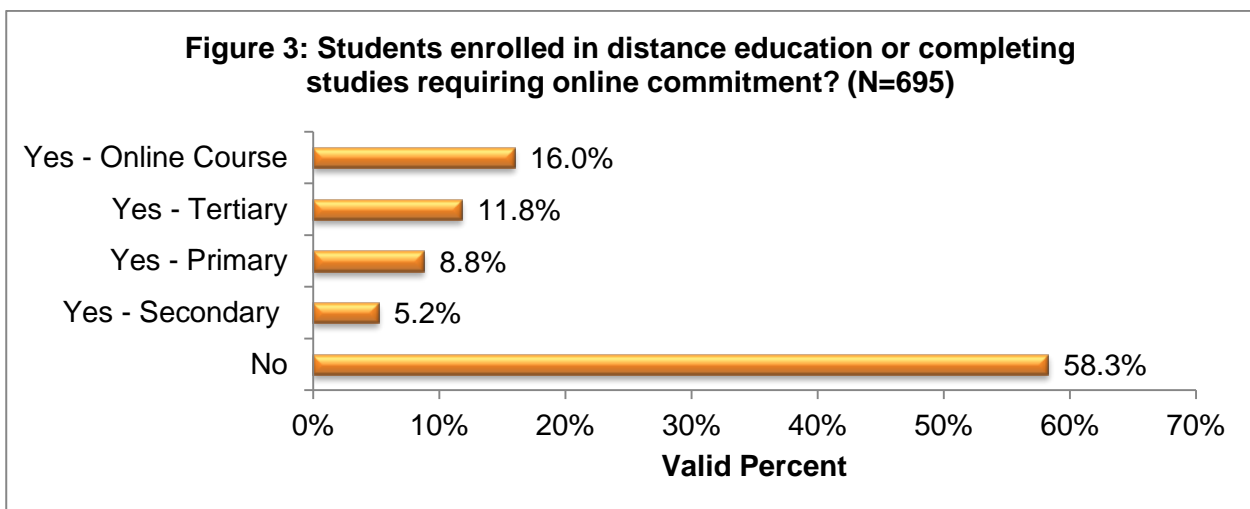
Figure 3: Students enrolled in distance education or completing online studies

Respondents were asked how much data they thought they needed to participate in distance education. **Nearly 55% of respondents** indicated that they needed between **1GB and 25GB to adequately complete distance education. Twenty-eight percent** indicated that between **26GB and 50GB** was required. Ten percent said between 76GB and 100GB and 6% indicated between 51GB and 75GB of data per month was needed to adequately participate in distance education, see Figure 5.

Figure 4: Participant responses about the amount of data required to adequately participate in distance education (N=229)
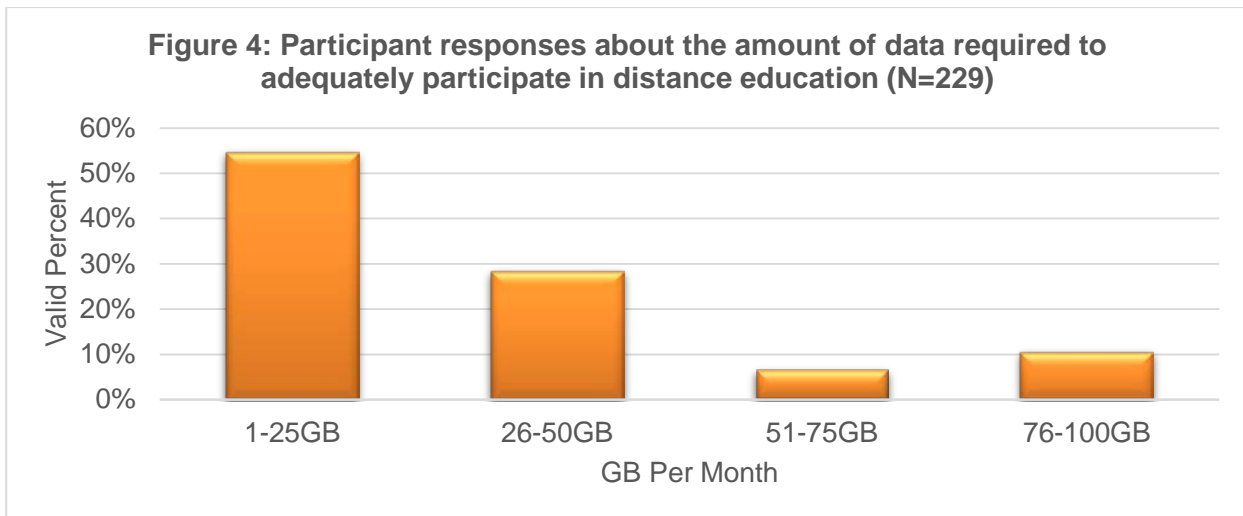
Figure 4: Data required to adequately participate in distance education

Respondents were asked to supply supporting comments as part of the survey; those relating to education support the finding of the survey and are listed below:

Table 1: Anecdotal comments from respondents about education

"Estimating what GBs would be needed per distance ed student is difficult as currently we only do the minimum of what allows our students access, ie, minimal webcam usage, no audio, limited online time, inability to watch learning videos etc. Obviously more being available would set us free to access all of these things and I assume distance ed technology will change and use more data to the benefit of students... All this is also without the constant software updates…" (Upper Warrego, QLD)

"My son was identified as requiring extra tutoring - outside of school. We arranged to do online tutoring but the data speeds were unacceptable and we gave up - such a shame that he will go to boarding school even more behind than he needs to be!" (Hatfield, NSW)

"Almost all homework needs to be completed with access to the internet. Mobile broadband works well for us, but it's just so expensive. I've already doubled the phone bill this year just trying to keep up with what's required for school." (East Popanyinning, WA)

"We are extremely unhappy with our internet service. I'd love to do a tertiary online course but am not going to attempt it with the unreliable connection we have now." (Willbriggie, NSW)

"Decided to make Kindy-aged daughter travel to town to go to school because our internet wasn't reliable enough for distance ed. I rely on school holiday visits to my ADSL-equipped parents in Sydney to accomplish most IOS and app updates." (Condobolin, NSW)

Respondents were also asked if they completed their survey when sitting at the home computer. Eighty five percent said yes they could complete the survey at home. When **asked if the current services met the needs of respondents**, **the overwhelming response was no**.

Figure 5: Do the current services meet your needs? (N=653)
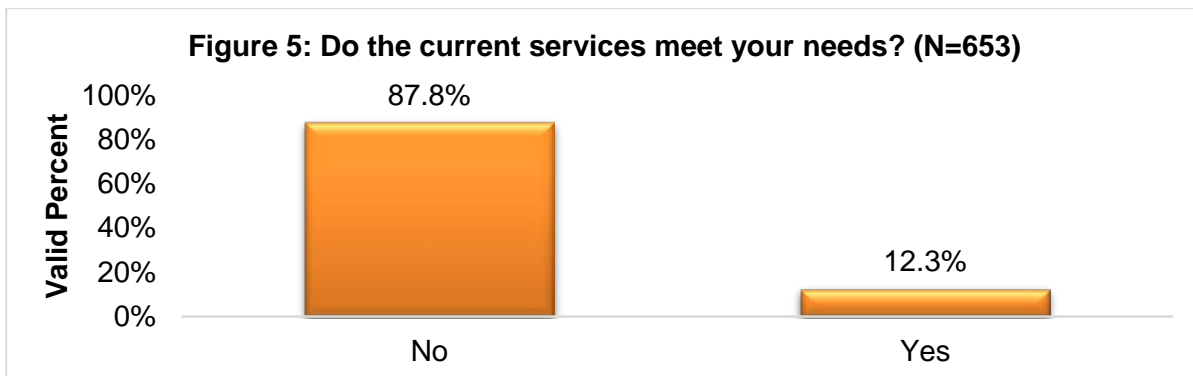
Figure 5: Do the current service meet the respondents needs

Comments supporting the results in Figure 5 follow:

Table 2: Anecdotal comments from respondents about doing the survey at home

"I suffered 3 dropouts while completing this survey. On holiday or summer weekends the tourists in town make the internet inaccessible due to lack of capacity." (*Echuca West, VIC*)

"This survey took me about 3 hours as it kept timing out and I had to keep refreshing." (Beaufort, VIC)

"With drop outs I had to do this survey over a couple of times. I also had to access NBN information from another internet service as this was too slow to load it." (Baynton, WA)

"The survey took 3 attempts to complete, kept getting error messages. Our internet and mobile coverage is both pathetic and very expensive for what we get. There is optical fibre running past our front gate and we cannot access the NBN. Doesn't figure does it?" (*Wanganella, NSW*)

This report is made up of several sections.

Section 1 of this report will discuss the responses from people who have access to mobile broadband. **Section 2** will discuss responses from people with satellite internet. **Section 3** will discuss responses from those people who access the internet via their mobile phone. **Section 4** will discuss responses from the NBN service. These sections are followed by responses to other questions and then anecdotal comments by respondents about their thoughts on rural, regional and remote internet connection.

Mobile Broadband

Due to extremely slow satellite speeds, mobile broadband is becoming the preferred option in regional areas of Australia, although many customers using this form of internet have no other option. **Mobile broadband is viewed by NBN (nbn, 2011) as "metro comparable"** and as such, **many customers were ineligible for NBN Satellite**. However, the current mobile broadband service still proves to be inadequate.

The first question asked the participant about their **primary source of internet**. Respondents came from every state and territory in Australia (with regional mapping address issues significantly impacted ability to map many respondents).
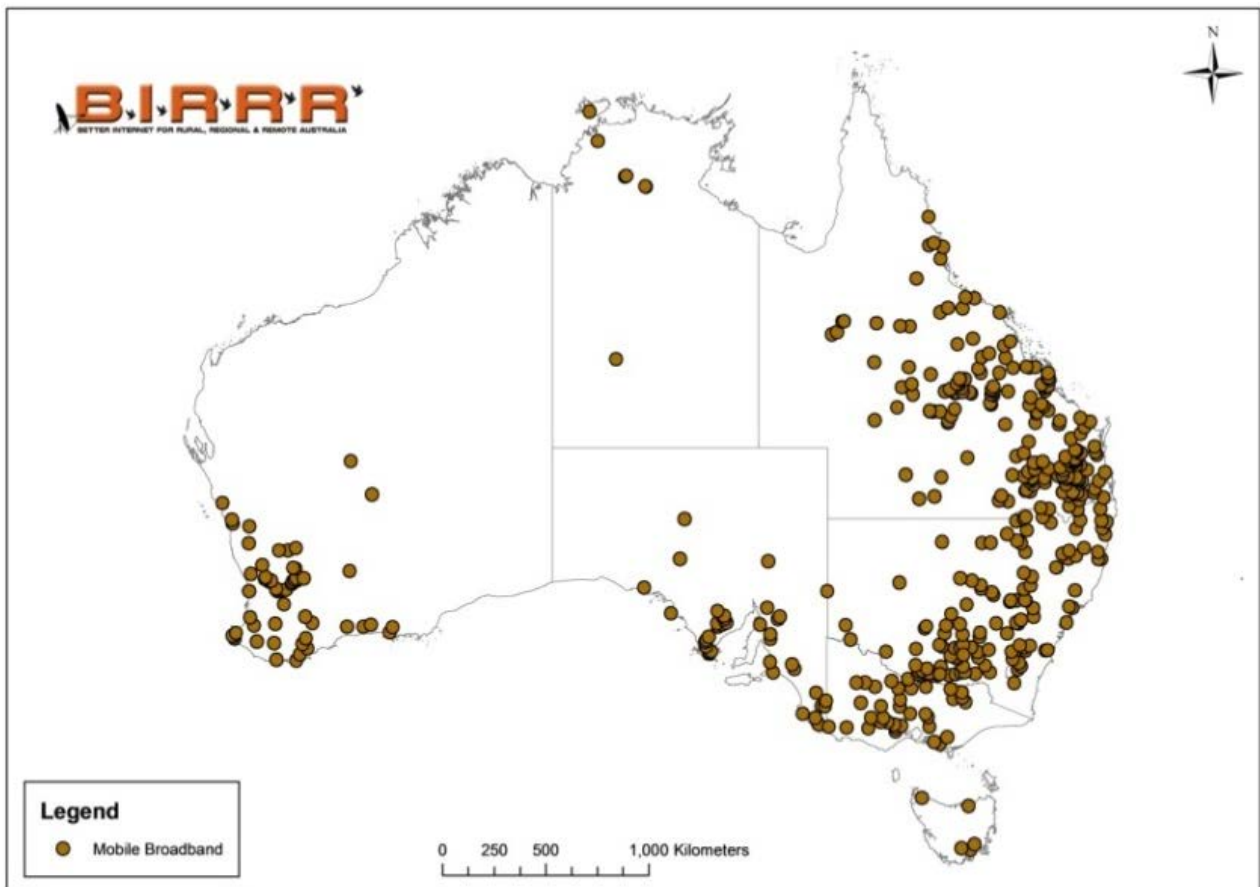
Figure 6: Map of participant supplied addressees for Mobile Broadband internet connection from BIRRR, Regional Access Survey

Respondents connecting to broadband were asked **how they accessed the bulk of their data**. Eighty-five percent answered that they accessed the bulk of their data via a monthly plan. Nearly 9% used pre-paid services and around 7% used a hot spot to access data on their mobile phone or other devices, see Figure 7**: How respondents access the bulk of their data.**

FIGURE 7: Respondents access to the bulk of their data (N=494)

Type of Plan	Valid Percent
Monthly Plan	84.6
Pre-paid	8.7
Hot spot mobile phones / devices data	6.7
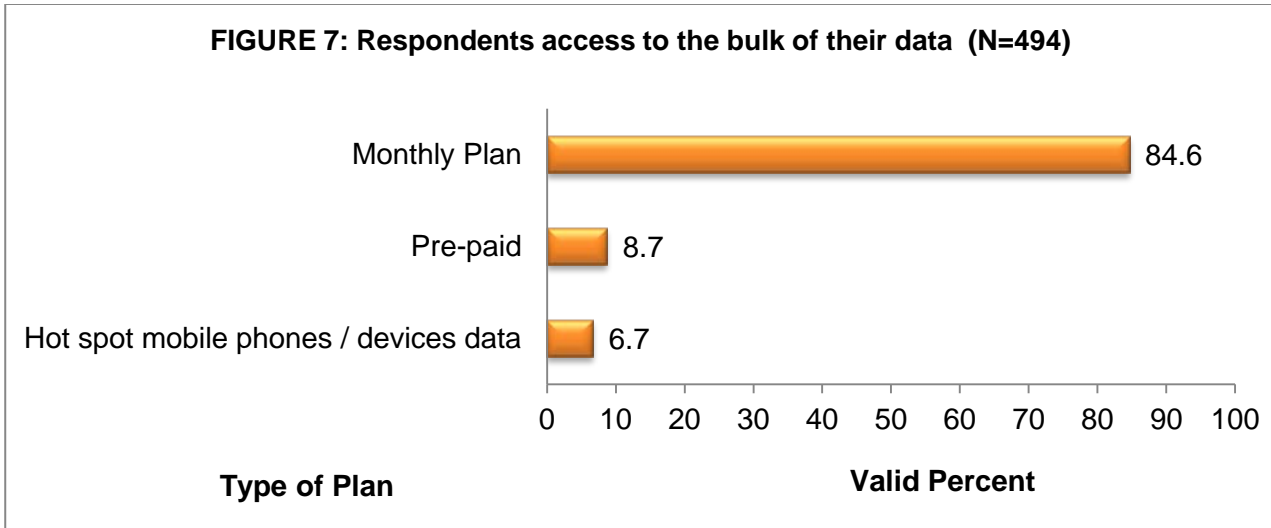
Figure 7: How respondents access the bulk of their data

While, according to BIRRR's experience, the current mobile broadband service meets users speed requirements (except in high congestion areas), the **pricing structures** and **download limits** are prohibitive. **Telstra appears to be the main provider in the majority of regional areas** (Figure 8), the **lack of competition exacerbates the problem of expensive and unreliable internet in the bush.**

The survey respondents highlighted Telstra as the largest supplier of mobile broadband to the bush with 46% of respondents signed up to Telstra Bigpond and 44% signed up to Telstra. Four percent of respondents are with Optus and 2% are with Vodafone.

FIGURE 8: Mobile Broadband Providers (N=493)

Provider	Valid Percent
Bigpond	45.6
Telstra	43.6
Optus	4.5
Reseller	4.5
Vodaphone	1.8
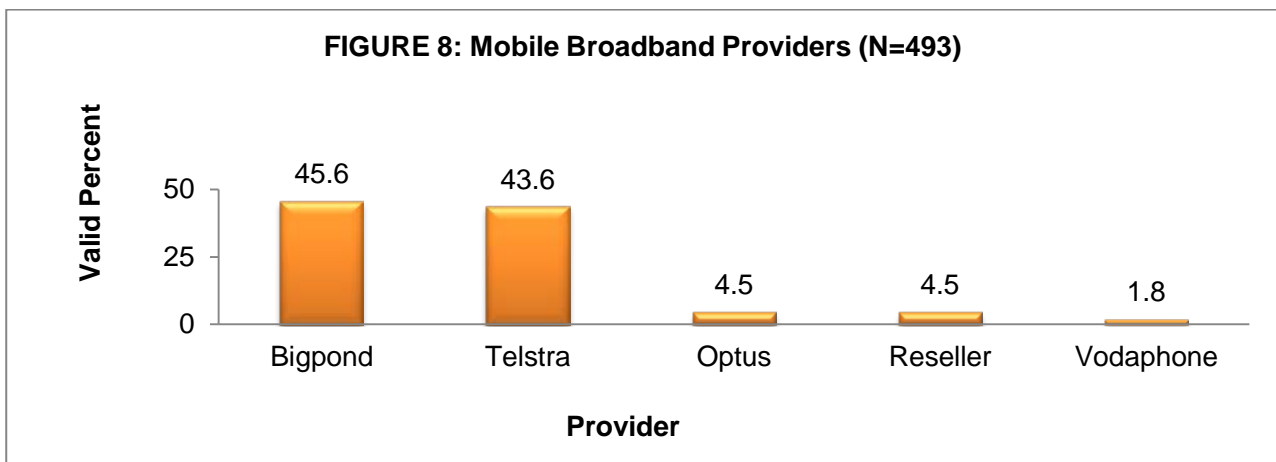
Figure 8: Mobile Broadband Providers

Around 1% of participant's use a reseller for their internet, the highest reseller is Virgin, others include Aldi Mobile, Amaysim, Australian Nomad Technologies, Bendigo Bank Telco, Boost, Bordernet, Exetel, GTelecom, iinet, Reachnet, Southern Phone, and Westnet, see Figure 9.
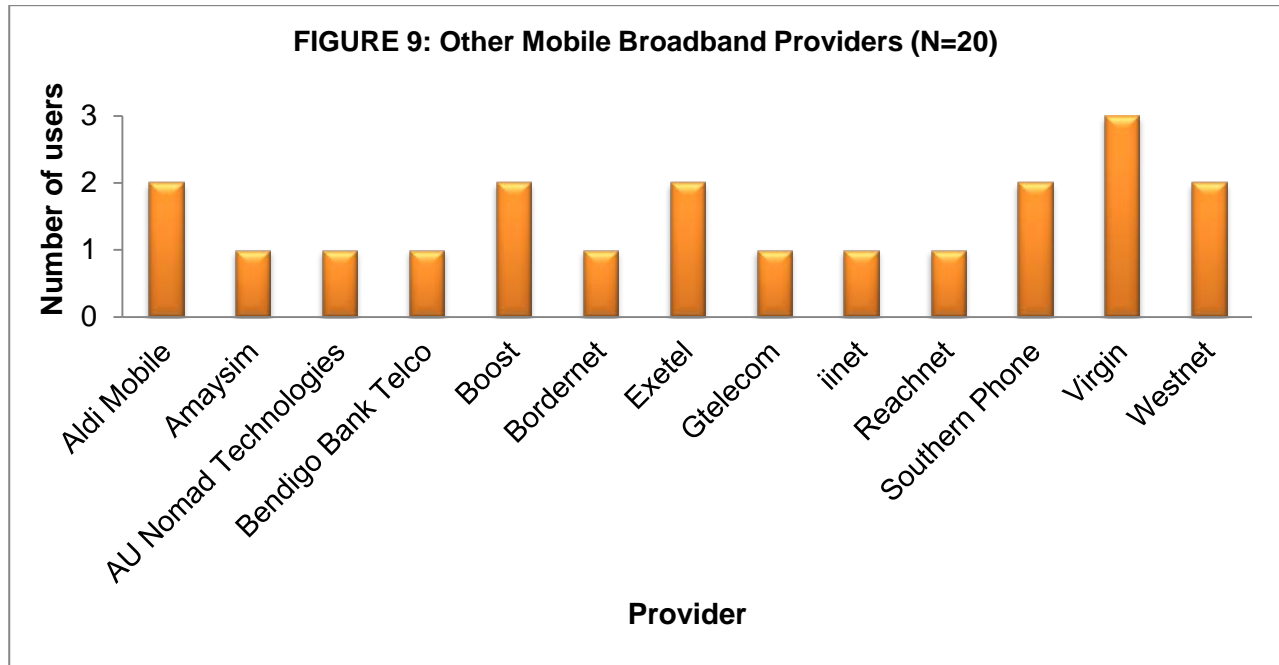
Figure 9: Other Mobile Broadband Providers

Respondents were asked to rate (1 = Excellent, 2 = Average, 3 = Poor) their provider / internet service according to customer support, cost, data limits, speed and limited drop outs/level of service reliability.

A means analysis identified data limits (M=2.83), cost (M=2.78), and speed (M=2.58) as the poorest service provided. Limited drop outs and unreliable service (M=2.53) was rated as the next area of concern and then customer support (M=2.23) (see Table 3).

Table 3: Means analysis of provider ratings for mobile broadband service and internet

	Customer Support	Cost	Data limits	Speeds	Limited Drop Outs/ Level of Service Reliability
Mean	2.23	2.78	2.83	2.58	2.53
N	488	488	488	488	488
Std. Deviation	0.605	0.445	0.411	0.549	0.597

The survey identified Telstra and Testra Bigpond as the largest provider of broadband services. However, their level of customer support was rated as average, and they were rated as poor for cost, data limits and speed (see Table 4). Telstra and Bigpond were also rated poor for reliability and limited drop outs, highlighting the unreliability of the service.

Optus was rated average for customer support and cost, but poor for data limits, speed and limited drop outs and reliability. Vodafone's customer support was also rated as average, and their costs

and data limits as poor. However, their speed was rated as average to poor and their service reliability as average. The Resellers were rated as average for customer support and cost but were rated poor for data limits, speed and service reliability.

Table 4: Respondent ratings of Broadband Providers

N=488		Bigpond	Telstra	Optus	Vodafone	Reseller
Customer Support	Excellent	19	10	5	3	9
	Average	**138**	**118**	**12**	**5**	**11**
	Poor	65	84	5	1	2
Cost	Excellent	1	2	0	1	3
	Average	29	35	**12**	3	**12**
	Poor	**192**	**176**	10	**5**	7
Data Limits	Excellent	0	3	0	2	2
	Average	22	34	3	2	7
	Poor	**200**	**176**	**19**	**5**	**13**
Speed	Excellent	7	5	0	1	1
	Average	81	74	8	**4**	10
	Poor	**134**	**134**	**14**	4	**11**
Limited Drop Outs / Service Reliability	Excellent	11	8	1	1	5
	Average	87	69	8	5	6
	Poor	**124**	**136**	**13**	3	**11**

Respondents have supported the findings in Table 3 & Table 4 with the following comments:

Table 5: Anecdotal comments from respondents about their supply of internet

"We are 5km from town. The best deal we can access with Bigpond is 15gb per month for $105. Crazy!" (Margaret River, WA)

"Internet in Australia is notoriously expensive and slow. Mobile phone service is third rate for rural customers who need to purchase a TMSA at cost of $1100 + yagi to access service already paid for." (Purlewaugh, NSW)

"Our internet, mobile phones and home fixed line cost us around $300.00 per month. Our mobiles will work if we walk down our entrance road about 200m, our fixed line crackles every time it rains and our wireless/mobile broadband only works because I spent too much money and time to purchase, build and install suitable equipment." (Kingaroy, QLD)

"The expense of Internet access is prohibitive and it appears that the less access you have the less you get and the more access you have the better the deals and cost structures. Rural families are massively disadvantaged!!" (Robe, SA)

"The current pricing/data provision provided by Telstra/Bigpond (as the sole provider in our area) is extremely expensive for a sub-par product. My children are being disadvantaged as I cannot let them access the extensive websites/programs online that is required for their schooling. Our business is suffering due to outages at critical times when I am required to do online banking or send information to our accountant. If I was only paying say $20 p/month for the shit service/connection/data allowance we currently receive, I could understand. But to pay a premium amount that is in the hundreds of dollars for something that is so poor is infuriating… as it stands it's a complete rip off and price gouge for rural customers." (Sandigo, NSW)

"We pay a premium price for poor service." (Cement Mills, QLD)

Rural, regional and remote internet users, unlike city dwellers, often need to **use extra hardware to access a connection to their network**. The survey asked respondents about the type and price of extra equipment that was required to access their mobile broadband service.

Thirty three percent of respondents had purchased **a Yagi Antenna** to assist with connectivity and **26%** of respondents **purchased some other type of on-roof antenna**. Fifteen percent purchased a Telstra branded Smart Antenna and 14% purchased a Cel-Fi Booster. Around 12% purchased another type of in house booster that was not named in the survey, see Figure 10.
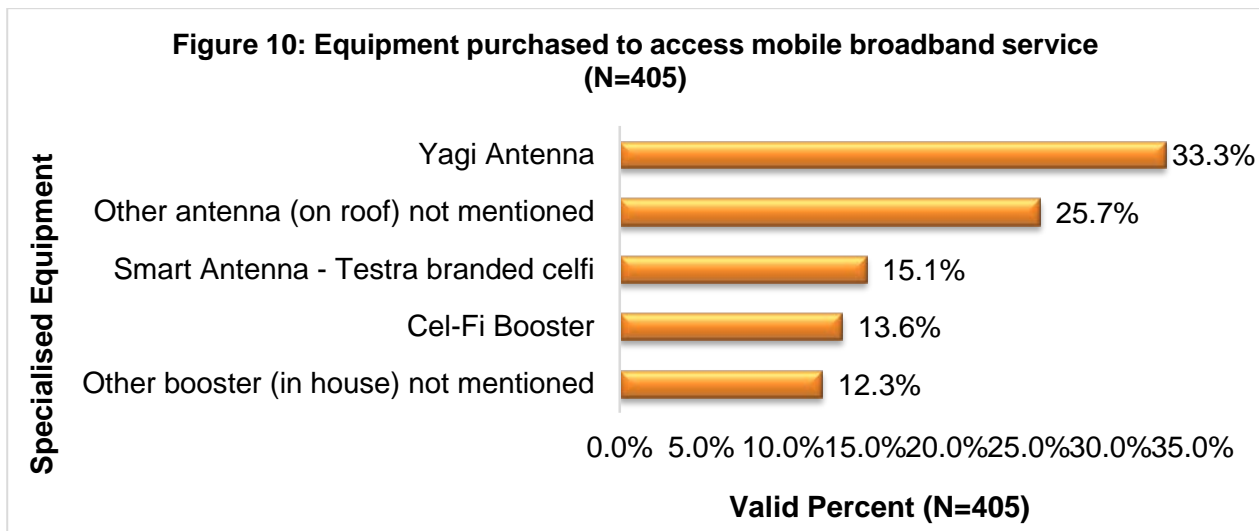
Figure 10: Specialised equipment purchased to access mobile broadband service

In terms of the **cost for extra equipment** purchased to gain access to mobile broadband, 45% of respondents paid between $0 and $500 for their antenna, 29% paid between $501 and $1000 and 21% paid between $1000 and $2000 for their extra equipment. Around 4% paid more than $2001, with a range between $2400 and $6000 paid for extra equipment to access the internet. Some respondents answered that their equipment was already at the premises when they purchased the property and others noted it was part of the whole house setup, see Table 6.

Table 6: Estimated cost of extra equipment needed to access mobile broadband

What was the estimated overall cost for the equipment needed to be able access your mobile broadband? (N=405)	$0-$500	$501-$1000	$1000-$2000	More than $2001	Total
Yagi Antenna	39	44	45	7	135
Smart Antenna - Testra branded Cel-Fi	11	21	23	6	61
Cel-Fi Booster	4	16	32	3	55
Other antenna (on roof) not mentioned	64	27	8	5	104
Other booster (in house) not mentioned	31	14	5	0	50
Total	149	122	113	21	405

Like all internet users, respondents are required to pay for access to the internet via a **contracted plan**. The current **plans are small** and often **do not meet the needs of the user**. Subsequently, users are required to purchase extra data or be without useable internet if they are on a shaped plan. The next survey questions address price paid for plans and price paid for extra data.

Respondents of the survey **pay up to $20.00 per gigabyte** (GB) and receive between 1GB and 120GB of mobile broadband data per month. Table 7 shows the breakdown of data and cost per respondent. It shows that 71% (327 respondents) are paying between $6.00 and $10.00 per gigabyte of data for up to 30 gigabytes of data per month. An example from the data shows that one respondent in Banana, QLD pays $8.90 per gigabyte and receives 15 gigabytes per month ($133.50/month for 15GB), whereas another in Billywillinga, NSW pays $10.00 per gigabyte per month and receives 10 gigabytes per month ($100/month for 10GB). However, one respondent in Capertee, NSW pays $20.00 per gigabyte and receives 14GB per month ($280/month for 14GB).

Table 7: Cost of mobile broadband data and data allowance per month

N=458		Gigabytes of data received in a month? (number of responses)				
		1-30 Gb per month	31-60 Gb per month	61 - 90 Gb per month	91 - 120 Gb per month	Total
Amount paid per GB of mobile broadband data ($)	$1.00 to $5.00	29	10	1	0	40
	$6.00 to $10.00	327	18	1	0	346
	$11.00 to $15.00	43	2	0	0	45
	$16.00 to $20.00	24	2	0	1	27
Total		423	32	2	1	458

In addition to high costs for internet connectivity, if a participant's data allowance is consumed during their monthly allowance **their speeds may be restricted by shaping** (where the internet speed is slowed). **Table 8** shows that 54% respondents are shaped every month and only 46% are able to purchase more data.

Table 8: Respondents who are shaped or who need to purchase more data when their mobile broadband allowance is consumed

Do you have a shaped account or can you purchase extra data? (N=473)	Frequency	Valid Percent
Shaped - speed is slowed when my data runs out	255	53.9
I can purchase extra data	218	46.1
Total	473	100.0

Respondents are most regularly required to purchase extra data to accommodate schooling or to continue with business in the bush. However, **there are other serious reasons to have continued connection.** For example **accident and emergency contact, flood and fire information** and **tracking weather events** as well as rural people's **well-being**, particularly in **Australia's harsh outback,** where it is important to keep in contact with friends and neighbours who potentially live many hours' drive away.

Some examples of respondent's thoughts about emergency contact:

Table 9: Anecdotal comments about respondent having access to emergency contacts

"My greatest concern is lack of mobile coverage for a 20 km radius of my property - if there was an accident there would be no way to ring 000." (Blakney Creek, NSW)

"Our daughter who wants to study Tertiary courses cannot, my husband who is the Natural Disaster Co-ordinator for the Local Government Region cannot get mobile access, let alone internet at our house …"

"Our home phone is also connected via the Telstra NextG mobile network 'Next G Wireless Link'. When the network is down - we have no telecommunications at all." (Hillston, NSW)

"We also use the internet for our safety as well for information regarding weather & fires." (Mitchell, QLD)

Purchasing extra mobile broadband data can be expensive. On average, respondents spend **$9.27 per gigabyte for extra data**.

While respondents in Banana, QLD and Capertee, NSW selected that they were shaped, respondents in Billiwillinga, NSW nominated that they pay $10.00 per gigabyte for extra data. Around **74%** of respondents are paying between **$6.00 and $10.00** per GB for extra data, 11% are paying between $16.00 and $20.00, 9% are paying between $11.00 and $15.00 and 7% are paying between $1.00 and $5.00 for extra data, see Table 10.

Table 10: Cost of extra data per gigabyte of mobile broadband

How much per GB does your extra data cost? ($ per GB) (N=197)	Valid Percent
$1.00 to $5.00	6.6
$6.00 to $10.00	73.6
$11.00 to $15.00	8.6
$16.00 to $20.00	11.2
Total	100.0

Respondents were asked **how often they were shaped or needed to purchase more data**. 44% respondents were shaped or required to purchase extra data each month, 20% need to purchase extra data 6 to10 times per year and 17% need to purchase extra data 3 to 6 times per year. Eleven percent need to purchase data less than three times per year and 7% never need to purchase extra data. *(A total of 64% need to purchase additional data 6 times or more in a year)*

NB: Not all mobile broadband plans allow users to purchase more data. Once shaping occurs, no more data can be purchased on some plans.

Table 11: Times respondents are shaped or need to purchase more mobile broadband data per year when data allowance is depleted

How often do you get shaped or need to purchase more data? (N=471)	Frequency	Valid Percent
Every month	208	44.2
6-10 times per year	95	20.2
3-6 times per year	80	17.0
Less than 3 times per year	54	11.5
Never	34	7.2
Total	471	100.0

This means that just **under half (44%)** of respondents are paying on **average $9.27 per gigabyte** every month **for each extra gigabyte of data**.

Comments from respondents clearly show the frustration of having a shaped account:

Table 12: Anecdotal comments about shaped accounts

"Unable to check internet speed as currently shaped due to having used our data limit in first 2 weeks of monthly cycle." (Eganu, WA)

"I was unable to complete the speed test as I had to use the internet connection at work in order to complete the survey. My internet has been shaped for the past 5 months as we have apparently gone over our 20GB allocation …data is always gone within 3-7 days of the start of the month…" (Kellerberrin, WA)

Next respondents were **asked if they had to abide by PEAK or OFF PEAK times** to use their data allocation or were they allowed to use it anytime. Ninety nine percent of respondents said they can use their data anytime, and less than 1% was restricted to peak or off peak usage, see Table 13.

Table 13: Peak, off peak or usage anytime allocation for mobile broadband

Do you have peak and off peak data allocation? (N=467)	N	Valid Percent
Data available anytime	461	98.7%
Off Peak Data	3	0.6%
Peak data	3	0.6%
Total	467	100.0%

Supporting comments regarding peak and off peak data highlight the different needs of people who live and work in rural, regional and remote areas of Australia.

Table 14: Anecdotal comments about peak and off peak data from respondents of the survey

"Our business need for better internet service is crucial, for example, once we use our peak data allowance and go on to the shaped plan (slower speeds) every month, we are unable to complete any internet banking transactions." (Inverell, NSW)

"Even though we receive 20GB of off peak data I feel that effectively our plan is 10GB as we only use a small amount of off peak data- we usually need to use the internet during peak hours as we go to bed early and are busy in the mornings." (Matcham, NSW)

The final **question about mobile broadband** asks about the **speed of respondents' internet connection**. Respondents reported that the slowest connection speed for mobile broadband is **0.1mps**, the fastest download speed was 25Mbps, and the **average download speed was 7.13Mbps**. As for upload speeds the slowest was also 0.1mps and the fastest was 25mbps, but the **average upload speed was 5.98mbps**.

A cross tabulation between town or locality and download speed showed that **74%** of respondents had an **average download speed** of between **1mbps and 5mbps**, 15.4% had an average download speed of 6-10mbps and 4.7% had a download speed of 11-15mbps. Less than 6% of respondents had download speeds greater than 16mbps.

Similarly, the **majority of respondents (90.5%)** had **upload** speeds of between **1 and 5mbps**, 5% had upload speeds of between 6 and 10mbps and 2.4% had an upload speed between 11 and 15mbps. The remaining, less than 3% of respondents had upload speeds greater than 16mbps.
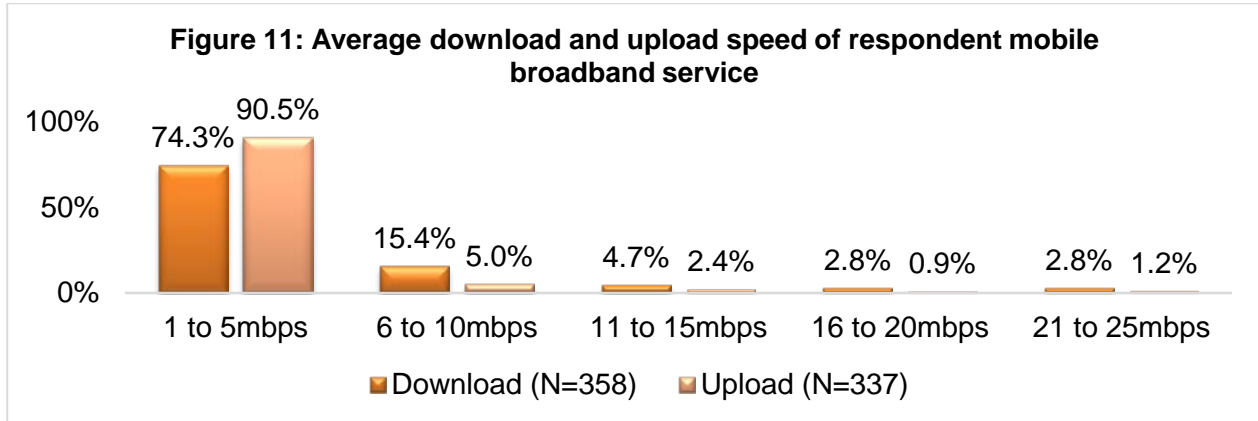
Figure 11: Average download and upload speed of mobile broadband service

Speeds between *1mbps and 5mbps* allow for activities like checking email (provided it does not contain a vast amount of content) and connecting to the internet. However, many times when the speed is closer to 1mbps opening email becomes challenging. Therefore, *tasks such as internet banking, watching videos for schooling or simply checking the weather are impossible*.

This is clearly noted by respondents in their comments as follows:

Table 15: Anecdotal comment from respondents about the speed of their internet

"3 years ago I could work from home, study and do banking from home all via the Internet. Today I cannot work from home, have to drive to town to do my study and have to re-log in to complete banking transactions most of the time. I can't tell when my internet is shaped as it is always shockingly slow. My children can't connect to study sites." (Langkoop, VIC)

"I had to complete this survey on my iPad due to the bad service. I was unable to complete a speed test due the unreliable service and slow speed." (Buckleboo, SA)

"I work from home and what I use to do in 4 hours a day in 2009 now takes 8 to 10 hours a day because it is so slow." (Lefthand Branch, QLD)

"This survey took DAYS to complete as I struggled to download the speed tests and my own ISP account details. I had to go to town to access mobile data to complete. Very well rounded survey so it was worth it. (Quilpie, QLD)

"I had to travel 200km one way to complete an upgrade to my computer as the 6GB download was too large for my internet to complete. I left my computer on all day and the download was only half completed. When I woke in the morning the message stated it was too large for the server and in the process I had used half my monthly allowance." (Carwoola, NSW)

Summary of mobile broadband data results

Rural, regional and remote (RRR) people experience extremely slow satellite speeds, which means they are turning to mobile broadband as their preferred option for internet connection in rural, regional and remote areas of Australia.

Around **55%** of RRR people access mobile broadband all states. They access the bulk of their data via a monthly plan, with a few people using pre-paid plans or hot spot access.

The main providers of internet access plans are Bigpond, Telstra, Optus, plan Resellers and Vodafone. There are other mobile broadband providers, however they service less than one percent of the RRR people who responded to the survey.

When asked to rate their provider on customer support, cost, data limits, speed and the level of drop outs or reliability, RRR people agreed that **limited data was the worst problem**. This was followed by cost, speed, limited dropouts or an unreliable service and then by customer support.

Rural, regional and remote (RRR) people are often required to purchase extra equipment to gain access to the internet via mobile broadband. **Seventy four percent of people surveyed, using mobile broadband in the bush,** were required to **purchase an antenna (at their own cost, with no subsidies available)** to gain access to the internet and 25.9% were required to purchase a booster. Forty five percent of people connected to the internet in the bush paid between $0 and $500 for their antenna, 29% paid between $501 and $1000 and 21% paid between $1000 and $2000 for their extra equipment. Around 4% paid more than $2001 with the range of price between $2400 and $6000. Others already had equipment at their homes.

People in RRR areas, like in other areas are required to sign contracts for internet connection. Contracted data plans are not meeting the needs of RRR people. Most RRR people pay between $6 and $10 per gigabyte for up to 30 gigabytes of data per month, which is often used prior to the contract period ending. When this occurs, their accounts are shaped or they need to purchase extra data. Some plans do not allow any extra data to be purchased, thus leaving users with no useable internet. When RRR people are required to purchase extra data every month cost is on average $9.27 per gigabyte. Peak and off peak data limits are less stringent with 99% of RRR people able to use their data at any time.

In terms of speed, **74% of respondents had an average download speed of between 1mbps and 5mbps,** 15.4% had an average download speed of 6-10mbps and 4.7% had a download speed of 11-15mbps. Less than 6% of respondents had download speeds greater than 16mbps.

Similarly, the **majority of respondents (90.5%) had upload speeds of between 1mbps and 5mbps**, 5% had upload speeds of between 6mbps and 10mbps, and 2.4% had an upload speed between 11mbps and 15mbps. The remaining, less than 3% of respondents had upload speeds greater than 16mbps.

Currently mobile broadband does not meet the educational, business, health & welfare needs of regional Australians.

Satellite

The second section of the survey asks respondents about their **satellite connection and its performance in rural, regional and remote areas**. Previously the ipstar satellite was offered to many respondents as an option for internet connectivity. However, as technology changes, so do the needs of people in rural, regional and remote communities and the technology is no longer the solution that it was.

In the first question, participants were asked about their primary source of internet. **Thirty-one percent of respondents stated they had access to Satellite**. Around 55% RRR people access mobile broadband across all states and territories.
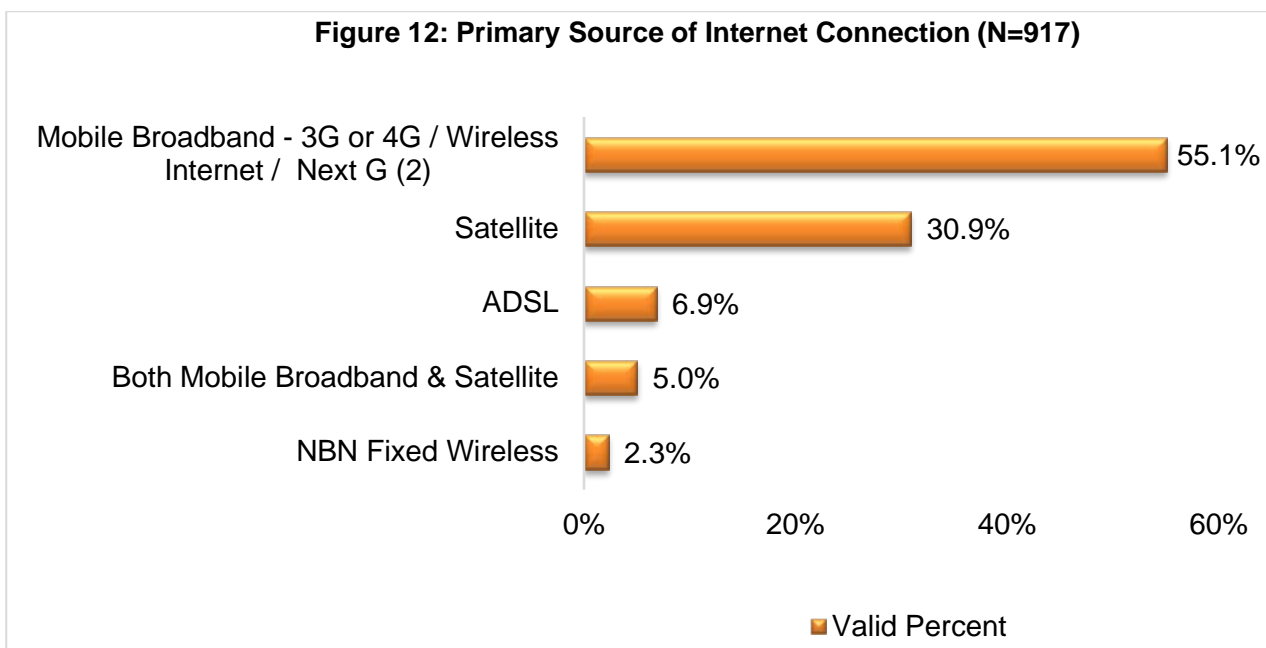
Figure 12: Primary source of internet connection (BIRRR Survey)

Respondents came from every state and territory in Australia, however regional mapping address issues^ significantly impacted ability to map respondents,
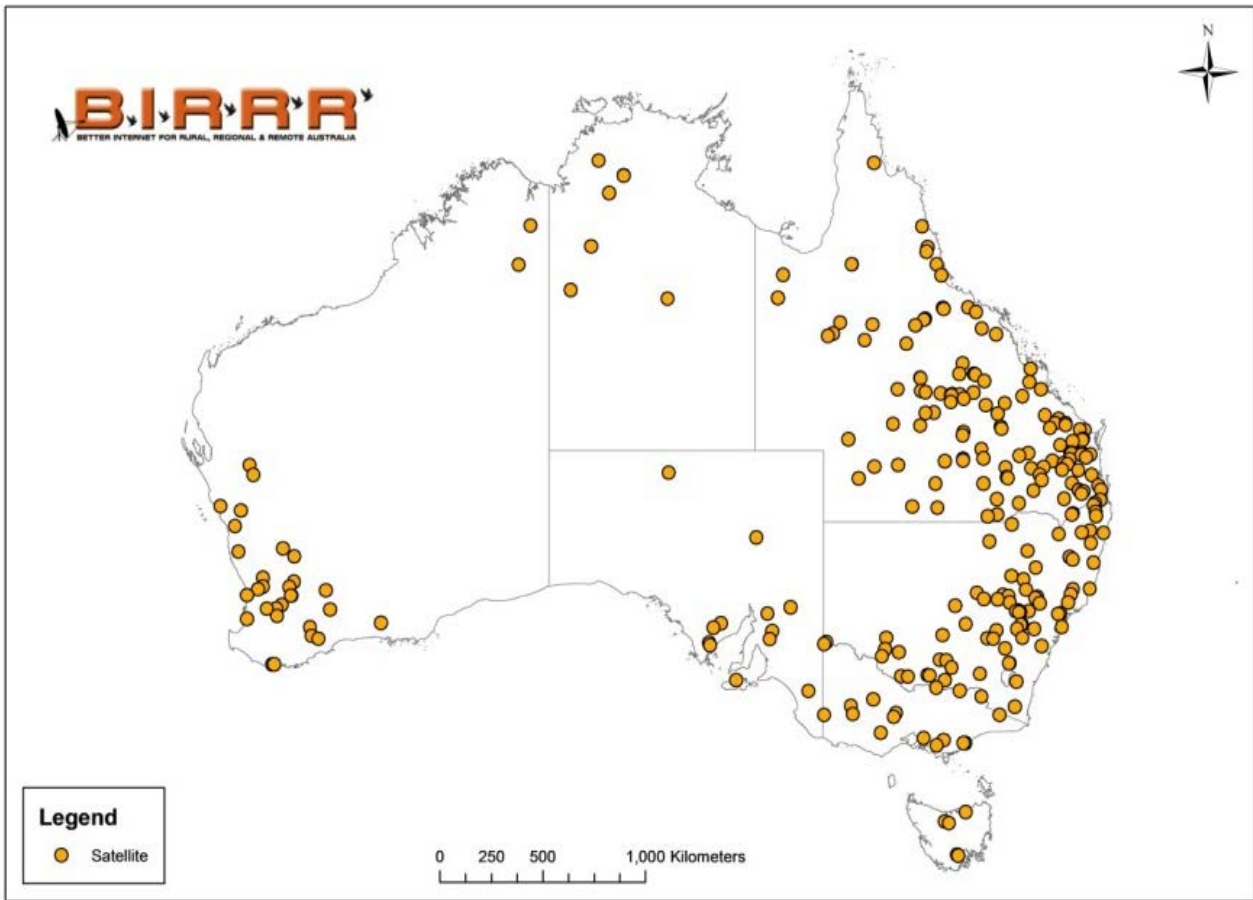
Figure 13: Map of participant supplied addressees for Satellite internet connection from BIRRR, Regional Access Survey

The survey respondents highlighted **Activ8me as the largest supplier of satellite internet** with 28% of respondents supplied satellite internet by them. Twenty three percent are with Skymesh, 9% are with HarbourISP, 7% are with Telstra, 6% with ANT Communications and 5% with Westnet. IPSTAR, which was the original satellite provider supplies 5% of the respondents, iiNet 4% and Reachnet supplies 3% (see Figure 14). Nearly 10% of respondents are with suppliers that were not listed in the questionnaire, which include Bordernet, Clear Networks and Optusnet (see Figure 15).
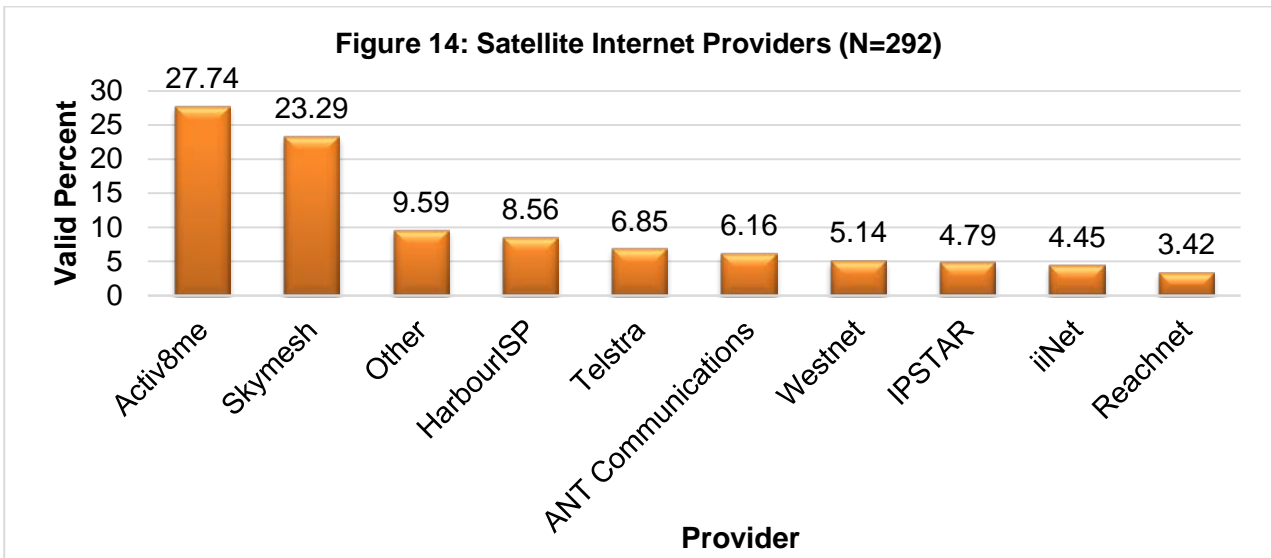
Figure 14: Satellite internet providers
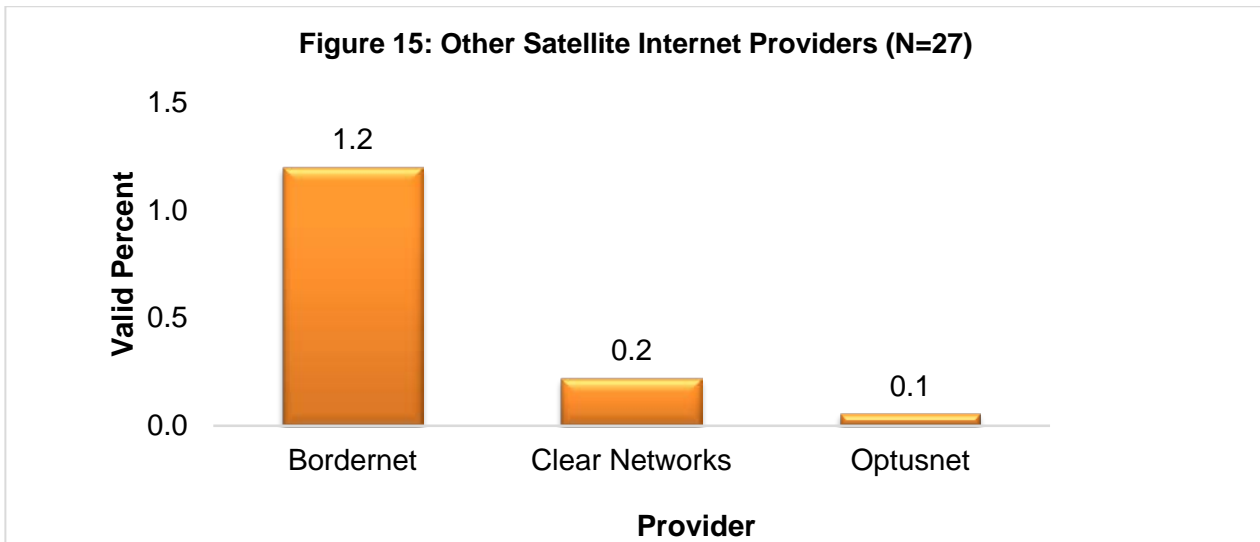
Figure 15: Other Satellite Internet Providers

Respondents were asked to rate (1 = Excellent, 2 = Average, 3 = Poor) their provider / internet service according to customer support, cost, data limits, speed and limited drop outs/level of service reliability.

A means analysis identified limited speeds (M=2.81) and data limits (M=2.67) as the poorest part of the service supplied across all of the providers. Dropouts and level of service reliability (M=2.44) was also rated as a poor service indicating that there are regular dropouts and limited reliability with the satellite service. Cost (M=2.26) and customer service (M=1.76) were of a lesser concern.

Table 16: Means analysis of satellite provider ratings for service and internet

	Customer Service	**Cost**	**Data Limits**	**Speeds**	**Limited Drop Outs/ Level of Service Reliability**
Mean	1.76	2.26	2.67	2.81	2.44
N	288	288	288	288	288
Std. Deviation	0.681	0.672	0.528	0.417	0.639

The findings in Table 16 are supported by respondents' comments as follows:

"I couldn't complete any speed tests on either my mobile broadband connection or temporary satellite connection. When it finally loaded it came up with latency errors." (Gregory River, QLD)

"Satellite connection is useless 26/31 days a month." (Talarm, NSW)

"We do not have a satellite signal 24/7, there are times when it keeps dropping out, especially during a weather event, but as the days pass the service is not as good as when we first started in 2012." (Netherdale, QLD)

"Our satellite internet is not reliable, slow or unusable at times (weekends, evenings)." (Mills Lake, WA)

The survey identified Activ8me and Skymesh as the largest providers of satellite internet services. In terms of level of service, cost and data limits participants rated Activ8me's as average and they rated speeds, dropouts, and reliability as poor. Skymesh also rated as average in terms of customer service, but rated poorly in the areas of cost, data limits, speed and drop outs/reliability, see Table 17.

HarbourISP, Westnet, Ipstar and iiNet rated average in terms of customer service, cost and data limits and they rated poorly for speed and drop outs/reliability except HarbourISP and iiNet who both rated as average for drop outs and reliability.

Respondents rated Telstra as average for customer service, and poor for all other areas. Ant Communications was rated as excellent in terms of customer service. However, the provider was

rated average for cost and data limits, poor for speeds and poor for level of drop outs and service reliability.

Finally, Reachnet also rated as excellent in terms of service, excellent to average on cost and data limits, but poor on speeds – the company rated average on dropouts and level of service.

Table 17: Respondent ratings for Satellite Providers

N=287		Activ8me	Skymesh	Harbour ISP	Telstra	ANT Comms	Westnet	IPSTAR	iiNet	Reachnet
Customer Service	Excellent	17	30	11	3	13	5	4	4	7
	Average	45	34	14	9	5	8	5	6	2
	Poor	18	4	0	7	0	2	4	3	0
Cost	Excellent	10	6	5	0	4	4	2	0	4
	Average	44	27	13	3	12	7	8	7	4
	Poor	26	35	7	16	2	4	3	6	1
Data Limits	Excellent	10	6	5	0	4	4	2	0	4
	Average	44	27	13	3	12	7	8	7	4
	Poor	26	35	7	16	2	4	3	6	1
Speeds	Excellent	0	3	0	0	0	0	0	0	0
	Average	6	15	9	3	0	3	3	2	4
	Poor	74	50	16	16	17	12	11	11	5
Limited Drop Outs/ Level of Service Reliability	Excellent	2	13	2	1	0	1	1	0	0
	Average	21	25	18	7	4	5	5	10	6
	Poor	57	30	5	11	13	9	8	3	3

Respondents were asked what type of satellite connection that they had. They were advised to link to the BIRRR information sheet (https://birrraus.com/2015/10/20/satellite-types/) on types of satellite, if they did not know what connection they were using.

Forty-nine percent of respondents selected that they have an **interim satellite service**, **24%** have the **NBN Satellite Subsidy Scheme**, 11% have the Australian Broadband Guarantee Program Satellite, 5% have Telstra satellite and 10% are unsure of whom their satellite provider is and 4% connect to the Optus Satellite.

Figure 16: Type of Satellite Connection (N=270)

Category	Valid Percent
Interim Satellite Service (ISS)	49%
NBN Satellite Subsidy Scheme (NSS)	24%
Australian Broadband Guarantee Program…	11%
I am unsure of what type of satellite…	10%
Testra Satellite	5%
Optus Satellite	4%

Valid Percent
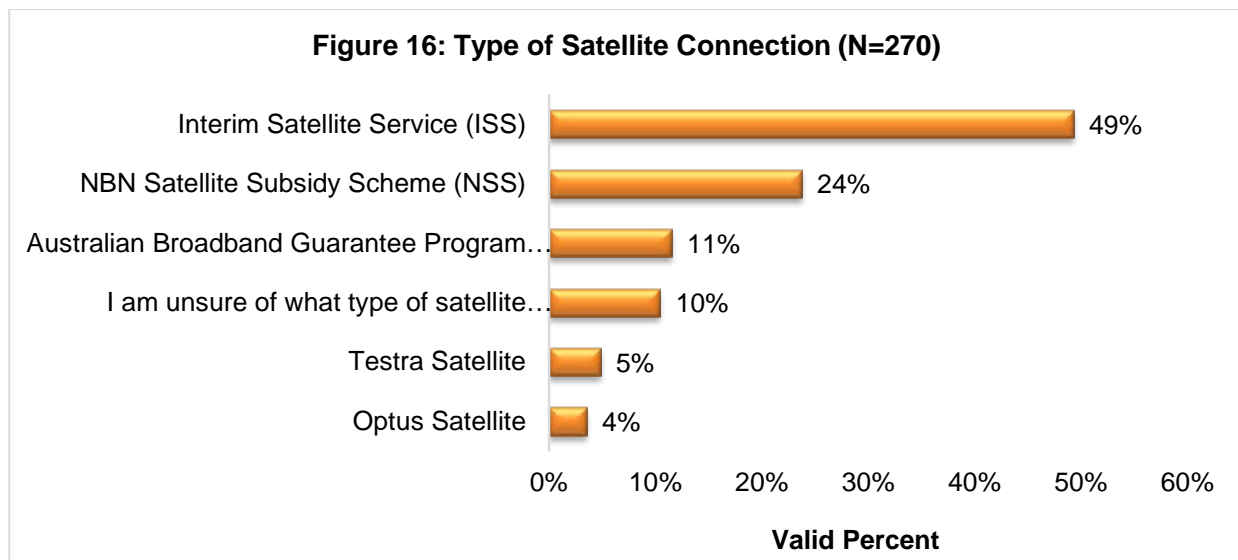
Figure 16: Types of satellite connection

Respondents were also asked if they **used voice service such as VOIP** via their satellite connection and if they were happy with the service. Only **11% of respondents were using VOIP** (Table 18**)** with respondents rating the service poor to average in terms of delay and average to poor in terms of clarity, see Table 19.

Table 18: Respondents who use VOIP via satellite

Do you use a voice service such as VOIP via your satellite connection? (N=271)	Frequency	Valid Percent
No	242	89.3
Yes	29	10.7
Total	271	100.0

Table 19: Participant rating of VOIP service given delay and clarity

Please rate your voice service over satellite (N=29)	Excellent	Average	Poor	Total
Delay	0%	41%	59%	29
Clarity	4%	61%	36%	28

In terms of **cost for the satellite service**, respondents pay **up to $70 per gigabyte** and receive up to **125GB of satellite data per month**. The data shows that 64% are paying between $1 and $20 per gigabyte of data for up to 25 gigabytes of data.

An example from the data shows that one respondent in Mataranka, NT pays $5.40 per gigabyte and receives 12GB per month ($64.80/month for 12GB), whereas another in Darke Peak, SA pays $9.00 per gigabyte and receives 8GB per month ($72.00/month for 8GB). However, another respondent in Arcadia Valley, Qld pays $6.00 per gigabyte and receives 20GB per month ($120/month for 20GB).

Table 20: Cost of satellite data and data allowance per month (N=264)

N=264		Gigabytes of data received in a Month (N=264)				
		1-25 Gb per month	26-50 Gb per month	51-75 Gb per month	101-125 Gb per month	Total
Amount paid per GB of satellite data ($)	$1.00 to $20.00	168	61	1	1	231
	$21.00 to $40.00	13	2	0	1	16
	$41.00 to $60.00	10	2	0	0	12
	$61.00 to $80.00	5	0	0	0	5
Total		**196**	**65**	**1**	**2**	**264**

On average respondents are paying **$15.96 per gigabyte of satellite data.**

In addition to very high costs for satellite data, respondents' **data is shaped** if their monthly allowance is consumed before the contract end date. **Eighty-two percent of respondents** stated that they **are shaped,** and 18% stating that they can purchase extra data, see Table 21.

Table 21: Respondents who are shaped or who can purchase extra satellite data when their allocation is consumed

Do you have a shaped account or can you purchase extra data? (N=271)	Frequency	Valid Percent
Shaped - speed is slowed when my data runs out	222	81.9
I can purchase extra data	49	18.1
Total	271	100.0

Likewise to mobile broadband respondents are most likely to use their data to accommodate schooling or to continue running businesses in the bush. Purchasing extra data is expensive, but is required to keep continuous connection during times of schooling, accident and emergency situations, to keep up to date with fire and flood conditions and for rural, regional and remote people's well-being, see Table 22.

Table 22: Cost of extra satellite data per gigabyte

How much per GB does your extra data cost? ($ per GB) (N=39)	Frequency	Valid Percent
$1.00 to $5.00	24	61.5
$6.00 to $10.00	5	12.8
$11.00 to $15.00	4	10.3
$16.00 to $20.00	6	15.4
Total	39	100.0

On average, **respondents pay $16.11 per gigabyte for extra satellite data**. While our previous examples in Mataraka, NT, Darke Peak, SA and Arcadia in QLD were all shaped, other areas such as Gympie in QLD pay $5.00 per gigabyte for extra data. Just under half of respondents (47%) pay for extra Satellite data every month, 16% pay for extra data six to ten times per year and 15% pay for extra satellite data three to five times per year. Eleven percent pay less than three times per year and 10% do not purchase extra satellite data.

63.3% of respondents using **satellite connections** were found to be **shaped** (or exceeding their data limits and needing to purchase more data) six or more times in a year, with 78.7% going over their data limits three or more times a year, See table 23.

Table 23: Times respondents are shaped or need to purchase more satellite data allowance is depleted

How often does your account get 'shaped' or do you need to purchase more data? (N=272)	Frequency	Valid Percent
Never	26	9.6
Every month	129	47.4
6-10 times per year	44	16.2
3-5 times per year	41	15.1
Less than 3 times per year	32	11.8
Total	272	100.0

Respondents to satellite connection questions were asked if they had to abide by PEAK and OFF PEAK times to use their data allocation or were they allowed to use it any time. The data shows that **satellite data is more restricted than mobile broadband.** Approximately one third of respondents are each affected by data anytime, off peak data and peak data. The majority (40%) have data available at any time, 30% have restrictions for off peak data, and 30% have restrictions with peak data, see Table 24.

Table 24: Peak and Off Peak or usage anytime satellite allocation

Do you have peak and off peak times with your data allocation (N=371)	Frequency	Valid Percent
Data available anytime	148	39.9%
Off Peak Data	113	30.5%
Peak Data	110	29.6%
Total	371	100.0%

Two thirds of respondents have set times for off peak data. The remaining third have varying off peak times. Thirty four percent or respondents are restricted to off peak data between 11pm and 1pm and 33 % are restricted between midnight and 7am, see Figure 17.
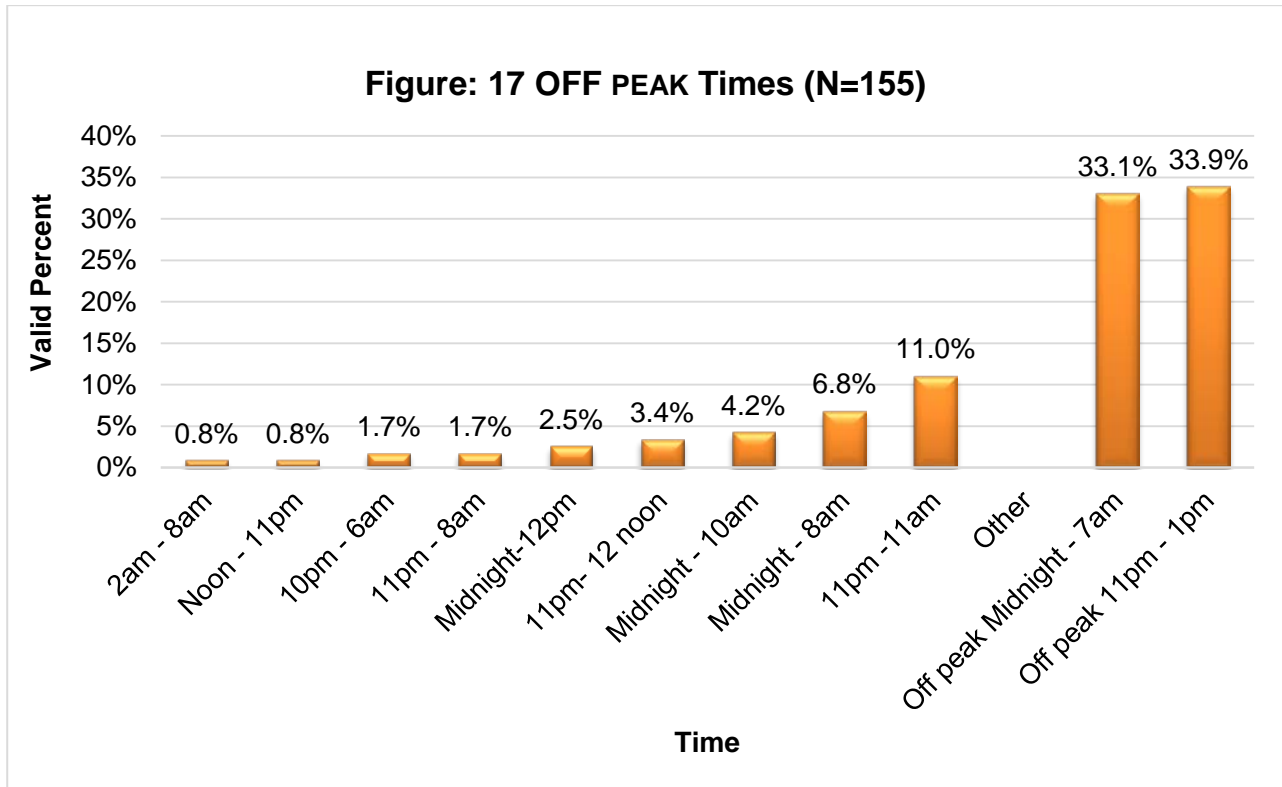
Figure 17: Off peak satellite data times including other text as entered by respondents

A cross tabulation between town or locality and speed showed that **89% of respondents** had an **average download speed** of **1mbps to 5mbps**, 11% had an average download speed of between 6mbps and 10mbps. There were **no respondents with a download speed of between 21mbps and 25mbps.**

Similarly, **99% of respondents experienced upload speeds** of between **1mbps and 5mbps** and 1% experienced upload speeds of between 6mbps and 10mbps.
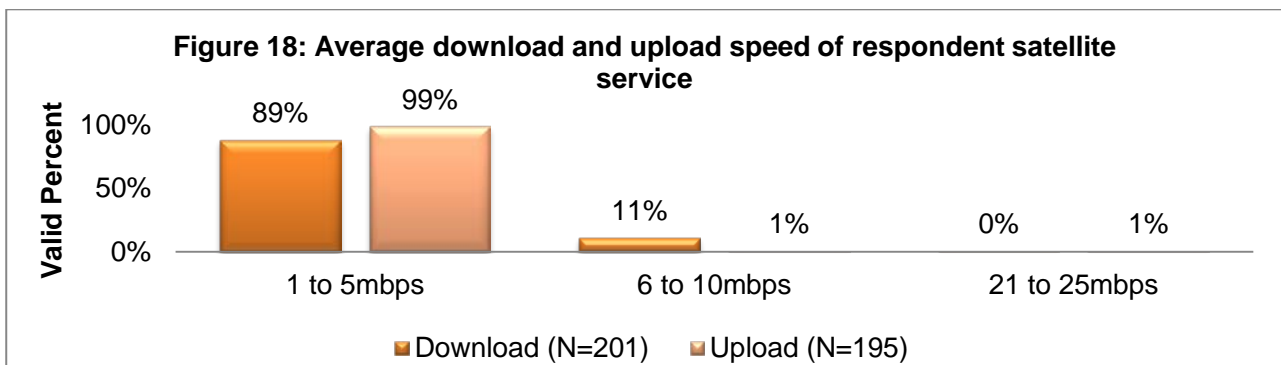
Figure 18: Average download and upload speed of mobile broadband service

Summary of satellite data

Satellite internet was offered to rural, regional and remote users of the internet as an alternative to inadequate services (such as dialup) that were available at the time. However, as technology changes so do the needs of rural, regional and remote (RRR) users in Australia.

Respondents came from every state and territory in Australia. However regional mapping address issues significantly impacted ability to map respondents. The main providers are Activ8me, Skymesh, HarbourISP, Telstra, ANT Communications, Westnet, ipstar, iinet and Reachnet. Less than 2% of respondents use other providers such as Bordernet, Clear Networks and Optusnet.

When asked to rate the providers on customer support, cost, data limits, speed and the level of drop outs and reliability, RRR people agreed that **limited speeds and data limits were the worst problem with the service**. This was followed by dropouts and level of service reliability, cost and customer service.

Around one half of the respondents have access to the interim satellite service, one quarter access the NBN Satellite Subsidy Scheme and one tenth access satellite internet via the Australian Broadband Guarantee Program. The remainder are either with Telstra, Optus or they are unsure of who their provider is.

Only 11% of respondents use the voice over internet protocol (VOIP) for their telecommunications. Fifty nine percent rated the delay as poor and 61% rated clarity as average, only 4% of respondent rated VOIP excellent for clarity.

Satellite data contracts are expensive. Telstra satellite customers pay up to $70 per GB of data. Most respondents pay between $1 and $20 per gigabyte for up to 25 gigabytes of data per month, which is often used before the monthly term is completed. When this occurs, their accounts are shaped or they need to purchase more data.

Typically, RRR people are required to purchase data (or are shaped) every month at an average cost of $16.11 per gigabyte. Around one third of respondents have data available at any time (40%), one third have an off peak data allowance (30%) and one third have a peak data allowance (30%).

In terms of speed, 89% of respondents have an average download speed of between 1mbps and 5mbps and 11% have an average download speed of 6mbps to 10mbps. Less than 1% of respondents have a download speed greater than 10mpbs. Ninety nine percent of respondents have an upload speed of between 1mbps and 5mbps.

Currently satellite internet does not meet the educational, business, health and welfare needs of rural, regional and remote Australians.

Mobile Phone Service

Over 70% of Australia's land mass has no mobile coverage and **many areas are very congested** especially in new mining communities and areas of high tourist traffic. The survey asked respondents about access to mobile coverage at their home, extra equipment required and cost of mobile data plans.

When **asked if respondents get reliable service at their home**, **73% answered NO**. For those who answered yes, 28% of respondents purchased a Smart Antenna and 28% purchased a Cel-Fi Booster. Eleven percent purchased an on roof antenna, and 5% purchased an in house booster. Additional equipment was purchased at own costs with no subsidies.
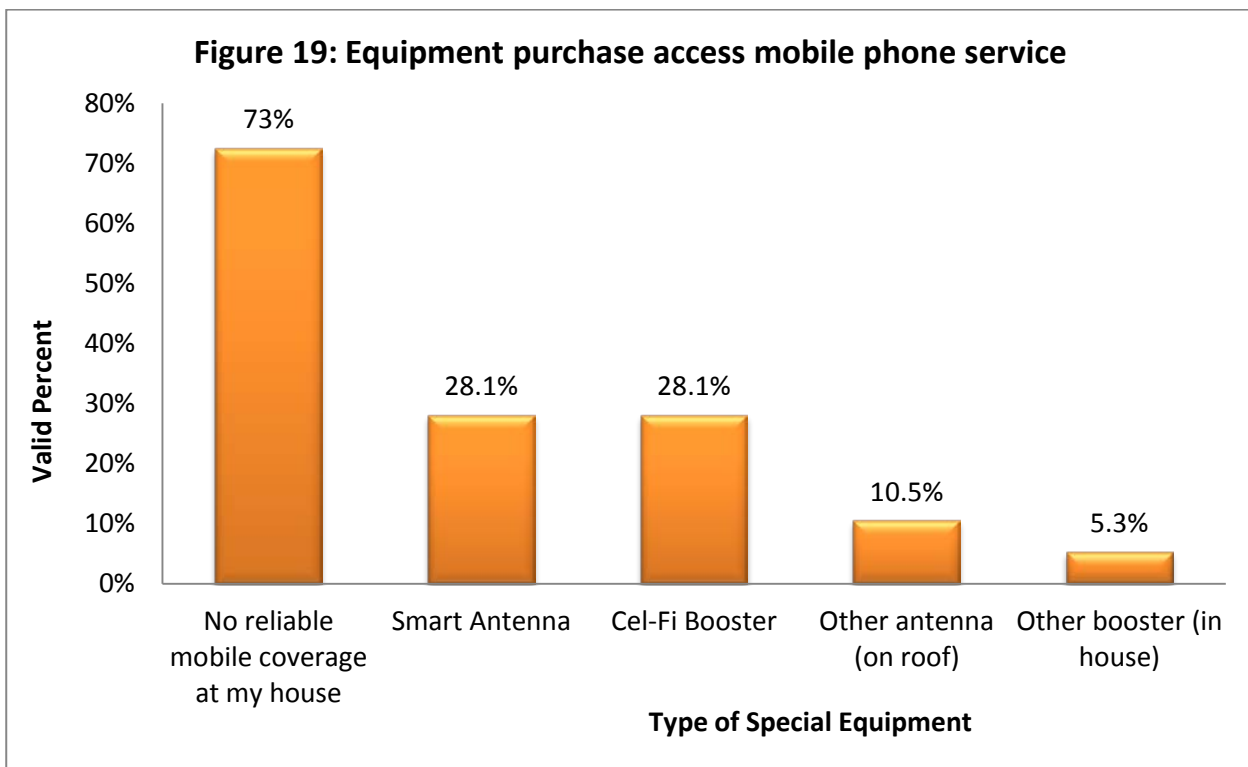
Figure 19: Mobile service and equipment purchased to access mobile phone service

Comments from respondents support these findings:

Table 25: Anecdotal comments from respondents about mobile coverage

"More mobile phone coverage with data capabilities would solve some issues." (St George, QLD)

"Most of our property has zero mobile phone coverage." (Mount Adrah, NSW)

"We have had trouble with getting a signal for our mobile phone and internet use for 3 weeks. Its good right now but it has been wofting in and out. Telstra faults line will not help us do we have called the telecommunication ombudsman." (Daysdale, NSW)

Respondents were also **asked how much it costs to access their mobile phone service**. Forty-six percent said that it cost $1000 to $2000, 35% said it cost $501 to $1000 and 19% said it cost between zero and $500. Three percent said that it cost more than $2001, with one respondent saying it cost $4000.

Figure 20: Overall cost to access the mobile phone service (N=37)

Figure 20: Cost of mobile phone access

Summary of mobile phone service results

Seventy three percent of rural, regional and remote people **do not have reliable mobile phone coverage**.

In addition, the service is both **expensive to set up and to maintain**.

Of those who said yes, **72% purchased extra equipment** - with the majority (46%) paying between **$1000 and $2000** to access the mobile phone service.

NBN Service

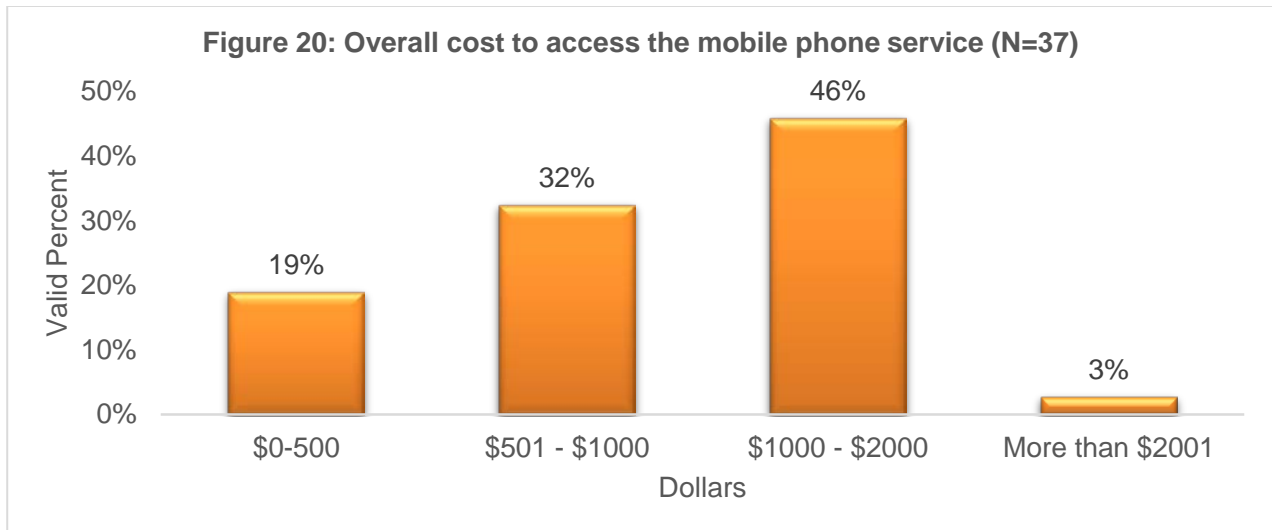**NBN Interim Satellite** has not met user expectations, it has been **oversubscribed,** and current **speeds** are causing considerable angst across Australia.

Recently there has been a reduction in plan sizes to between 20GB and 50GB depending on the provider. One provider has informed customers that when they surpass the 50GB limit their accounts will be suspended until the next billing period. Despite the 'fair use policy' (BIRRR, 2015) and reports by NBN Co that speeds have improved, they appear to be worse than ever before (as testified by many of our group members). Users are finding pages so slow to load that they are using excessive data just to be able to open web pages and emails. Monitoring systems set up by NBN providers often do not work as the service connection is too slow to load the usage page. **The devastating effects of the issues stated above, have left users frustrated and sceptical of satellite as a solution to the data drought.**

The survey asked if respondents had been suspended from their service due to the NBN fair use policy. Less than 5% responded that they had been suspended, however comments below demonstrates the disappointment that respondents feel by being suspended.

Table 26: Anecdotal comments from respondents about the fair use policy

"The terrible data limits on the NBN ISS since they enforced their fair use policy and my provider reduced my data allowance …crippling my ability to work from home and requires me to trip into town to work on a regular basis or pay extraordinary amounts for 3G data from Telstra. I feel extremely disappointed in the availability of broadband at my house and hope the LTSS service will provide at least 60GB of data per month - preferably 100-200GB to cover all my internet needs for the large household we have." (Lonnavale, TAS)

"Before NBN Co implemented their fair use policy, we were on 60 GB for $60 per month, now we pay $109.95 per month for 42 GB of data. Whilst the download speed may appear reasonable, one cannot stream even a short video without interruption. NBN Co have opted to service areas which already have access to ADSL 2+ and the Telstra 4G network, rather than focussing on areas that are stuck with exchanges that will never be upgraded to ADSL and are stuck on a very poor 3G network for wireless connections." (Booborowie, SA)

The next question **asked if respondents had checked the availability of NBN in their area**. Forty two percent said they had tried and had registered their address and **41% said they had tried but their address would not register**, highlighting the large number of RRR people addressing issues, see Figure 21.

Figure 21: Have you tried to check the availability of nbn in your area using the nbn Check Your Address? (N=645)
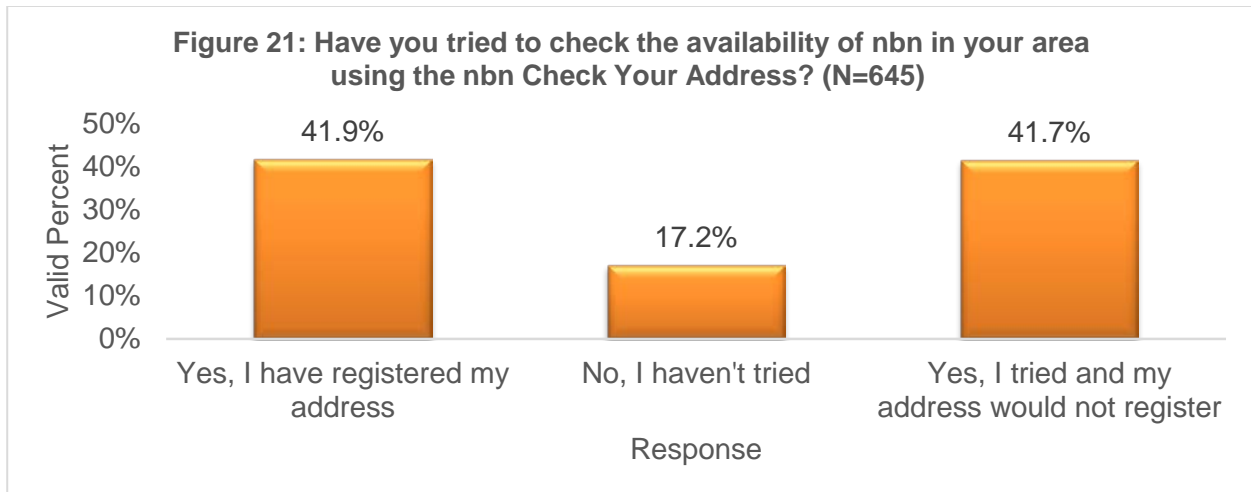
Figure 21: Availability of NBN in respondent's area

One respondent said the following highlighting concerns about connectivity when the LTSS does become available:

> "*The NBN website it states we can get NBN by fixed wireless at our address, but when we have tried to get connected were are told by all providers that it is not available to us. We have asked the NBN to change the website as we are concerned that we will not be considered for satellite as long as their website states we can get NBN. We have had technicians out here testing and we definitely can't receive the fixed wireless NBN, this has been going on now for over 2 years and NBN website still states we can get NBN.*" (Uralla, NSW).

Forty-six percent of respondents plan on **accessing the NBN Long Term Satellite** when it becomes available and **33%** said that they **might access it**. Whereas 14% would prefer to stay on mobile broadband if the plans had better data and better costs. Eight percent said they would not connect for another reason, which are discussed in the following tables.

Figure 22: Do you plan on accessing the LTSS when it is available
(N=642)

Figure 22: Respondents plans to access NBN Long Term Satellite when it becomes available

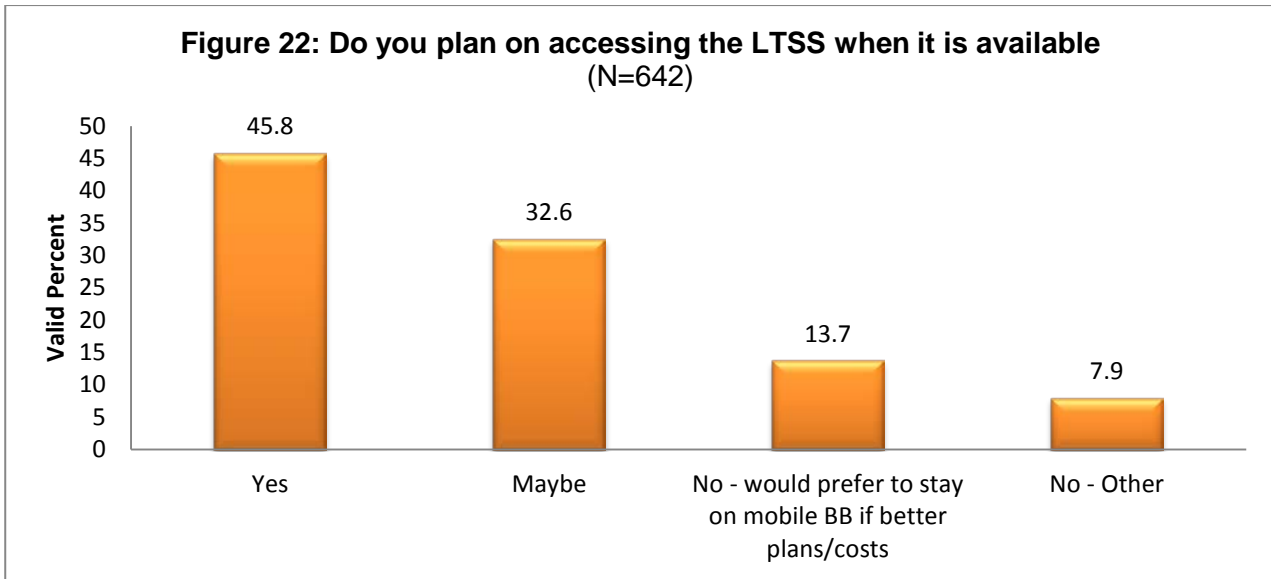Respondents were **asked if they were planning on accessing the NBN Long Term Satellite** (LTSS). Their written responses were grouped into **seven different themes**.

The **most quoted** theme was that the **respondents preferred to have fixed wireless**. Anecdotal comments from respondents supporting the fixed wireless theme are presented in Table 27.

Table 27: Anecdotal comments from respondents about their preference for Fixed Wireless Internet

"A private contractor AMA sound says fixed wireless beamed to our location is far better NBN, than NBN Satellite." (Mookara, NSW)

"I am hoping to get connected by Fixed Wireless (which is available in the area) with its better data cost and amounts." (Leongatha South, VIC)

"We are trying to obtain NBN fixed wireless. If that fails completely we will consider LTSS." (Leahton Park, QLD)

"Fixed wireless exists all around us but NBN can't /won't advise if we will get it or be obliged to get satellite." (Margate, TAS)

"Will try to connect to fixed wireless using private Wi-Fi link from neighbours property in range." (East Popanyinning, WA)

"Have a private Wi-Fi bridge from neighbour that getting NBN Fixed Wireless because satellite is shit and my place I can't access NBN fixed wireless." (Peel, NSW)

The **second theme** surrounds **speed**. Respondents are **concerned that the connection will be too slow, become congested, or suffer large lag times. Therefore, they are not planning to move to the LTSS.** Anecdotal comments from respondents supporting the speed theme are presented in **Table 28**.

Table 28: Anecdotal comments from respondents about their concerns of **how speed will be affected**

"Mobile broadband provides faster speeds, and greater reliability." (Islay Plains, QLD)

"Am concerned about speeds. We can very rarely view anything on you tube etc." (Boree Creek, NSW)

"I am told the LTSS is going to be slower than mobile and will get slower." (Wellington, NSW)

"The lag times associated with Satellite will be a problem for both personal and business use. In our business, our accounting software, POS software etc. is all online and I'm concerned lag times will affect speed of processing transactions etc". (Rand, NSW)

The **third theme** revolves around **cost and service**. It would be hard to convince someone that had already had bad experiences with cost or service to change. Anecdotal comments from respondents supporting the cost and service theme are presented in Table 29.

Table 29: Anecdotal comments from respondents about their **concerns of how cost and service will be affected**

"Would depend on cost and data limits of satellite vs mobile." (Glenrock, NSW)

"Yes if the cost is comparable and the service is better than the current satellite system." (Inverell, NSW)

"Our mobile broadband via Yagi & Cel-fi is poor at times because of our location which is either on fringe of mobile or outside eligibility for satellite. Possibly prefer mobile broadband but need better service/technology and bit of a reduction in cost." (Cunnamulla, QLD)

The **fourth theme** highlights **troubled decisions**. For example, some thought it would take too long to come in, others were not sure what to expect. Anecdotal comments from respondents supporting the cost and service theme are presented in Table 30.

Table 30: Anecdotal comments from respondents about their **concerns of what options will be available**

"I don't know what that is. I am unable to check the facts unfortunately. I am currently on slowed internet and I can't get into any of the blue hyperlinks that are attached to this survey." (Vittoria, NSW)

"Because I think that will be my only choice with no mobile phone coverage?" (Pekina, SA)

"Our land line phone works from the NextG 3G system so not sure if we would be able to have both?" (Emu Plains, NSW)

The **fifth theme** relates to '**better options for NBN**' where respondents are looking for flexibility and **access to more than one service**. Anecdotal comments from respondents supporting the cost and service theme are presented in Table 31.

Table 31: Anecdotal comments from respondents about **better options for NBN**

"Flexibility to move equipment and upgrade in 5G." (Dalby, QLD)

"Hopefully will be able to access NBN in the near future." (Alton Downs, QLD)

"Planning to start my own wireless/fibre based rural ISP - but if this doesn't happen, I will probably use a combination of mobile broadband and LTSS." (Calivil, VIC)

The **sixth theme** surrounds **not having the option to connect** because the **LTSS will never be available in their area.** While BIRRR recognises that NBN will be available to all Australians, many people are unaware of their NBN options. Anecdotal comments from respondents supporting the concern over lack of options to connect to NBN are presented in Table 32.Table 31

Table 32: Anecdotal comments from respondents supporting the concern over lack of options to connect to NBN

"It won't ever be available at my address." (Treeton, WA)

"Not available to us." (Kingaroy, QLD)

The **seventh theme** highlights that the **LTSS will not suit everybody's needs**. It **surrounds past experience**, a preference for mobile options and consideration of others. Anecdotal comments from respondents supporting the cost and service theme are presented in Table 33.

Table 33: Anecdotal comments from respondents about LTSS not suiting everybody's needs

"Already have a NGWL phone have had satellite in the past. Woeful." (Bowenville, QLD)

"Have used satellite in past and it is so variable. We should be able to get the same as other places." (Deniliquin, NSW)

"Portability…" (Surat, QLD)

"Don't want to clog up the satellite for those who really need it." (Norwin, QLD)

"I believe I should be on fixed wireless or mobile rather than satellite that takes bandwidth away from those who really need it." (Bowenville, QLD)

*"Latency - I *need* remote desktop, cloud apps and online school. Satellite latency renders them unusable." (Beltana, SA)*

Finally, the **last NBN question** asks if the **respondent's provider** has **made them aware of all of the NBN options that are available**.

Thirty eight percent of respondents said they were not confident that they had received all of the information. Twenty seven percent were somewhat unconfident and 13% were somewhat confident that they had learned all they needed to know from their provider. Eight percent of respondents were confident that they had all of the information and 15% were neutral.
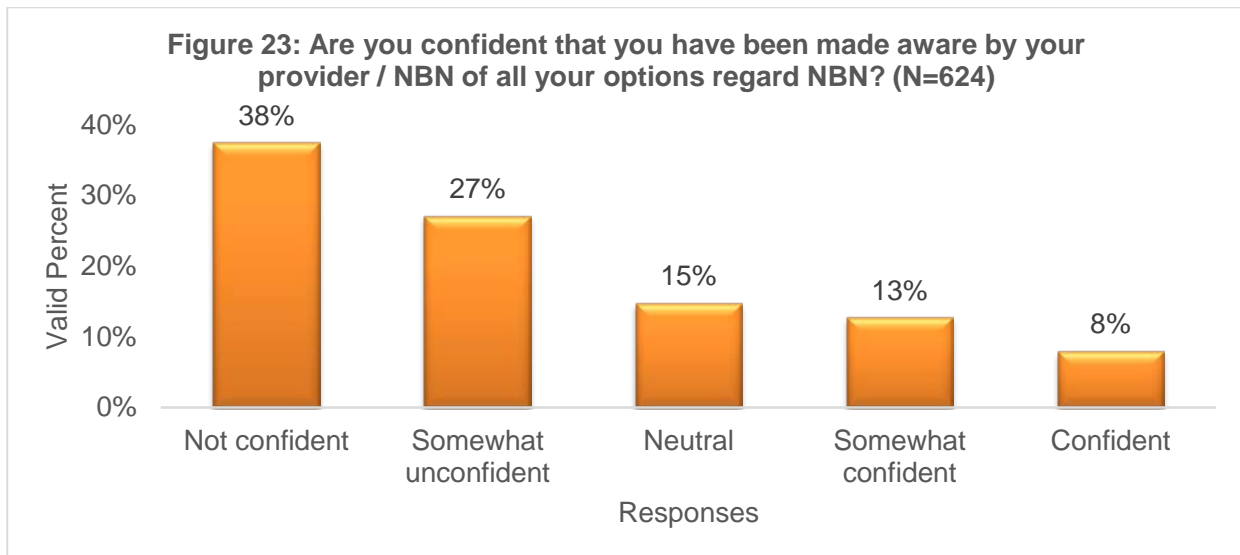

Figure 23: Respondents opinion on whether they have been made aware of all of their NBN options

Summary of NBN service results

NBN Interim Satellite has not met user expectations, it has been **oversubscribed, and current speeds** are **causing considerable angst across Australia**.

Eighty two percent have tried to **check availability of the NBN in their area**. Forty two percent were able to register their address and **41% were not able to register**. Seventeen percent did not try to find out if they had NBN available in their area.

Just under half of the respondents intend on accessing the LTSS when it becomes available. Nearly 8% would prefer not to access it for a range of reasons including that they would prefer or had access to fixed wireless, they did not trust the speeds, and they were concerned about cost and service provided and the thought it would take too long. In addition, others were not sure what to expect and some thought they had better options available. Others had more practical reasons such as the LTSS would never be available in their area. Finally, theme seven highlighted that the LTSS would not suit everybody.

Respondents were **not confident that their provider had told them about all of their options regarding NBN.**

The **final questions of the survey** ask about where to find the best information about connecting to the internet, and if the respondent is likely or not to recommend BIRRR to a friend or colleague.

Thirty five percent of respondents said they go to the BIRRR website for information, 28% ask their provider and 9% look on the NBN website. Eight percent use forums like Whirlpool to gather information. Nineteen percent use some other source, see Figure 24 and Figure 25.
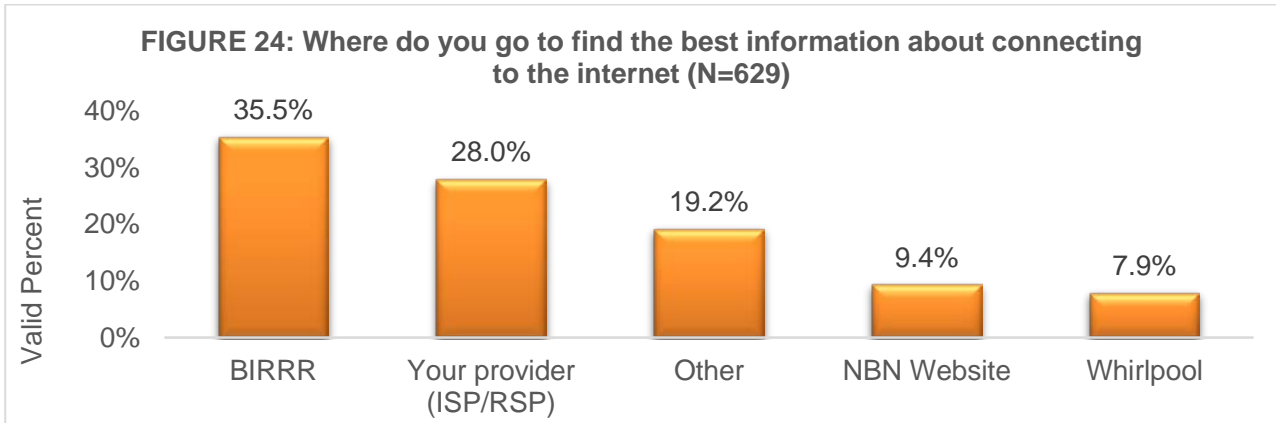
Figure 24: Where respondents find information about connecting to the internet

Figure 25 refers to **other sources**. According to 80% of respondents for 'other sources', the media is the best place to find information about connecting to the internet, followed by a Google search (28%), word of mouth (17%) and then service providers (16%). Fifteen percent of respondents said that they could not find information anywhere. Nine percent looked for information with Telstra and 5% used a range of sources. Four percent used forums to find information and less than 1%, each used their networks and the NBN website. Four percent said that they did all of the above (which refers to first part of the question: NBN Website, their provider, BIRRR, and Whirlpool).

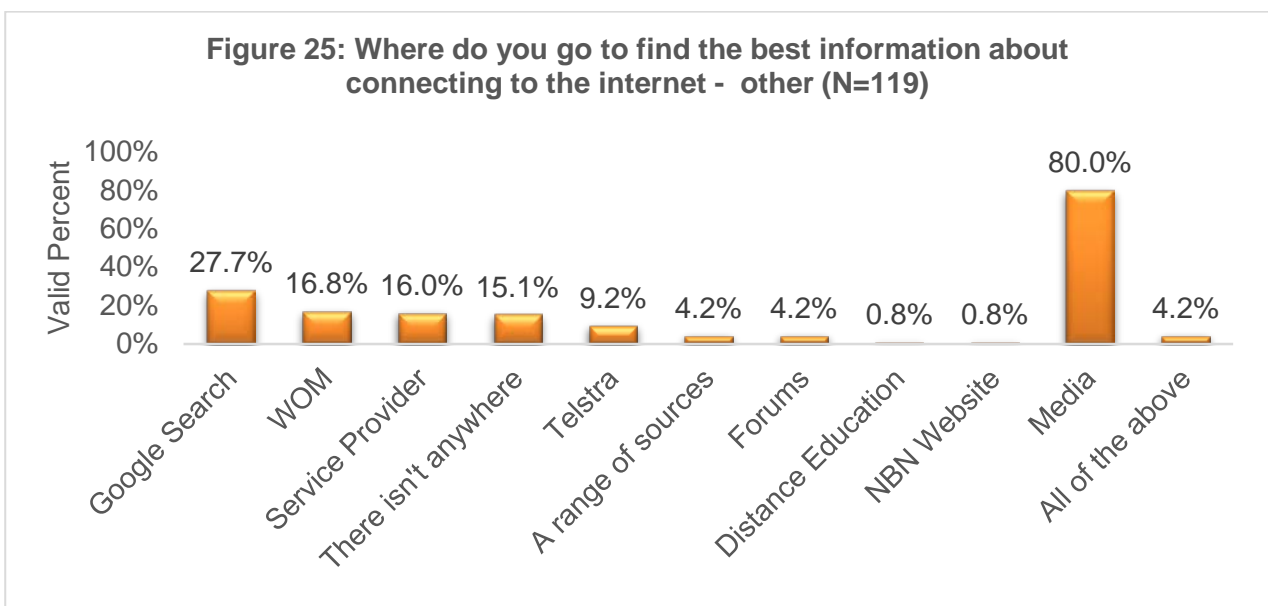**Figure 25: Where respondents find information about connecting to the internet – Other**

Respondents were asked to rate their chances of recommending BIRRR to friends or colleagues.

Of the 633 responses, **92% gave a score of six or above** indicating that they would recommend the **BIRRR to friends and family**. Nearly 8% gave a score of five or below indicating that they were less likely to recommend the BIRRR group to friends and family.
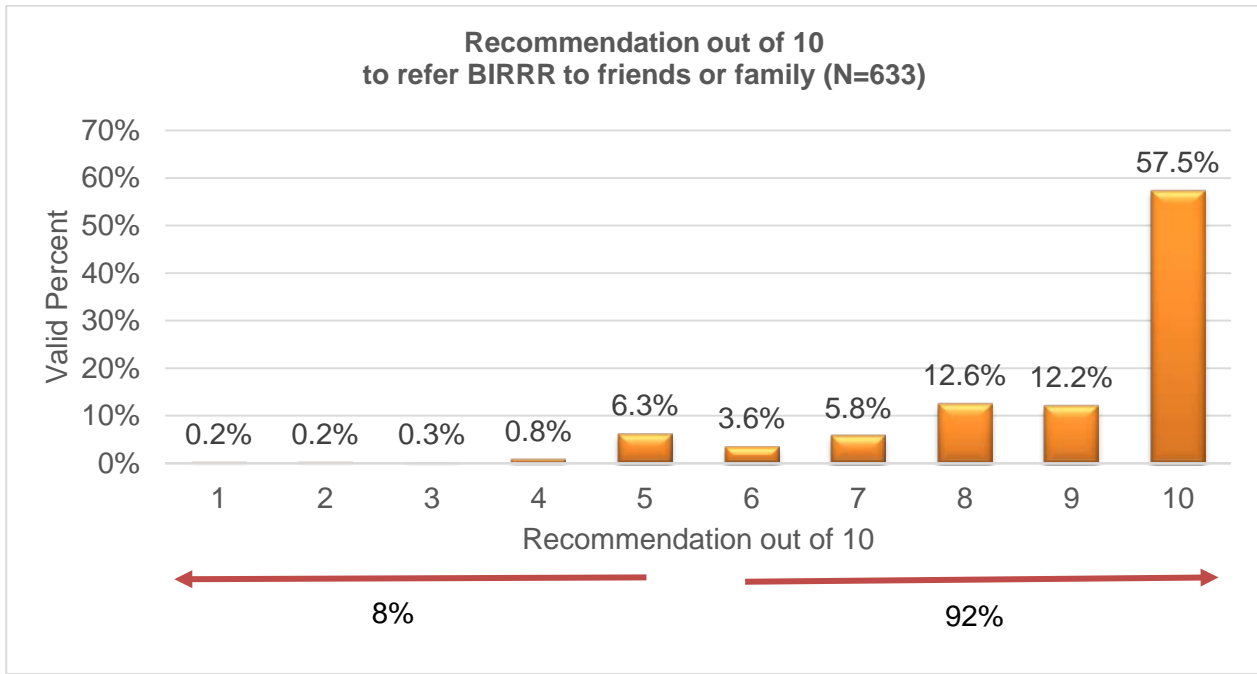
Figure 26: Respondent recommendations for BIRRR

Comments supporting respondent's ratings follow:

"BIRRR has been a lifesaver for me, a great place to get reliable information." (Bell, QLD)

"I have gained more insight from BIRRR in the past few weeks than I have from providers in the past 4 years - thank you." (Kaarimba, VIC)

"Just to say thanks for doing such a fantastic job and taking (a lot of!) time out of your own days to assist and lobby for better regional internet!!!" (Nangeenan, WA)

"Keep up good work. LTSS on and off peak periods are ridiculous. Please lobby hard for change. Thanks for everything."

"Thank you for making the internet minefield a little less scary and for giving us ideas and options." (Narromine, NSW)

"The group is doing a fantastic job raising awareness of the issues and solving problems - well done.!" (Winton, QLD)

"Though you're not a political or activist group, you're doing a great job giving us all, who are suffering out in the bush, a voice. Well done, keep up the good work and thanks :)" (Flowerdale, VIC)

The respondents were asked to **share any other information** that they had with the survey. Several themes occurred, some of which have been used throughout the report to support the findings in a particular area. Following are the remaining comments under each theme:

Table 34: Anecdotal comments from respondents about DATA ALLOWANCE

"A new office computer uses all our data in four days due to software that constantly updates and we are unable to stop this from occurring." (Little Billabong, NSW)

"My husband has had to move 2.5 hours away during the week because our data availability is so poor he cannot run his business or complete his engineering degree. We are looking at 3 more years of our 5 year old not having his dad at home most of the time for this reason. My husband is a network engineer who specialises in remote IT solutions and has run a national IT consultant cusp …if he can't make our situation work so he can stay with his family that tells you how poor our options are." (Beltana,SA)

"My speed results are based on the start of a new month for us, started two days ago, and already my teenagers have used 84% of the normal data, sigh." (Tennant Creek, NT)

"Our internet lasts only 4-5days per month." (Delaneys, QLD)

"Would do study online if we didn't run out of usage, if the connection was more reliable for when you have to watch videos, which is why I don't use it for health as most workout videos won't download, or they chew through the usage." (Springsure, QLD)

"Could only do this survey on home internet, as our allowance has just clicked over, have been shaped for previous three weeks. Would use the internet so much more, if we had better access. Can only dream of streaming iview/TV and gaming (for teens) rule in our house, if it's a picture, or it moves, you can't view it!!." (Ellangowan, QLD)

"I am on the highest plan offered by (my provider) but unfortunately run out about the middle of every month and then shaped with is very frustrating." (Yaraka, QLD)

Table 35: Anecdotal comments from respondents about EXTRA EQUIPMENT NEEDED

"12 months ago Telstra sent me a new 4G mobile internet stick. I still have to put it on a lead & up on the window or outside & it gets extremely hot. It is no better than the previous 3G device." (South Doodlakine, WA)

"Aerial assisted Internet is satisfactory though prone to dropping out." (Brooker, SA)

"Because of poor speeds, I have purchased a pre-paid Tls Mobile Device to use at work on my laptop (in a large regional centre), expensive and means even more time away from home." (Wattening, WA)

"I have had to have Yagi and Smart Antennas installed to access the internet and mobile service. Data speeds without using Yagi and Smart Antennas are: Download - 0.85Mbps "Upload - 0.04Mbs" (survey completed in Brisbane, QLD)

Table 36: Anecdotal comments from respondents about DROP OUTS

"Internet main issue is drop outs." (Stanthorpe, QLD)

"Internet/mobile service cuts in and out, have made a complaint to service provider who state this is the only option at this time." (Junee, NSW)

"I had many dropouts while completing this survey." (Woorndoo, VIC)

"It seems our connection and package is better than lots, but still falls way short of what is advertised, even now, in regards expected speeds etc. Also the unseen drop outs make it almost impossible to use work software which is citrix based." (Two Mile Flat, NSW)

"Lost connection whilst trying to complete the survey." (Freeburgh, VIC)

"My mobile internet speed and dropouts depends on time of day." (Wyandra, QLD)

Table 37: Anecdotal comments from respondents about LOCATION

"I have a fixed line (copper) on my property but Telstra records don't show it exists. Their records don't show my property exists either." (Wayo, NSW)

"I tried to register with NBN for information but our address was not accepted." (Wallumbilla, QLD)

"My address won't register on NBN. Property is less than 2 km from town." (Roberston, NSW)

"Only a few km out of reach of Fixed wireless." (Bungawabin, NSW)

"Not currently able to access any internet service." (Taylors Flat, NSW)

Table 38: Anecdotal comments from participants about MOBILE PHONE SERVICE

"We run a motorbike park on our farm, mobile coverage would make a huge difference to how we operate our business as well as be very beneficial to visitors for personal and safety reasons without mentioning the amount of travellers each year we have pull in to make use of our landline phones. Better internet and mobile coverage is a must for rural Australia!" (Narrabri, NSW)
"About 25% of my work is done away travelling so the mobile services are more appropriate for me. They are great when in town / Perth and usually work elsewhere. I just put up with the slow speeds & frequent disconnections and wait patiently for improvements." (South Doodlakine, WA)

Table 39: Anecdotal comments from participants about DATA PLANS

"Annoying to be only 18kms from a town with unlimited downloads ADSL access and yet Telstra/NBN will do nothing to improve access for people on the fringes. Long term sat is not going to be a long term solution and will leave rural Australians further and further behind."
(Jerramungup, WA)

"Data rates and pricing are outrageous for a home office to run on mobile wireless internet."
(Carwoola, NSW)

"Definitely would like to see more data or equivalent service available in town - only 10km away! $120/month for just 15gb is just about robbery." *(Kelley, SA)*

"I have four grandchildren who spend almost all their school holidays here. They all have laptops, and their home connection (ADSL Bigpond in Yass) allows 1TB for the same price as I pay. The blocks I put in the router are a source of ongoing conflict." *(Goonoo Forest, NSW)*

"We have 2 devices that both have 8gig per month. 1 slows down after usage and the other is charged if over. Also our mobile data options are pretty ridiculous…our service is very unreliable and we chew up data like water out of a hose." *(Tower, Kings Park, WA)*

"We just want access to reasonable data amounts and prices." *(Darke Peak, SA)*

Table 40: Anecdotal comments from respondents about NOT HAVING ENOUGH DATA/SPEED TO COMPLETE A SPEED TEST FOR THE SURVEY

"Survey dropped out numerous times due to connection." *(Matong, NSW)*

"Could not use speed test, I am data restricted. Could not register with NBN, same reason."
(Nymboida, NSW)

"Had great difficulties getting the speed test completed because we have used up our internet allowance for the month. After reloading the page several times it worked." *(Mayberry, TAS)*

"Ran speed test on my connection, completed survey in town." *(Charters Towers, QLD)*

"Unable to complete speed test- sorry. We have spent months trying to get help from Telstra mky business centre but with no outcome or solution to the ongoing internet slow state we are experiencing. I find it is quicker… to drive in and out of town to use the library internet if I need to access docs - 2 hours all up - than getting them through our own service." *(Clermont, QLD)*

"Unable to perform speed test from home internet connection, biggest impacts of unreliable and slow connection are… limitations on running business and maintaining professional development online as health professional in rural area with young family (currently on maternity leave) …impossible to stream necessary webinars, view professional development videos online. Living remotely from family members… also made difficult by limited access/reliability of Skype and similar programs. Very isolating! Concern for future is impact on schooling for our children if they are unable to achieve access appropriate to their needs and equivalent to peers." *(Bell, QLD)*

Table 41: Anecdotal comments from respondents about their THOUGHTS ABOUT INTERNET IN RURAL, REGIONAL AND REMOTE AUSTRALIA

"There needs to be a commitment to those in remote Australia to have equal access to the internet to access education and unmetered TAFE and university would be a solid commitment from the commonwealth to support remote Australia." (Leyburn, QLD)

"I do not consider my local community 'remote' but I fear we will be resigned to LTSS, degrading the service for people that really need it, i.e. people 100's ok kms from towns not 10km from a town." (Rosewhite, VIC)

"Its time rural/remote people stood up for themselves to force some equity into our digital society. Citycentrics don't actually care, it's not bothering them, the city/rural divide is now a grand canyon. If we don't make noise, we will get overlooked as usual. In a 1st world country surely farmers and pastoralists are entitled to some digital equity with priority over those who already have reliable mobile signal. This situation is a joke." (Moody, SA)

"Rural people are missing out on essential internet services. Education, health, information etc Just about everything requires an online response, email or some form of connection. We can't even get mobile service, dial up, wireless etc. We have no choice but to pay for expensive, unreliable satellite service in an unsuitable amount." (Grenfell, NSW)

"The inequity of available and affordable internet speeds and downloads in rural and remote areas compared to the city is a disgrace and highlights the lack of interest and the impotence of our political representatives who are accepting their high salaries while failing in their responsibility to ensure access to essential services for their constituents." (Farrer, NSW)

"Those with unlimited access to internet have no idea or don't care." (Gregory River, QLD)

"Please make more information available at a local level so we are not just relying on heresay." (O'Connor, WA)

"I have absolutely no faith in NBN delivering acceptable internet to rural Australia." (Gindie, QLD)

Table 42: Anecdotal comments from respondents about success stories

"Mobile eftpos machine now works though depending on time of day & weather I may have to take it outside to be successful. Previously I had to have a fixed line & mobile eftpos but have been able to do away with the fixed line machine." (South Doodlakine, WA)

"While we have crap internet, we do have a local town wireless network we can play games / stream music across." (Beltana, SA)

Table 43: OUTSTANDING QUESTIONS from respondents to the survey

"There are 2 houses on this property and this survey has only been completed for 1. Is it possible to register for NBN for 2 separate households as it would not allow me to add in a "unit number or cottage"?" (Upper Warego, QLD)

"I just really want to know, am I going to be better off sticking with the wireless that I currently have 8gb for $59 with Bigpond, or will the new satellite be cheaper, and as fast as or faster than what we have now?? We are now going over our data every month with kids heading into high school and it is effecting our farming business. We miss out on fixed wireless by a few klms, and I am blown away by their plans!!" (Booleroo Centre, SA)

"I know we live in a black spot for phones, TV and internet, but really have no idea where to go for help or assistance, and really don't know what to expect in the future. Our internet connection is too poor to search online and we don't really know where to start to look." (Thangool, QLD)

Conclusion

The BIRRR Regional Internet Access Survey aimed to establish the state of the internet for people in rural, regional and remote areas of Australia.

The survey found that **rural, regional and remote people** are **severely disadvantaged** in terms of **access, speeds, cost and reliability of their internet connections**, whether they be via **mobile broadband** or **via satellite.**

This has a dramatic effect on rural, regional and remote peoples business, the education of their children and themselves and on their personal well-being.

This Survey has found that current consumer conditions are unhealthy and predicts even with the onset of NBN SkyMuster Satelitte, data growth will soon outgrow the Fair Use Policy.

Currently **internet connectivity does not meet the educational, business, health & welfare needs of regional Australians**. The Long Term Satellite is not a long-term solution for rural, regional and remote users of the internet: Peak Data of 75GB on NBN satellite will not future proof Australia's data needs, nor will it end the #datadrought.

There needs to be **an established service guarantee for internet services Australia wide**, this should be **equitable*** in terms of **speed, download capabilities and costs.** If this does not occur regional Australia will be left behind. Results reinforced the need for an independent telecommunications advisory body to help guide consumers through the bush broadband jungle of options and answers.

*Whilst RRR Australia requires equitable access to Internet services, we understand the logistics of the locations involved, and are not asking for unlimited data, simply equitable Internet services.

Limitations

1. Regional mapping address issues significantly impacted the ability to map respondents (on both maps), therefore maps are indicative only. ^

2. On ranking providers - these are indicative of personal opinion only and often not representative of BIRRR experiences.

3. We acknowledge difficulties associated with knowing ALL of the information asked for in the survey - drop outs, shaping etc have negatively impacted people's ability to actually complete survey, as has the confusion surrounding bush broadband.

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