Regional Connectivity Program

BIRRR SUBMISSION INTO THE RCP DRAFT GUIDELINES ROUND 2

Prepared for BIRRR by

[redacted]

BIRRR

BETTER INTERNET FOR RURAL, REGIONAL & REMOTE AUSTRALIA

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Introduction

Better Internet for Regional, Rural and Remote Australia (BIRRR) welcomes the opportunity to provide comment on the draft grant opportunity guidelines for Round 2 of the Regional Connectivity Program (RCP). BIRRR understands the aim of the RCP is to improve telecommunications infrastructure in regional Australia, specifically for areas outside the nbn fixed line footprint.

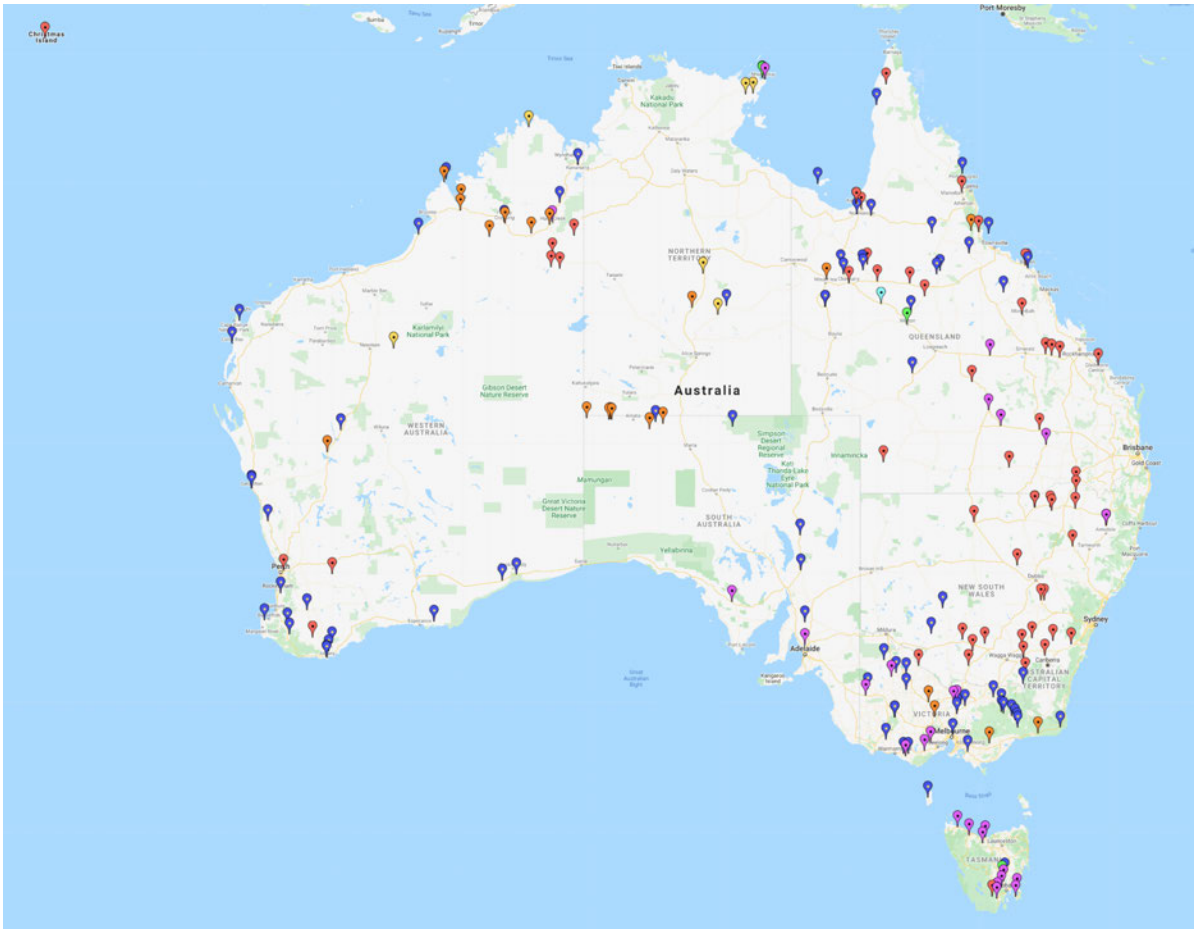


Figure 1: RCP Round 1 & National Recovery & Resilience Agency projects & colour key below

The RCP Round 1, although not yet rolled out, will deliver place-based connectivity solutions to a wide and diverse number of regional communities across Australia. BIRRR has mapped the Round 1 RCP Projects and the National Recovery and Resilience Agency funded telecommunications and energy improvement program which delivered further telecommunication infrastructure projects in Northern Queensland.

(red) Fixed Wireless Broadband

(purple) Fibre Broadband

(blue) Mobile Voice & Data

(yellow) Satellite Broadband

(green) Fibre Backhaul

(orange) Mobile Small Cell

BIRRR advocated strongly for the need for a place-based approach to improving telecommunications infrastructure in the regions during the 2018 Regional Telecommunications Independent Review Committee (RTIRC) consultation. We would like to take this opportunity to thank the Federal government and the department for their work in this space and for the development of a program that offers bespoke solutions to regional areas needing improved telecommunications. It is essential that programs such as this are continually funded and implemented, to ensure regional Australians can access communication services that meet their needs and are equitable to services provided in metro areas.

Background

The BIRRR group was founded in 2014 due to a lack of information, advocacy, and support for bush broadband consumers. There are now over 13,600 active and engaged BIRRR members from every state and territory of Australia. In particular, the group includes those that are requiring equitable telecommunications for their businesses and the education of their children. BIRRR is a volunteer- based advocacy group with extensive lived experience in regional telecommunications and a community of engaged regional users and support volunteers. Rural, Regional & Remote (RRR) consumers are extremely reliant on effective communications, due to the nature of their geography and vulnerability, and this also heightens the need for effective representation.

Even after the roll-out of the nbn and a significant amount of funding directed to the Mobile Blackspot Program (MBSP) and Round 1 of the RCP, there remains a regional dimension to the digital divide. The BIRRR team has undertaken extensive large-scale research on regional telecommunication needs, previously there have been few studies and limited research into this specific consumer group. The impact of COVID-19, closure of banks, amalgamation of local government offices, closure of regional newspapers and a push to have all government services online, have further ignited concerns amongst those in regional Australia about being left behind in the new globalised and Internet-connected world. With this has come an anxiety among RRR consumers that uneven distribution in access to reliable, affordable, and adequate voice and broadband services may further ingrain the digital divide.

Connectivity Literacy

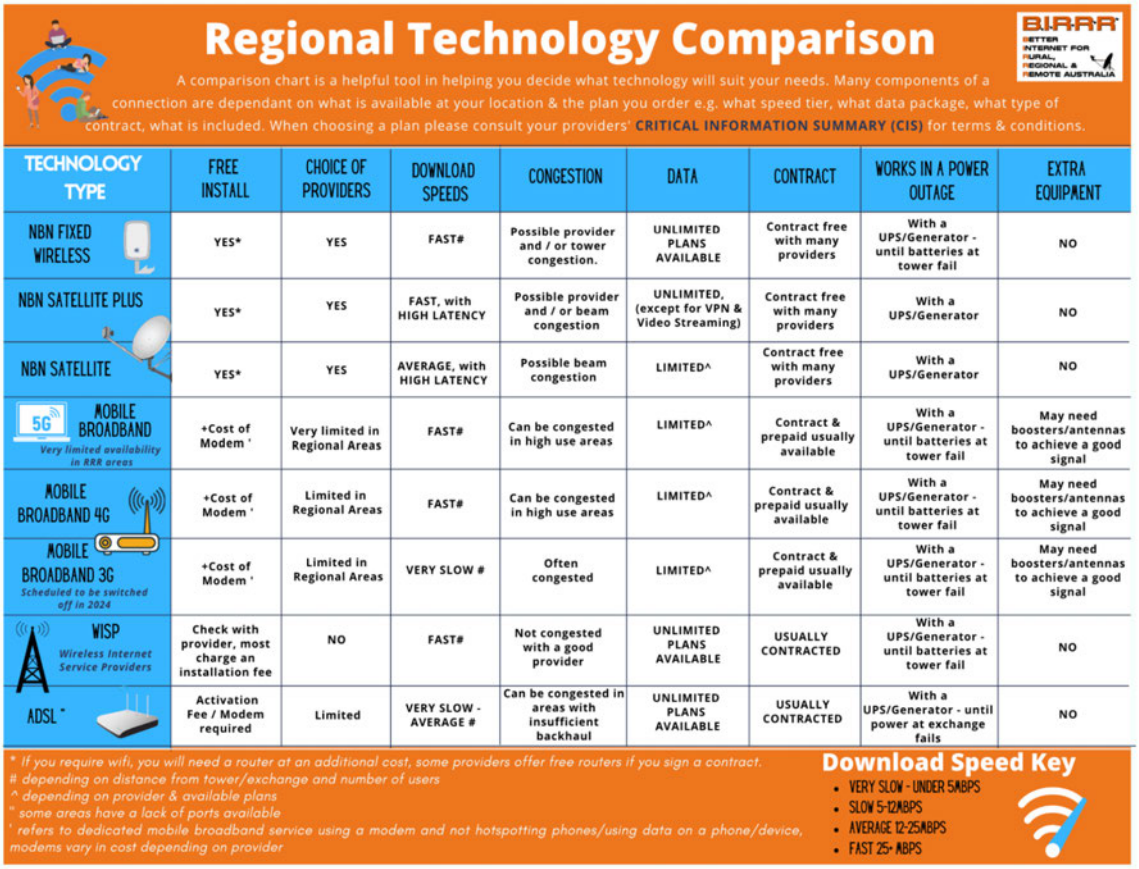
Connectivity literacy was first termed by BIRRR Admin, Kristy Sparrow, who has extensive grassroots experience and knowledge in regional telecommunications. "*Connectivity literacy is all of the skills and knowledge needed by a consumer to get connected and stay connected, to both voice and broadband services*"[1]. It is separate from digital literacy as the skills required to navigate through a choice of regional providers and technologies, understand terminologies, plans and equipment are different skills than what are needed to physically use a broadband service.

Connectivity illiteracy issues have developed in RRR areas due to misinformation/ disinformation, a lack of support and education and poor consumer guarantees as regional Australia has moved from a monopoly provider with a limited choice of technologies and plans, to a patchwork quilt of connectivity, plans, speeds, providers, and technologies. Regional connectivity illiteracy is spawned by the vast differences between urban and regional connectivity solutions. BIRRR research demonstrates that connectivity illiteracy does not have any demographic barriers such as age, gender, location, or education level. Whilst BIRRR acknowledge that connectivity illiteracy exists on a smaller scale in metropolitan areas, for RRR areas connectivity improvements over the last few years have created many challenges surrounding education and upskilling of consumers, who previously had limited choice in terms of their connectivity. Regional technologies are poorly understood and anecdotally misrepresented, creating ongoing customer confusion. They are inherently less reliable, more expensive, and poorly supported. Connectivity illiteracy not only affects individuals and businesses, it also creates a barrier to businesses, local governments and community groups in navigating their way through grant opportunities such as the RCP.

[1] https://birrraus.com/submissionssurveys/birrr-submissions/

The Regional Patchwork Quilt of Technologies

Regional connectivity infrastructure has become like a 'patchwork quilt' of technologies. With 5G, 4G, 3G, nbn fixed line, nbn fixed wireless, nbn satellite, alternate fibre providers, ADSL, Wireless Independant Service Provider's (WISP's) and the newly emerging Low Earth Orbit Satellites (LEO's) all contributing to the patches on the quilt. Consumers lack the resources to compare and match their available technologies to their broadband and voice needs. BIRRR has previously created several resources to assist regional consumers. However, these require updating and enhancing and need to be shared and distributed throughout regional areas on a much wider scale to allow these communities to maximise the potential of Government funding.



Regional Technology Comparison

BIRRR BETTER INTERNET FOR RURAL, REGIONAL & REMOTE AUSTRALIA

A comparison chart is a helpful tool in helping you decide what technology will suit your needs. Many components of a connection are dependant on what is available at your location & the plan you order e.g. what speed tier, what data package, what type of contract, what is included. When choosing a plan please consult your providers' **CRITICAL INFORMATION SUMMARY (CIS)** for terms & conditions.

TECHNOLOGY TYPE	FREE INSTALL	CHOICE OF PROVIDERS	DOWNLOAD SPEEDS	CONGESTION	DATA	CONTRACT	WORKS IN A POWER OUTAGE	EXTRA EQUIPMENT
NBN FIXED WIRELESS	YES*	YES	FAST#	Possible provider and / or tower congestion.	UNLIMITED PLANS AVAILABLE	Contract free with many providers	With a UPS/Generator - until batteries at tower fail	NO
NBN SATELLITE PLUS	YES*	YES	FAST, with HIGH LATENCY	Possible provider and / or beam congestion	UNLIMITED, (except for VPN & Video Streaming)	Contract free with many providers	With a UPS/Generator	NO
NBN SATELLITE	YES*	YES	AVERAGE, with HIGH LATENCY	Possible beam congestion	LIMITED^	Contract free with many providers	With a UPS/Generator	NO
MOBILE BROADBAND *Very limited availability in RRR areas*	+Cost of Modem '	Very limited in Regional Areas	FAST#	Can be congested in high use areas	LIMITED^	Contract & prepaid usually available	With a UPS/Generator - until batteries at tower fail	May need boosters/antennas to achieve a good signal
MOBILE BROADBAND 4G	+Cost of Modem '	Limited in Regional Areas	FAST#	Can be congested in high use areas	LIMITED^	Contract & prepaid usually available	With a UPS/Generator - until batteries at tower fail	May need boosters/antennas to achieve a good signal
MOBILE BROADBAND 3G *Scheduled to be switched off in 2024*	+Cost of Modem '	Limited in Regional Areas	VERY SLOW #	Often congested	LIMITED^	Contract & prepaid usually available	With a UPS/Generator - until batteries at tower fail	May need boosters/antennas to achieve a good signal
WISP *Wireless Internet Service Providers*	Check with provider, most charge an installation fee	NO	FAST#	Not congested with a good provider	UNLIMITED PLANS AVAILABLE	USUALLY CONTRACTED	With a UPS/Generator - until batteries at tower fail	NO
ADSL "	Activation Fee / Modem required	Limited	VERY SLOW - AVERAGE #	Can be congested in areas with insufficient backhaul	UNLIMITED PLANS AVAILABLE	USUALLY CONTRACTED	With a UPS/Generator - until power at exchange fails	NO

** If you require wifi, you will need a router at an additional cost, some providers offer free routers if you sign a contract.*
 # depending on distance from tower/exchange and number of users
^ depending on provider & available plans
" some areas have a lack of ports available
' refers to dedicated mobile broadband service using a modem and not hotspotting phones/using data on a phone/device, modems vary in cost depending on provider

Download Speed Key
- VERY SLOW - UNDER 5MBPS
- SLOW 5-12MBPS
- AVERAGE 12-25MBPS
- FAST 25+ MBPS

Figure 2: BIRRR Infographic Regional Technology Comparison

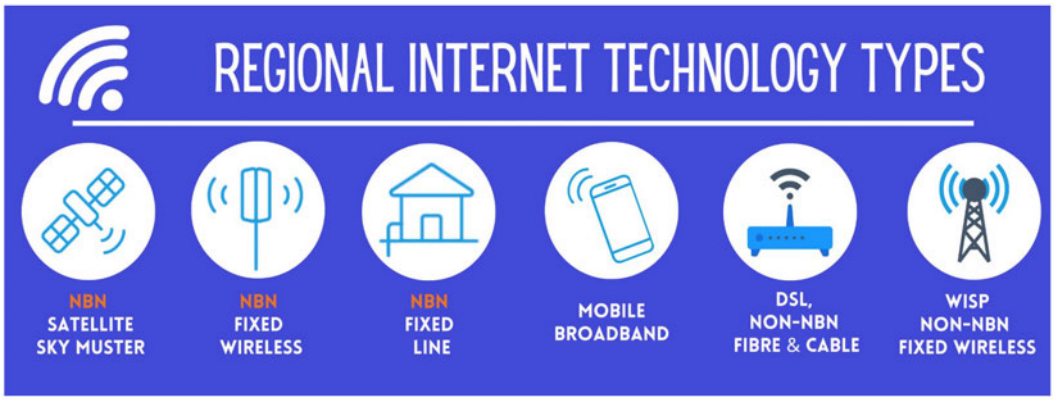


Figure 3: Regional Internet Technology Types

The patchwork quilt of connectivity options continues to grow and expand. However, the education of consumers and RRR stakeholders in how to access these technologies has attracted little Government or industry investment. Although the Regional Tech Hub (RTH) has recently been funded to provide help to regional users in getting connected it is not widely known about and doesn't solve the issues of independent advice on a larger scale for local government, business and community organisations.

Lack of independent advice and mapping

Without specific support and independent advice on navigating through the patchwork quilt, local governments and communities will find it difficult to be part of Government funding such as the RCP. Additionally, regions who are less resourced and smaller or more remote are even less likely to be able to access the tools and knowledge needed to help assist them to navigate through the maze of solutions and emerging technologies on offer, let alone understand the technologies that may already be available within the community.

BIRRR urges the department to investigate ways communities, businesses and local governments can be supported in developing plans and applications for place-based solutions for their regions. The team at BIRRR are often asked to help to give independent advice to RRR stakeholder groups and businesses. To date our team has provided this support on a volunteer basis, and as our advice and independence has become more widely known, our team have become overwhelmed with enquiries and requests for assistance. BIRRR can not continue to fill this void on a volunteer basis and believes that grant programs

such as RCP should have a mechanism in place that provides independent advice to these consumers. BIRRR acknowledges the department has established a noticeboard of potential projects which is a great tool in making connections between projects and the telecommunications providers. However, often communities are presented with several different proposals, with each telecommunication provider advocating for their solution and 'selling' themselves as the best technology for that specific community. Many RRR stakeholders lack the skills and knowledge on how to pick which proposal will best meet the needs of their specific community or business and often become even more confused after consulting with telecommunications companies. BIRRR has concerns that some communities may be at risk of being given the wrong advice for their specific needs.

BIRRR has developed a guide for regional communities with tips on how to best advocate for community telecommunications improvements and how to assess the best place-based solution for those communities looking to apply for RCP funding. The guide can be accessed in full here: https://birrraus.com/regional-connectivity-program/

The webpage aims to step a community, business or local government through the steps required to improve telecommunications infrastructure.

Step 1: Map what technologies are currently in the community

Discover what telecommunication options are in your area – visit **here** to see how you can map the current technologies

Step 2: Follow the Connectivity Roadmap

BIRRR encourages communities to assess, research and identify a roadmap of connectivity.

Figure 4: Connectivity Roadmap

Step 3: Decide on a technology for the RCP project

Factors such as affordability, future-proofing, choice of provider, terrain etc can all impact the decision on which technology and which telco a community will use for an RCP grant application. BIRRR has developed a handy independent technology comparison to assist communities.

Step 4: Gather support letters and Case Studies

Sample case studies and support letters can be downloaded here:
https://birrraus.files.wordpress.com/2021/07/birrr-rda-rcp-presentation-3.pdf

Technology Summary	Mobile Broadband	nbn Fixed Wireless	nbn Fixed Line	Alternative Wireless Internet Service Provider (WISP)
Choice of Provider	• Limited to three main carriers + re-sellers (generally resellers don't have access to full wholesale networks)	• Large range of providers offer plans on the network	• Large range of providers offer plans on the network	• Usually only one provider
Affordability	• Limited in data, higher data amounts can be limited to certain areas (Optus) • Plan costs similar to nbn fixed wireless/fibre. • Often have lock in contracts for plans. • Equipment costs vary.	• Most providers offer unlimited data plans for metro comparable prices. • Free install and good providers offer no lock in contract.	• Most providers offer unlimited data plans for metro comparable prices. • Free install (except for new developments)and good providers offer no lock in contracts.	• Dependant on each specific company, for higher speeds and data plan costs can be in excess of $200/month. • Most are contract based plans, which are often long, with varying equipment charges.
Can meet future growth / demand	• Can suffer from congestion, especially if high tourist area or transient population (e.g backpackers). • Can cover a wider area/more residences.	• Can suffer from RSP congestion. • May not cope with future growth e.g. large business, mining, town growth. • Can cover a wider area/more residences.	• Future-proof connectivity for the township. • Limited to town area (not financially viable to extend to outlying properties).	• Can suffer from RSP congestion. • May not cope with future growth e.g. large business, mining, town growth. • Can cover a wider area/more residences. • Locked into one provider.
Regional Connectivity Program	• Upgrading backhaul capacity • Coverage along major transport routes & public interest premises such as schools, health centres & tourism hotspots • Indigenous communities • Areas with high transient population or closely settled rural properties	• Technology flip from nbn Satellite to nbn Fixed wireless for a township, or fringes of a fibre based town or between towns when rural properties are closely settled.	• Technology flip from nbn Satellite or nbn Fixed Wireless - to nbn FTTP for a township	• For smaller towns mapped for nbn Satellite or fringes of a fibre based town or between towns when rural properties are closely settled. BIRRR BETTER INTERNET FOR RURAL, REGIONAL & REMOTE AUSTRALIA

Figure 5: BIRRR Technology Summary

Although the above resources are useful BIRRR was unable to access all of the information needed to ensure the resource could be used in a wide variety of regional communities. BIRRR encourages the department to develop resources and information that can be used to assist regional communities in not only accessing but comparing and deciding on best fit technologies.

BIRRR has also noted that often regional digital plans have been developed by organisations and businesses who have little understanding of the intricacies of regional technologies and the current and future needs of regional communities. These plans often add to the cost of applying to programs such as RCP, and make it even more difficult for those regions who are under-resourced to develop such plans. There is no existing map or wizard of RRR connectivity infrastructure and technologies, nor a comparison tool that explains each technology and its benefits or limitations. This makes it inherently difficult for local governments, businesses and communities to understand the details of each technology and what is best placed to deliver the best connectivity solution for their specific community, region or business. We often hear cases where a community 'gives up' or doesn't even try as the connectivity problem is seen as too complex or too hard to fix.

A map of regional backhaul availability Australia wide would greatly assist infrastructure providers, enabling them to easily access available backhaul and thus determine if improved communications infrastructure can be provided to regional communities. The department may be able to find instances where this has already occurred for example the WA Digital Infrastructure Atlas[2]. The Atlas illustrates all key telecommunications infrastructure such as the telephone exchanges, dark fibres and radio-communication sites around Western Australia. Some regional councils have also undertaken digital and communication audits which could be used as a starting point for communities and understanding their needs and current limitations. As an example, the Central Highlands Regional Council Queensland Digital and Communication Audit[3] and the Gippsland Regional Digital Plan[4].

There is also a need for a map of independent WISP's for regional areas, to highlight areas already served and gaps in services. We encourage the department to work with established WISP's to ensure the criteria of the RCP enables them to access funding. BIRRR has an nbn alternative fixed wireless/ independent WISP provider map, however this is not comprehensive and relies on the WISP's to keep their services updated with BIRRR or the RTH, additionally not all WISP's are aware of BIRRR / the RTH.

Assisting smaller 'last mile' providers and communities in accessing the information needed to improve existing telecommunications infrastructure will ensure they can fully maximise and participate in programs such as the RCP.

[2] https://www.agric.wa.gov.au/digitalinfrastructureatlas
[3] https://chdc.com.au/miningenergy/digital-and-communications-audit
[4]https://www.rdv.vic.gov.au/__data/assets/pdf_file/0010/1872946/Gippsland-Digital-Plan-Final-25-September-web.pdf

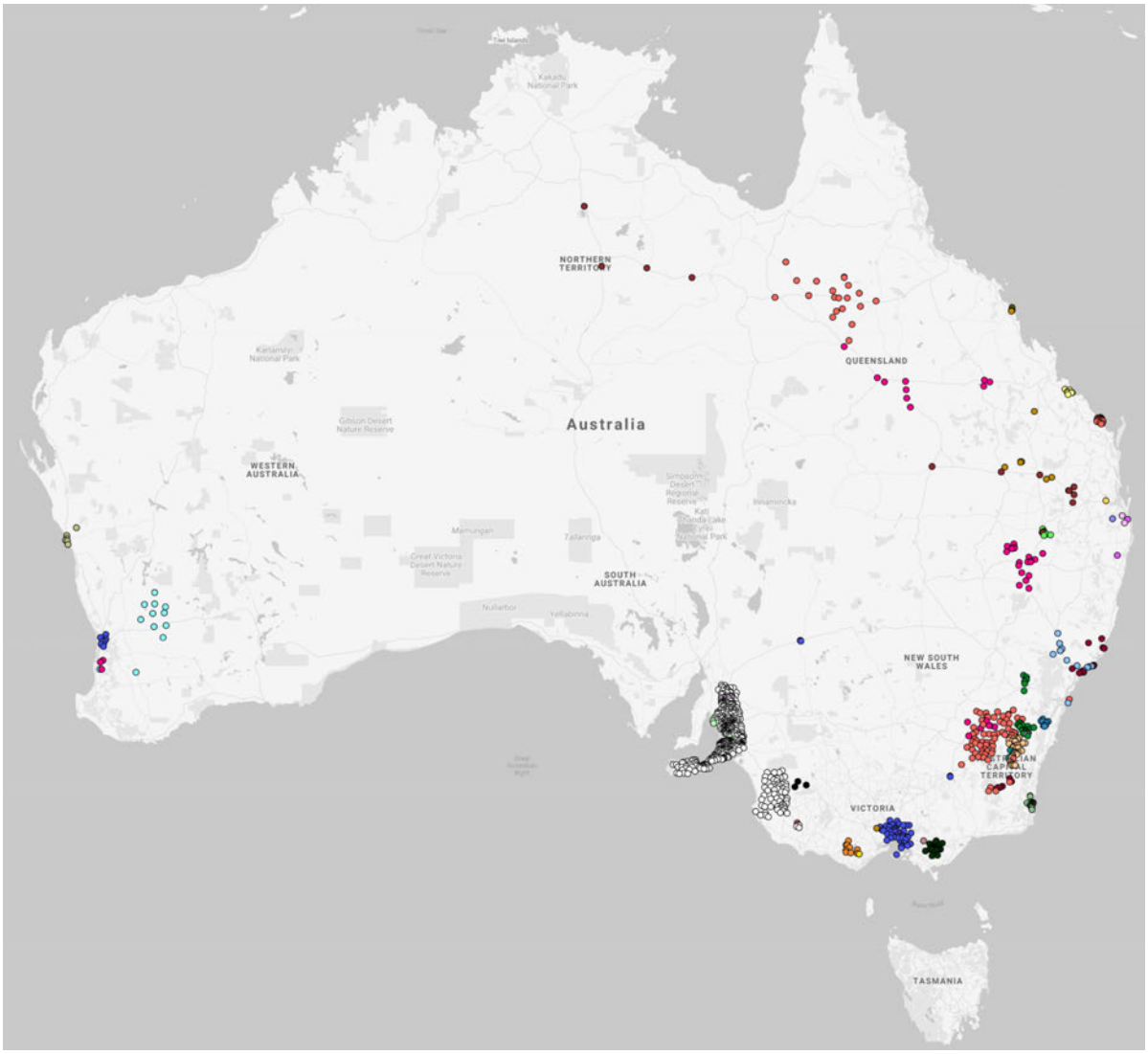


Figure 6: BIRRR Map of WISP's

Regional Connectivity Program Criteria

BIRRR acknowledges that RCP Round 2 will prioritise projects outside the nbn fixed line footprint. Across Australia there are a significant number of regional towns that are mapped for nbn Sky Muster that are currently using legacy ADSL technology. Many of these residents are unclear as to the future of these services, with no upgrade to the technology planned for the future that would ensure comparable or enhanced broadband services. Additionally, Telstra was recently quoted as stating, "whilst Telstra has not yet determined an end of life date for the ADSL platform, we are likely to do so within the next couple of years,"[5]. nbn has

[5] https://www.itnews.com.au/news/telstra-broaches-adsls-end-of-life-570516

underserved these communities, as nbn Sky Muster delivers less data at increased prices and with a much higher latency when compared to legacy ADSL services. BIRRR believes that RCP priorities should be given to:

- upgrading ADSL towns, mapped for nbn Satellite that have been underserved by the nbn roll out
- delivering place-based solutions to fringe areas of large regional towns, with dense populations, yet mapped for nbn satellite
- upgrading regional areas located in nbn satellite 'busy beams'
- upgrading areas where nbn Fixed Wireless is underperforming and at capacity, to Fibre to the Premise (FTTP)
- solving capacity restraints of regional backhaul by delivering new fibre pathways and upgrading those that are capacity constrained

Applicants who have not consulted extensively with local communities and leaders within those communities should not be prioritised for grant applications. BIRRR is aware of several grant applications (unfunded) in Round 1 that did not have community engagement or local government support; it would be disappointing if these projects received funding and we urge the department to ensure that community engagement is mandatory. It is imperative that RCP projects engage with communities to plan for future growth and development and increase the technology used to meet the current capacity needs and needs into the future. RRR stakeholders 'on the ground' in regional areas are well placed to identify local telecommunication priorities and needs.

The department should also ensure grant guidelines emphasise that small communities, businesses and local governments can participate in grant project applications without the need for large co-contributions. Often smaller local government associations (LGA's) do not have the funds available within the budget cycle of the grant timeframes, if at all. Smaller LGA's have less ratepayers, lower populations and large land areas to cover, they are usually less resourced and less likely to be able to afford co-contributions. Some of these communities support large numbers of tourists and transient workers etc but don't have the permanent population that stack up for grants. These LGA's should be made aware that RCP project co-contribution can come from the carrier or telecommunications provider or other industry and state collaboration. Furthermore, the department should emphasise in the

draft guidelines, that in many instances the telecommunications applicant will do the heavy lifting in the grant writing process.

The department should ensure that funded RCP projects guarantee affordability for the community; many smaller regional towns often have high numbers of residents with low income[6]. Grantees should ensure that individual installation costs for consumers are kept to a minimum and are affordable for all residents. Once a project is complete, LGA's and community groups should also not be responsible for ongoing maintenance or repair costs to the funded infrastructure, however an audit should occur after a RCP project is delivered to ensure that the project's aims are achieved.

If the department elects to make the use of external advisors, these advisors should have extensive knowledge of regional communities and regional technologies used in RRR areas. The department should continue to ensure that smaller LGA's and community groups can access the RCP funding. Smaller projects should have less onerous application requirements

Regional Australians have a critical need to be able to access metro comparable voice and broadband services. These services should be:

- Adequate for current and existing needs, with capacity to expand as data usage and needs grow.
- Affordable - for all residents and businesses of a community and for LGA's, businesses and community groups participating in the grants.
- Accessible - not require expensive set up or long lock in contracts, noting that regional consumers need at least two seperate communications services, as no one technology is 100% reliable

Future-proofing connectivity in RRR areas by adopting and funding solutions that plan for future growth and investment in our regions will ensure that they are not disadvantaged due to their population and postcode.

[redacted]

[6] https://profile.id.com.au/australia/household-income?WebID=245