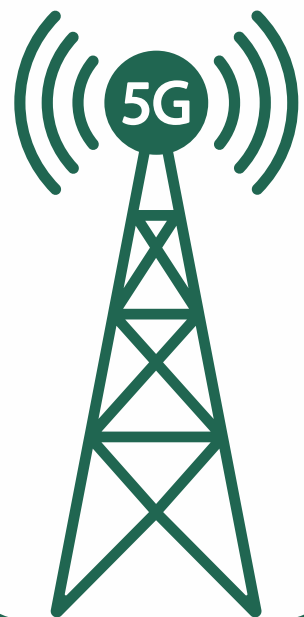
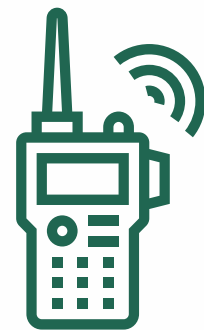
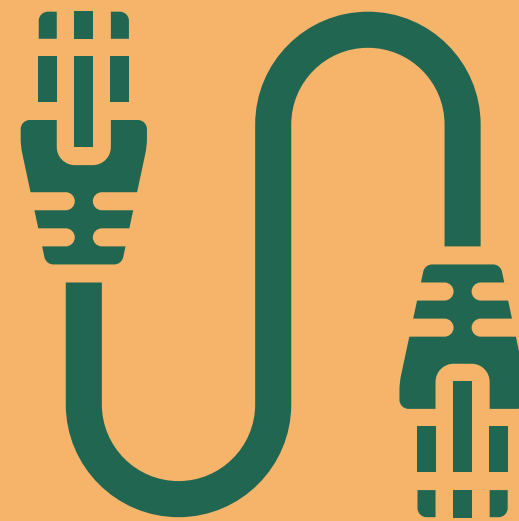


# Connectivity



# Literacy



Moving beyond  
efficiency,  
addressing the  
people problem

**BIRRR**  
BETTER  
INTERNET FOR  
RURAL,  
REGIONAL &  
REMOTE AUSTRALIA



# WHO ARE BIRRR ?

- BIRRR is a technology agnostic, apolitical and independent **volunteer** support, information, advisory & advocacy group for regional telecommunications.
- Started as a Facebook Group in **2014** by myself & Kylie Stretton.
- We now have over **15,000** members and have built a community where members are engaged, invested and volunteer time to assist in our advocacy work.
- We are **the voice** for rural, regional and remote telecommunications consumers.

**BIRRR**  
**BETTER  
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REMOTE AUSTRALIA**



# How can the telecommunications industry be more efficient?

BY ADDRESSING THE BARRIERS TO CONNECTIVITY LITERACY...



# What is Connectivity Literacy?

All the knowledge a  
consumer  
needs to know to get  
connected and stay  
connected.

## Connectivity Literacy

- you don't know what you don't know -  
(and there's no map or guide)

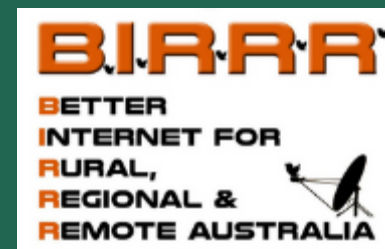




# Connectivity Literacy

- How to pick a **technology**
- How to pick a **provider**
- How to pick a **plan**
- Finding a connection to suit your
- needs & budget
- Choosing & installing **equipment**
- Troubleshooting connection issues
- Staying connected in an emergency
- Where to go to get help

## Regional Internet Technology Types



nbn  
FIXED  
LINE



nbn  
FIXED  
WIRELESS



nbn  
SATELLITE  
Sky  
Muster



WISP  
non-nbn  
FIXED  
WIRELESS



Starlink  
SATELLITE



ADSL,  
non-nbn  
FIBRE &  
CABLE



MOBILE  
BROADBAND

# Connectivity Literacy vs Digital Literacy



- Knowledge needed to get connected & stay connected.
- No demographic barriers, people of all ages, genders, cultural backgrounds & education levels can lack connectivity literacy skills.
- Widespread barrier affecting consumers, businesses, communities, industry etc

**CONNECTIVITY LITERACY**

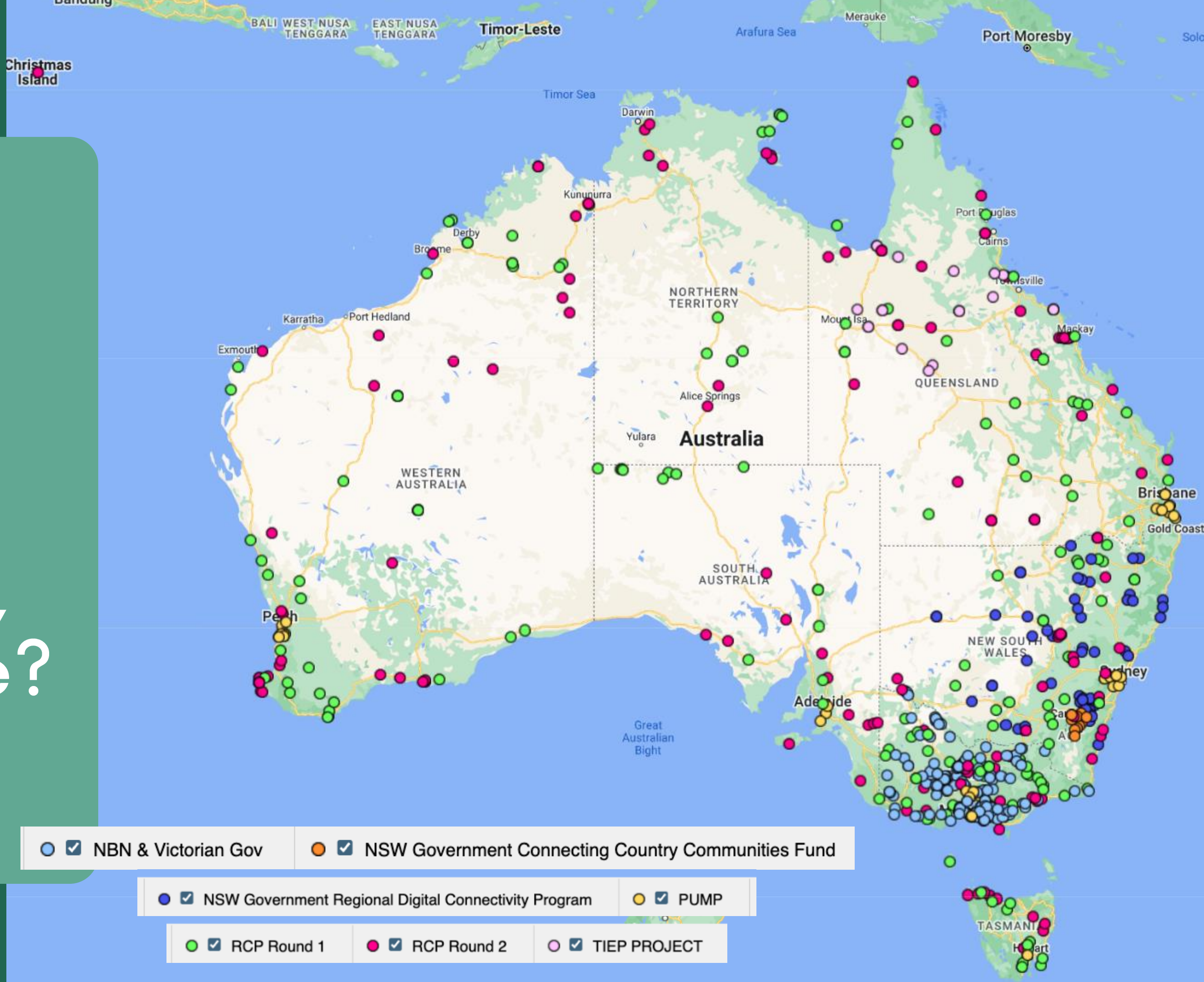


- Skills needed to use your connection.
- Well researched & studied e.g. ADII
- Clear measurable barriers e.g. cultural, low income, age demographics

**DIGITAL LITERACY**

Why  
Connectivity  
Literacy  
is a barrier.

If we build it,  
will they come?



**1**

# The bush broadband is **bad** narrative,

My wife waits until she takes the kids to the pool so she can use the Wi-Fi in town to pay the wages and do the banking

A sensor could save time, but dreadful mobile phone coverage makes that impossible.

The rural location comes with some disadvantages, namely, no NBN.

Oncologist to bush patient: no we can't do telehealth your internet is bad in the bush

Slow internet forces ...family to homeschool from the paddock

Forced to drive up a hill & set up an office on the side of the road as a last resort just to get a phone or internet connection

Landlines are being phased out.

With the family farm in an internet black spot, technology has been a major barrier to home schooling

You can't video conference or netflix over nbn satellite.



## needs to change...



## Australian Made



Locally developed, manufactured, supplied, and supported.  
Fast reliable Rural Internet & Mobile Phone communications  
for home or for vehicle.

Forget NBN Satellite - it is already too crowded and slow and unreliable

Forget NBN Fixed Wireless - it is limited to within 10km of the nearest tower

Forget Cell boosters & repeaters - they are old tech & have limited success

Forget Telstra Go - it works a little bit for phone reception if you are lucky

Forget ADSL2 - Telstra is abandoning copper lines as fast as they can

Forget pansy little Netgear Nighthawks & Telstra's other portable rubbish



# Misinformation & Disinformation

Lack of independent advice

Lack of RRR tech advice

Industry is profit not result driven

Myths & Furphies

### HOW DOES PEGASUS INTERNET DIFFER TO NBN IN OUR AREA?

NBN currently offer satellite services in our area which are very slow, have limited downloads and are expensive. Like Pegasus Internet, Fixed Wireless technology is also used by the NBN, they just never made it to Dingo, Bluff and Duaringa. Luckily we now have a Fixed Wireless solution that is faster than NBN and less expensive.

Officeworks  
Find products, brands, categories and more

### SpaceX Starlink High-Speed/Low Latency Internet Standard Kit

Engineered by SpaceX, Starlink is designed to deliver high-speed, low-latency internet to the most rural and remote locations around the world. Starlink enables activities that historically have not been possible with satellite internet, including streaming, online gaming, video calls and more. Your Starlink Kit is designed for self-install and arrives with everything you need to get online within minutes.



# Terminology

modem  
internet CVC  
congestion  
adsl fttb ntd wisp data connectivity  
antenna  
dish yagi broadband  
cable router  
PPPOE satellite port cel-fi  
fttn packet loss  
repeater tower mobile broadband booster  
fttc isdn leo frequency nbn latency  
isp landline sky muster speed trace route rsp  
hfc fibre voip ping speed wi-fi backhaul ngwl  
geo ethernet



# 4

# Lack of Support

- Poor support from providers
- Providers that are difficult to contact or have long wait times
- Offshore call centres
- Providers who lack understanding of regional connectivity
- Past negative experience with providers.
- Frustrations at not being able to get faults resolved
- TIO - lengthy waits, often credit applied but faults not fixed.





# Lack of Transparent & easy to understand Information & Equipment



- Poor coverage maps
- No independent performance data
- Addressing issues
- RSP outage pages
- Complex equipment e.g. routers that aren't plug & play
- Too many variables
- Consumers not aware of the need for redundancy
- Lack of engagement from telcos with consumers, communities & LGA's regarding connectivity

*You don't know what you don't know...*

# 6

## Scammers & Snake Oil Salesmen

"there is something wrong with your internet, press 2 to have it repaired"



**WARNING**

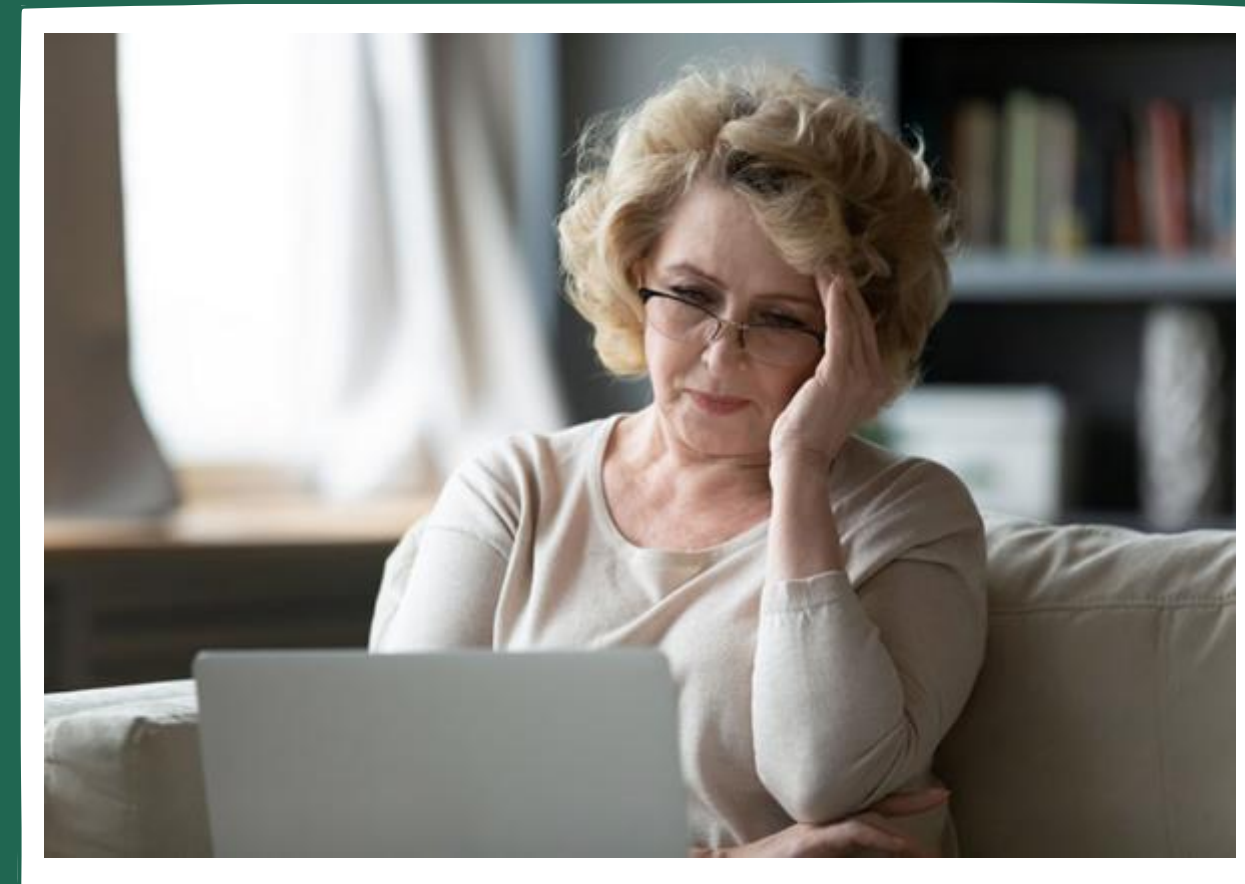
"switch to nbn now or you will lose your landline"



"Telstra is the mother internet provider in all of Australia"

**WARNING**

Illegal repeaters, often with realistic branding





# HOW DO WE SOLVE THE CONNECTIVITY LITERACY PROBLEM

**WE ALL HAVE A ROLE TO PLAY...**

**Ensure Gov.  
funded  
programs have  
clear  
consumer driven  
outcomes**

**Ensure  
minimum  
standards &  
guarantees are  
adhered to  
by all telcos**



# How can regulators help solve connectivity illiteracy?

**Monitor & report on all technologies in all areas**

**Develop a common set of metrics for telcos to produce coverage information**

**Escalating fines when consumers problems are not fixed**

**Help stop misinformation & disinformation**

# Help educate consumers. Engage with consumers & advocacy groups.



**ENGAGE**



**EDUCATE**



**INFORM**



