



Australian Government

**Department of Infrastructure, Transport,
Regional Development and Communications**

Alternative Voice Services Trials—Summary Report to 31 December 2021

31 March 2022

Introduction

The Alternative Voice Services Trials (AVST) program aims to identify different ways to deliver voice services in locations across rural and remote Australia, test them and raise awareness of them. The Trials also provide an opportunity to help providers to refine their products and processes.

The Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) administers the program. A Stakeholder Reference Group (SRG) has been appointed to help keep the Government informed of community views, provide a sounding board for ideas and help share information about progress. The members were nominated by the Regional Rural and Remote Communications Coalition. The SRG members are Kathy Rankin (NSW Farmers and the National Farmers' Federation), Kristy Sparrow (Better Internet for Rural, Regional and Remote Australia), Jo Stewart-Rattray (National Rural Women's Coalition) and Una Lawrence (Australian Communications Consumer Action Network).

Six grants have been made to Concerotel, NBN Co, Optus, Pivotel, Telstra and Zetifi. Grantees are responsible for promoting their trials, recruiting participants, providing equipment and services, and providing information and data on trial performance. As noted below, Concerotel and NBN Co deliver services via downstream retail service providers.

Customers participating in the Trials are known as triallists. Most have only one service, but in a few cases they may have more than one trial service at their properties. Customers generally retain their existing voice services as a safety net, while having the benefit of the trial service.

The Trials are focussed on those parts of Australia that are outside NBN Co's fixed line footprint, where customers typically depend on the Telstra fixed line network for their voice services.

Grantees provide monthly performance reports on trial services. Lonergan Research (Lonergan), an independent research company, also surveys triallists each month by phone for the Department. Surveys collect information from triallists on the quality of their voice services, including any issues with services during the month and whether they are rectified, as well as triallists' overall rating of the service.

The Department undertook to report on the Trials. This report summarises key results from the Trials to 31 December 2021. The report gives an overview of the grantees, their solutions, the number of trial services being provided, results reported by grantees, independent survey results and initial observations.

At 30 September 2021 there were 451 trial services; and at 31 December 2021 the number of trial services was 540. While there was an increase in the number of trial services, there were some withdrawals from the Trials for a range of reasons as discussed below.

Overview of AVST

At the end of the recruitment period, grantees had the trial services as shown in Table 1.

Table 1: Recruitment targets and services for AVST at 31 December 2021

Service recruitment targets	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi	Total
Service recruitment targets	200	260	15	60	295	50	880
Trial services at 31/12/21	138	185	15	51	102	49	540

The trial services are spread across Australia, although trials operated by Concerotel, Optus and Zetifi are more localised. The map at [Attachment A](#) shows the distribution of voice services across Australia. About a quarter of triallists are on the Cocos (Keeling) Islands (CKI) and Norfolk Island (NI) and there is one triallist on Lord Howe Island. In the case of Concerotel, Optus and Pivotel, there are some instances where they are trialling multiple services at one location (e.g. multiple users at one locality).

What voice services did triallists have before the Trials?

Most existing voice services in rural and remote Australia are delivered using Telstra's copper network, although a number are delivered using wireless platforms including high-capacity radio concentrator (HCRC), 3G wireless local loop or USO satellite technology. This is reflected under the AVST. The majority of triallists' existing services are delivered over copper, while approximately 40 have HCRC, wireless local loop or satellite and approximately 20 do not currently have a landline. A handful of triallists have been using NBN Co Sky Muster for voice.

Concerotel's triallists are a somewhat special case. People on NI have fixed and mobile voice services for calls, as well as broadband on the island and NBN Co's Sky Muster satellite service. People on the CKI have access to copper services for calls, 4G data services that can be used for voice over Internet (VoIP), as well as access to broadband via NBN Co Sky Muster.

Trial services

The majority of service solutions employ what is commonly known in the community as VoIP. This involves the digitalisation of the voices of the parties to the call, and then transmission of this as data over a digital data link between the calling parties. Some solutions (like those of Concerotel, Pivotel and, in some cases, Zetifi) rely on downloadable VoIP apps (softphones). VoIP technology is now well established globally, including in Australia, where it is used to provide voice services over NBN Co's fixed line network. However, while VoIP is an established technology generally, this is not necessarily the case in the Trial areas outside NBN Co's fixed line footprint where Telstra's analogue telephone services remain the dominant fixed line technology and VoIP is being provided in new ways and/or by new providers.

Concerotel has 138 trial services on CKI and NI, with retail services provided on CKI by Indian Ocean Territories Telecommunications and on NI by Norfolk Island Data Services. Concerotel uses applications with codecs designed to improve the quality of voice services when the services depend on satellite transmission for backhaul. The applications are typically loaded onto triallists' mobile phones or laptops which connect via Wi-Fi with the triallist's broadband service to provide voice services.

NBN Co recruited 195 triallists, but had ten withdrawals, meaning it had 185 services in operation at the end of 2021. It is using three different technology platforms with services being offered by four different retail providers – Australian Private Networks (APN), Field Solutions Group, MultiWave and Telstra. Twelve triallists are trialling the provision of voice over a new low band fixed wireless platform at Robinvale in Victoria (VIC) and Coffin Bay in South Australia (SA). Thirty-three are trialling the provision of voice over *NBN Co*'s standard fixed wireless service in New South Wales (NSW), the Northern Territory (NT), Queensland (QLD), SA, VIC, Tasmania (TAS) and Western Australia (WA). There are 140 trialling the provision of voice over *NBN Co*'s Sky Muster Plus satellite services in all states and territories except the Australian Capital Territory (ACT). *NBN Co* is also trialling a universal power supply (UPS) battery back-up and a SpeedMate device that monitors the quality and performance of each triallist's service.

Optus is operating 15 trial services in NSW, QLD and SA to test alternative voice options using three different solutions which all use satellite backhaul. Five trial services are direct-to-home satellite solutions. Five services are connected to a 4G mobile small cell and a further five are connected to local area Wi-Fi, both of which have satellite backhaul. The last two solutions provide a wireless signal beyond the homestead so that triallists can use their mobiles at a number of different locations on the property.

Pivotal recruited 60 trial services at 26 locations in NSW, QLD, SA and on NI. Some triallists subsequently withdrew, leaving it with 51. Triallists receive a fixed voice service, and may also receive up to three mobile services. In relation to the mobile services, triallists download a smartphone application that allows them to exchange voice calls and SMS over any data connection (both while at home and away). Triallists are provided with battery back-up. Triallists can use mobile connectivity to make calls over the app on their phone when away from their premises.

Telstra recruited 105 trial services (three have since withdrawn, leaving 102). It is trialling two solutions: one using fixed wireless using its 4G mobile network to deliver services to 97 triallists and the other is providing voice over a direct-to-home satellite service to five triallists. Its product offerings were designed for residential rather than small business customers. On the 4G network, *Telstra* is providing all triallists with battery back-up and a fixed handset. All 4G fixed wireless triallists are using modems with an integrated antenna, and two thirds have had an additional external antenna installed at their premises to provide effective connectivity. The 4G triallists are located in regional and remote locations in NSW, QLD, TAS, VIC and WA. The satellite service is delivered over an Intelsat satellite sourced by *Telstra* and is trialling alternative equipment with battery backup at the customer's premises. These satellite triallists are located in rural areas of NSW, QLD and SA.

Zetifi recruited 50 triallists located in regional and rural areas in NSW and VIC. One withdrew in December because they moved house. *Zetifi* installs equipment, including an antenna, transmitter and battery back-up, at farms or other rural locations to extend Wi-Fi coverage. This supports Wi-Fi calling, with triallists using their existing mobile phones or a VoIP phone to make calls. The majority of triallists have an *Optus* or *Telstra* mobile phone, which provides the backhaul, but for a few other triallists backhaul is provided by *NBN Co*'s fixed wireless or Sky Muster satellite platforms. One triallist is using Starlink, a low earth orbit satellite (LEOsat) network for backhaul.

Overall, the Trials involve three different geostationary satellites belonging to *NBN Co*, *Optus* and *Intelsat*. It was hoped that new LEOsat systems like Starlink would feature in the Trials but no substantive proposal came forward from these operators. We understand their systems were not ready at the time the Government requested proposals for the Trials.

Results reported by grantees

The following section provides key results reported by grantees for the Trials for the period of 1 July to 31 December 2021.

Median connection times

Table 2 shows the median time for connections of the services, noting there is some variation of the period measured due to supply approaches (e.g. the extent to which installation depended on the grantee or retailer and the customer).

Table 2: Median connection time

Month	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
July-Sept	15 minutes	25 days	34 days	18 days	9 days	32 days

Concerotel, Optus, Pivotel, Telstra and Zetifi had completed connection of customers by September. NBN Co continued connecting customers into the following quarter. Generally, the timeframes reflect the time between the order of a service and the provision of the equipment for its supply, noting most solutions involve final service activation by the customer.

Concerotel's short timeframe reflects its connection process which involves the download of an app with in-store support. In the case of Telstra, connections were normally provided within timeframes agreed with the customer. Telstra's data indicates the additional time involved where an agreed timeframe could not be met and was rescheduled.

We are seeking to better standardise the median connection time results for the final report.

Service uptime (availability)

Table 3 provides the uptime for the voice services (the percentage of time for which the voice service was reported as being available). Service uptime calculations for satellite-based trials incorporate downtime due to satellite outages, such as outages caused by bad weather.

Table 3: Service Uptime (%)

Month	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
July	99 (NI) 89 (CKI)	95	100	100	100	99.46
August	100 (NI) 94 (CKI)	98.33	100	100	100	99.54
September	100 (NI) 97 (CKI)	98.64	100	99.91	100	99.85
October	97 (NI) CKI*	99.13	100	99.95	100	99.22
November	97 (NI) CKI*	98.94	100	99.31	100	99.94
December	97 (NI) CKI*	98.54	100	98.85	100	98.42

*Data was not available due to a system issue.

Call volumes

Table 4 provides call volumes across all services in the Trials, broken down by grantees.

Table 4: Total call volumes per month of the Trial across all trail services

Month	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
July	418	431	53	0	5,257	N/A
August	1,487	895	74	60	5,800	N/A
September	2,482	1,379	57	158	4,852	N/A
October	2,638	2,229	70	443	6,050	N/A
November	3,572	2,808	48	628	5,865	N/A
December	3,772	2,163	58	591	5,209	N/A

Call volumes include the total number of outgoing and incoming calls across all services, with the exception of Pivotel and MultiWave in the NBN Co trial, which only bills outgoing calls and therefore do not record incoming calls in their business systems. As the figures cover calls that were successfully connected and answered, they do not include calls that were made but not answered (for example, because the call recipient was away or busy). Zetifi cannot directly monitor call volumes as it does not originate or terminate calls. Optus's call volumes are low because it has only a small number of triallists (15), and because triallists also used over-the-top applications to make calls and send messages, which are not recorded by Optus's billing systems, and also continued to use their pre-existing mobile services. Optus's and Zetifi's triallists also regularly used their services to access the Internet.

Average call success rate

Table 5 provides average call success rates. This is the percentage of calls able to be delivered, regardless of whether they are answered by the party called.

Table 5: Average Call Success Rate (%)

Month	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
July	67 (CKI) 94 (NI)	94.76	100	Not available	99.33 (4G) 98.67 (Sat)	N/A
August	74 (CKI) 85 (NI)	99.76	100	75	99.37 (4G) 92.38 (Sat)	N/A
September	84 (CKI) 91 (NI)	99.86	100	97	99.17 (4G) 99.09 (Sat)	N/A
October	74 (CKI) 82 (NI)	93	100	91	99.31 (4G) 95.57 (Sat)	N/A
November	86 (CKI) 91 (NI)	95.43	100	98	99.28 (4G) 98.54 (Sat)	N/A
December	84 (CKI) 91 (NI)	94.76	100	99	99.41 (4G) 98.56 (Sat)	N/A

Concerotel's initial average call success rate results for July and August excluded calls that were connected but not answered. Going forward, its call success rate includes all connected calls, whether or not they are answered. During July and August, the call success rate for CKI and NI was low as triallists were changing their device settings, affecting inbound call routing.

Pivotel's call success rate during August included some cases of invalid dialled numbers (including triallists not dialling the area code). A system change, to append the area code to the dialled number where it was not provided, resulted in a higher success rate in September and later months.

Zetifi cannot record average call success rates because it does not originate or terminate calls.

Mean Opinion Score (MOS)

Table 6 gives the average Mean Opinion Score (MOS) reported for the trial services in the period. The MOS relates to the quality of the voice call as perceived by the parties and is a long established measure. Services are rated from 1 to 5 where 1 equals the lowest perceived quality (as perceived by the parties) and 5 equals the highest perceived quality. While originally based on ratings by callers, network-based call monitoring is now used.

Table 6: Mean Opinion Score (MOS)

Month	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
July	3.4 (NI) 3.7 (CKI)	3.88	4.4	3.7	4.1	4.1
August	3.2 (NI) 3.8 (CKI)	3.89	4.4	3.5	4.1	4.1
September	3.2 (NI) 3.7 (CKI)	3.85	4.4	3.67	4.1	4.1
October	3.4 (NI) 4 (CKI)	4.03	4.4	3.6	4.1	4.25
November	3.3 (NI) 4.2 (CKI)	3.94	4.4	3.6	4.1	4.25

As Zetifi provides a platform to extend its customers' access to their existing mobile services, it cannot monitor call quality via its network and it surveys its triallists. Lonergan also surveyed triallists on the call quality of their services, as discussed below.

Faults and repairs

Data is also collected on faults and repairs, including median repair times. Limited faults and repairs were reported by grantees in the two quarters. Issues identified included modem compatibility, service settings and UPS operation. One grantee had to address seven instances where SIM cards or equipment needed repair, in some cases because of installation problems or because of storm damage. All repairs were carried out on the date agreed between the grantee and the customer. The Department will be looking more closely at the definitions of fault and repair being applied by grantees to ensure events are being appropriately reported.

Results from independent Lonergan surveys

Summary statistical data from Lonergan's monthly survey of triallists is at [Attachment B](#).

While triallists are strongly encouraged to participate in the survey, participation is ultimately voluntary. Overall participation is lower than expected and varies between grantees and over time. Results are based on the cumulative responses of triallists over the six months from 1 July 2021 to 31 December 2021. As such, the results, while useful, should be seen as illustrative rather than definitive. In addition, by its nature the survey is qualitative and responses and results are necessarily subjective. The results are shared with grantees to help with product and process improvement.

Consumer expectations

When first surveyed, triallists were asked why they were participating in the trial to get some idea of their prior experiences and expectations. Triallists provided a range of reasons for joining a trial (Table B.1). The main reasons were to get a more reliable phone line and to get a better quality voice service. Triallists, particularly Zetifi and Telstra triallists, also stated that they joined trials to get better mobile reception at home.

Service quality and customer support

In most cases the majority of triallists by grantee rated their trial service as good or excellent – see Table B.2. The majority of triallists rated the quality of their trial service above that of their existing service – see Tables B.5 and B.6. The majority of triallists with an existing copper service also rated the quality of their trial service as good or excellent, relative to their existing service – see Table B.6.

Concerotel's triallists noted that their services could have some noise on the line, echo or latency, and that at times the connection would drop out during rainy weather.

Services provided over NBN Co's Sky Muster platform as part of the NBN Co trial were generally rated as fair or better, although there was some variation between retailers, which is being examined.

Optus's triallists reported few issues. They were generally positive about the quality of the service.

Telstra's triallists (on its 4G mobile network and satellite platforms) observed there were some minor quality issues on calls, including some pops or crackles or echoes, but generally rated the service as good to excellent. In the July-September quarter, there were some problems with message bank cutting in too quickly and ringtones not being loud enough, and both Telstra and triallists reported that Telstra needed to provide advice on how to resolve these issues. Telstra's satellite triallists noted some latency issues, but also generally rated the service as good.

Zetifi's triallists rated the service as fair to excellent. A number of Zetifi triallists raised Internet congestion issues, noting that lockdowns in NSW and Victoria were in place during some of the period and this generally increased data usage. In response, Zetifi worked on service prioritisation to improve outcomes for its customers. There were also a few issues with services not working because repairs were needed, or because of the underlying mobile connection.

Observations to date

The following general observations are made about experience with the Trials to date.

Recruitment

Interest in the Trials has not proven as strong as expected given reported concerns with existing landline services, with a number of trial places unfilled. It may be that products offered by grantees did not meet the needs of all potential triallists – e.g. residential products would not suit or be available to businesses, small or large, or some people may already have been using VoIP over Sky Muster.

In many areas, recruitment of triallists was hampered by COVID-19 and lockdowns. These precluded grantees from holding public meetings to provide information about their trials, or from sending staff into some areas. Generally, the most successful method for recruiting triallists was through information disseminated by community or consumer groups, or directly through phone calls or meetings. However, some grantees also found that when they called potential triallists to provide information, some triallists thought they were receiving scam calls. The Department sought to counter this by offering and providing letters attesting to the legitimacy of the Trials.

The Department established a database on which people could register their interest in participating in the Trials. This was used heavily by some grantees and proved useful, as did action taken by members of the AVST SRG to raise awareness amongst regional communities.

Despite the relatively small size of the Trials, they have also been affected by day-to-day events like deaths and people moving house, leading to a small number of withdrawals following recruitment.

Connection and activation of services

The timeframes for delivering equipment to more remote locations varied, with deliveries sometimes taking three weeks or even longer. At times, there were issues with equipment being delayed due to courier or shipping issues, especially to more remote locations, including NI. These issues may reflect the fact that grantees are conducting trials, rather than delivering mass market products on a business-as-usual basis. These delivery issues would need to be factored in when planning service activations in a business-as-usual context.

Some grantees found that triallists would delay connecting equipment, for example, due to farming priorities, or would prefer to wait until friends or family members visited to activate their services. This may reflect set-up being too complicated, and/or, as triallists retained their existing mobile and landline services they did not have a pressing need to make the trial service operational.

Where consumers are installing their equipment themselves, it is important that instructions are clear and concise and are sent with the equipment, so that consumers can set up the equipment easily. Equipment should be clearly labelled, particularly when multiple items of equipment are required.

In many rural or remote areas, there may be only a few local technicians able to install antennas or equipment, and many may be unfamiliar with the job. Where a grantee relied on local technicians, in a limited number of instances, the grantee had to return to some sites to correct installation issues. Later technicians were required to provide photos and videos of the installation by mobile, so that any errors could be identified and corrected remotely before the technician left the site.

Service performance

Overall, grantees reported that most triallists were using their voice services. The voice services were rated as 'excellent' or 'good' by the majority of triallists surveyed. Some minor issues were identified, such as the volume of the ring tone or the number of rings before a call went to voicemail. These have been addressed by grantees. Other issues, as noted above, involved installation problems or storm damage, which required rectification.

Under NBN Co's trials, Telstra's triallists experienced some issues with their Telstra equipment requiring it to be replaced. APN has experienced some software issues which have been resolved.

Generally, services have been working well as measured by network uptime and call success rates. Most MOS results for satellite are reasonably high, except where triallists are using over-the-top apps they have downloaded and that are used in conjunction with Sky Muster backhaul. In relation to these trials, some triallists experienced some instances of packet loss which resulted in 'choppy' calls with incomplete sentences. This may be attributable to the effect of heavy rain on satellite transmission. This is being examined further by the Department.

Trial services to Norfolk Island and other locations were affected by a NBN satellite outage during December 2021, which extended into January 2022.

Customer service

Lonergan surveyed triallists on their customer service experience and while the majority of triallists did not report issues, there were 91 reported issues with customer support over the six month period. The most common issues reported were insufficient customer support, issues taking too long to fix, and triallists not being able to contact a customer support person. The Department provides the survey results to grantees and checks that grantees are following up the issues raised.

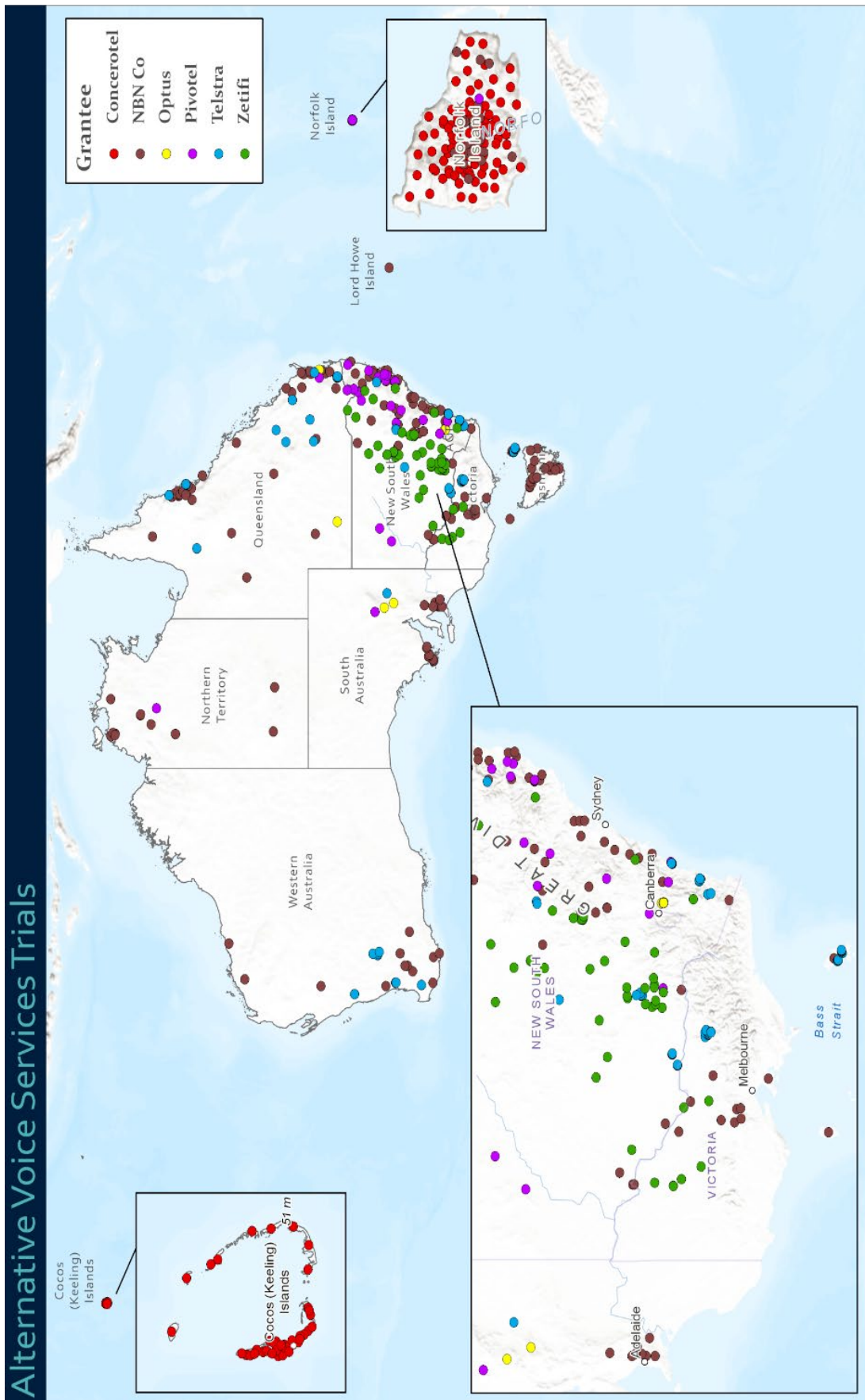
The SRG noted that poor customer support is a recurrent consumer concern with existing services. As such, it would have expected more positive support results during the Trials than those reported in Table B.4. It would expect any ongoing business-as-usual products to provide much better support than the results to date indicate.

Next steps

As the Trials continue, monthly performance data for January to 31 March 2022 will be collected and analysed with the next AVST progress report to be published in April–May 2022. A final progress report is proposed for July-August.

The Trials end on 30 June. At their conclusion, all data and grantees' final reports will be analysed to inform an evaluation report. The evaluation report will assess the services and the lessons from the Trials.

Attachment A



Attachment B

Results from independent surveys of triallists by Loneragan

The survey responses are for the six months across participating triallists from 1 July to 31 December 2021. Participation in the survey, while strongly encouraged, is ultimately voluntary. Around 900 surveys with triallists were completed over the six months.

The data presented here generally reflect the number of times a matter was reported to Loneragan, noting Loneragan seeks to contact all triallists each month and makes contact with a high proportion of them. As such, the number of reports should be considered against the total responses over the six months, as in many cases the actual number of issues raised is relatively low in comparison to the total number of trial services. An issue may also be raised in consecutive months by one person, either because it has not been resolved or because the person is reflecting their overall experience to date.

Table B.1: Top 3 reasons to be involved with the trial services by provider (1 July to 31 December 2021)

Top 3 reasons to be involved	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
1	To get a more reliable phone line (n=10)	To get a more reliable phone line (n=22)	No reason provided (n=2)	To get a more reliable phone line (n=12)		
2	To get a better quality phone line (n=9)	To get a better quality phone line (n=17)		To get a better quality phone line (n=9)		
3	To get better mobile coverage/reception/signal (n=5)	To get better mobile coverage/reception/signal (n=8)		To get better mobile coverage/reception/signal (n=6)		

Table B.2: Triallists' overall satisfaction with their trial service by provider (1 July to 31 December 2021)

Overall service rating	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
Excellent	19% (n=23)	19% (n=19)	20% (n=5)	28% (n=12)	28% (n=98)	44% (n=75)
Good	42% (n=52)	30% (n=31)	56% (n=14)	51% (n=22)	43% (n=152)	35% (n=60)
Total of excellent and good	61% (n=75)	49% (n=50)	76% (n=19)	79% (n=34)	71% (n=250)	79% (n=135)
Fair	28% (n=34)	25% (n=25)	16% (n=4)	12% (n=5)	21% (n=74)	15% (n=26)
Poor	10% (n=12)	14% (n=14)	8% (n=2)	9% (n=4)	6% (n=22)	4% (n=7)
Bad	2% (n=2)	13% (n=13)	0% (n=0)	0% (n=0)	2% (n=6)	2% (n=4)

Table B.3: Top 3 issues reported with the trial services by provider (1 July to 31 December 2021)

Top 3 issues	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi
1	Phone call quality issues (n=34)	Phone call quality issues (n=25)	Phone call quality issues (n=6)	Phone call quality issues (n=8)	Phone call quality issues (n=53)	Internet Issues (n=37)
2	Phone line/connection patchy (n=19)	Phone line/connection patchy (n=18)	Noise on the line (n=2)	Internet Issues (n=6)	101/message bank/missed calls (n=30)	Phone line/connection patchy (n=26)
3	Phone line/connection didn't work (n=14)	Phone line/connection didn't work (n=13)	Phone line/connection patchy (n=1)	Didn't work during power outage/weather (n=5)	Issues with ringtone (n=28)	Phone call dropped out (n=15)

Note: The issues are ranked according to how often they were raised by triallists over six months. In some cases, an issue was raised more than once by the same triallist in different months. Phone call quality issues are generally minor, such as some echo or noise on the line.

Table B.4: Triallists' reported issues with the provider support (1 July to 31 December 2021)

Triallists issues with support	Concerotel	NBN Co	Optus	Pivotel	Telstra	Zetifi	Total
It took too long to fix/Issue still not fixed.	(n=5)	(n=6)	(n=1)	(n=1)	(n=12)	(n=7)	(n=32)
They didn't contact me when they said they would/follow up.	(n=2)	(n=10)	(n=0)	(n=3)	(n=7)	(n=3)	(n=25)
Couldn't get through to them /had issues getting through to them.	(n=1)	(n=7)	(n=0)	(n=1)	(n=11)	(n=1)	(n=21)
There was no help/support/felt fobbed off/not taken seriously	(n=6)	(n=5)	(n=0)	(n=0)	(n=7)	(n=2)	(n=20)
There was no information/ I didn't know what was happening.	(n=2)	(n=1)	(n=0)	(n=2)	(n=7)	(n=0)	(n=12)
Instructions provided were difficult/confusing.	(n=0)	(n=2)	(n=1)	(n=0)	(n=4)	(n=0)	(n=7)
Other	(n=1)	(n=1)	(n=0)	(n=0)	(n=9)	(n=2)	(n=13)

Note: Some respondents raised more than one issue.

Table B.5: Overall satisfaction with trial service versus existing voice service (at 31 December 2021)

Satisfaction rating	Triallist satisfaction with...	Triallist satisfaction with...	Triallist satisfaction with...	Triallist satisfaction with...
	Previous landline	Previous landline	Previous landline	Overall service
	Copper Technology	Other technology	Total landline	AVST trial
Excellent	12% (n=13)	3% (n=1)	9% (n=14)	27% (n=121)
Good	39% (n=41)	37% (n=14)	36% (n=55)	41% (n=186)
Total of excellent and good	51% (n=54)	39% (n=15)	45% (n=69)	68% (n=307)
Fair	28% (n=30)	26% (n=10)	26% (n=40)	21% (n=93)
Poor	11% (n=12)	16% (n=6)	12% (n=18)	9% (n=40)
Bad	9% (n=10)	18% (n=7)	12% (n=17)	2% (n=11)

Table B.6: Overall satisfaction of triallists with copper services with the Trial service versus their existing copper service (1 July to 31 December 2021).

Satisfaction rating	Previous landline	Overall service
	Copper Technology	AVST trial
Excellent	12% (n=13)	27% (n=88)
Good	39% (n=41)	42% (n=136)
Total of excellent and good	51% (n=54)	70% (n=224)
Fair	28% (n=30)	20% (n=63)
Poor	11% (n=12)	8% (n=27)
Bad	9% (n=10)	2% (n=8)