

**Isolated Children's Parents' Association of western Australia Inc**



**Submission**

**to the**

**Regional Telecommunications Independent Review Committee**

**for the**

**Regional Telecommunications Review 2021**

**from the**

**State Council of the Isolated Children's Parents' Association of Western Australia Inc.**

**ICPA (WA)**

**September 2021**

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## **1. BACKGROUND**

The Isolated Children's Parents' Association of Western Australia, ICPA (WA), welcomes the opportunity to participate in the Regional Telecommunications Review 2021.

ICPA (WA) is a voluntary, not-for-profit parent body dedicated to ensuring all regional, rural and remote students have equity of access to a continuing and appropriate education. This encompasses the education of children from early childhood through to tertiary. The majority of member families (around 300) of ICPA (WA) reside in small communities in rural and often isolated areas of Australia, and all share a common goal of seeking access to an appropriate education for their children and the provision of services required in achieving this. Students whose family home is in rural and remote Australia and who are enrolled in Schools of Distance Education rely heavily on telecommunications to access daily lessons, via both telephone and internet. Our member families also attend small rural schools that are dependent on internet for schoolwork, homework, research, teacher assistance/mentoring, specific needs sessions as well as landlines for contact for teacher support, emergencies and general administration tasks of a school. There are quite a few rural small schools which are not in mobile coverage areas and struggle with receiving adequate internet service.

The rapid advancement of COVID-19, and the closure of schools, highlighted several short-comings throughout the communications industry and ICPA (WA) were contacted by a number of anxious parents concerned with how their children were going to continue accessing an education. Parents faced different challenges in accessing and facilitating online learning. There were issues relating to data usage, data plans and reliable and consistent connectivity. Even when families had data connectivity some children did not have the resources and skills to operate devices to access online learning. ICPA (WA) would like to thank the telco companies for their speedy response in increasing data allowance, implementing more cost-effective plans and providing children with learning resources.

COVID-19 show-cased that any child can be isolated from accessing education, not just children in regional, rural and remote areas of Australia.

The impact of the Wooroloo Bush Fires and Cyclone Seroja in Western Australia at the beginning of 2021 highlighted the vulnerabilities of our current communications system with both mobile and satellite services affected. Although it is acknowledged that these were catastrophic events, in looking to the future, it is important the sustainability of communications in adverse situations is considered.

## 2. RESPONSES TO QUESTIONS

### **Question 1: What telecommunications services are required in regional Australia to meet current and future needs? Are there any things regional communities and businesses need to do, but can't, on their existing services?**

Geographically isolated students (all regional, rural and remote students) need to have equity of access to telecommunication services which have the necessary capabilities with regards to speed, quality, reliability and cost to meet their educational needs. It is imperative that any service that offers high speed does not have a reduction in the quality of the services as this is essential for distance education and online learning. The quality of deliverance of educational programs have improved exponentially in recent times and telecommunication services need to be able to provide a seamless transmission when such programs are accessed. Video streaming in high definition or 4K, high quality live streaming, multicast transmission and YouTube applications are all methods that are being utilised by schools and universities. These applications need to be accessible without the interruption of buffering; buffering is frequently experienced by our members limiting or preventing student's access to their education. This capability needs to be available whether a student is studying via School of the Air, School of Isolated and Distance Education, online at home or in a regional or rural school. Band widths should not be a limitation on providing educational programs and services. High band width capabilities are required to access medical and health specialist support services for children, as well as extra-curricular tutorials and other extra-curricular programs such as music, drama or dance.

#### MOBILE VOICE

Despite the 3G network having a large network within Western Australia there are still areas that do not have mobile phone coverage or a reliable, consistent service. In areas where 3G has now been replaced by 4G members comment that the reliability of the voice service is more unstable and of poor quality compared to that of the 3G.

#### MOBILE DATA and BROADBAND

It is imperative that both mobile and broadband services have the required capabilities to access the internet. Many families are having to subscribe to both mobile and broadband services in order to access education services for their children. Invariably the mobile service is sufficient for voice calls however poor reception or access to 3G only prevents the use of their mobiles for any connection to the internet. The current plans on offer have large data allowances but families are unable to utilise these to their full extent and need to have a second service, usually satellite broadband, for their internet, at additional costs. Even with a 4G connection, if the signal does not have sufficient bars of connectivity, you are unable to access the internet. Families find it necessary to have two systems in the home – mobile for calls and then satellite for data due to inadequacies and inefficiency of the mobile network. Some consumers use their mobile phone as a hot spot to provide an internet connection however members find hot spot connections are not as stable as a mobile broadband device or other broadband service.

Satellite Broadband, especially the creation of Sky Muster Plus plans, has provided increased data options for families, albeit at a cost far greater than metropolitan plans. However, latency issues with delay lags on satellites, combined with interruptions from weather events and the requirement of electricity to the end user can prevent access to the internet and affects the reliability of the service with periodic dropouts through those conditions. Greater, and consistent, speed is required to be able to utilise the service to its best capabilities. Even on current Sky Muster plans members are unable to access video or live stream without buffering or connectivity issues.

#### FIXED VOICE

Many members are still dependent on fixed line telephony, particularly in rural areas with poor mobile coverage. For families, it is imperative that they are able to maintain contact with their child's school, especially where their children reside away at boarding facilities. It is important for children learning via distance education to have access to their teachers via phone as well as internet. Often private lesson times (PLTs) are carried out on the phone while other children in the school room are using the computer to access their lessons. When mobile phone networks are not working, or where they are not available it is important to ensure children can still contact their teachers.

Trials, such as the Alternative Voice Services Trial (AVST) to identify new ways of delivering voice services need to ensure the service is not cost prohibitive, is not susceptible to interruptions and can be relied upon 24 hours per day as per the requirements of the Universal Service Obligation. Currently, VoIP (Voice over Internet Protocol) is unreliable on Sky Muster. Many regional, rural, and remote (RRR) areas experience black outs during storms and if there was no landline there would be no way of reporting loss of power where there is limited or no mobile service, which is often affected by a black out. Where there is the practice of utilising VoIP in urban areas for the landline there is also a strong mobile system.

RRR families that do not have continuous power and operate from generators require a fixed landline service to be able to maintain some form of communication when the generator is off, especially if they are in a poor mobile reception area. Any alternative voice service that requires power leaves families vulnerable and isolated when the generator is not operating. Many families do not operate their generators at night.

#### **Question 2: What changes in demand, barriers or challenges need to be addressed when it comes to telecommunications services in regional, rural and remote Australia?**

##### DEMAND

**Digital Age** - As a society we are living in a digital age. Increasingly, services and information are only accessible online. School curriculum information, student progress, school timetables, school calendars and all other related school matters are found online. Schools have comprehensive websites, and many have school apps to access information and grant permissions. Need to contact your child's teacher? The

best method is 'send an email'! Plans to have all Australian Government services available online by 2025 will create an even heavier reliance on internet access.

**Education Environment** - The use of the internet within the school environment is consistently increasing with many rural schools using internet technology for teaching methods, education delivery and access to specialised teachers through distance education. In secondary and tertiary education there is an even greater reliance on computers and internet technology.

Primary school students from rural schools have a need to access the internet for homework for programs such as Mathletics and Reading Eggs. Secondary students are requiring access to webpages that utilise video and the downloading of documents, as well as for online tutorials and research. Tertiary study externally (online) is becoming increasingly popular. Many courses reverted to online only at the height of the COVID-19 pandemic and as universities and colleges have reopened to face to face learning many facilities are still offering online study as an option. Students are able to remain at home and in their local community while continuing to study. External tertiary study is extremely data hungry with most tertiary institutions either live-streaming lectures and tutorials or sending videos. A families download data allowance can easily be consumed within two weeks.

**Telehealth Services** - The use of Telehealth Services greatly increased during the COVID-19 pandemic. Telehealth provides a means for regional, rural and remote (RRR) families to access services otherwise not easily accessible due to distance. The ability to access such services to treat children's medical conditions on a regular basis can have a huge impact on educational outcomes for children. However, for Telehealth to maximise its effectiveness requires high bandwidth video capabilities.

**Tourists** - The increase of visitors to rural areas has put additional pressure on mobile connectivity. There are more people than ever who have chosen to "Wonder out Yonder" and this is causing major congestion on the mobile networks. At times it is even impossible to make a phone call, let alone use your mobile data.

**Truck drivers** - More companies are using technology to trace their driver's movements, creating more usage on the networks. Additionally, truck drivers carting grain at harvest time are required to utilise apps to log the details of their delivery. There are many trucks on any given farm at one time causing congestion issues. Farmers are also utilising the internet more throughout harvest to monitor the results of their loads.

#### BARRIERS/CHALLENGES

**Out of School Access** - While at school students have access to the required technology and hardware, however outside the school environment this is not always the case. Not all families have the ability to access the internet or have the financial means necessary for their children to have the devices required to complete

homework. Not all families have the digital capability to be able to access the necessary information that can be found online or to assist their children with their schoolwork; in order to seek help it is necessary for them to go online to search for that information! There needs to be greater support for those families for whom access to digital information is challenging.

**Multi student use** - There are occasions when multiple children are at home utilising the internet simultaneously for their studies. Depending upon what the children are trying to access, families have experienced congestion issues within the home.

**Provision of Services** - There is a confusing array of complex offers for a variety of products. The lack of independent information and promotion of more affordable devices and services hinders the ability of families' understanding of products suited to their needs and budget. This information needs to be available without online connectivity.

**Affordability** - Families are spending more money on internet services due to greater usage. Currently families can be spending \$134.95 for 100GB peak and 100GB off peak, compared to \$29.95 for 2GB 10 years ago. The cost of a limited data plan for RRR is far greater than unlimited plans for urban counterparts, often with far lower speeds.

The mobile broadband network is limited by the number of service providers in regional areas.

**Data Speed** - Limits on download speeds severely impact the ability to access some web-based programs for education purposes. Many urban counterparts are able to access phenomenal internet speed whilst most satellite broadband internet providers can only provide speed up to 25mbps.

**Flexibility** - Although there are a number of plans available there needs to be greater flexibility within those plans. Often families will start with a basic plan and then increase that plan when the children are home in the holidays to cope with the increase educational internet access requirements. The increase can occur immediately however in changing back down to the basic plan there is a requirement to wait until the end of the monthly cycle. Until COVID-19 there were not many options for cost effective low data plans.

**Upgrade of equipment** - Some RRR families have installed aerials and devices, at considerable expense, just to be able to receive a 3G signal. These aerials and devices will not work on the 4G system. When the upgrade from 3G to 4G takes place RRR families will have the additional cost of replacing the aerials and devices.

**Data Allocation** - The data allocation of Sky Muster plans is heavily loaded towards unreasonable off-peak times. The mbps continues to fall extremely short of those

available to our urban counterparts. Sky Muster plans are not only limited in on and off-peak data each residence is limited to only one plan. The very nature of living in a RRR area means that most households only have one plan and as such data must be rationed between business, personal, health and education usage. Data allowances are easily consumed if children are undertaking extra-curricular activities and reliable, affordable internet is the key to providing these students with some of the opportunities their urban counterparts can easily access. RRR children cannot compete when their urban based counterparts have unlimited access to data.

**Multicast capabilities** - Multicast functionality is an extremely efficient means of data transmission. Currently, Sky Muster Education Ports cannot support multicast transmission. The Department of Education in Western Australia provides homestead connections (Education Ports) utilising the NBN Sky Muster services delivered by Clear Networks. The Sky Muster plus product with its different metered/unmetered content configurations has the potential to address the current data limit challenge of School of the Air students. However, it is a more expensive offering.

**Transient workers** - Families of geographically isolated children enrolled in distance education who frequently travel and move due to work commitments (for example mustering on out camps) have very few options in accessing mobile satellite internet. There is only one option available that is extremely expensive for the hardware with additional high costs for the internet plan.

**Back-up power** - The reliability and capacity of back-up power on mobile towers is required to ensure a consistent and uninterrupted delivery of educational programs to geographically isolated children and rural schools.

**Question 3: How have the Government's policies and programs affected telecommunications service outcomes in regional, rural and remote Australia? How can these be improved?**

#### POLICIES

**Universal Service Guarantee (USG)** - this update to the Universal Service Obligation (USO) ensuring some form of access to broadband services in addition to the original standard telephone service under the USO, providing all Australian homes and businesses with access to both broadband and voice services, regardless of location, is welcomed. The ability for competing retail providers will continue to assist in price competitive retail broadband services. The ability for other telecommunication providers to become Statutory Infrastructure Providers (SIPs) on future real estate developments will remove the threat of a monopoly on broadband services. However, although NBN provides the broadband infrastructure there is no guarantee that a retailer service will be offered to every area.

Under the USG Telstra must still provide its own infrastructure where needed and must maintain its copper network outside NBN Co's fixed line footprint until 2032. The



USG provides no provision beyond 2032 for the provision of standard telephone services.

**Customer Service Guarantee** - Unfortunately, this policy has done little to assist families in RRR areas. Delays at times far outweigh those under the Customer Service Guarantee (CSG). Members have reported being without a fixed landline service for a period of six weeks from the date reported. Repairs dates are initially given only to be extended and then re-extended on numerous occasions. The supply of parts was the cause of the delay. Due to poor mobile coverage members were unable to rely on a consistent service from the existing mobile tower, leaving members with a lack of communications. The Consumer Service Guarantee financial entitlements to the consumer are an insignificant penalty for the telco. Members are concerned at the number of repeated extended outages in aging exchanges.

### PROGRAMS

**Regional Connectivity Program** - This program has enabled bespoke solutions to improve connectivity options in the regions. Encouraging business, industry, community groups and local government co-contributions will enable more localities to be able to access place-based telecommunication solutions and increase the number of projects able to be funded under the Regional Connectivity Program.

**Mobile Blackspot Program** - The continued expansion of this program has delivered significant telecommunications infrastructure to improve and increase access to mobile coverage and competition in RRR areas across Australia. The geographical location and topography of the location of some of the towers is questionable. There are a number of factors involved in choosing a location for a tower or base station, however on-ground physical knowledge appears to be absent. A recent proposed tower in the Western Australia Midwest was due to be erected in a valley, servicing very few consumers. It was relocated and now services a far greater area.

**No Australian Left Offline** - The ACCAN 'No Australian Left Offline' policy focusses on equitable access for low-income families. While this is crucial, it is important to ensure that RRR families are secure in knowing NBN satellite installations will be met, and more affordable access is also available where needed.

While Sky Muster continues to be available to RRR families the uncertainty of continued assistance for installation costs in the future is of concern. These costs escalate greatly in providing relevant technicians to our most isolated locations and would limit who can and cannot access the Sky Muster facility into the future. Some parents are not yet commencing the education journey of their children and therefore see little need for large data allowances. The future uptake of a Sky Muster service needs to remain affordable for parents of RRR students.

**Question 4. How do service reliability issues impact on regional communities and businesses? How do outages, including in natural disasters, impact on communities and businesses?**

RELIABILITY

Reliability is everything! The internet is now a necessity and if families are to be attracted to live, work and deliver education in RRR areas they want to know the internet is reliable. Without reliable internet regions already suffering from a diminished workforce will suffer further.

Reliability, whether it is for fixed line, mobile or broadband, is important to keep our children connected to their schools and education. It is imperative that educational access is not disrupted due to connectivity issues. It can be very demoralising for children if they get behind at school, and often some lessons/activities are impossible to catch up on. This can have an impact on a child's mental health. Without reliable internet connections it is impossible to proceed with school studies, students are unable to download course content and unable to study effectively online.

Without access to a continuously reliable internet connection and disruptions to the access of education, some families decide to relocate part of the family to an urban area, splitting up the family unit, while other families completely leave these rural areas altogether.

Without reliable telecommunications people are increasingly isolated.

Safety in RRR areas is also a major concern. Many children access school on a daily basis utilising the Orange School Services. It is important for parents to be able to communicate with school bus drivers particularly during weather events to warn of dangers on the road or route alterations caused by such events (for example flooding or fire). Farming communities are shrinking and distances between populations increasing, necessitating a requirement of early warnings, where possible. For those with children living away from home to access an education it is important that they know they are able to contact their parents if needed, especially in the case of an emergency.

**Mobile service** - Members are still reporting issues with call dropouts. Sometimes this can occur when services are switching between 3G and 4G. On other occasions there are no known reason, the call just drops out.

**Broadband service** - Some Sky Muster sites are having issues with the performance of their remote site installations. There are increasing reports of dropouts and low fade margins causing some sites to fail. Remote identification of problematic sites would enable issues to be resolved before they have a major impact on distance education students.

OUTAGES

The majority of equipment from internet service providers that is required to provide a service from the NBN network is mains powered. Any disruption to mains power, however short, will cause the service to fail and the equipment has to reboot for it to be useable again. This causes disruption and delays to online lessons in progress. The power supply to some RRR areas is not a consistent supply and the supply variation can cause the equipment to reboot, sometimes several times a day.

Power outages limit the ability to recharge devices. Our reliance on rechargeable devices for communicating and accessing the internet leaves communities vulnerable and isolated when power outages restrict the ability to recharge and stay connected.

During natural disasters, the ability to be able to communicate is vital. The Wooroloo bushfire and cyclone Seroja in Western Australia highlighted the importance of communities being able to remain in contact with one another when a catastrophic event happens. Children away at school need to know their families are safe to relieve anxiety and concerns. Parents and children need to be able to communicate with their teachers.

**Question 5. How might such impacts be addressed to ensure greater reliability? How can the network resilience be addressed in regional areas?**

TWO MODES OF COMMUNICATION

Families living in rural and remote parts of Australia, due to the nature of where they live, require two separate forms of communication i.e., phone/voice and internet/data as separate services, not relying on the same mode of delivery thus ensuring that if one service fails, the other is still available.

CALL CENTRES

There will be times with every system and every network that connections breakdown and faults are reported. The quicker consumers can be back online the better resilience a system will have. During COVID-19 Telstra call centres operated from within Australia and most customers saw an enormous difference in the assistance being received. Rural and remote customers have a unique set of circumstances that is not understood by the majority of sales and service personnel, which can result in lengthy delays for installation and repairs.

SATELLITE MOBILES

Access to satellite mobiles help to minimise the disadvantage experience by the lack of mobile coverage in rural and remote regions and offer a back-up service should outages occur with the primary sources of communication. School is able to continue uninterrupted and provides an element of safety to staff and students in small rural schools if there is only one other means of communication.

IMPROVE BACK-UP SYSTEMS

**Back-up batteries** - Back-up batteries only provide a continuation of service for a limited time. Issues with back-up batteries failing only become apparent at the time of loss of power, which has occurred on a number of occasions in Western Australia. This is particularly concerning when it occurs on days of catastrophic fire danger during the height of summer. It is imperative that there be a method of assessing the back-up batteries periodically to avoid such issues and how this is achieved needs to be addressed?

**Uninterrupted power supply** - An Uninterruptable Power Supply (UPS) will keep the equipment going for a short period of time. As most equipment is powered from a battery eliminator that supplies 12volts, the provision of a battery back-up system that can stay operational for a number of hours becomes particularly useful. The use of a battery will also protect the equipment from power variations and surges that may cause issues with reliability of services. This will also allow families to maintain communications when the generator is off.

Are there other back-up options? Are there reasons they are not being considered?

#### ALTERNATIVE TECHNOLOGIES

Alternative technologies such as universal broadband present an opportunity to improve access to equitable education for all students in RRR areas. Alternative satellite-based internet services and technologies with fast internet and large download limits would be of major benefit not only for RRR families but also for travelling working families.

Providing alternate connectivity solutions for towns in the satellite footprint will ease traffic on the Sky Muster satellite enabling a more adequate service for those customers who have no other choice than Sky Muster plans.

#### **Question 6. How did the use of digital services change for regional consumers and businesses during the response to the COVID-19 pandemic? What insights for future service delivery does this provide?**

During the COVID-19 pandemic there was a massive increase in demand in accessing education through online learning across all year levels for both compulsory and post compulsory students. There was also an increased use of Telehealth. This coupled with an increase in parents working from home put a great strain on home internet services both in terms of data allowance and congestion issues.

COVID-19 has provided the opportunity for more businesses to look at flexible working options for their employees. This could see a continued rise in simultaneous demands on home internet services with multi use of high-resolution programs. Using multiple devices, within the one household, creates the possibility of congestion issues (when multiple children are accessing education programs while parents are working from home). Many of the improvements to services made by telco's during the COVID-19 provided an element of relief to some of these issues.

The quality and complexity of education programs is constantly improving, and future service delivery needs to have the capabilities for increases in quality and speed requirements.

**Question 7. What can be done to improve the access and affordability of telecommunications services in regional, rural and remote Indigenous communities?**

**Digital capabilities** – It is important to consider the digital capabilities in Indigenous communities. In providing reliable telecommunication infrastructure it is important those communities have the ability to utilise that telecommunication. Service providers need to understand the level of education within Indigenous communities as to whether greater assistance is required in those communities in understanding their options to access the internet. Attention also has to be given as to whether those communities can access and afford the necessary devices required to access telecommunications services. Flexibility of plans, more cost-effective options, expanding options and lower price point mobile plans need to be considered. More favourable pre-paid mobile plans need to be available.

**Question 8. How can investment in telecommunications infrastructure work with other programs and policies to encourage economic development in regional Australia?**

N/A

**Question 9. What role could innovation, including new models, alternative investors or new ways of doing business, play to encourage investment in regional telecommunications infrastructure? What are the barriers?**

N/A

**Question 10. To what extent will new technologies enable significant change to the delivery of telecommunications services in regional Australia over the next 5-10 years? Are there any barriers to accessing these technologies?**

ICPA (WA) welcomes the development of new technologies that would provide greater support and educational opportunities for RRR students. The ability or option for students to attend an educational institution of their choice via a virtual classroom operating in real time would provide greater education outcomes, affordability and the retention of families in RRR areas.

The barriers to alternative future telecommunications enabling the delivery of this mode of education include issues such as: where would the technology hubs need to be located to ensure an uninterrupted service and the affordability of the necessary technology including hardware.

**Question 11. How can Government better support the rapid rollout of and investment in new telecommunications solutions in regional areas?**

N/A

**Question 12. How can different levels of Government, the telecommunications industry and regional communities better co-ordinate their efforts to improve telecommunications in regional Australia?**

N/A

**Question 13. What changes to Government investment programs are required to ensure they continue to be effective in delivering improved telecommunications?**

N/A

**Question 14. How can regional consumers be better supported to identify, choose and use the best connectivity options for their circumstances, as well as to understand and use their consumer rights?**

Rural and remote families live in a unique environment. Regionally based communication services and staff who understand nature of the areas are required, specifically dedicated to deal with the regional and remote areas.

Many people do not understand their consumer rights, or even know where to go to find what they are. Flyers and flow charts work well to distribute complicated information. More information should be given at the time of contracting or changing plans.

Service providers need to be able to understand the on-ground issues. There needs to be independent advice for customers to determine their requirements.

**Question 15. To what extent is public information on connectivity options, including predictive coverage data and speeds, sufficient to help regional customers make informed decisions? What other information is needed?**

A lot of information relating to telecommunications is too complicated and confusing. It is very difficult to compare plans and resources such as the '*Regional Tech Hub*' could collate such information and put it in a table of reference to enhance understanding (this information could be included with billing) specific to individuals locations. Some service providers already offer this facility within their product range but there may be other providers who offer a more appropriate service. It is time consuming and confusing contacting them all individually.

Coverage maps are not detailed enough. Western Australia is a vast state with great distances between residences on properties. It is hard to determine whether there is mobile coverage without the physical presence of a technician and data speeds at best are only a guide.

It is important for people to know where the provider is located, regional offices, support services etc

**Question 16. What other matters should the Committee consider in its review and why are they important?**

Although we live in a digital age, not everyone is digitally advanced! It is important to cater for those who are not tech savvy. Not everyone has the digital capability to access services and information digitally.

Small communities have little money to contribute to the cost of installing small cell networks (30/30/30). Consideration must be given on how to make these types of networks more affordable to struggling communities to ensure the best possible education outcomes for geographically isolated students.