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Mr Sean Edwards
Chair Regional Telecommunications Review
Department of Communications and the Arts
GPO Box 2154
Canberra, ACT, 2601

RE: 2018 Review of Regional Telecommunications in Australia – Submission from the Broadband for the Bush Alliance

Dear Chair

On behalf of the Broadband for the Bush Alliance I would like to thank you and members of the Committee for attending and presenting an outline of the review at our recent Forum in Darwin. The annual Forum is an important ongoing national conversation valuable to informing policy for people living and working in remote Australia. We trust you gained much from being part of the Forum.

We are pleased to contribute to this timely review of Regional Telecommunications in Australia. The attached response was drafted in consultation with our members and stakeholders, commencing with the “World Café” session at the Darwin Forum which some of your Committee attended. Data gathered from the Forum was complimented by an online survey and a number of direct engagements with B4BA members. As such this response reflects the collective view of the Alliance.

About The Broadband for the Bush Alliance

The Broadband for the Bush Alliance is a national not-for-profit that seeks to advance the digital capacity and capability of people who live and work in remote Australia through access to better broadband services and increased digital inclusion.

The Alliance is the trusted and united voice for regional and remote Australians, which brings together a range of stakeholders with expertise in communications, remote service delivery, and community engagement.

Our vision is to:

- To influence and inform policy makers and service providers about the specific communication needs of remote and rural people; and

- To engage people living and working in regional and remote Australia to inform, build awareness and share knowledge around Digital Inclusion¹.

Since its establishment in 2012, the Alliance has contributed significantly to many developments in regional telecommunications. Achievements to date of the Alliance include:

- Advocating for digital inclusion in remote Australia, notably the push for digital inclusion as a “Closing The Gap” indicator for all governments²
- Informing and supporting the NBN Skymuster rollout and Public Interest Premises Strategy
- Informing the expansion of Wi-Fi services in remote communities and homelands
- Informing co-investment programs that have led to more mobile coverage including affordable pre-paid plans
- Informing the review of the Universal Service Obligation (USO) and contributing to development of the proposed Universal Services Guarantee (USG)

At the Darwin Forum there was a recognition that the connectivity agenda has progressed and a renewed call to shift the focus to increasing the delivery of effective digital skills for regional and remote Australia. How this will be done to provide optimum benefit for people living and working in regional and remote Australia needs to be a key consideration to any policy direction arising out of the 2018 Review.

We recommend that in order to address the challenges in regional telecommunications a dedicated Remote Telecommunications Policy and Strategy (RTPS) be developed and implemented as a matter of priority. This submission outlines a number of key recommendations that we believe should form part of that policy and strategy.

In closing thank you again for the opportunity to submit to the review. The Alliance is very supportive of the review and we look forward to seeing a range of positive outcomes implemented in regional and remote Australia over the coming years.

Yours truly,



¹ *“The goal of digital inclusion is to enable everyone to access and use digital technologies effectively. It goes beyond simply owning a computer or having access to a smaRTPShone. At its heart, digital inclusion is about social and economic participation: using online and mobile technologies to improve skills, enhance quality of life, educate, and promote wellbeing across the whole of society.”*

² http://broadbandforthebush.com.au/wp-content/uploads/2018/01/Letter-to-NT-CM_Digital-Inclusion-as-Closing-the-Gap-indicator_20170803_....pdf

Apolline Kohen
Chair Broadband for the Bush Alliance

Response to Regional Telecommunications Review 2018 Broadband for the Bush Alliance June 2018

Executive Summary

As access to the Internet improves, the Alliance sees an increasing need for targeted investment in digital inclusion programs, especially for Indigenous and remote communities, public administration, participatory democracy and businesses. Additionally, the ability for those in regional and remote areas to afford the necessary access is of vital importance if the current investments in telecommunications are to be fully realized.

We contend that these considerations and those identified in the following response should form the core of a dedicated Remote Telecommunications Policy and Strategy (RTPS).

We see the need for such a policy as paramount and urge that it be developed as a matter of priority, and recognize that the “One size fits all” model of the NBN does not necessarily meet the many different and unique needs and conditions of people living and working in regional and remote Australia. A comprehensive RTPS needs to address the three pillars of digital inclusion being Access, Affordability and Digital Ability and should encompass:

- **Access and equity** - Incorporating affordability issues; an expanded Universal Service Guarantee (USG) as well as a range of relevant and appropriate access models supporting local innovation and capacity;
- **Capability for all** - Improving digital literacy with a view to the future use of technology as well as the introductory and basic levels. Also developing digital business skills while understanding and utilising the many ways in which digital learning takes place in the community;
- **Expansion of mobile coverage and effective Last Mile solutions** – an ongoing need that requires a visionary roadmap creating higher levels of certainty and innovation;
- **Infrastructure** - Developing flexible and appropriate infrastructure solutions, including rational use of existing infrastructure with cheaper access to more data ; and
- **Partnership approach** - successful development of the RTPS can only be accomplished with Governments, Industry and community working together.

This requires a robust communication and partner engagement strategy that shares the same vision for the future.

What is required is an RTPS that is backed by strong government investment both in dollars and principles of fairness and equity. We recommend that, as a priority, work be commissioned to fully understand the appropriate level of investment government should consider to ensure successful policy outcomes.

The Alliance recommends that RTPS be developed in partnership with the many communities, organisations, businesses and individuals that live and work in regional and remote Australia to ensure that a range of models and situations are understood and addressed appropriately.

Furthermore, The Broadband for the Bush Alliance notes that the Review Committee has not sought views from submitters on the critical issue of the Universal Service Obligation (USO). We are aware that work is currently underway to redevelop the Universal Service Obligation (USO). We are concerned that there is a real risk of many regional and remote Australians being further disadvantaged if a future USO is not supported to sufficient levels. A reduced USO will likely see Telstra reduce technical support for the most costly infrastructure, which is often located in remote Australia. We believe this Committee needs to consider this issue and recommend that the future provider of last resort arrangements namely the USO be fully funded and meet the needs of remote Australians.

Recommendations

In order to address the challenges in regional telecommunications, the Broadband for the Bush Alliance recommend that a dedicated Remote Telecommunications Policy and Strategy (RTPS) be developed and implemented as a matter of priority.

A comprehensive RTPS needs to address the three pillars of digital inclusion being Access, Affordability and Digital Ability and incorporate the following recommendations.

Overarching Principles

1. That the RTPS is backed by strong government investment both in dollars and principles of fairness and equity.
2. That work be commissioned as a priority to fully understand the appropriate level of investment government should consider to ensure success.
3. That the RTPS be developed in partnership with the many communities, organisations, businesses and individuals that live and work in regional and remote Australia to ensure that a range of models and situations are understood and addressed appropriately.
4. That the updated Universal Service Obligation (USO) ensures a future provider/s of last resort and that USO arrangements be fully funded to meet the needs of remote Australians.

Access

5. That the RTPS incorporate a predictive data roadmap that sets realistic targets for future data usage to inform future investment and programs.
6. That the Mobile Black spot program being maintained and broadened and the 5G rollout be prioritized as a key technology.

Affordability

7. That Internet Service Providers (ISPs) and Telco's be encouraged/required to provide clarity in product promotion to reduce market confusion.
8. That key Australian, state and territory government services including access to government services as delivered through MyGov, education and health be unmetered to allow equitable access.
9. That Australian, state and territory government apps and services be appropriately designed to mitigate congestion, cost, and capacity challenges.
10. That the Australian government utilise organisations such as BIRRR, the Broadband for the Bush Alliance and the Australian Digital Inclusion Alliance to engage with regional and remote communities.
11. That through COAG the Australian government takes a leadership position to ensure data is affordable for regional and remote Australians.
12. That the Australian government commission further research to understand data needs and technology trends to help plan for future industries and businesses that could be successfully developed and/or re-located in regional and remote Australia.

Digital Ability

13. That a new rollout of the Digital Hubs including Digital Champions to support initially digital enablement and industry-related awareness with long-term benefit for all local communities be funded and implemented.
14. That a targeted *Indigenous Digital Inclusion* program be developed with indigenous community guidance and be fully funded by the Australian government.
15. That a digital ability improvement strategy be developed and implemented. Such strategy needs to reflect the variety of learning methods required to meet community needs and support existing infrastructure such as public libraries and community centres.
16. That an RTPS incorporate acceptable and continuously improving published KPIs for service delivery and product support for regional and remote Australia.

17. That the Australian government commission the development of a set of social and economic measures to guide investments in better broadband and mobile coverage for community benefit.
18. That a wide range of technologies suitable to regional and remote Australia be supported by the RTPS to encourage continuous improvement and innovation including locally controlled data/telephony networks.
19. That the Australian government urgently undertake work to define the necessary market interventions required to support competition, where economically viable, in regional and remote Australia.

Response to individual questions

1. *What are the main barriers to people in regional communities increasing their use of digital technologies and possible solutions for overcoming these barriers?*
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While access to reliable digital communication technology is becoming the norm for most Australians there remain significant numbers that face barriers to the effective use of those technologies. Broadly speaking, the barriers fall within the three subcategories set out in the Australian Digital Inclusion Index (ADII), being access, affordability and digital capability.³

Regional Australia in particular is lagging behind and we urgently need a strategy to address issues of infrastructure, access, affordability and digital ability. For people living and working in regional and remote Australia these barriers are multiplied in significance due in large part to factors relating to geography and the ADII confirms that.

“The more remote your location, the more digitally excluded you are likely to be.”⁴

Limited infrastructure, poor access and low digital ability combine to exacerbate the impact on communities in relation to communications with government and essential business services increasingly delivered exclusively online, health, education, employment and business development opportunities.

Each of these barriers often intersects and impacts on the other and as such no one should be seen in isolation from the other. For example the move to online Centrelink reporting via MyGov has introduced a structural barrier for many residents of remote Australia in particular Aboriginal and Torres Strait Islander people. Internet access is limited in many communities, is often congested and slow, is unaffordable, or is provided through community facilities that have limited opening hours during the working week. In many remote NT communities there is no public Internet access available and mobile coverage is available in only about 20% of remote NT, north-west WA, north SA and Cape York and Torres Strait communities.

It is clear that regional areas in Australia are less digitally connected, have more difficulty affording technology, and are therefore less digitally able than those who live in cities.⁵ The current evidence would suggest that, if unchecked, this gap between rural and urban areas will exist and grow for some time.⁶ If allowed to continue it will widen over time and place regional and remote Australia at further disadvantage from both a digital inclusion and a cost of living perspective.

³ Thomas, J, Barraket, J, Wilson, C, Ewing, S, MacDonald, T, Tucker, J & Rennie, E, 2017, Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2017, RMIT University, Melbourne, for Telstra. DOI: www.dx.doi.org/10.4225/50/596473db69505

⁴ Dezuanni, M, Burgess, J, Thomas, J, Barraket, J, Marshall, A, Wilson, C, Ewing, S, MacDonald, T, 2017, Measuring Queensland's Digital Divide – The Australian Digital Inclusion Index 2017: Queensland, RMIT University, Melbourne, for Telstra

⁵ Thomas, J et al. 2017 [Ibid]. Table 12 p. 20.

⁶ Ibid p.6

To address this imbalance and to avoid the risk of increasing this rural/metropolitan digital divide the government needs to intervene in ways that ensure equitable access to appropriate broadband services and increased digital inclusiveness. Key to this is the development of a dedicated RTPS as earlier highlighted and the identification of the barriers and the appropriate co-designed solutions need to be clearly articulated.

Access

Access barriers exist in remote Australia primarily as there are less community places for people to access the Internet, especially those on low income and requiring public access. This has a negative impact upon business, education, employment and health in particular and works to unnecessarily impoverish regional and remote Australia.

Access is compounded by the lack of availability of bandwidth and connectivity in remote areas. We contend that as yet no suitable broadband solution has been provided to non-urban dwellers and for those on satellite products congestion and latency are key ongoing and seemingly unresolvable issues⁷.

“Eighteen locations have been identified as delivering speeds during peak times that are less than what the average Turkish internet user enjoyed in 2012”⁸

It is likely that congestion will remain an issue when the NBN rollout is complete as the demand for more and more data is predicted to be unmet by supply. A policy that incorporates a predictive roadmap that sets realistic targets for future data and voice usage will work to provide some certainty and likely see Telco's, governments and the community better placed to respond to congestion issues as they arise.

There are increasing numbers of cloud based products and services. As business in regional Australia comes to rely more heavily on cloud based applications the ability of the Internet service providers including the NBN needs to ensure that capacity is adequate to meet this growing need. This is currently not supported well by stand-alone satellite for example due to distance, latency and other isolation factors.

Solutions that encourage the prioritization of 5G as a key technology and the Mobile Black spot program being maintained⁹ and broadened as well as including complementary technologies such as long range WiFi, and active and passive repeaters need to be included in the aforementioned RTPS. This should include mandating an NBN (or other WISP) gateways on every Mobile Black Spots tower funded by Commonwealth and State public money.

7 Gothe-Snape, Jackson. “Is Fixed Wireless Congestion on the NBN Getting You down? You’re Not Alone.” Text. ABC News, April 25, 2018. <http://www.abc.net.au/news/2018-04-25/nbn-fixed-wireless-congestion-slows-connections-across-australia/9696490>.

8 Gothe-Snape, Jackson. *ibid*

9 We strongly recommend that the name be changed to removed the word Blackspot

Recommendation 5: That the RTPS incorporate a predictive data roadmap that sets realistic targets for future data usage to inform future investment and programs.

Recommendation 6: That the Mobile Black spot program being maintained and broadened and the 5G rollout be prioritized as a key technology.

Affordability

In the view of the Alliance far too many regional communities have been put on satellite as the only option rather than make an effort to explore how other technology solutions such as fixed wireless, local LTE with satellite backhaul or cable could compliment it. For regional and remote consumers this has resulted in a product range that is limited and has higher cost installations and support as there are few if any simple, plug and play installations at low cost.

Confusion in the product marketplace exacerbates affordability and needs to be addressed by ensuring Telco's market their products with clarity and that those on the community have the ability to understand the products available to them.

Data limits on Skymuster are creating a problem for many. For regional and remote Australians the Alliance recommends that government, education and health services be unmetered to allow equitable access to these vital services. For example we already know that the cost associated with a low-income parent not being able to afford a computing device and the associated data for their child has a lasting impact on that child's education.¹⁰ The cost benefit of providing unmetered access to government, education and health services need to be explored and understood in full.

Recommendation 7: That Internet Service Providers (ISPs) and Telco's be encouraged/required to provide clarity in product promotion to reduce market confusion.

Recommendation 8: That key Australian, state and territory government services including access to government services as delivered through MyGov, education and health be unmetered to allow equitable access.

Digital Ability

Very little has been done in a strategic way to engage with people living in rural and remote Australia to firstly understand their digital ability and subsequently to develop programs to improve their skills. Those programs that have been in operation over the past few years have not met the needs of regional Australia¹¹¹²¹³. They have laid some useful groundwork but are short-term; they are not enough. They are limited in resource base, targeted to specific groups and lack any overall strategic direction.

¹⁰ McLeish, K. (2016, December 16). 'Queensland schools' BYOD program risks leaving poorer students behind, QTU says'. ABC News.

¹¹ <https://www.telstra.com.au/tech-savvy-seniors>

¹² <https://www.beconnectednetwork.org.au/>

¹³ <https://www.godigi.org.au/>

Additionally, strategic thought needs to go into what digital ability needs to look like over time. Learning needs to be project or work based, embedded in formal education, inclusive, responsive to community wishes, and, where relevant, build on existing projects or areas of interest. A program like inDigiMOB¹⁴ that's about improving digital inclusion for Aboriginal and Torres Strait Islander people in remote Northern Territory is worth exploring as a model. It makes available a flexible suite of technical, training and infrastructure support resources that communities and organisations can take advantage of, according to their diverse needs and contexts.

To ensure government services work well in remote Australia we recommend that government apps and services be designed with people living and working in regional and remote Australia so that they can work with congestion, cost and capacity challenges highlighted.

The barriers are deeply challenging for the most disadvantaged in regional and remote Australia and the solutions require long-term commitment in partnership, a spread of appropriate and affordable technologies and a multifaceted approach to developing digital capability. We encourage the government to utilise organisations such as BIRRR¹⁵, The Australian Digital Inclusion Alliance (ADIA) and the Broadband for the Bush to engage with regional communities in partnership with Telco's and government agencies to help break down those barriers.

Recommendation 9 - That Australian, state and territory government apps and services be appropriately designed to mitigate congestion, cost, and capacity challenges.

Recommendation 10 - That the Australian government utilise organisations such as BIRRR, the Broadband for the Bush Alliance and the Australian Digital Inclusion Alliance to engage with regional and remote communities.

¹⁴ <https://irca.net.au/projects/indigimob>

¹⁵ <https://birraus.com/>

2. How are people in regional communities currently using their broadband service and how might they increase the benefits of using this technology?

People in regional communities, as with the metropolitan populations, are currently using their broadband in a number of ways. However despite the growing number of positive stories we have a long way to go to fully realise the benefits that broadband has to offer regional Australia.

To highlight only one area that of telehealth in which consulting between GPs and specialists with patients has become a more frequent occurrence thus allowing in-home and on community biometric monitoring for chronic disease¹⁶. For example CSIRO research showed savings of 24 per cent over the year to the healthcare system made through reductions in the number and cost of GP visits, specialist visits and procedures carried out¹⁷.

Consideration needs to be given to how broadband could influence population growth in regional Australia. For example with students being able to study online opportunities exist for retention of youth in regional areas and remote communities. The potential for this to have an impact in keeping youth “in and on country” has a clear social benefit where the impact on local economies is a positive one ranging from supporting local workforce to allowing communities to regenerate.

Key to increased broadband usage and realizing greater benefits is ensuring regional and remote Australians have affordable products. It is therefore critical that all governments work within the same framework and we recommend therefore that through COAG the Australian governments take a leadership position to ensure data is affordable for regional and remote Australians.

Recommendation 11 - That through COAG the Australian government takes a leadership position to ensure data is affordable for regional and remote Australians.

¹⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5734598/>

¹⁷ <https://www.csiro.au/en/Research/BF/Areas/Digital-health/Improving-access/Home-monitoring>

3. What data-intensive activities are occurring in regional, rural and remote Australia? What digital technologies are needed for these?

There are already many data-intensive activities occurring in regional, rural and remote Australia however we should never assume that the data that is available is enough. This is especially the case as we move to more mobile, Internet of Things (IoT), and more cloud-based applications.

The use of cloud-based applications is predicted to boom with an increase in value of 15% from 2017 to 2018 to almost \$6.5 billion, due mainly to the boom in software-as-a-service adoption.¹⁸ There is clearly a challenge here for regional businesses to keep pace given the broadband access gap between regional and urban and often the higher data costs and associated limitations.

Business operators rely more on data from their operations to better understand performance, reliability and shortfalls, so that they can apply improvements and realise better productivity outcomes. Therefore the digital technologies needed to be successful include those that are high speed, low latency, low congestion and have unlimited access to data and voice bandwidth. Additionally they need to be priced in such a way as to be affordable for all those living and working in remote Australia and they need to be supported with skills development programs and in some cases online and in situ support.

The mining and agricultural sectors are often in the forefront of developments in part because they have invested in high-speed connectivity required to grow their businesses within the global market¹⁹.

Health, government and education sectors are becoming more data intense in particular through the need to move and exchange of large data files. For example areas such as health are using image exchange in radiology and using other data intensive services such as videoconferencing, multi site link ups through utilities such as Zoom and Skype on a daily basis. In relation to health outcomes the return on investment in addressing the shortfall in health outcome that country people experience is far greater than for people in metropolitan areas and the technology including data access needs to be targeted to address this.

We would anticipate 5G if rolled out equitably and affordably will compliment these over the coming decade as part of the overall mix that would support such things as local connectivity, and the sensors, actuators, data analysis and visualisation tools related to the Internet of Things (IoT).

Further research needs to be done as part of a dedicated regional telecommunications policy (RTPS) to help plan for future industries and businesses that could be successfully located in regional and remote Australia and critical to this is understanding of data needs and trends.

¹⁸ "The Growth of the Australian Cloud Computing Industry." *Penguin Management* (blog), November 5, 2017. <https://www.penguinaccounts.com.au/inside-australian-cloud-computing/>.

¹⁹ McHugh, Babs. "The 'digital Mine' Revolution Is Here as Technologies Accelerate." Feature. ABC Rural, August 9, 2017. <http://www.abc.net.au/news/rural/2017-08-09/the-digital-mine-revolution-underway-now/8786194>.

Recommendation 12 - That the Australian government commission further research to understand data needs and technology trends to help plan for future industries and businesses that could be successfully developed and/or re- located in regional and remote Australia.

4. How can regional businesses better utilise digital technologies to maximise economic benefits?

The opportunities to maximise economic benefit for regional businesses is unquestionable. We need to continue building the backbone - the infrastructure, the bandwidth, the pipe needed to realise these benefits and we need to have a cohesive and comprehensive understanding of those business opportunities.

We are seeing mining, farming, environment and tourism services just to name a few taking advantage of the Internet of Things (IoT) applications, high speed broadband and the ability to share data into global markets. The economic benefit plays out in improvements to marketing reach, efficiencies, supply chain continuity, ordering, accounting as well as more awareness of what already works. This however tends to be confined to individual businesses and the understanding of the broader benefits is limited.

We see the opportunity for a RTPS to develop more communication across regions via coordination networks and programs that allow peak bodies to support business digital literacy to their members and stakeholders, e.g. RDA.

The more trusted sources we have the better able business would be to take advantage of digital for economic benefit.

As part of a proposed dedicated remote telecommunications policy we highlight the need for a new rollout of the Digital Hubs including Digital Champions to support initially digital enablement and industry-related awareness with long-term benefit for all local communities.

Recommendation 13 - That a new rollout of the Digital Hubs including Digital Champions to support initially digital enablement and industry-related awareness with long-term benefit for all local communities be funded and implemented.

5. What can be done to improve access to and uptake of telecommunications services in remote Indigenous communities?

This review provides a key opportunity to address a structural and skills issue that is impacting on the ability of Aboriginal and Torres Strait Islander people to firstly, engage with Internet delivered services and resources that enhance employment and educational opportunities and secondly, ensure access to government (MyGov) services and safety nets, especially in remote areas.

Indigenous Australians have been recognised to have a significant gap in digital inclusion compared with the broader Australian population within the Digital Inclusion Index (14% gap based on 2011 ABS data). It is well known that this gap is much greater for remote Indigenous Australians.

At the present time, a very large proportion of small to medium sized remote Indigenous communities (in the categories formally defined as outstation/homeland or minor community) are reliant on a single means of telecommunications access, or have no access at all. Typically, where provided this is a single payphone or community phone, connected to the PSTN via HCRC microwave link or satellite link respectively.

To quantify this, the Homelands Review (2015/2016 data) found that around 80% of the approximately 400 occupied outstations/homelands in the NT i.e. 320 outstation/homelands did not have access to reliable mobile coverage, so all of the 320 outstations plus a number of minor communities (population between 50 and 200 approximately) without mobile coverage are in this 'single means of access' category²⁰. In total only 20% had mobile compared to approximately 81% of the broader Australian population. A similar situation exists in the Kimberley and North Queensland.

Given this the first consideration should be to not remove existing telecommunications such as payphones or community phones until a reliable and well-proven future solution be found. A point to note in this context is that satellite connected services, particularly Ka Band i.e. NBN Skymuster are susceptible to rain fade, and can therefore be unavailable under heavy rainfall conditions when they may be most needed.

There is currently inadequate data collection to measure the full extent of the gap nationally for indigenous digital inclusion. Without such data and targeted programs to address the gaps, Federal and State governments will need to continue to deliver essential services face to face reducing significantly any cost benefits that can be gained from digital.

Digital inclusion will promote improvements in most other Closing the Gap (CTG) measures, including education, health, social inclusion, governance, compliance with government regulations and ability to participate in employment and economic improvements. Chapter five of the Closing the Gap policy relates to economic development and Chapter seven relates to social inclusion. Both of these key outcomes will be improved by addressing Digital Inclusion. The importance of

²⁰ The Northern Territory Homelands and Outstations Assets and Access Review (CAT, 2016) www.icat.org.au Centre for Appropriate Technology. Alice Springs. 2016

Telecommunications and Infrastructure underpins the Department of Prime Minister and Cabinet's Indigenous Advancement Strategy.

In line with this strategy a key recommendation coming from the 2017 Indigenous Focus Day and Broadband for the Bush forum in Perth WA was to seek the support of all Australian Governments through the Council of Australian Governments (COAG) to adopt digital inclusion as a key performance measure within the Closing the Gap framework. It was further recommended that a targeted *Indigenous Digital Inclusion* program be developed and fully supported.

The *Indigenous Digital Inclusion* proposal addresses the provision of appropriate, accessible and affordable Internet access to vital online government services such as MyGov in remote Aboriginal and Torres Strait Islander communities. More generally, the proposal addresses the opportunities provided by Internet access, including access to jobs sites, educational resources, online learning, e-commerce sites, online banking, and the potential for establishing online businesses.

The *Indigenous Digital Inclusion* program proposal has seven components:

1. Data collection to measure whether remote Aboriginal and Torres Strait Islander community members have broadband available to them with the minimal requirements in terms of access, availability, affordability and digital literacy in order to access online services.
2. Prioritisation of the rollout of broadband services, including mobile coverage, to identified remote Indigenous communities that do not have minimal community-wide online access.
3. Provision of public Internet access to the identified communities through community WiFi and LTE systems.
4. Implementation of unmetered access to all online government services (including MyGov), banking, education, employment, justice and health services.
5. Rollout of a culturally and language appropriate digital literacy program for remote community members.
6. A Community Digital Mentors program to provide meaningful community-based jobs in remote communities to support digital engagement, literacy and support via a peer-learning model.
7. Support for the use of tele and video conferencing in local and community governance facilitating extended community-wide awareness building, accountability and consultation processes

Critical elements of this program are that they are targeted, recurrent and sustainable i.e. not capriciously allocated, a one-off activity for a press release or build dependencies that are unsustainable. Strategic continuity and ongoing development of programs are critical factors in their success. It is also important that there is local ownership in all aspects of the program and building upon the capacity of existing organisations, infrastructure and programs, avoiding duplication of effort. A flexible and locally targeted approach is more likely to work than a one-size-fits-all model.

We see that this review provides an opportunity to further highlight this exciting concept that provides a meaningful way forward for indigenous Australians and as such we recommend that it be incorporated into the proposed RTPS.

If the growing digital divide for Indigenous Australians is not being addressed through a holistic and targeted digital inclusion strategy as soon as possible, it will become increasingly difficult to achieve, risking the creation of a burgeoning digital under-class. Conversely, it is an area that can have very good outcomes and flow-on benefits to other CTG measures as a result of targeted programs in this area.

Recommendation 14 - That a targeted *Indigenous Digital Inclusion* program be developed with indigenous community guidance and be fully funded by the Australian government.

6. *Are there practical examples of how communications services can improve the well-being of people in remote Indigenous communities?*

There are a number of practical examples of how communications services are improving the well-being of people in remote Indigenous communities however there is a long way to go.

Some examples from the recent Indigenous Focus Day highlight the importance of activities being locally driven as it leads to a much greater chance of sustainable success and utilises local assets and community.

1. Digital Inclusion Mparntwe (Alice Springs) - collaborative project across 5 town camps focussed on education and healthcare and working with accessible phone boxes as some people don't have mobiles. Every town camp needs phone reception and Internet access, including staffing support such as the inDigiMOB Digital Mentors.
2. Tjuntjuntjura projects - Marlpas (friend and companion) and Mentors (inclusion workers) working together - two way learning and the creation of relationships. Optus small cell installed at roadhouse. CRC in Tjuntjuntjura has computers, community radio, transitory migration that results in a shifting population makeup and size (200 - 2000). A relationship of collective sharing resulting in individuals needs being met. Teachers that are local and culturally aware are utilised.
3. Remote Community Library Services - NT library has 16 libraries in remote communities run by local councils and free WiFi is being run out to 46 communities to enable access to library resources when they don't have a physical library. Cloud based storytelling and storage and expanding services available to remote communities.

Models such as the aforementioned inDigiMOB are worth looking to replicate and learn from as they allow communities to decide what is of value to them in developing digital literacy. This increases local ownership and greater sustainability and impact.

We would also suggest strongly that policy and decision makers need to spend a lot more time in and with remote indigenous communities to understand what is needed²¹, what is possible and what can be done to support the communities with technology.

²¹ Corporation, Australian Broadcasting. "Self-Determination and Respect for Remote Indigenous Communities on Big Ideas." ABC Radio. Accessed July 19, 2018. <http://radio.abc.net.au/programitem/per0moo4MD?play=true>.

7. What skills do people need to get the most from their digital technologies, and where can they learn these skills?

People living and working in regional and remote Australia require to a range of digital skills to get the most from their digital technologies. The key emerging skill required is that of problem solving. Learning is often device related or specific to one technology so the ability to learn how to think around and through a problem is critical. This skill can be applied to both hardware and device problem solving through to understanding how to evaluate and critically understand information on the Web.

Learning digital skills requires appropriate, easily accessible and usable online resources in addition to well-equipped community learning facilities. This is another reason why broadband in regional areas needs to be affordable and fast.

Important to learning success is also an appreciation of the value proposition put forward by digital i.e. (way it will change their life, work and wellbeing) and the ability to adapt to new tools devices and applications. The need exists also to enhance digital and general digital ability beyond the simplest levels. A study of digital learning course in the City of Melbourne indicated that well over 70 percent of courses available were for over 55 year olds and deemed to be at basic of introductory in level²².

Offline print resources are important to reinforce learning activities as well as in community mentoring that organisations such as men's sheds, women's sheds, libraries and neighbourhood houses could be heavily involved in. The opportunity exists to set up digital engagement centres or hubs across regional Australia.

More resources in particular need to go into local libraries to support digital literacy skills over a long period of time. The necessary infrastructure and services is already there, staffing, buildings, mobile libraries and computers etc. and libraries are already doing some of this work with communities.

We know little about what digital learning is offered where and what is required in regional and remote Australia and therefore need to develop a digital ability roadmap as part of a broader digital ability improvement strategy if we are to achieve maximum benefit over time. It is important to understand that a variety of learning methods are required that are flexible and non-prescriptive so as to meet community needs. It should identify and utilise local mentors as well as working closely with local communities to understand the needs and this is especially the case with Aboriginal and Torres Strait Islander communities. As such we recommend as part of the RTPS a strategy to improve the digital ability of regional and remote Australians is recommended.

Recommendation 15 - That a digital ability improvement strategy be developed and implemented. Such strategy needs to reflect the variety of learning methods required to meet community needs and support existing infrastructure such as public libraries and community centres.

²² Infoxchange [unpublished] 2017

8. *Have you had ongoing issues affecting your satellite or fixed wireless broadband service? If so, how have you overcome these issues?*

Nearly half the complaints received by the Telecommunications Industry ombudsman last year identified customer service as the key issue²³. We note also that a new report from ACCAN²⁴ indicates that consumers are unhappy at Telco complaint resolution speeds in particular. While there is no comparison in either report identifying urban versus regional complaints and whether they be regional satellite or fixed wireless it would be reasonable to conclude that issues affecting regional and remote consumers are likely to be on the lower end of the scale.

The ACCAN report indicates that it takes an average of 13 days for complaint resolution, but for those with more difficult issues times blow out to 2 months. The quickest method of problem resolution is in-store which given the geography of regional Australia this is likely to be a costly and underutilized pathway for regional and remote consumers and again points to regional consumers being disadvantaged.

We note the work of Better Internet for Rural Regional and Remote Australia²⁵ in particular for sharing information to assist individuals' resolve a large range of problems associated to telecommunications. In doing so we believe this should be supported much more strongly by a significant improvement in support by Telco's as the need that saw BIRRR form in the first place indicates a massive technical support gap.

As evidenced by BIRRR and the ACCAN report customers are spending days trying to sort out straightforward things like changing a plan, updating contact details, and general account inquiries and we believe that this is not acceptable for regional and remote people. We agree with the CEO of ACCAN in saying that it's time to shift the balance back to Telco's so that customers are not carrying such heavy costs to maintain their essential telecommunications services.

“Poor customer service by the industry shifts costs from providers to their customers, who are experiencing loss and disruption by spending far too long trying to resolve issues.”²⁶

Recommendation 16 - That an RTPS incorporate acceptable and continuously improving published KPIs for service delivery and product support for regional and remote Australia.

²³ https://www.tio.com.au/_data/assets/pdf_file/0018/250911/Telecommunications-Industry-Ombudsman-Annual-Report-2017.pdf

²⁴ “CAN YOU HEAR ME? Ranking the Customer Service of Australia’s Phone and Internet Companies.” ACCAN. Accessed July 23, 2018. <https://accan.org.au/our-work/research/1523-can-you-hear-me-ranking-the-customer-service-of-australia-s-phone-and-internet-companies?highlight=WyJoZWYlI0=>.

²⁵ <https://birraus.com/>

²⁶ <https://www.itwire.com/business-technology/83710-telstra,-optus-get-low-ranking-on-consumer-customer-service-scorecard.html>

9. *If you are in an area with access to the Sky Muster satellite service and you have not taken it up, why not?*

We refer the committee to our colleagues at BIRRR who have extensive detail in this regard.

10. What economic or social indicators could be used to guide investment to further improve mobile coverage?

There are a number of economic or social indicators that could be used to guide investment to further improve mobile coverage. The Australian Digital Inclusion Index (ADII) is an excellent indicator to begin with however in relation to some cohorts the data needs to be treated with caution especially for indigenous populations. The question is which one or mix of indicators provides the best data to inform decision-making and which ones with are valuable over time.

If the ultimate outcome is to develop a strong evidence base for future technology directions and scalability of technology investment forecast for the regions then adequate funding support needs to be in place to oversee the data collection analysis and distribution. In this context some of the data points worth investigation could include:

- Local Digital profiling and benchmarking against urban experience comparing common data points
- Existing infrastructure within a community – tracking data use, internet speeds, traffic size time of day, industry needs - ongoing and seasonal etc.
- Current MBSP guidelines – Backhaul data analytics etc.
- Population, size and nature of populations e.g. students, businesses, and community demographics, travellers within a region
- Overtime, data sets looking at internet use and future need
- Health indicators – e.g. differential in health outcome for ATSI and rural and remote communities.
- Digital ability and skills development
- Distance from a regional centre = remoteness
- Willingness to invest - co-investment models

It is important to understand what data points are valuable and how they can be maintained over times as new data points are bought into the digital inclusion equation will be a challenge. We recommend that the government invest in developing a set of social and economic measures to guide investments in better broadband and mobile coverage for community benefit.

Recommendation 17 - That the Australian government commission the development of a set of social and economic measures to guide investments in better broadband and mobile coverage for community benefit.

11. Is information readily available regarding how to use devices to improve mobile reception in areas with poor coverage? E.g. information about external antenna equipment?

Information regarding devices and how to improve reception is not readily available. The recent ACCAN report into customer complaints gives some insight into service level failure by Telco's, which we see as an indicator into both the availability, and ease of use of consumer information.

An RTPS should look at how information is gathered, kept current and disseminated in such a way as to ease the burden for regional consumers. The BIRRR Facebook page for example works as one good way of sharing current information. The question as to whether the government could fund a support or help service in concert with these initiatives needs to be considered.

12. What emerging digital services will be of most benefit to regional businesses and what are the data needs of these services?

The Alliance sees all digital services as equally important to those living and working in regional and remote Australia and work needs to be done to ensure that the benefits are understood and realised. This we believe can be accomplished within the framework of a dedicated regional telecommunications policy.

Whilst there are some emerging digital services that need to be supported with increased data and associated services such as high-speed connectivity to high-spec data centres, mobile communications for voice and data remain the most important issue for remote and rural Australians. Currently there is a very low penetration of mobile coverage in remote Australia. Despite high demand, market failure means that service providers will not independently invest in further coverage in remote Australia.

13. What broadband services are people using other than those available through the NBN?

There are a mix of technologies such as cellular mobile broadband, Non NBN satellite, ADSL, Local Wireless networks, LTE private networks and public WiFi to name a few. The question is how can we reach all regional and remote Australians with adequate, affordable and ubiquitous coverage and how do emerging technologies like 5G blend into the mix. We recommend that a wide range of technologies suitable to regional Australia be supported by the RTPS so as to encourage continuous improvement and innovation.

Recommendation 18 - That a wide range of technologies suitable to regional and remote Australia be supported by the RTPS to encourage continuous improvement and innovation including locally controlled data/telephony networks.

14. How can more competition be encouraged in the provision of broadband services in regional Australia?

Competition as the singular model for telecommunications in regional Australia would be highly unlikely to be successful given issues of geography, the actual nature of the market and the limited size of the market.

To ensure equity of service provision for those living and working in regional and remote Australia and especially for those subject to a successful implementation of the new Universal Service Guarantee the government has no choice but to intervene in the market.

A dedicated RTPS will be an important vehicle to provide clarity about the nature and level of government commitment. Such a policy should take into account the levers for competition and understand when and where government needs to invest to reduce the chances of market failure and determine how long that investment should continue. We recommend that work be commissioned to define the market interventions required to foster competition where feasible in regional and rural Australia.

Recommendation 19 - That the Australian government urgently undertake work to define the necessary market interventions required to support competition where economically viable, in regional and rural Australia.

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