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Developing an appropriate telecommunications strategy for remote Australia

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Abstract

Access to reliable digital communication technology is the norm for most Australians. The exponential growth of smartphone use continues to revolutionise the way in which Australians conduct their personal and professional lives. Remote Australia, however, has not been able to fully engage and participate in the digital revolution because of a lack of adequate infrastructure, affordability issues and, for most, poor digital literacy. Unlocking the digital potential of the bush has the potential to ignite economic growth in remote areas, including Aboriginal and Torres Strait Islander communities. There is a need for government to better understand remote regions' digital aspirations and priorities.

The Broadband for the Bush Alliance (the Alliance) brings together organisations that seek to advance the digital capacity and capability of remote Australians. The Alliance believes that without a targeted, well-resourced, evidence-based strategy, remote Australians will be left to play 'catch up' with the rest of the world. The Alliance has developed a number of policy papers that can assist in the development of an appropriate telecommunications strategy. This paper presents how such a strategy should be developed and what it should encompass. It considers:

1 the expansion of mobile coverage;
2 getting digital infrastructure right;
3 smart 'last mile' solutions for small towns and communities;
4 affordable pricing for mobile calls in remote and rural Australia;
5 improved digital literacy; and
6 improving Indigenous ICT education programs.

Introduction

High-speed and affordable telecommunication is now a foundation stone of modern society, offering widely recognised economic and social benefits. High-speed broadband is no longer cutting-edge technology and connectivity around the world is transforming our society with new ways of accessing services and information. In Australia, access to reliable digital communication technology is the norm and mobile broadband subscriptions have now outnumbered fixed one by a ratio of 3:1 (UNESCO 2014a). Australians have enthusiastically embraced the use of broadband in their everyday lives, including being 7th in the world for use of social media (UNESCO 2014b). The National Broadband Network has been promoted as providing affordable and ubiquitous broadband services to 100% of Australians. However, without a dedicated strategy, remote and rural Australians are likely to be left out of the national and global digital economy.

Remote Australia remains largely disconnected from the digital revolution due to a lack of adequate infrastructure, affordable and reliable services, and, for most, poor digital literacy. It is well documented that people living in remote areas have lower incomes, employment rates, and education attainment, and these trends are exacerbated in the Aboriginal and Torres Islander population. The digital exclusion of remote Australians will inevitably contribute to widen inequalities between remote and non-remote Australians if we don't act now. This is why the Broadband for the Bush Alliance (the Alliance) was formed in 2012 and has a growing membership of organisations that are committed to the digital inclusion of remote and rural Australia. The Alliance

believes that there is an urgent need for a targeted and well-resourced Remote Telecommunications Strategy (RTS) to ensure that remote Australians are not left behind. A RTS requires a multi prong approach which addresses mobile coverage, appropriate infrastructure, pricing and digital literacy issues.

Expansion of mobile coverage

The findings of the 2011-2012 Regional Telecommunications Review (RTR) (Australian Government 2012) show that mobile communications is the most important issue for remote and rural Australians. Indeed, access to broadband through mobile devices has become the medium of choice for all Australians, particularly in remote areas where people are regularly travelling or working outdoors. Currently there is a very low penetration of cellular mobile coverage in remote areas of Australia. Despite high demand, market failure means that service providers will not independently invest in further terrestrial coverage in remote Australia. A key inhibitor for remote areas is that mobile delivery is currently not part of the NBN business plan, limiting the option of satellite backhaul for mobile services.

Recent partnerships between the Western Australia and Northern Territory Governments and Telstra have enabled expansion of mobile coverage to additional remote communities where existing fibre optic backhaul permitted. However, more is needed and urgently. The current $100 million Mobile Black Spots initiative of the Federal Government, aimed at improving mobile coverage and competition in regional Australia, is unlikely to address the needs of remote and rural communities. The program is designed to provide in-fill and cover large population areas with sustainable markets such as transport corridors and tourist destinations, limiting the eligibility of small remote centres and low socio-economic areas.

Therefore, the Alliance recommends dedicated funding to expand mobile coverage in remote areas and importantly, the rational use of existing infrastructure (such as towers and satellite capacity) and micro-cell technology to lower the capital and operational costs. This should be underpinned by a joint government and industry feasibility assessment of providing lower cost backhaul for cellular mobile using both terrestrial microwave and satellite technologies, to take advantage of the window of opportunity to be afforded by the launching of the two new NBN Satellites.

Getting digital infrastructure right

The Government's focus on investment in the national broadband infrastructure ignores the need for continued upgrade and expansion of remote telecommunications infrastructure. The NBN policy (the 1,000 premises rule) fails to connect remote towns and communities in proximity to existing fibre-optic infrastructure to the terrestrial NBN network. The NBN Co network extension policy is an optional process that places financial burden on communities wishing to connect to NBN terrestrial services. The Alliance recommends the Government commits to allocating assistance funding to connect remote towns and communities to the NBN where existing legacy fibre- optic routes are in close proximity. Additionally, the Government needs to invest in remote region black spot programs to address the provision of telecommunication infrastructure where commercial telecommunication companies require incentives to invest in priority new infrastructure.

Smart 'last mile' solutions for small towns and communities

One-size-fits-all approaches regularly fail in remote Australia. Flexibility in programs is required to adapt to community needs and unique circumstances. For example, the NBN direct-to-premises satellite services approach fails to take into account the possibility that sharing broadband services may be appropriate in some circumstances. Assessing Wi-Fi and other platforms for their effectiveness for local access in remote communities where backhaul exists needs to also be considered as part of a RTS. With the high take-up of mobile devices, WiFi enables access anywhere in the community, simplifies the process for getting connected, and enables cost-sharing for people

who do not wish to sign up for a billed satellite service. However, NBN does not currently have a satellite product that allows WiFi sharing. More online community access facilities are also needed provide access, training and support for people without personal ICTs, including the elderly, travellers, and low income groups.

Affordable pricing for mobile and broadband services in remote Australia

Pre-paid mobile and internet services are the preferred option for Indigenous and low-income people where coverage is available, as they enable people to manages usage costs. However pre-paid mobile calls and data usage rates are significantly higher than for billed services. Mobile, data and pre-paid services are not covered under the Universal Service Obligation, which only provides cost equalisation for fixed line services and public phones. The 'extended zones' tariffing scheme, introduced in 2001 to provide local call rates to neighbouring regions in remote areas has not been extended to mobile services, making many calls at STD rates. Further, with the NBN satellite products now being designed, there is not currently a pre-paid option to reduce the potential for bill shock from excess usage.

The Alliance recommends the introduction of affordable mobile and broadband products that meet the needs of remote users. Further, the costs of equipment maintenance and upgrades should be borne by the supplier to ensure reliable ongoing access, not just more redundant technology cluttering rooftops.

Improving digital literacy

The challenges and costs associated with accessing digital training programs and engaging with experts for remote Australians cannot be underestimated. The fact that many of the existing digital programs are targeted exclusively at NBN early release sites, explicitly precluding towns and local governments not in these areas is further impending access to training for most remote Australians. There is a need to develop specific programs for remote Australians to ensure they have the opportunities to gain the skills to participate in the global digital economy. Programs to improve online presence and strategies for remote micro and small businesses should be given priority.

Improving Indigenous ICT education programs

High levels of digital inequality still exist in many remote Indigenous communities around Australia. Indigenous Remote Communications Association (IRCA) highlights this point, saying 'most remote Indigenous people currently have limited access and usage of ICTs', and further that, 'limited access to IT facilities, training, relevant on-line content and service delivery, and affordable broadband services will increase the digital divide (Indigenous Remote Communications Review unpubl.)'. There is an opportunity, through appropriate use of the NBN and targeted programs, to build digital literacy and engagement and significantly improve remote Indigenous communications and capacity. Also, with the rapid take-up of mobile technologies in remote communities, mobile services and applications are becoming a key enabling technology for remote communities.

Indigenous and community organisations need to play a greater role in program development and delivery to ensure training, access and support are tailored to the specific needs and context of individual remote communities. This promotes engagement and empowers Indigenous people to take ownership and responsibility for community services.

Conclusion

Remote Australians are heavily reliant on effective communication services to keep in touch, share information, promote businesses, and access services and emergency information. It is critical that remote Australians have equitable access to broadband infrastructure, mobile services and digital literacy programs as other Australians to enable participation in the digital economy.

It is time to act and commit the resources necessary to develop and implement a Remote Telecommunications Strategy to ensure digital inclusion of remote Australians. The Broadband for the Bush Alliance is keen to actively assist with the design and rollout of appropriate programs to ensure that remote Australians are able to fully reap the benefits of the worldwide digital revolution.

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