SUBMISSION TO THE PRODUCTIVITY COMMISSION TELECOMMUNICATIONS UNIVERSAL SERVICE OBLIGATION INQUIRY

This submission does not attempt to address all the matters raised in the Issues Paper as some relate to areas that are beyond our scope and expertise. Rather, we have focussed on particular aspects which can be broadly described as approach, principles and scope, as well as addressing particular questions from the Issues Paper and Community Roundtable Discussion agenda paper prepared for the Roundtable held in Alice Springs on 7 July 2016.

Approach

Discussions around the existing USO and future arrangements have tended to adopt a minimalist approach i.e. what is the minimum that should be provided? Our view is that while a minimalist approach was appropriate when there was a single telecommunications technology (the PSTN), such an approach is no longer relevant given the range of technologies which have been developed, each according to different standards and protocols. Attempting to determine what a minimum service standard should be in this environment runs the risk of pitting one type of technology against another and is likely to result in less consumer choice, potentially widening the existing digital divide. Lack of choice is already pervasive in remote and very remote[1] Australia and there is little to encourage market competition among providers (for example, some users in very remote areas are essentially "locked in" to a satellite solution through the National Broadband Network even though alternative backhaul infrastructure is available). Our Committee members report frequently being on the receiving end of community frustration with the lack of alternative solutions available to those in outer regional, remote and very remote areas. Instead, we believe that a new USO should facilitate choice; the NBN is not necessarily going to meet the needs of all Australians. Furthermore, the telecommunications needs of remote and very remote Australia are not homogenous. Accordingly, a new USO needs to be flexible and facilitate choice.

A holistic approach should be adopted not only towards the content of a new USO but also in the ways in which particular options (including funding options) are evaluated. In addition to considering immediate costs/returns we urge the Commission to consider both direct and indirect benefits that may accrue through, for example, improved health and education outcomes, and by enabling greater participation in the economy and increased business productivity. For example, telehealth is an area where there may be significant savings. These potential savings should be factored into the decision making process.

At a policy level it is our view that regional and remote telecommunications has been used as a political football to the detriment of those who live, work and visit these areas. While it may be outside the role and scope of the Commission's Inquiry, we nevertheless would urge the Commissioners to recommend that the Government seek bipartisan support for any new USO.

[1] Throughout this submission our usage of the terms 'remote' 'very remote' and 'regional' refer to the areas identified as such by the ABS Remoteness Index.

Principles

We believe the following principles should underpin the development of any new USO or Customer Service Guarantee (CSG):

- Telecommunications (including fixed and mobile, voice and data) are an essential service, not a luxury;
- There is a digital divide in Australia and a USO-CSG (as a Government instrument) has a key role to play in creating the conditions that will help lessen this divide;
- Responsibility for implementing a new USO-CSG should not necessarily be the sole domain of the public sector, nor a single provider; rather we believe there is a collective responsibility that should be borne by Government, nbn co and retail service providers;
- Don't leave anyone behind; any new USO-CSG should not leave anyone, anywhere, any worse off.

Scope

A new USO needs to address more than the simple provision of a voice service and physical infrastructure. In addition to availability it should address accessibility, affordability, quality of service and equity, consistent with the holistic approach we advocate. This would also allow for the inclusion of elements which are currently separate (e.g. the USO and the Telecommunications CSG) to be brought under one umbrella (one document), consistent with the Government's reducing red tape agenda. This would also make it easier for consumers to access this information.

Addressing accessibility, affordability, quality of service and equity play a critical role in addressing the digital divide[2]. Accordingly we urge the Commission to quantify the cost of the digital divide to the Australian Government and to consider the costs of alternative models for a new USO-CSG within this context. Lloyds Bank in the UK has recently released a Consumer Digital Index and calculated that there would be at least £3.7B in savings for UK consumers if the financially and digitally excluded were able to realise online opportunities[3].

Addressing these elements is also important to facilitate improvements in the productivity and competiveness of businesses in remote and very remote areas. Owing to the market failure that characterises these areas it is not possible to rely on market competition to provide improvements in terms of availability, accessibility, and quality of service to the same extent that is possible in metropolitan areas. In our experience the arrival of new technologies has not resulted in greater competition in these areas in any substantive way; Telstra remains the dominant supplier of a broad range of telecommunications services and is the monopoly supplier of last resort for the domestic transmission carriage service. Additionally, this lack of choice extends to those who work in remote parts of the NT but may reside in the larger urban centres, because geographic coverage from providers other than Telstra rarely extends beyond the fringes of urban areas[4]. Anyone who lives and works in these areas, as well as people who regularly travel to more remote locations, essentially have no choice other than to rely on Telstra for their mobile coverage.

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[2] Those groups that are on the wrong side of the digital divide include Indigenous, remote and very remote Australia, the disabled, seniors and those on low incomes. The SEIFA Index could be used as a guide in identifying geographic areas of disadvantage but we suggest it not be the only measure used.

[3] Lloyds Bank. 2016. *Consumer Digital Index Benchmarking the Digital and Financial Capability of UK Consumers*. Available at https://www.accenture.com/t20160218T103231__w__/us-en/_acnmedia/PDF-5/Accenture-Banking-Lloyds-Bank-UK-Consumer-Digital-Index-2016.pdf [accessed on 8/7/2016].

[4] By major urban areas we mean Darwin, Palmerston, Katherine, Tennant Creek and Alice Springs.

In keeping with facilitating choice we believe that any new USO-CSG should be as 'technology-neutral' as possible in order to accommodate the existing array of technologies available as well as inevitable new developments. For example there should be maximum fault repair times regardless of the type of technology used to deliver services. Similarly, there should be minimum network standards in relation to speed, committed information rate, jitter, packet loss and reliability and latency. In our study of the digital capacity and capacity of NT workplaces[5] speed and reliability in particular emerged as a key barrier for workplaces in remote and very remote areas, in terms of being able to utilise applications (such as cloud services, web and video-conferencing) that have the potential to improve productivity and efficiency and reduce costs. Just over 66% of participants in our study said that they would like their workplace to be able to utilise cloud services and video-conferencing if they had adequate internet. A new USO-CSG also needs to include mobile services (voice and data) given that the same study revealed a heavy reliance on mobile devices (84.8%) by all workplaces. Further information regarding the study is provided as an attachment.

In order to ensure that a new USO-CSG does not leave anyone worse off it should include a requirement that existing infrastructure, such as payphones in remote outstations and at isolated roadhouses along roads and highways, is retained and maintained under a "grandfather" clause. However to ensure that people reliant on this as their only form of telecommunications do not get stuck with outdated/obsolete infrastructure the new USO/CSG should also have a clause which requires that there be an additional telecommunications option made available in these areas within a particular timeframe. The latter requirement addresses choice and is more likely to encourage competition and investment rather than simply giving out a "free pass" to existing providers for simply maintaining the status quo in areas where the status quo is clearly inadequate.

A new USO-CSG should clearly state the specific responsibilities of Government, nbn co and retail service providers of telecommunications technology. Failure to do so will inevitability result in buck-passing between these groups and leave the consumer in a position where they are not able to seek resolution and redress in the event of disputes. Transparent reporting requirements should apply to all three groups.

Responses to specific questions raised in the Issues Paper

Can the NBN be treated as an alternative (wholesale) USO service?

We do not believe the NBN as currently constituted can be treated as an alternative or default (wholesale) USO service for several reasons. Firstly, the requirement for nbn co to provide a commercial ROI to government does not sit comfortably with being a USO provider given the costs of providing services in some areas. The NBN does not address mobile phone coverage and, as indicated above, being a wholesale provider of infrastructure, is not able to address all the issues associated with affordability, quality of services, accessibility and so on; aspects of these are matters for RSP's. We reiterate our view that a new USO-CSG is a collective responsibility of Government, nbn co and RSPs.

How frequently should universal services policy be reviewed?

Given the rapid changes in technology we believe any universal services policy/new USO-CSG should be reviewed at least every three years. In the interests of efficiency, such a review could be included as a mandatory component of future Regional Telecommunications Reviews.

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[5] RDANT. 2016. *Meeting the Challenges of a Digital Economy. Digital workplaces in Outer Regional, Remote and Very Remote areas of Australia: experiences from the NT. Summary report*.

Is it reasonable that telecommunications users in regional and remote locations do not bear more of the actual infrastructure costs of providing telecommunications services?

We do not believe that regional and remote users should have to bear more of the actual infrastructure costs for a range of reasons including:

- Telecommunications (fixed and mobile, voice and data) are an essential service;
- The Australian Government is moving to provide more and more government services in an on-line only environment, thereby essentially requiring all residents, regardless of where they live or how much it costs, to take-up the internet;
- The small resident taxpayer population, particularly in remote and very remote areas, means that there is a very limited capacity to substantially contribute more to the actual infrastructure costs;
- Equity – if regional and remote users have to bear more of the actual costs, so to should users in inner regional and metropolitan areas;
- Residents in remote and very remote areas already pay more for a whole range of goods and services and any requirement for consumers in these areas to pay more for their telecommunications will exacerbate existing disadvantage. It will stifle the uptake of new technologies which are likely to lead to improved health and education outcomes, and improved business productivity and participation in the labour market.

Roundtable questions

What should be included in a minimum level of retail telecommunications services?

Refer to our responses under Approach, Principles and Scope above.

Emergency services – what level of reliability is needed/feasible/desirable?

Such services need to work anywhere, anytime, 100% of the time.

Unmet telecommunication needs, factors causing these needs and impacts in your local area?

RDA NT has consistently identified the need for investment in telecommunications across the region, current NT infrastructure lags behind many other regions. Across the NT there are still places that:

- lack a standard telephone service (e.g. remote family outstations);
- lack mobile coverage (e.g. islands, smaller communities, outstations, much of the Stuart, Victoria and Barkly Highways; major and minor roads. As a specific example, the distance between Alice Springs and Tennant Creek is 500km; there is no reliable mobile coverage along 355km of this stretch of the Stuart Highway – travellers have to rely on public payphones at Aileron, Wycliffe and Wauchope roadhouses);
- rely on the old HCRC network (e.g. pastoral stations); and
- do not have reliable satellite connections with speeds that allow them to carry out their day-to-day business.

Many of the factors that have resulted in the unmet needs described above can be traced back to market failure in remote and very remote areas of the NT. Our small population, dispersed over a very large geographic area, attracts little interest from providers (despite there being unmet demands e.g. for greater mobile coverage) because the potential revenue for providers from operating in these areas is significantly less than can be gained from metropolitan markets.

The nature, extent and impacts of some of these unmet needs are described in Attachment A.

Payphones – is there still a case to have them?

Yes. Within the NT there are small settlements whose only telecommunications service consists of a payphone, they lie outside of mobile coverage and where residents are unable/unlikely to take up satellite internet owing to issues such as affordability and communication barriers. If these locations no longer had a community phone they would have no way of contacting the outside world short of getting in a car and driving to the nearest settlement with a working phone/mobile coverage. Clearly this is unacceptable, particularly in the case of emergencies. Living in these areas is not a "lifestyle choice". Until such time there are real telecommunications choices in these small settlements, payphones need to be retained and maintained.

Other

We note that access to information regarding the Inquiry has been essentially limited to those who have an internet connection. Given the subject of the Inquiry and potential for perverse impacts upon those who would most need to rely on a USO to guarantee access to telecommunications services, we strongly urge the Commission to consider additional ways of disseminating information about the Inquiry and ways in which people can participate, including those who do not have access to the internet. For example, through distributing electronic copies of information to public libraries who can then print out hard copies and make them available to the public.

ATTACHMENT A – Extract of relevant data from the RDANT report titled *Meeting the Challenges of a Digital Economy. Digital Workplaces in Outer Regional, Remote and Very Remote areas of Australia: experiences from the NT.*

In 2014 RDA NT invited Territory organisations to participate in an on-line survey regarding digital workplaces. There were 160 respondents to the survey, representing 108 different organisations[6] across Government, Business, Non-government/community. On the basis of the ABS Remoteness Index 25.6% of participants were situated in Outer Regional areas, 39.4% in Remote areas, and the remainder (35%) in Very Remote areas. The majority of individuals that participated in the survey (63.8%), were based in workplaces that provided goods and/or services to rural or remote areas receiving limited or no telecommunications.

Individuals from small, medium and large workplaces participated in the survey. In terms of industry representation most participants worked in the Other Services sector, followed by the Healthcare and Social Services, Arts and Recreational Services, Public Administration and Safety, Education and Training (Figure 1).

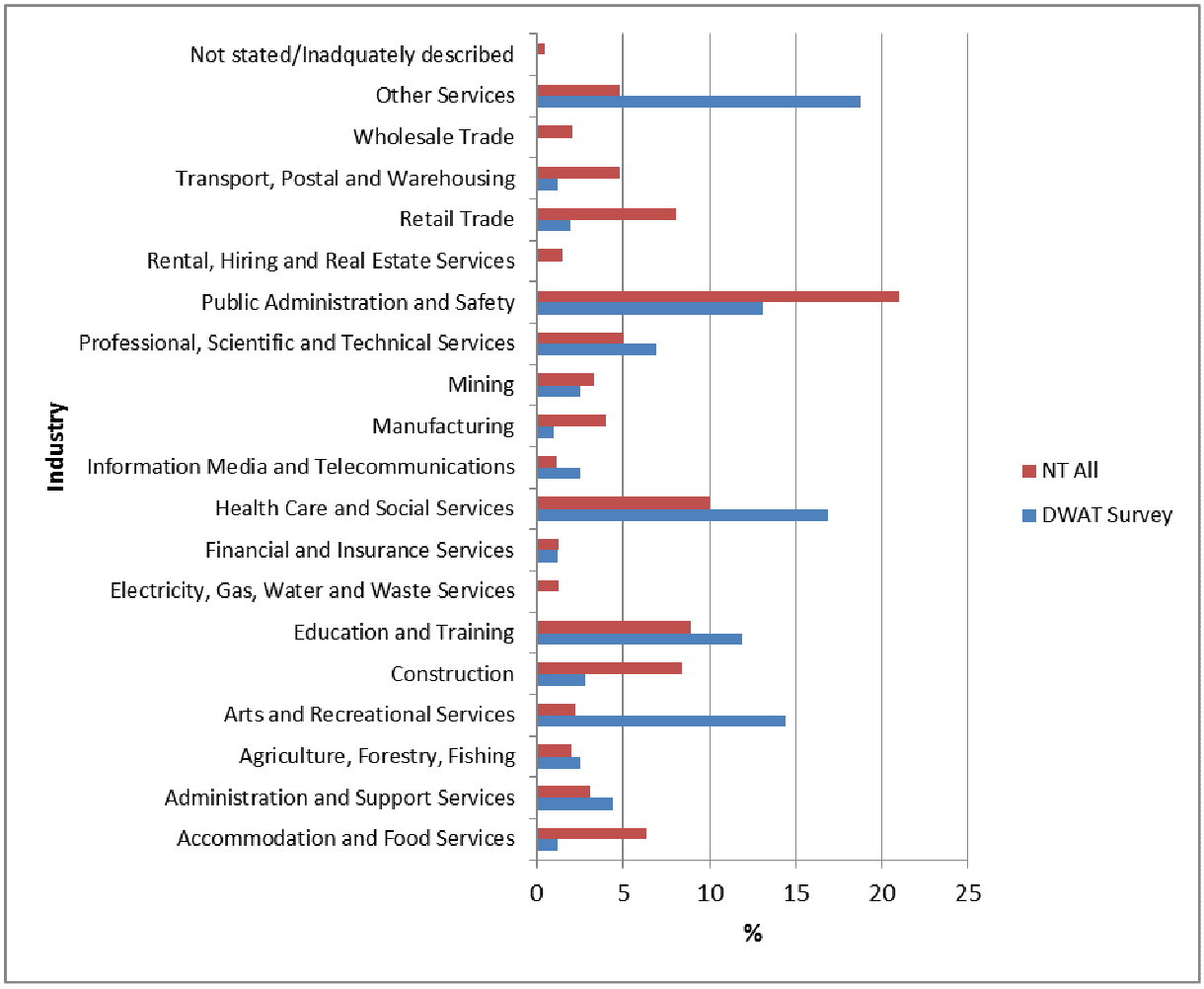

Figure 1. Industry representation in the DWAT Survey compared to the NT as a whole.
Data source: NT All data from the 2011 ABS Census of Population and Housing.

[6] In these counts, service centres of Regional Councils were counted as one organisation. Similarly, regional branches of organisations were not considered to be a different organisation from the parent organisation.

Over 92% of survey respondents believed that internet access is essential for their workplace, and this is particularly the case amongst those situated in Remote areas (97%). Viewed in this context, equity and access to reliable and affordable telecommunications, including the internet, assumes greater importance than might otherwise be the case in metropolitan areas where greater choices and alternatives exist.

In our survey, participants were asked if their level of internet access enabled them to adequately utilise the applications that they used in their workplace. While about three-quarters (75.5%) of participants answered in the affirmative, of the 21.9% who responded negatively to this question speed and reliability were most commonly raised as issues. One participant wrote that the "internet is too slow to run some applications" and another that "internet speeds impede use of multiple forms (email, web, etc) at once" and yet another that "…while we get ADSL2 we only get about half ADSL2 speed". Notably, of these participants, 42.4% relied on satellite connections, 15.1% on wireless and 12.1% on 3G/4G. One participant who relied on satellite connectivity, wrote that:

> *"Our satellite service is well below a standard where we can use cloud services. We are expected to move to digital record keeping yet our internet connection means this is borderline impossible due to slow speeds*".

Another noted that "On satellite we do not get regular usage. [The] internet keeps dropping out".

Even among those participants who indicated that they did have an adequate level of internet access, there were some who still commented unfavourably on the speed and/or reliability of their existing internet connection. One wrote that it was "very slow and frustrating at times", another that "I have had ongoing problems with unpredictable internet disconnections and times of very slow service. This interferes with being able to utilise certain programs". **This serves to highlight internet speed and reliability of service as important issues for workplaces in the Territory, particularly those that rely on satellite connections.** It is consistent with previous observations made by the Broadband for the Bush Alliance, who note that "much of northern Australia will need to rely on satellite telecommunications which is not as good as the telecommunications their city cousins will enjoy, and has inherent limitations"[7].

In terms of location, it is clear from our survey results that the adequacy of telecommunications (internet) services to enable adequate use of applications in the workplace declines with distance from major urban centres (Figure 2). For example, while over 80% of participants in Outer Regional areas said their level of internet access enabled them to adequately utilise their workplace applications, this dropped to only 63% in Very Remote areas.

[7] Broadband for the Bush Alliance, cited in Commonwealth of Australia 2014 op cit, p58.

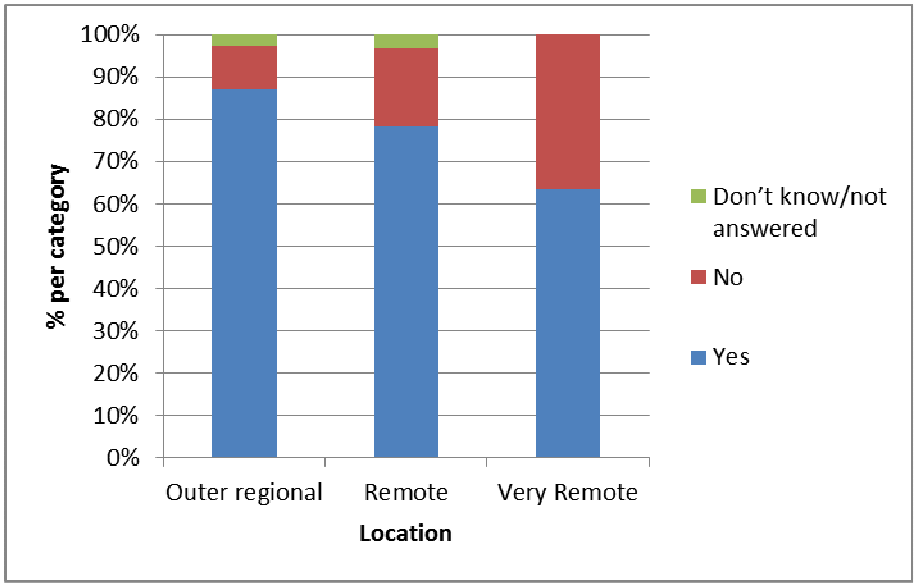

Figure 2. Participants' responses to the question regarding level of internet access to adequately utilise workplace applications, by location.

It should also be noted that our survey results suggested that although most respondents might have an adequate level of internet access to enable them to use their *existing* applications, there are nevertheless *additional* applications that some of these respondents would also like to use, if their internet enabled them to do so. The additional applications most frequently identified were videoconferencing, followed by cloud services. Use of these types of applications may facilitate increased productivity, reduction in costs , and participation in the global economy. **Therefore we make the important point that it is simply not enough to have a merely "adequate" telecommunications service, when competing in a global economic environment.** This is particularly the case for Northern Australia given the Government's Developing the North agenda. The 2015 Regional Telecommunications Review Issues Paper itself acknowledged that "high-speed broadband offers real economic benefits to businesses and communities in regional Australia"[8] (emphasis ours).

Figure 3 shows the types of internet connectivity used by participants in the survey according to their workplace location. Almost 12% rely on satellite which is higher than the national average of 1%. Our survey revealed a high level of mobile device use: 84.4% used mobile phones, tablets and laptops to access and transfer data. This high level of mobile device usage is consistent with ACMA's[9] finding that mobile phone use is significantly higher in regional areas compared to capital cities.

[8] Regional Telecommunications Review 2015. *Issues Paper*, p11. Retrieved from http://www.rtirc.gov.au/issues-paper/ on 15/6/2015.

[9] ACMA. 2015. *Australians Get Mobile*. Retrieved from http://www.acma.gov.au/theACMA/engage-blogs/engage-blogs/Research-snapshots/Australians-get-mobile on 22/7/2015.

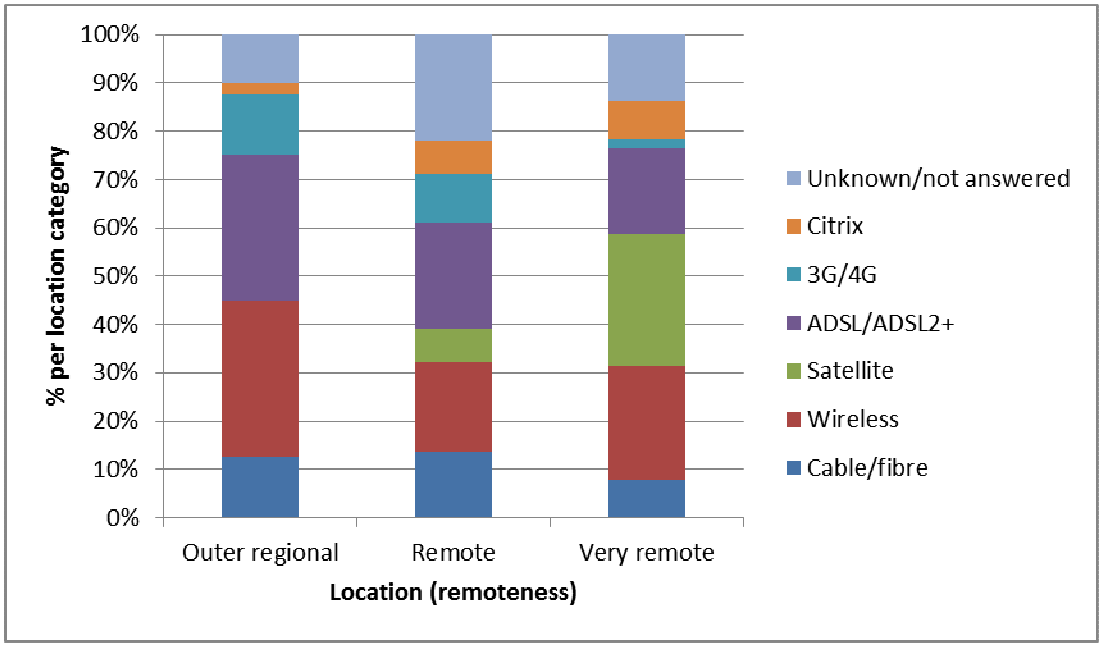

Figure 3. Frequency distribution of connectivity types by workplace location (remoteness).

Our survey also revealed that:

- 61.5% of business workplaces used the cloud compared to around 45% of SMEs nationally;
- Over 70% of participants used ICT to work from home;
- 73.1% of business workplaces used teleworking compared to just under one-third recorded nationally;
- Remote and Very Remote workplaces were slightly more likely to telework (70% and 71% respectively) than respondents in Outer regional workplaces (64.1%);
- 75.5% of participants used the internet to assist with recruitment processes;
- Among businesses, 61.5% used the internet for recruitment, compared to only 34% nationally;
- Nearly 58% of participants said their workplace used online training to up-skill staff.

Collectively these high figures demonstrate the heavy reliance on telecommunications by NT workplaces to mitigate against some the challenges posed by living and working in these outer regional, remote and very remote areas.

Cost Benefits

Previous research identified cost as both a driver and a barrier to Internet adoption, and use of ICT to reduce costs as a potential digital transformation strategy[10]. There is also a widely held belief that the Internet can mitigate or overcome some of the challenges faced in regional areas, including high operational and travel costs[11]. The DWAT Survey aimed to gauge the extent to which Territory workplaces' use of technology had

[10] Deloitte Access Economics Pty Ltd., 2013. *Connected Small Businesses: how Australian small businesses are growing in the digital economy*. p14-16. Retrieved from https://www.deloitteaccesseconomics.com.au/uploads/File/Connected%20Small%20Business.pdf on 22/10/2014.

[11] See Campbell, S., Mason, C.M., Griffith, C., Dane, S.K., Reeson, A., O'Brien-McInnally, B.A., and Kimber, J.D., 2013. *Broadband Impact and Challenges: Realising the benefits from the digital economy*. Australian Centre for Broadband Innovation CSIRO EP1312215. Retrieved from http://www.csiro.au/Organisation-Structure/Flagships/Digital-Productivity-and-Services-Flagship/ACBI-Broadband-Impacts-Report.aspx on 13/1/2015, p6.
Commonwealth of Australia., 2011. *Broadening the debate: Inquiry into the role and potential of the National Broadband Network*. House of Representatives Standing Committee on Infrastructure and Communications. chapter 2,

allowed them to reduce their operational costs and if their workplace used applications such as web or videoconferencing, to reduce travel.

Use of ICT to reduce operational costs

When asked if their workplace use of technology had reduced their operational costs, 55% answered Yes, 35.8% said No, and the remainder were Unsure/did not answer. Estimates of the cost reduction (as a percentage of savings) ranged from 2% up to 80% with the median around 15%.

Of Outer Regional respondents, just under 72% said technology had reduced operational costs, compared to 46.7% in Remote and 53.8% in Very remote workplaces. Except for those users reliant on satellite, the majority of users of all other types of Internet connectivity said that use of technology in their workplace had reduced their operational costs.

The overwhelming majority (66.7%) of satellite users said that use of technology in their workplace had not reduced their operational costs. Given the majority of satellite users are situated outside of the four main urban areas, it is likely that costs such as transport, power and water are sufficiently high that technology alone cannot offset operational costs. The high cost of satellite services compared to other types of connectivity is also likely to be a factor.

Use of ICT to reduce travel

In the DWAT survey 55% of participants said Yes, 35.8% said No, and the remainder were Unsure/did not answer when asked if their workplace used applications such as web or videoconferencing to reduce travel.

While no substantial differences were apparent between workplace types or remoteness locations, significant differences emerged between user groups in urban and non-urban locations. While the majority of respondents in urban areas (63.6%) said that they used applications to reduce their travel, the majority of respondents in non-urban areas (59.6%) said they did not. The majority of respondents in non-urban areas (57.7%) cited lack of reliable connectivity as the reason they did not use applications to reduce travel costs. In contrast, most respondents in urban areas that did not use applications to reduce their travel (41.2%) said there was no need.

All participants who answered No to the travel question were asked why they did not use applications to reduce their travel, regardless of their workplace location. These combined results indicated that the most commonly cited reason was lack of reliable connectivity (41.9%), followed by no need or lack of applicability (23.2%) and slow service (speed) (9.3%). Apart from one participant who identified cost as a factor, another who referred to a "lack of policies, procedures and resources", and another who said it was "not advanced", all the others identified a lack of appropriate infrastructure/technology.

When responses to this question were compared with the users' connectivity types, it reinforced the notion that connectivity was a major issue. 88% of respondents reliant on satellite said they did not use applications such as the web and video conferencing to reduce their travel, compared to 58.8% of those on ADSL2/2+ and 54% using wireless who said they did.

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p101, 123-125, 128. Retrieved via http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_committees?url=ic/NBN/report.htm on 5/10/2015.

Commonwealth of Australia., 2015b. *Regional Telecommunications Review 2015 Issues Paper*. p9-11. Retrieved from https://www.communications.gov.au/sites/g/files/net301/f/RTIRC_Independent_Committee_Review_2015_FINAL.pdf on 17/6/2015.

Northern Territory Government and Department of Corporate and Information Services., 2015. *2015 Regional Telecommunications Review submission*. Retrieved via http://www.rtirc.gov.au/submissions/ on 1/9/2015, p2.

Throughout our survey, satellite connectivity was highlighted as being costly, slow and unreliable. The extent to which the launch of the Skymuster Service will ameliorate some of these issues is currently unknown. Meanwhile, the 'single solution' policy approach of the Australian government and the NBN, which essentially locks Very Remote respondents into a satellite solution, is clearly problematic. It is also at odds with the NT Government aim to work towards terrestrial-based connections wherever possible[12]. Unless respondents in Remote and Very Remote areas are given access to connectivity solutions other than satellite (i.e. are given choices), the cost benefits associated with ITC and Internet use are unlikely to materialise.

END OF SUBMISSION

[12] NTG and DCIS 2015, Op cit.