

## Regional Development Australia Wheatbelt Inc.

### Submission to Productivity Commission: Issues paper; Telecommunications Universal Service Obligation – August 2016

#### 1 INTRODUCTION

Regional Development Australia Wheatbelt Inc. (RDA Wheatbelt) makes this submission as a stakeholder in the rural and remote location of the Western Australian Wheatbelt. RDA Wheatbelt is a locally based, not-for-profit, incorporated association governed by a volunteer committee, and funded by the Federal Government.

The Wheatbelt region of Western Australia has a population of approximately 75,000 people dispersed across 155,000 square kilometres in over 200 communities and 42 Local Government Areas. There are no cities in the region and the largest town (Northam) has a population around 6,500 people.

The key role of RDA Wheatbelt is to build strong and effective partnerships across all levels of government, industry, community groups and other regional stakeholders to boost the economic capability and performance of the Wheatbelt.

As part of this role RDA Wheatbelt took the early initiative and initiated the Wheatbelt Digital Action Plan in 2013. A critical aim of the plan was to identify strategies that would take full advantage of, and ensure comprehensive utilisation of NBN infrastructure in the region through identified opportunities. Further work around optimisation of opportunities commissioned by RDA Wheatbelt has reinforced the importance of an effective telecommunications network for the Wheatbelt<sup>1</sup>. Intermittent and or inadequate access to internet and mobile phone services were identified as an overriding constraint in developing innovative entrepreneurial start-up businesses as well as growing the scale of existing businesses.

While it is anticipated that the NBN will address the extreme extent of these issues, the dispersed nature of the Wheatbelt population and businesses along with an ageing population and elements of disadvantage particularly among the Aboriginal population will continue to challenge accessibility, availability and affordability of telecommunications in the region. As such this is a critical time and opportunity to review regulatory approaches and actioning of practices to ensure equitable universal delivery of telecommunication services for the Wheatbelt.

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<sup>1</sup> Boundless 2016 “Wheatbelt Innovation Report” in review prior to publication.

The structure of the submission has linked the Universal Service Obligation's objectives to provide available, accessible and affordable services to the expanded range of telecommunications that include the internet landline and mobile phone services in regional and remote areas. Relevant case studies highlighting specific issues have been presented.

### Summary: Evolving telecommunications systems and uses

As noted in the Productivity Commissions terms of enquiry there has been considerable change in Australia's telecommunications sector services. This change has occurred both in how the services are used and what they are used for. Several studies undertaken by RDA Wheatbelt highlighted the changes. In a 2013 Wheatbelt study it was found that 97% of participants used the internet for work purposes with 70% using it to communicate with customers<sup>2</sup>.

In addition, other work showed that services were increasingly using the internet to deliver information and support. A review of business support services that could be utilised by Wheatbelt businesses found that all services had an online profile with three quarters of the services making provision for contact and support via email and 13% offering a web chat option<sup>3</sup>. Of note was that 31% of services did not offer telephone contact as an initial option.

In turn it was a similar situation for the Wheatbelt's Aboriginal population, a demographic that faces substantial disadvantage in terms of health and economic participation. A review of business and employment support services for Aboriginal people in the Wheatbelt showed that all services had an online presence and offered telephone contact with 93% making provision for email contact<sup>4</sup>. However given that only 41% of Aboriginal households in the Wheatbelt's more remote and regional areas were connected to the internet<sup>5</sup>, the option of accessing information and services via the internet was highly likely to be reduced.

These examples illustrate the transition of the internet for telecommunications in the WA Wheatbelt to that of a basic necessity for business and supporting disadvantage elements of the population. Similarly the same has or is occurring with mobile phones. Increasingly agribusiness management and marketing Apps are becoming available and are decreasing time lags in crucial decision making processes in areas such as pest and disease management and or achieving optimum commodity prices. As with the internet, mobile phones are increasingly viewed as a critical component of productivity in agriculture.

Equally past research has shown that mobile phone usage in regional and remote Aboriginal communities was substantially increasing particularly among the younger age groups<sup>6</sup>. It was proposed that low rates of internet connection coupled with poor internet connectivity contributed to higher usage of mobile phones in these communities.

Given these changes, RDA Wheatbelt submits that the scope and objectives of the Universal Service Obligation should be extended to include internet and mobile phone services. Correspondingly, as the following section will demonstrate, RDA Wheatbelt believes there is a need for continued Government intervention in wholesale pricing and subsidisation of services of to the disadvantage sectors of the Wheatbelt population and the business sector.

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<sup>2</sup> Wheatbelt Digital Action Plan 2013 <http://www.rdawheatbelt.com.au/>

<sup>3</sup> RDA Wheatbelt Road to Riches Business Support Directory 2016. In publication.

<sup>4</sup> RDA Wheatbelt Indigenous Business and Employment Support Directory 2016. In publication.

<sup>5</sup> ABS 2011. Census of Population and Housing. Based on Place of Usual Residence. Catalogue number 2002.0

<sup>6</sup> Tangentyere Council and Central Land Council (2007) Ingerrekenhe Antirrkweme: Mobile Phone Use Among Low Income Aboriginal People, A Central Australian Snapshot, Tangentyere Council and the Central Land Council, Alice Springs.

## Pricing and service quality for businesses

This section addresses in detail the impacts of telecommunication's pricing on Wheatbelt customers in reference to the appropriateness of objectives of any new universal services policy such as universal availability, affordability and accessibility. As will be illustrated in this section, availability and affordability will be key issues that need to be considered in regard to Wheatbelt households and businesses.

The question of availability defined as the level, price and quality of service being equivalent wherever a person lives or conducts business is particularly relevant to outer regional and remote Wheatbelt communities and businesses. Theoretically the NBN through fixed wireless, fibre and satellite will provide access for all regional and remote communities. However simple economic impact modelling undertaken by RDA Wheatbelt, along with a case study suggest that equitability in the level, price and quality service is at best questionable.

The economic impact modelling focused on the Wheatbelt Sub regions of Avon, Central East and Wheatbelt South that have a proportion of remote communities that will in most cases have to connect to Sky Muster<sup>TM</sup><sup>7/8</sup>. Of note is that this would amount to approximately 18% of households and businesses in those Sub regions which is substantially higher than the estimated national level of 3%<sup>9</sup> and could be as high as 73% in the Wheatbelt South and 49% in the Wheatbelt Central East.

To begin with, Wheatbelt businesses that have to connect to Sky Muster<sup>TM</sup> providers will be at an immediate disadvantage compared to those who have fixed wireless or fibre options or urban businesses (Table 1). The inequities extend across price, data availability and data use options. Under NBN conditions Sky Muster<sup>TM</sup> users are able to access a maximum of 150 gigabytes (GB) a month and can access a maximum of 70 GB during Peak period which is defined as between 7am and 1am with Off Peak being between 1am and 7am.

As table one illustrates the least expensive Sky Muster<sup>TM</sup> plan offers a third (33%) less data per month at 92% higher cost per GB than the comparable fixed wireless/fibre plan which, although 17% more expensive, added just 0.2% to businesses internet costs compared to the equivalent Sky Muster<sup>TM</sup> plan. In addition businesses connected to Sky Muster<sup>TM</sup> plan would only be able to access 10 GB of data per month during what could be termed as business activity periods whereas the fixed wireless/fibre plan offers data access at any time. Added to this was the condition that Sky Muster<sup>TM</sup> data allocations included both down loads and up loads while fixed wireless/fibre plans only included downloads.

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<sup>7</sup> <http://www.nbnco.com.au/content/dam/nbnco2/documents/website-communities-table.pdf>

<sup>8</sup> Three Year Construction Plan 2016 <http://www.nbnco.com.au/learn-about-the-nbn/three-year-construction-plan.html>

<sup>9</sup> <http://www.itnews.com.au/gallery/photos-nbn-coverage-maps-221455>

Table 1 Business cost comparisons between satellite and fixed wireless/fibre plans

Internet providers	Data allowance	12/1 Mps- Plan cost/12 months	Cost per GB/month	Cost % to average business turnover In the Wheatbelt's outer and remote regions		
				Avon (\$54,095)	Central East (\$79,738)	Wheatbelt South (\$110,611)
Satellite- low price plan	Peak- 10 GB Off peak- 125 GB	\$600	\$0.37	1.1%	0.8%	0.5%
Satellite- Medium price plan	Peak- 65 Gb Off peak- 85 GB	\$1,740	\$0.97	3.2%	2.2%	1.6%
Satellite- High price plan	Peak- 70 GB Off peak- 80 Gb	\$2,399	\$1.33	4.4%	3%	2.2%
Wireless/Fibre small plan	100 GB + 100 GB bonus data anytime	\$720	\$0.3	1.3%	0.9%	0.7%
Wireless/Fibre small plan	1000 GB + 1000 GB bonus data anytime	\$1,440	\$0.06	2.7%	1.8%	1.3%

*\*Satellite plan's prices are based on pricing for the lower down and up load speed of 12/1 Mps. The higher heavier load 25/5 Mps speed costs an additional \$5 a month.*

The inequities in level, price and quality of service are further reinforced when a comparison of price of a comprehensive communications package between satellite and fixed wireless/fibre services is made (Table 2). In undertaking the comparisons several adjustments in satellite plan telecommunication packages needed to be made to ensure efficiency. A Wheatbelt IT specialist suggested it would be prudent for remote businesses using satellite plans including a VOIP option to maintain a landline phone option as power outages and climatic conditions could disrupt VOIP connections<sup>10</sup> (This view is supported by the experiences of a business user detailed in the accompanying case study.)

With these considerations taken into account the inequities in overall telecommunication costs for satellite users are more pronounced ranging in the Avon Sub region, from 4% of average business turnover for a 'small' telecommunications package to 7.5% for a large package (Table 2). In comparison a 'small' fixed wireless/fibre telecommunications package would account for 3% of average business turnover in the Avon Sub region with a 'large' package accounting for the same level of cost (3.8%) as the 'small' satellite package. The main difference here is that the 'large' fixed wireless/fibre telecommunications package delivers 94% more combined internet and mobile phone gigabytes for 3% less cost a year than the 'small' satellite package.

<sup>10</sup> Pers. comm. Mr. M. Gillard. Oz Com IT Specialist.

Table 2 Telecommunication cost comparisons between satellite and Fixed Wireless/FTN providers

Business internet/mobile phone & landline telecommunication packages	Small (satellite) package <sup>1</sup>	Medium (satellite) package <sup>2</sup>	Large (satellite) package <sup>3</sup>	Small fixed wireless/fibre package <sup>4</sup>	Large fixed wireless/fibre package <sup>5</sup>
Telecommunication's plan costs- 12 months	\$2,100	\$3,420	\$4,079	\$1,620	\$2,040
Average Business turnover <sup>11</sup>					
Avon \$54,095	3.9%	6.3%	7.5%	3%	3.8%
Central East \$79,738	2.6%	4.3%	5.1%	2%	2.6%
Wheatbelt South \$110,611	1.9%	3.1%	3.7%	1.5%	1.8%

<sup>1</sup> Small satellite package: Internet peak data-10 GB (Off peak 125 GB) + VoIP + 5 GB Mobile phone plan + basic business landline plan

<sup>2</sup> Medium satellite package: Internet peak data-65 GB (Off peak 85 GB) + VOIP + 10 GB mobile plan \$840/12 months + basic business landline plan

<sup>3</sup> Large satellite package: Internet peak data-70 GB (Off peak 80 GB) + VOIP+ 10 GB mobile plan+ basic business landline plan

<sup>4</sup> Small fixed wireless/fibre package: Internet anytime data-200 GB bundled with landline + 5 GB mobile plan

<sup>5</sup> Large fixed wireless/fibre package: Internet anytime data-2000 GB bundled with landline + 10 GB mobile plan

However quality and level of service which is as equally contingent to productivity as costs, are not captured in the cost comparisons in table two. The following case study details the difficulties a regional business faces if connection to fixed wireless or fibre is not available.

### Case Study

The business, located in the Wheatbelt (Under 70 kms from the Perth CBD) is unable to access fixed wireless/fibre internet and relies on a telecommunications package of satellite, mobile phone, mobile Wi-Fi tethered to mobile phone and landline. The cost of this combined communications package was estimated to be about \$3,100 annually.

The reason for this complex mix of telecommunications plans was due to level and quality of the service and the need for the business to meet regular deadlines. The business owner, who is in publishing, originally used a mobile Wi-Fi 4 G device to connect to the internet and retained the device when they connected to satellite (*just in case things didn't work as they should*). In short the satellite connection did not come close to meeting all their requirements in terms of down load and up load speeds which were found to be at times intermittent and could not be relied on when needed. As a result, the satellite connection is used when there are no time constraints with the mobile phone being used for most data down loads and up loads, being the most efficient method.

The business owner also needs to receive and send large data files but finds that files above five to seven Megabytes will not down load or up load. As a result the owner breaks down the file sizes that they have to send and requests senders to do the same. The owner noted that the urban businesses are surprised by this request. Sending high resolution pictures to the business that prints the publication can also be an issue which at times has led to the owner either using friends fixed wireless/fibre systems to send the pictures or failing that, hand delivering the pictures directly to the printing business.

In short the business owner has adapted to the problematic quality and level of the internet services they use but admits the issues have increased their work hours without any additional remuneration and have decreased productivity by 10%-15%. In turn while the relatively high cost of the telecommunications package accounted for 5% of business turnover, the owner accepted that it was "part of doing business" in a regional area. The owner believed the fundamental issues that affected productivity for their business were internet speeds and reliability in service quality.

It was noted that these issues also affected productivity in the partner's livestock farming operations. The recent advent of weekly online stock auctions could significantly increase farm productivity by decreasing costs derived from transporting stock to market and viewing and buying replacement livestock on-line rather than having to attend the sale in person. However variable levels and reliability of service preclude the owner's partner taking advantage of the technological option.

Given the economic modelling and the information detailed in the case study along with dispersed nature of the Wheatbelt's population and accompanying low levels of population density, it is the opinion of RDA Wheatbelt that the retail market for relevant services will be unlikely deliver optimal and appropriate outcomes for business consumers without Government involvement. The modelling shows a high potential for inequities between regional and remote satellite users and users with access to fixed wireless/fibre in largely inner regional and urban areas. Similarly, the case study highlights issues with service quality in a regional area that would most likely not occur in an urban area and would not be tolerated if they did. Fundamentally accessible, efficient and affordably priced telecommunication services are integral to the economic growth and continued regional development of the Wheatbelt.

In addition there is also the issue of increasing data usage and the capacity of the satellite system to meet future data requirements. In reviewing the Sky Muster™ data provisions, RDA Wheatbelt is led to understand that peak data usage (between 7am and 1am) is capped at 70 GB per user per month and that the total gigabytes available are 150 for each user per month. It could be construed that these limitations will pose issues in the future as demand and usage increases as indicated by recent figures provided by the NBN<sup>12</sup>. It was found in April 2015 that total data usage over the NBN was 67 GB (down load only) per month while the national average across all providers was 58 GB. The NBN Co. Principle Technology Officer, Tony Cross observed that the increase usage of data indicated that demand for smart devices and online content were increasing exponentially and that the NBN was designed to keep pace with the demand<sup>13</sup>.

Based on these figures it could be taken that high end data business users in the Wheatbelt connected to Sky Muster™ services may have to make additional provisions to either access more data via alternative services or adjust the working hours to access off peak data (between 1am and 7am). It should be noted that the nbn™ average data usage figures referred to earlier only included down loads and not up loads which are included in the available gigabytes provided by Sky Muster™ services. It should also be noted that Sky Muster™ will not support video rich applications which again suggests that customers who have need of such applications for business will have to access alternative services thereby adding further to their telecommunications costs.

These issues indicate that again there are or will be inequities for regional and remote satellite users compared to fixed wireless/fibre users in the level and quality of services.

Of equal concern to RDA Wheatbelt are issues of affordability of telecommunications for Aboriginal people and communities in the Wheatbelt Region. The following section details the sources of this concern and the need to ensure a disadvantage segment being a large proportion of the Wheatbelt's Aboriginal people have access to efficient telecommunications.

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<sup>12</sup> nbn™ 2015 " Internet downloads increase by 33 per cent – ABS" <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/internet-downloads-increase-by-33-per-cent-abs.html>

<sup>13</sup> nbn™ 2015 " Internet downloads increase by 33 per cent – ABS" <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/internet-downloads-increase-by-33-per-cent-abs.html>

## Affordability and access for Aboriginal people

A major driver for RDA Wheatbelt's concern with affordable access to telecommunications for the Wheatbelt's Aboriginal population is to increase economic participation through developing Indigenous business and employment opportunities in the region. This aligns with objectives outlined in the Wheatbelt Blueprint<sup>14</sup> of developing Aboriginal enterprises and increasing engagement and achievement in education and learning which also aligns with Federal and State Government initiatives to promote Indigenous economic advancement.

Currently the socio-economic state of a large proportion of the Wheatbelt's Aboriginal estimated population of 4,000 population is characterised by high unemployment, low labour force participation rates, low levels of personal income, high levels of welfare dependency with low levels of year 12 attainment and non-school qualifications.

The three Sub regions of Avon, Central East and Wheatbelt South have 78% of the Wheatbelt's Aboriginal population<sup>15</sup>. Household internet connection in these Sub regions was low at the time of the last census (ABS 2011) with an average of only 41% of Aboriginal households connected to the internet. Levels of internet connection varied between the three Sub regions with 47% of Aboriginal households in Avon, 43% in Central East and just 32% in Wheatbelt South. It should be noted that Wheatbelt South also has four LGA's out of 14 LGA's designated as remote.

Improving Aboriginal education and training outcomes are key components in developing business and increasing employment opportunities. Accessibility, affordability and availability of telecommunications are crucial to this process. Simple economic modelling showed that without government concessions for disadvantage telecommunications could, depending on the size of the telecommunications package, account for between 2.4% and 7% of Aboriginal monthly household income (Figure 1).

The calculations were based on the costs of small and medium satellite plans combined with a basic landline phone plan and a variation of one or two pre-paid mobile phones per household. The use of pre-paid mobile phones plans in the modelling was based on research that found Aboriginal people tended to favour pre-paid mobile plans as a strategy to manage credit issues<sup>16</sup>.

What also should be taken into account is that median number of people in a Wheatbelt Aboriginal household was 3.6 compared to 2.5 in a non-Aboriginal household with 29% of Aboriginal households having five or more occupants compared 8% of non-Aboriginal households. To add further context to these figures, the 29% of Aboriginal households with five or more people accounted for 44% of the Aboriginal population in the region<sup>17</sup>. This additional information suggests that Aboriginal household telecommunications costs may be higher than indicated the graph (Figure 1).

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<sup>14</sup> Wheatbelt Development Commission 2015 "Wheatbelt Blueprint: A vision for a vibrant future"

<http://www.wheatbelt.wa.gov.au/publications/wheatbelt-blueprint/>

<sup>15</sup> RDAW analysis derived from ABS Census of population and housing data 2011

<sup>16</sup> Tangentyere Council and Central Land Council (2007) Ingerrekenhe Antirrkweme: Mobile Phone Use Among Low Income Aboriginal People, A Central Australian Snapshot, Tangentyere Council and the Central Land Council, Alice Springs.

<sup>17</sup> RDAW analysis derived from ABS 2011. Census of Population and Housing. Based on Place of Usual Residence. Catalogue number 2002.0

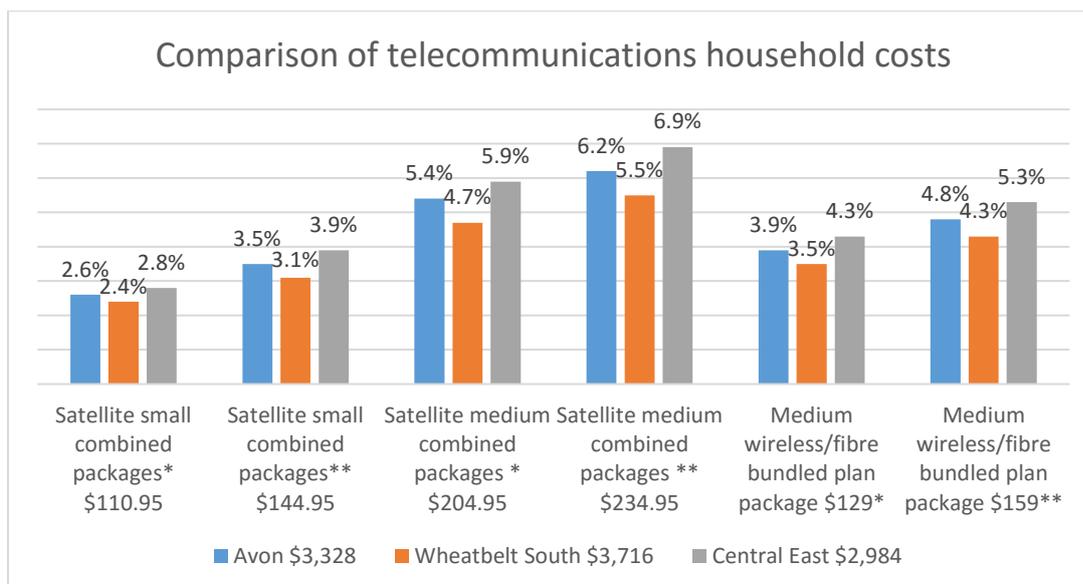


Figure 1

\*assumes one pre-paid mobile device household

\*\*assumes two pre-paid mobile devices per household

The argument for the appropriateness of universal availability, affordability and accessibility can be substantiated by this high level of cost as well as issues many Indigenous people have with paying high home phone landline bills. Although there is no information available on how Indigenous Wheatbelt households respond to having home phone services cut due to payment issues, research has shown that in other Indigenous communities, people rely on the public pay phone service<sup>18</sup>. In Central Australia (communities in and located around Alice Springs) it was found that 79% of research participants regularly used pay phones regardless of where they lived (urban Alice Springs or remote areas) and income sources.

While the response may be different in the Wheatbelt, the issues associated with telecommunications costs coupled with low incomes, high unemployment (27%)<sup>19</sup> and high welfare dependency, make a case for extending the USO to include internet and mobile phones and maintaining government support for Indigenous and other disadvantage groups in the region.

## Recommendations

It is the view of RDA Wheatbelt that that the 'thinness' of the telecommunications market in the Wheatbelt would preclude retail providers entering the market if universal wholesale pricing supported by government intervention was withdrawn. The premise that multiple retail competitors in an unregulated market would drive down telecommunication costs in a region with a relatively small and highly dispersed population is unrealistic. It would be doubtful that multiple providers would receive any return on investment on infrastructure and sustain business viability on what would be defined as affordable and equitable pricing structures. While the cessation of national universal wholesale pricing could reduce telecommunications' costs in urban areas there is a strong likelihood that it would substantially increase costs in regional and remote areas. This would increase the existing gap between regional and urban communities' access to social and economic amenity and decrease liveability of outer regional and remote Wheatbelt areas.

<sup>18</sup> Tangentyere Council and Central Land Council (2007) Ingerrekenhe Antirrkweme: Mobile Phone Use Among Low Income Aboriginal People, A Central Australian Snapshot, Tangentyere Council and the Central Land Council, Alice Springs.

<sup>19</sup> ABS 2011. Census of Population and Housing. Based on Place of Usual Residence. Catalogue number 2002.0

**Recommendation 1:** Universal Services Obligation provisions be extended to include internet and mobile phone services in regional and remote areas.

**Recommendation 2:** The Government maintains national universal wholesale pricing through policy regulation and subsidisation for all regional and remote business and personal users.

**Recommendation 3:** Additional concessions be kept in place or implemented for disadvantaged elements of regional remote populations to ensure their access to the social and economic amenities available to the rest of the population in regional and urban areas.

RDA Wheatbelt holds reservations in terms of Sky Muster's™ capacity to meet appropriate levels and quality of service in the interim but more so in the future based on the cap or available data per month and its lack of capacity to support video rich applications. These (potential) short comings could hold ramifications for promoting economic growth in the Wheatbelt's outer regional and remote areas and broader socio-economic development across the region. While rural and remote people are inherently adaptable and will find ways to accommodate these short comings, RDA Wheatbelt questions the fairness of the situation and believes other options should be explored to mitigate potential additional imposts on businesses and households in the region.

**Recommendation 4:** Initiatives should be undertaken to utilise or adapt existing infrastructure to deliver more fixed wireless/fibre options to regional and remote areas. The 4-G network has extensive coverage in the Wheatbelt but offers no provision for wireless internet services providers to utilise the network in outer regional and remote areas. Wireless service providers have comparatively inexpensive plans (e.g. unlimited data \$89/month) that could act as an alternative to satellite services or provide supplementary data.

**Recommendation 5:** Consideration should be given to developing and implementing co-investment strategies between Federal, State and Local Governments with industry and business in consultation with local communities to increase access to fixed wireless infrastructure in the region thereby reducing reliance on a telecommunications resource with finite future capacity.

These recommendations align with the results of studies commissioned by RDA Wheatbelt that affordable, available, equitable and efficient delivery of telecommunication services are contingent to future socio-economic development and growth in the region. RDA Wheatbelt holds that any compromises pertaining to price, level or quality of services that contribute to economic and social penalties for people who live, work and operate businesses in the region would be unfair and in contravention of the level, price and quality of service being equivalent regardless of where a person lives or conducts business.



Ms Juliet Grist  
Executive Officer  
RDA Wheatbelt Inc  
Tel: 0428 372 179  
juliet.grist@rdawheatbelt.com.au

