

# 2017 Revision of the 2013 RDA Wheatbelt

## Wheatbelt Digital Action Plan



# Revision of RDAW Digital Action Plan 2013 – October 2017

## Executive summary

The 2017 revision of the Regional Development Australia Wheatbelt Inc (RDAW) 2013 Digital Action Plan was undertaken in conjunction with a regional survey designed to identify updated baselines of digital use, benefits and constraints within the Wheatbelt's business sector and among its residents.

The survey was in part based on the 2012 survey that underpinned the 2013 Digital Action Plan in that the majority of questions used in the 2012 survey were replicated in the 2017 survey. Where the 2017 survey differed from the 2012 survey was that it examined certain areas in more detail such as frequency of device use and internet access along with factors associated with service connectivity.

As with the 2012 survey the 2017 survey was delivered via survey monkey through RDAW's mailing data base of 570 recipients with a small number of hardcopy surveys delivered face to face during the Wagin Woolarama. In total 399 recipients opened the survey link with 354 either completing or partially completing the survey. Overall there were 364 surveys included in the analysis which included the 10 hardcopies collected during the Wagin Woolarama. In comparison the 2012 survey received 225 completed or partially completed responses.

The analysis was conducted across two core segmentations of the survey sample being business/employment and age groups with results being reported in overall and discreet measurements.

## 2017 survey results

### *Business-usage*

Business responses showed that utilisation of mobile digital connection has advanced since 2012 in the agribusiness, non-agribusiness, government and Not for Profit sectors. This was reflected in the increased use of mobile phones for business across the three sectors which ranged between 92% (Government/NFP) 93% (agribusiness) and 94% (non-agribusiness) compared to 78% in 2012. There was also a marked increase in the use of iPads over the same period. Of interest there was a declining usage trend of desk top and laptop computers.

In terms of using the internet at work, there was very little change in the levels between 2012 and 2017 however there was an increase in accessing business relevant services online being predominately in the areas of sourcing suppliers, ordering and tracking, market research, data management and accounting/banking services. Of note was that 93% of agribusiness participants were accessing Government services online and 78% were using pest/disease/management apps. Additionally use of automated systems has risen from 39% in 2012 to 70% in 2017.

### *Business-constraints: Mobile phone coverage*

Adequate mobile phone coverage remains problematic for many Wheatbelt businesses. Agribusiness was particularly affected with over half (54%) of the participants rating their coverage as 'barely' or 'not at all' adequate while 49% of non-agribusiness participants rated their coverage as 'barely' (25%) or sometimes adequate (24%).

Wheatbelt South businesses had the poorest levels of mobile coverage with 67% rating their coverage as not at all (16%), barely adequate (29%) or sometimes adequate (22%). Mobile coverage was similarly problematic for the Avon and Central Midlands Sub regions. The only Sub region participants to exhibit some level of acceptable coverage were the Central Coast (80%) and Central East (57%).

Added to the issues of coverage was that of costs. Overall 58% of business participants and 73% of agribusiness participants thought they were paying more for their mobile plans than city businesses. However there was a certain level of resignation that higher costs than the city was just the way it was for people in rural/regional area with 37% of agribusiness and 30% of non-agribusiness participants in agreement with the statement. The fundamental importance of mobile coverage for Wheatbelt businesses was highlighted with 98% of business owners, managers and employees rating better mobile coverage as important (25%) or most important (73%).

#### *Business constraints: Internet connectivity*

Reliable consistent internet connectivity was also identified as an issue. While Sky Muster™ has delivered some measure of improvement it has its own set of limitations including data allowances, down and up load speeds and higher costs. These limitations have a real potential to be an additional constraint for businesses in the Wheatbelt with specific reference to the Central East and Wheatbelt South Sub regions. Modelling by RDAW suggests that approximately half of Central East and three quarters of Wheatbelt South will be included in the 3% that will be connected to Sky Muster™ nationally.

Another concern for business participants was the high costs they incurred for their digital connection which to some extent appeared to be influenced by the need to have multiple connections. Almost a quarter used two types of connections including 15% of those connected to Sky Muster™ services. It is probable that a part of the need for multiple connections was related to data allowances, speeds and connectivity. This was highlighted by the high proportion (82%) of Sky Muster™ business customers with another connection that were personally prepared to make a one off payment to ensure better connectivity and access to adequate levels of data.

Outside a high degree of uncertainty among current and future Sky Muster™ services business customers, slightly less than a third (31%) of agribusiness and a quarter (24%) of non-agribusiness participants thought Sky Muster™ was or would be better than what they had before. These responses were influenced by concerns about reliability and speeds.

However the key message that could be taken from the business participants responses is that poor digital connectivity should be regarded as a critical constraint in starting and establishing businesses in the Wheatbelt. In turn it could be accepted that the poor digital connectivity is acting as an overarching restraint on the economic growth of the overall region and addressing the issue should be flagged as a critical priority. This was supported across the responses of the majority of agribusiness and non-agribusiness participants connected to ADSL, mobile wireless and particularly those connected Sky Muster™ services.

As such the results indicate that there remains some way to go in ensuring Wheatbelt businesses and services have a reliable and consistent delivery of digital communications connectivity.

#### *Social connectivity*

From a social perspective participants responses showed that there is growing level of sophistication in how they use digital telecommunications in daily life. This is being led by the 18-34 years age group who could be for all intents and purposes regarded as the digital generation. That being said, responses across the other groups including 65+ show a high digital uptake for social purposes.

Perhaps the best indicator of this is the average number of devices participants used across the age groups and in aggregation when compared to responses in the 2012 survey. On average the 18-34, 35-44 and 45-54 years age groups used almost four devices being 3.9, 3.8 and 3.7 respectively. This dropped to 3.3 for the 55-64 years and 3 for the 65+ age groups for an overall average of 3.6 devices. By comparison in the 2012 survey the average number of devices used by participants was three. The

increase in the number of devices used also correlates with an increase in the frequency of use and increase in the use of online services and social connection. Almost all (96%) participants paid accounts or did banking online, sourced news and did research (95%) and accessed government services (90%). In addition, most used email to stay in contact with family and friends and there was a rising trend in the use of social media up from 72% in 2012 to 85%. However the greatest increase in usage was health (either research enquiry or services) up from 23% to 63% which was mainly driven by the 18-34 years age group.

The increase in using digital connection has seen some issues viewed as challenges such as understanding and current technology become less of a priority for the younger age groups but more so for the older age groups. However security was considered more of a challenge than it was in the 2012 survey along with access to IT services.

The responses of participants indicate that Wheatbelt residents have progressed beyond the early adoption stage and are well into the maturation phase. Essentially the use of digital devices and digital connection has moved beyond being a technological novelty and has become a normal and expected means of conducting everyday activities. As could be expected this has extended to education in the region and the potential good digital connectivity could deliver to Wheatbelt students and to the region as whole.

#### *Education*

One of the biggest challenges the majority of the region's LGAs have identified is the retention of their youth. This represents a difficult challenge given that a comparatively high proportion of young people leave to continue their secondary education. The impact of the education migration has been further exacerbated with the inclusion of year seven in the secondary curriculum and parents looking for alternative and less costly options than boarding their children at private schools. These options include moving the whole family to Perth or the mother and children moving to Perth and the father remaining and becoming a drive in drive out parent.

Irrespective of what option is chosen there is an adverse impact for the local community. At best the community loses its high school age children, at worst they lose entire families including the primary school age children. However responses in the survey suggest that improved digital connectivity may contribute to reducing the migration of regional students to the city.

Well over half (56%) of parents in the survey agreed that good digital connectivity influenced where they decided their child/children would undertake secondary education. Correspondingly 69% agreed that better digital connectivity in the region would encourage more parents to have their children complete their secondary education in the region. Similarly many (73%) parents believed that the roll out of the nbn would help reduce the education gap between country and city students as well as improve their children's educational outcomes and opportunities to attain better standards of employment.

These responses infer that better digital connectivity could deliver cross benefits to the Wheatbelt in improving educational outcomes in the region and reducing the number of secondary aged children leaving the region to complete their education in the city.

#### *Economics*

RDAW contests the Productivity Commissions overriding narrative of the high cost of providing equitable digital telecommunication services to regional and remote areas based on the economies of scale of population. Rather, RDAW contends that expenditure on delivering reliable digital connection to regional and remote communities in the Wheatbelt should be seen as a future orientated investment in the economic growth and social development in the region.

This argument is supported by the revenue generated in the region which in 2011-12 was reported to be an estimated \$3.5 billion for agriculture and \$2.5 billion for mining. It has been projected that the nbn will spend an average of \$7000 on connection per rural household and Wheatbelt ABS data shows that there was 26,925 households and 9,166 businesses. Based on these estimates, expenditure on connecting Wheatbelt residences to the network would amount to about \$188,475,000 with an additional \$64,162,000 to connect businesses, resulting a total outlay of approximately \$252,637,000.

With the \$6 million the Wheatbelt generates from agriculture and mining and the increasing value of the tourism industry, estimated at \$246 million in 2011/2012, it could be proposed that a one off spend of \$250 million to increase digital connectivity for three industry sectors generating \$6.25 billion is a sensible investment to increase efficiencies and economic sustainability of the industries.

At the same time it is worth considering the potential economic benefits reliable internet connectivity could deliver across the region's industry sectors and to WA and Australia. Just 5% growth in revenue in the tourism industry as a result of good digital connectivity would result in another \$12.5 million being injected into the State's economy. Equally if better digital connectivity increased the value of the overall Wheatbelt economy (calculated at an estimated \$10 billion in 2011/2012) by just 1% that would add an additional \$100 million per annum to the region's value. Correspondingly this suggests that at the most minimal rate of return on investment, the breakeven on the \$250 million expenditure on connecting the Wheatbelt to the network could occur within two and a half years.

#### *Review of the 2013 Digital Action Plan*

The fundamental conclusion drawn from the review of the RDAW Digital Action Plan in light of the issues illustrated in association with business and education in conjunction with the increased uptake of digital technology, is that much of the plan has met and served its purpose. This should be expected as the plan was aimed at facilitating the transition to digital technology.

Of the five areas of focus identified in the original plan, four were centred on promoting uptake of skills and the technology. Given the results of the survey it would be reasonable to propose that between the actions implemented in achieving these aims and the evolution of the digital space in the Wheatbelt that these areas of focus are now less of a priority.

However the 2017 survey results show that the second focus area of 'Connectivity and access' in the original digital plan retains a high level of unequivocal importance for the region. Participant's responses whether from a business, social or education view point were for the most part emphatic that better mobile coverage and internet connectivity along with concerns about Sky Muster's capacity to adequately meet requirements were critical issues. In essence it was made plain by business participant's responses that good mobile coverage along with reliable and consistent internet connectivity is a key priority in underpinning the economic growth of the Wheatbelt.

Therefore it could be proposed that it is incumbent upon Federal and State Government organisations, such as RDAW and the Wheatbelt Development Commission, to work with all levels of government and regional stakeholders to develop a cohesive strategy that ensures a level of digital connectivity that will drive economic and population growth in the region.

#### *Acknowledgement*

RDA Wheatbelt wish to acknowledge and thank all that participated in the 2017 Telecommunications survey. The responses garnered have provided the basis for this revision.

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## i. Introduction

The review of the RDAW Digital Action Plan 2013 was commissioned as it was recognised that there had been a transition in the Wheatbelt's digital space from the innovative early adoption phase to the majority adoption phase in the four years since the plan was published. As with the original digital action plan, the review employed the use of a survey of Wheatbelt people to identify new or adjusted baselines and provide comparisons with baselines established in the original survey.

The report is divided into two parts. The first part reports on the survey results with the second part providing a review of the 2013 Digital Action Plan using the results of the 2017 survey. The first part of the report comprising the survey results is divided into two sections being Business and Social responses. The business section has five sub sections that detail responses to the level of digital usage in business, the challenges of less than adequate connectivity and concerns about Sky Muster's performance and capacities. The second section examines digital use from a social perspective in terms of the activities of everyday life, social connectedness and education.

The second part of the report revisits the 2013 Digital Action Plan and reviews the actions associated with the five focus areas and in combination with the latest survey results examine what additional actions if any could be implemented.

## ii. Survey methodology

### *Survey question construction*

Three approaches were used developing the 2017 survey instrument. The first approach was to use a core set of questions used in the 2012 survey. These included types of devices used, levels of use, digital activity and frequency of activity. Other questions from the 2012 survey included in the 2017 survey referred to topics such as biggest issues and elements of importance both at a personal and regional level. These questions were used to measure changes, if any, in the various baselines.

The second approach used was to add more detail to some of the original questions in regard to a more specific measurement of frequency of use of devices or services. This line of questioning was useful in measuring differences in the level of use between business sectors and age groups.

The third approach was to introduce additional questions concerning mobile phone coverage and internet connectivity from a business and social outlook. These questions were derived from secondary research undertaken in the development of RDAW two submissions to the Productivity Commission's Telecommunications USO enquiry.

The reasons for introducing these lines of questions was to: a) in the case of mobile phone coverage, examine if there had been changes in responses given that there had been additional towers erected in the region during the period between the two surveys and b) levels of internet connectivity had not been examined in the 2012 survey and Sky Muster had not been launched.

The objective of the 2017 survey was to incorporate as many of the elements associated with digital telecommunications as possible to provide a comprehensive picture of the situation in the region.

### *Survey distribution*

Prior to the survey being delivered electronically a field trial with a hardcopy version was undertaken at the Wagin Woolorama. The field trial identified some problems with question structure and formatting which were addressed before the survey was distributed. The survey was delivered via email with links to survey monkey through the RDAW data base comprising 570 entities. The email



invited the organisations to circulate the survey monkey link among their members and encourage the members to participate in the survey.

### *Analysis*

When the survey was closed, the responses were entered into excel spreadsheets. During this process the data was 'cleaned' meaning that any questions or statements with two responses that required a single response were omitted from the data set.

The analysis was conducted using a univariate approach measuring response frequencies with results expressed as percentages or means in column, bar, or line graphs. Analysis of responses was undertaken of the survey sample as a whole and at a more discreet level of specific survey population segmentations of the sample. These segmentations were: business/employment; age groups; internet connection types; sub regions and secondary education.

### *iii. Demographics*

The people who participated in the survey lived and worked in a broad range of areas in the region and came from a wide variety of business, employment and personal backgrounds. Responses were received from all age groups ranging from 18 to over 65 years, with sound representativeness shown in all defined age range categories. On the other hand when compared to regional gender demographics<sup>1</sup>, female participants were over represented in the survey and males underrepresented.

In terms of business demographics, 38% of participants were from the agribusiness sector, 30% from non-agribusiness with 28% representing Government/NfP/CRC and 5% were retired and or not working. Representative balance between agribusiness and non-agribusiness participants was slightly biased towards agribusiness as in 2015, agribusinesses comprised 51% of businesses in the Wheatbelt compared to 49% of non-agribusinesses. On the other hand Government/NfP/CRC participants were over represented in the survey and retired and or not working under represented.

Representativeness within the age demographics varied somewhat with the 18-34 years age group 17% comparable to the Wheatbelt's 21%. Conversely the 35-44 (23%) and 45- 54 years age group (29%) were over represented in the survey when compared to the overall region breakdown of 15% and 18% respectively. Alternately the percentage of 55-64 years (21%) reflected the proportion (20%) of 55-64 year olds in the region while the 65 plus age group with 9% of participants was substantially underrepresented when compared to the regional proportion of 25%.

At a sub region level, there was a relatively representative sample across four of the sub regions compared to representativeness in the region with just Wheatbelt South being well over represented in the survey with 40% of responses compared to having 23% of the Wheatbelt's population. Additionally representativeness of individual LGAs in the region was high with responses from 40 of the Wheatbelt's 42 shires.

Despite the variations of representativeness across the various segmentations of the survey sample it would be reasonable to propose that the responses were largely representative of the region's business and resident's population and as such could be regarded as a valid survey sample.

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<sup>1</sup> RDAW analysis of ABS 2017 Census of Population and Housing; General Community Profile by LGA. Catalogue number 2001.0

## 1. Regional update

As proposed in RDAW's 2013 Digital Action Plan, increasing digital connection is changing the way Wheatbelt residents live and businesses undertake activities. Conceivably this change has accelerated as more residences and businesses have come on line. The latest information on the nbn rollout indicates that 38 services are available in the Wheatbelt with a further 16 commenced or about to commence<sup>2</sup>. This is well in excess of the 19 services cited in the 2013 RDAW Digital Action Plan.

The current Sub regions and communities with access to nbn wireless or fixed line services are:

<b>Avon</b>	<b>Central Coast</b>	<b>Central East</b>
Beverley- 1 service	Dandaragan-1 service	Merredin-2 services
Northam- 9 services	Gingin-3 services	Nungarin-1 service
York-2 services		Mukinbudin-1 service
Toodyay-2 services		
	<b>Central Midlands</b>	<b>Wheatbelt South</b>
	Dalwallinu- 2 services	Cuballing- 3 services
	Moora-1 service	Narrogin- 1 service
	Wongan-Ballidu-3 services	Pingelly-2 services
		Wandering-1 service
		Williams- 2 services

Services that have been commenced or are about to be commenced include:

<b>Avon</b>	<b>Central Coast</b>	<b>Central Midlands</b>	<b>Wheatbelt South</b>
Northam- 2 services	Gingin-6 services	Chittering-3 services	Brookton-1 service
Cunderdin-1 service		Wongan-Ballidu-1 service	Narrogin-1 service
			Wagin-1 service

The increase in availability of nbn and other services was reflected in the rise in the number of Wheatbelt households with internet connection between 2011 and 2016. Across the region 80% of households were connected to the internet in 2016 representing a 10% increase<sup>3</sup> on 2011.

However the increased connection was not evenly distributed across the Sub regions or within Sub region's LGAs. The highest rate of connection was registered in the Central Midlands with 83.5% of households ranging from a high of 89% in Chittering and a low of 76% in Moora. The Central Coast recorded the next highest rate of connection with both Dandaragan and Gingin having 82% of residences connected. Avon Sub region was the next most connected area with 80.5% ranging from 85% in Toodyay to 75% in Wyalkatchem. In comparison the Central East Sub region had 79% of households connected with Mukinbudin being the highest (83%) and Trayning the lowest (71%). Wheatbelt South had the lowest rate of internet connection (78%) of the five Sub regions and also registered the lowest rate of connection in a shire being Pingelly with 70% of households connected.

Arguably the disparity in the level of connections between and within the Sub regions represents challenges for population growth and economic development. For example the Central Midlands with the highest rates of internet connection also had the highest increase in population (8.3%) compared to:

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<sup>2</sup> As of July 2017 <http://www.nbnco.com.au/content/dam/nbnco2/documents/website-communities-table.pdf>

<sup>3</sup> RDAW analysis of ABS 2016 and 2011 Census of population and housing; General Community Profile by LGA. Catalogue number 2001.0

- Central Coast- 7.1% increase
- Avon- 4.9% increase
- Central East- 2.5% increase
- Wheatbelt South- 0.05% decrease

Of note was that the LGAs recording the lowest rate of connections in their respective Sub regions also had no growth or decline in population as illustrated below:

- Moora- 1.9% decrease
- Wyalkatchem- 1.4% decrease
- Trayning- 0%
- Pingelly- 1.5% decrease

Arguably digital technologies and increased digital connection are beginning to generate impacts that are influencing changes in the living and work environments as illustrated by results derived from RDAW's 2017 Wheatbelt digital survey. Wheatbelt residents are placing increasing importance on accessing online education and health services to which 61% and 56% of survey participants respectively ranked as important. Similarly 58% of the participants attributed importance to being able to work from home online.

These changes in the Wheatbelt's digital environments are reflected in the increasing reliance of the region's businesses on digital connection and the associated challenges of less than adequate digital connectivity.

### 1.1 Business use

As shown in the responses of survey participants who were business owners or employees, a growing majority of Wheatbelt businesses are taking up digital technologies and services. The survey showed that usage of mobile phones in business was almost universal with 94% of non-agribusiness owners or employees, 93% of agribusiness, and 92% of government/NFP/CRC employees using mobile phones once or more a week (Figure 1). Of note was that 87% of non-agribusiness and government/NFP/CRC participants and 84% of agribusiness participants used their mobile phones daily. This represents a substantive increase from the 78% of participants who said they used a mobile phone in the RDAW's 2013 Digital Action Plan survey.

The survey also illustrated a diversity in the use of devices participants in each business sector were using to access the internet with a trend towards more mobile devices and a perceptible shift away from the desk top computer as indicated by the 2013 Digital Action Plan survey results. Of interest was that agribusiness use of tablets was higher than laptops while non-agribusiness tended to use laptops more than tablets (Figure 1).

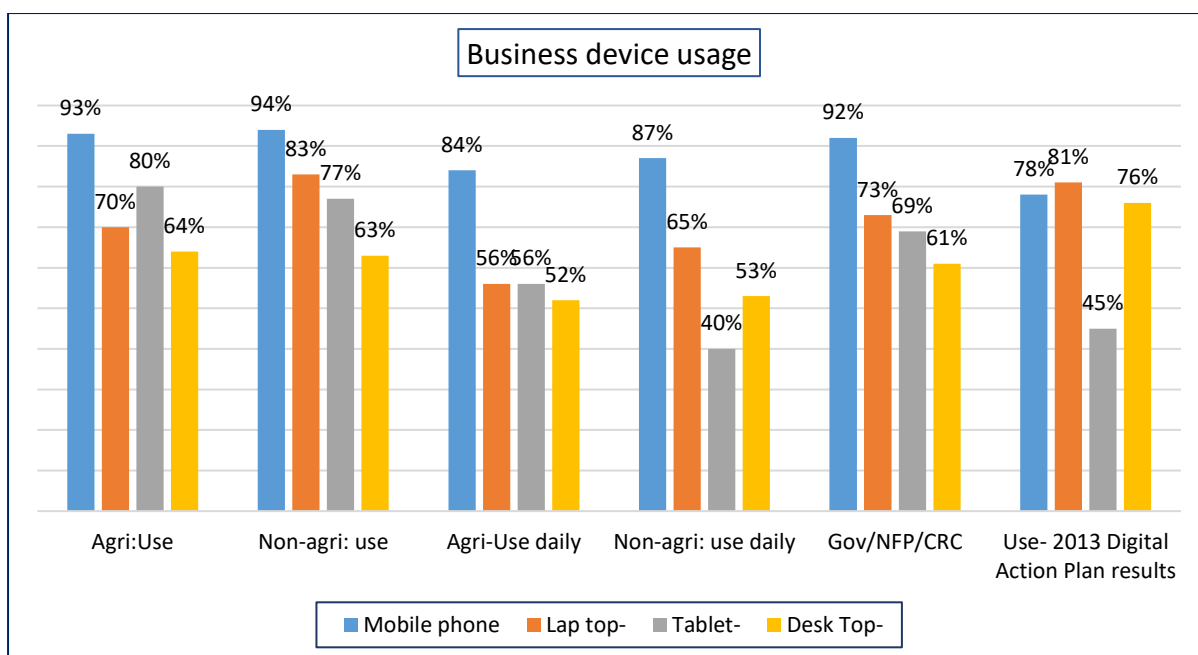


Figure 1

Overall work internet usage rate of 97% remained the same as the earlier rate shown in the 2013 Digital Action Plan although government/NfP/CRC users were higher at 99% along with agribusiness at 98% and non-agribusiness lower at 95%. However usage of various services has increased on the 2013 figures particularly in the areas of sourcing suppliers, ordering and tracking, market research, data management and accounting/banking services (Figure 2).

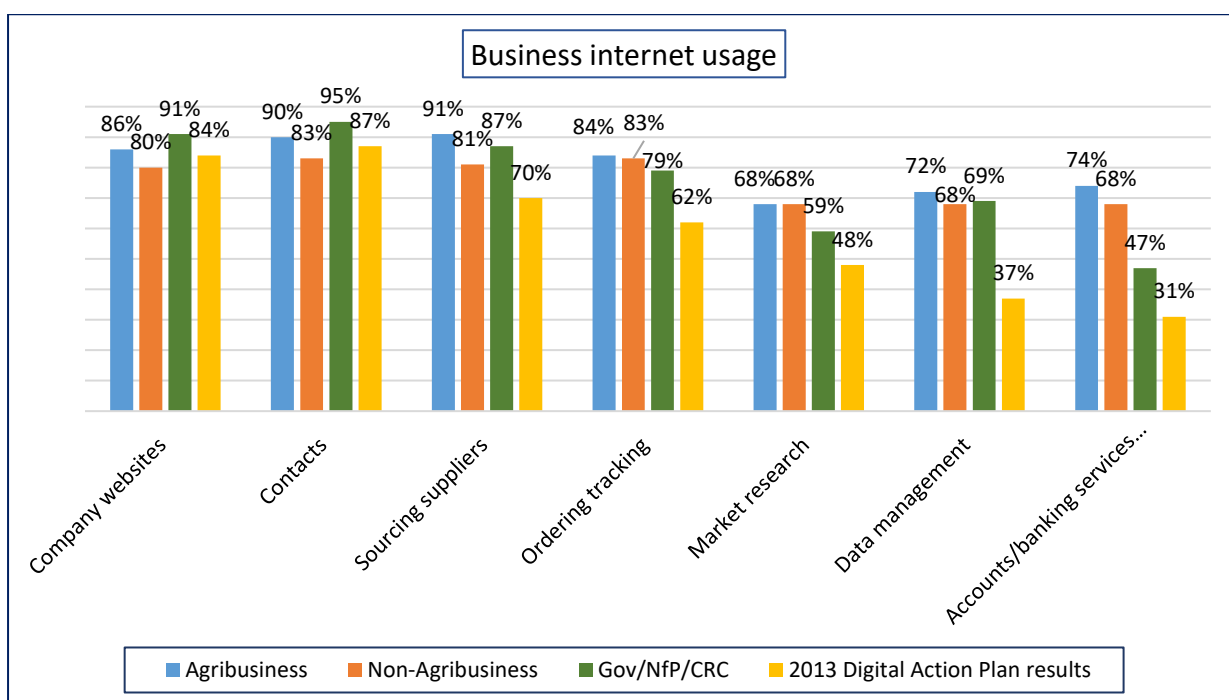


Figure 2

In addition the business and Government/NfP/CRC sectors were increasing using the internet to access Government services and connect with customers with a high number of agribusiness participants also using pest/disease/management apps and GPS (Figure 3).

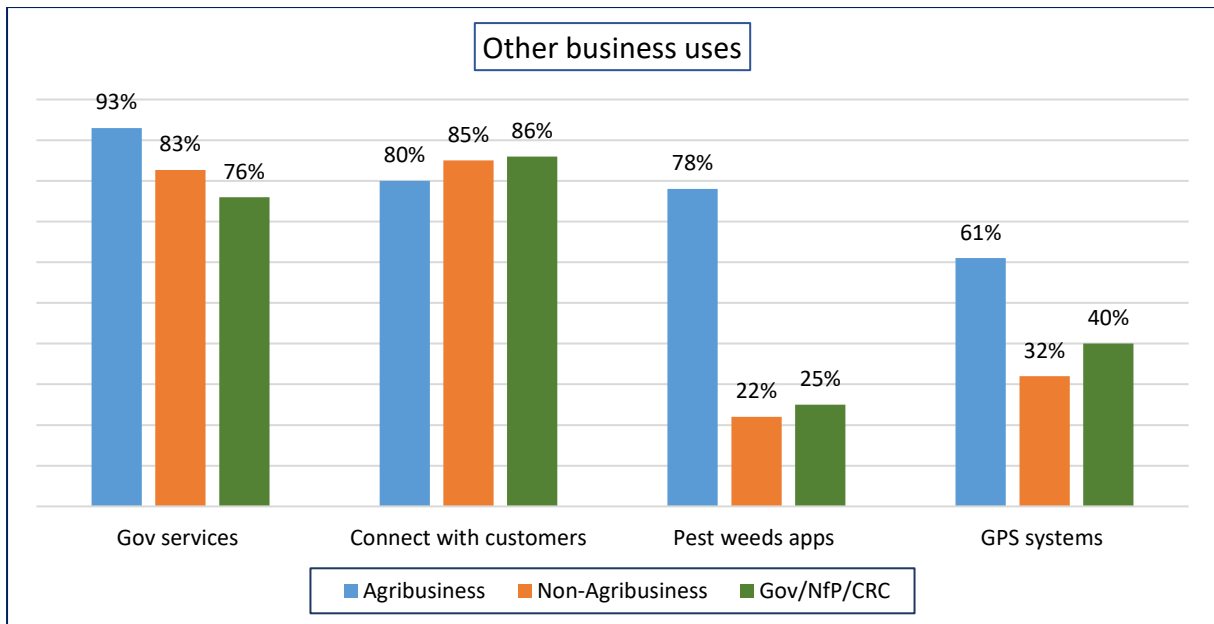


Figure 3

In terms of automated systems, only 39% of participants were using the systems in 2013. This has increased to 70% (Figure 4).

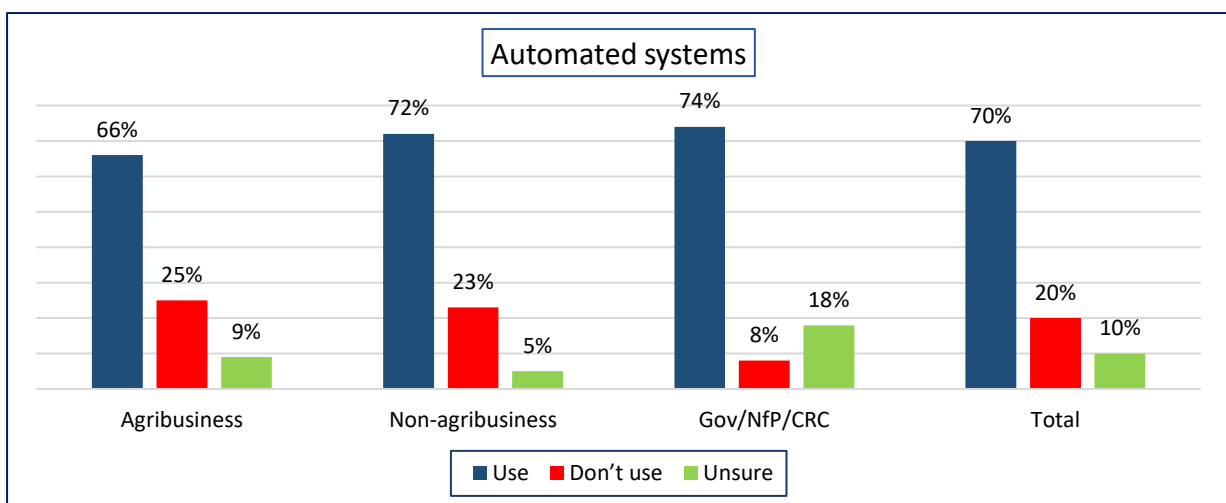


Figure 4

However this increased usage of the internet has brought with it challenges that analysis indicates has restricted Wheatbelt users from accessing some services and potentially constrains the development of new businesses and expansion of established businesses. These challenges and associated issues are presented in the following section.

## 1.2 Challenges and constraints for businesses: Mobile phone coverage

Responses in the survey indicate that the two main overriding issues for business in the Wheatbelt were mobile phone coverage and internet connectivity. Having adequate mobile phone coverage was problematic for many participants despite the increase in the number of mobile phone towers since 2013. Similarly internet connectivity remained an issue for many including those who had recently been connected to Sky muster services.

### 1.2.1 Business mobile phone coverage

Access to adequate mobile coverage for Wheatbelt businesses was largely dependent on what the businesses were and by the definition where they were located. Agribusinesses recorded the poorest mobile coverage with over half (54%) of the participants rating their business coverage as barely or not at all (Figure 5). Alternately non-agribusiness fared slightly better with a quarter of participants rating the coverage as 'barely' (25%) and a quarter (24%) rating coverage as 'sometimes' adequate. Conversely almost three quarters (73%) of Government/NfP/CRC employees rated their mobile coverage as adequate to very good.

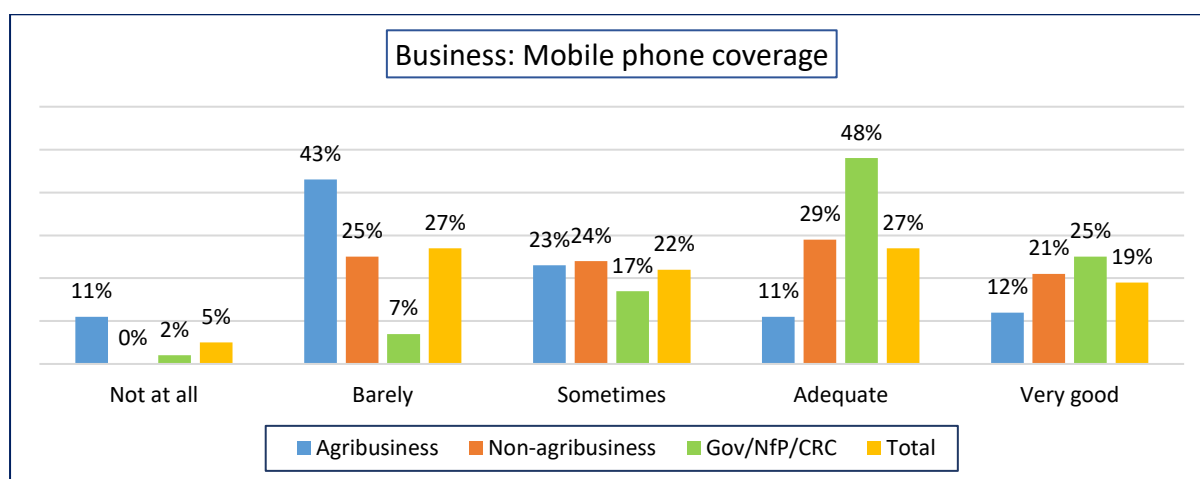


Figure 5

To a certain extent these results are not surprising given that most agribusinesses were farming enterprises situated outside town locations while most non-agribusiness and Government/NfP/CRC participants were situated in towns.

Responses of business participants in the survey showed that Wheatbelt South businesses had the poorest levels of mobile coverage with 67% rating their coverage as not at all (16%), barely adequate (29%) or sometimes adequate (22%) (Figure 6). Business mobile coverage was similarly problematic for the Avon and Central Midlands Sub regions. The only Sub region participants to exhibit some level of acceptable mobile phone coverage were the Central Coast (80%) and Central East (57%) who rated their mobile coverage as adequate or very good.

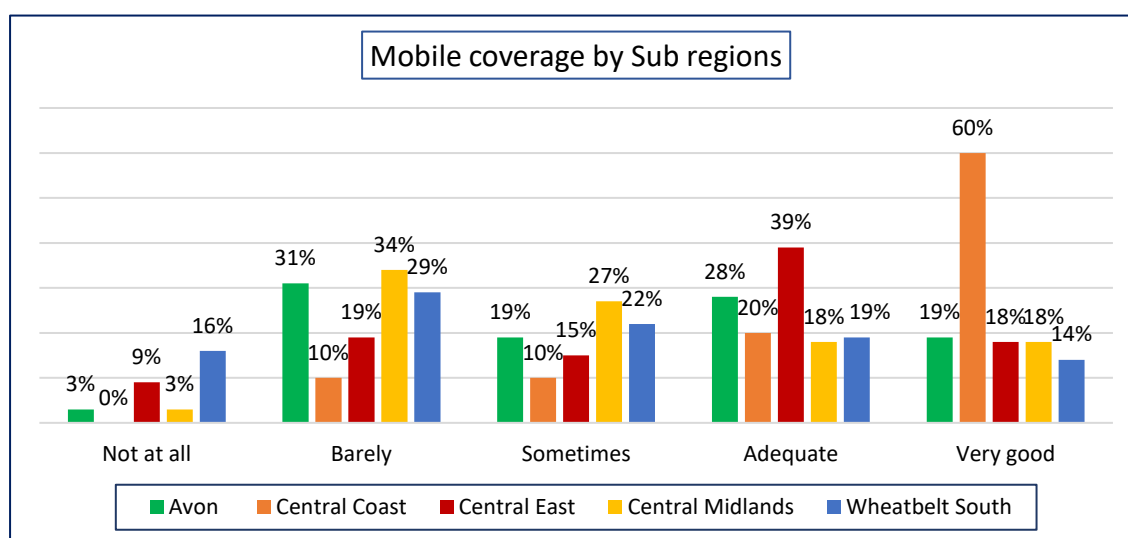


Figure 6

Given the recent policy initiatives<sup>4</sup> to decrease mobile phone blackspots in rural and regional areas, it could be assumed that the situation as it stood at the time of the survey will be improved. However it remains to be seen if increased coverage will also have a downward influence on plan costs. As the ensuing section details, costs for mobile phone services are an additional issue facing many Wheatbelt businesses.

### 1.2.2. Business mobile phone plan costs

Mobile phone plan costs were identified by many business participants in the survey as being inequitable when compared to city businesses. As shown in figure seven, 73% of agribusiness participants believed they were not paying the same costs as city businesses. Overall 58% of all business owners, managers or employees thought they were paying higher mobile plan costs than their city counterparts.

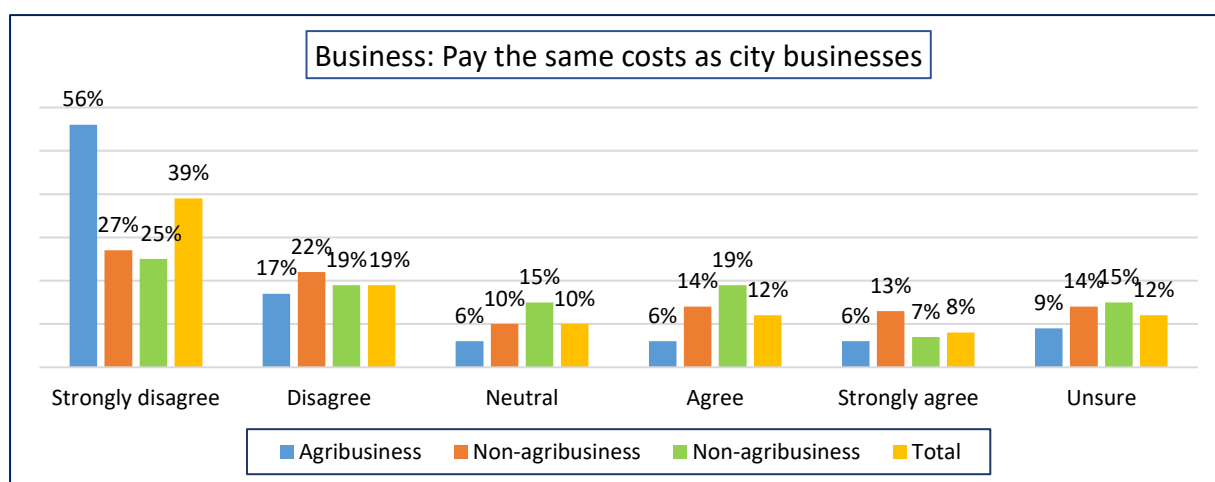


Figure 7

The impact of high mobile plan costs was reiterated at higher level when participants were asked if they would like the same plan cost options that are available to city businesses. Most (95%) agribusiness participants agreed with 81% in strong agreement, while 84% of non-agribusiness participants agreed with 69% strongly agreeing (Figure 8).

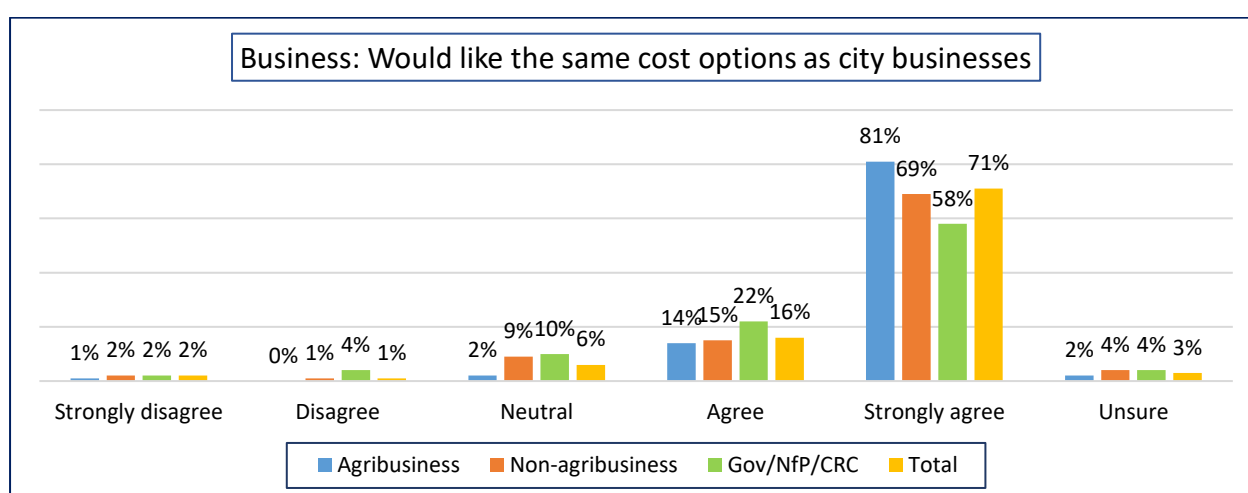


Figure 8

<sup>4</sup> Department of Communications and the Arts. 2015. Mobile Blackspot program: Rounds 1 and 2. Funded base stations. <https://data.gov.au/dataset/mobile-black-spot-programme-funded-base-stations>



Of interest was the responses of participants to the statement: 'If telecommunication costs are higher in rural/regional areas, I accept that is just the way it is.' While there were more participants that disagreed with the statement, there was also a relatively high level of acceptance on the part of other participants with 37% of agribusiness and 30% of non-agribusiness participants agreeing with statement (Figure 9).

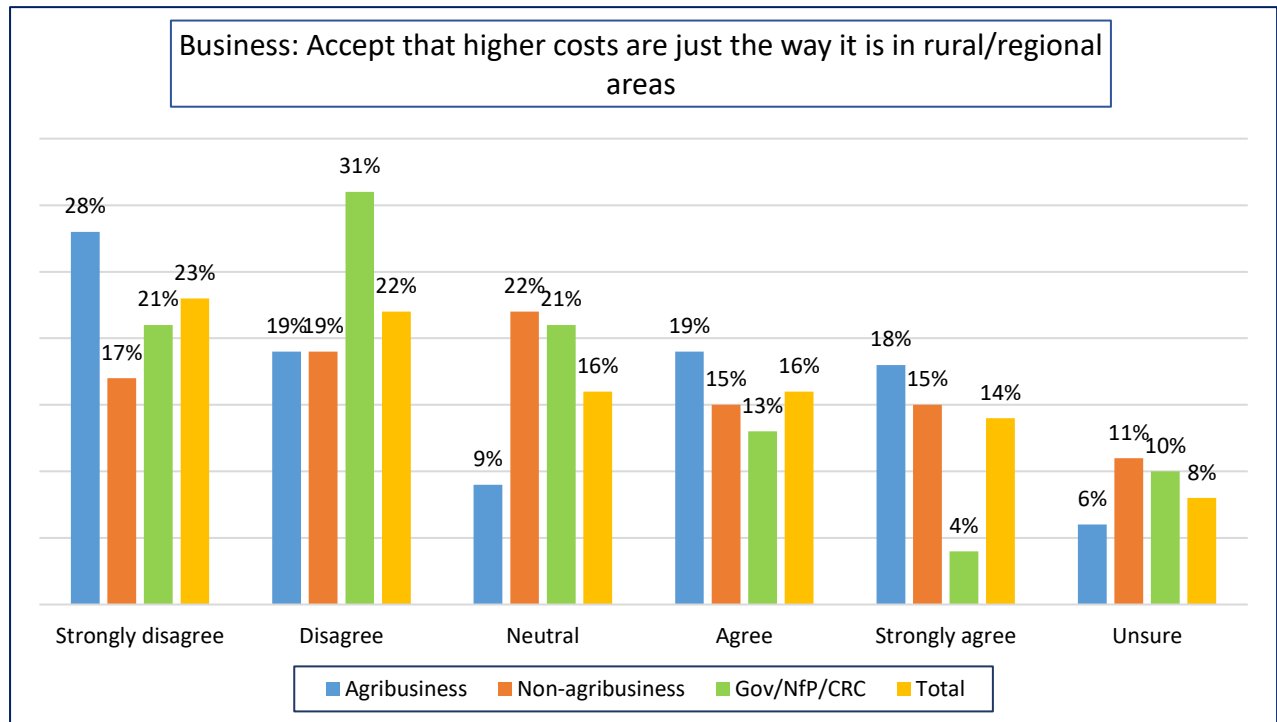


Figure 9

The fundamental importance of mobile coverage for Wheatbelt businesses is succinctly illustrated in figure 10 where 98% of business owners, managers and employees rated better mobile coverage as important (25%) or most important (73%).

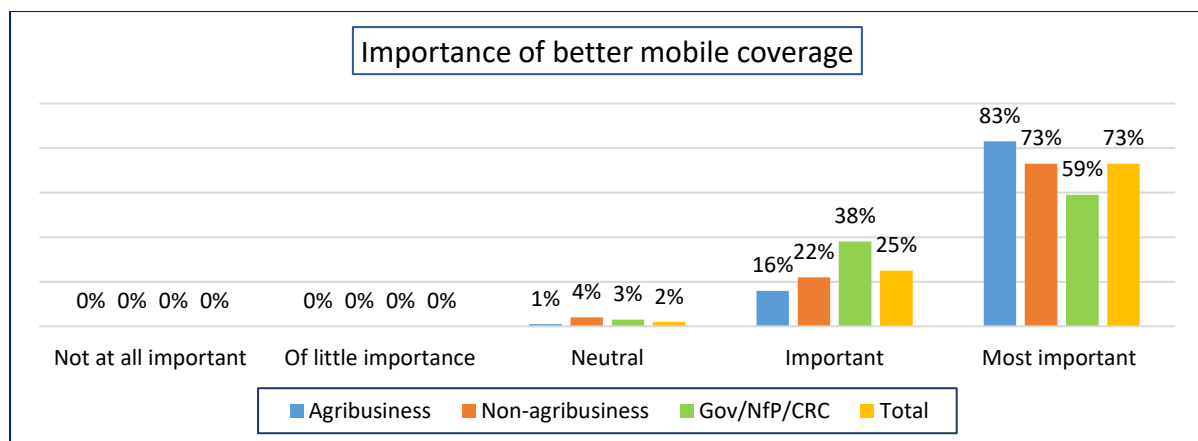


Figure 10

The importance of good mobile phone coverage cannot be under estimated within the Wheatbelt. However the costs of mobile phone business plans represent an equity Wheatbelt businesses must carry because of where they operate. Based on the level of mobile phone usage within businesses, high costs cannot be seen as a restraint on doing business. However at the same time, the higher costs could be seen as an additional 'one percent' financial impingement on Wheatbelt businesses bottom line.

### 1.2.3. Discussion

In the 2013 RDAW Digital Action Plan, it was reported that there were 16 new mobile phone tower sites under the RMCP project funded by Royalties for Regions. These sites were situated in the following locations within the Sub regions:

<b>Avon</b> Clackline Flint (Beverley) Koorda Woottatting (Northam)	<b>Central Coast</b> Breton Bay (Gingin) North Gingin Wongonderrah (Dandaragan) Woodridge (Gingin)	<b>Central East</b> Mukinbudin Bencubbin Narembeen
<b>Central Midlands</b> Ballidu Miling	<b>Wheatbelt South</b> Arthur River North Wickepin East Kondinin	

In light of the results just described, it could be ascertained that these mobile phone towers have only partially met the service needs of some businesses in the Wheatbelt. This short fall is being addressed with the funding of further base stations which commenced in 2015 and 2016 and includes further towers either built or planned for the following locations<sup>5</sup>.

<b>Avon</b> Northam York Toodyay Goomalling Cunderdin Beverley Dowerin Quairading Tammin	<b>Central Coast</b> Dandaragan Gingin	<b>Central East</b> Nungarin Yilgarn Trayning Westonia Bruce Rock
<b>Central Midlands</b> Victoria Plains Dalwallinu Chittering Wongan Chittering	<b>Wheatbelt South</b> Corrigin Kulin Dumbleyung Lake Grace Wickepin Brookton Wagin	

Based on the number of base stations within each Sub region it would be reasonable to assume at the conclusion of construction mobile phone coverage across the Wheatbelt will be greatly improved. However the reality is that the Wheatbelt region is in relatively, a small market which may reduce competitiveness in the market likely resulting in higher costs for consumers compared to consumers in more densely populated areas. As such ensuring a reasonable level of cost equitability for Wheatbelt businesses and residents should be a priority.

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<sup>5</sup> Department of Communications and the Arts. 2015. Mobile Blackspot program: Rounds 1 and 2. Funded base stations. <https://data.gov.au/dataset/mobile-black-spot-programme-funded-base-stations>

### 1.3 Challenges and constraints for businesses: Digital connectivity

Internet connectivity in the Wheatbelt has been an ongoing issue. The launch of Sky Muster™ has offered some level of improvement particularly for those who were not able to connect to the internet at all. But Sky Muster™ has come with its own suite of limitations, particularly in regard to data allowances, down and up load speeds and costs<sup>6</sup>.

Additionally whereas nbn co. maintain that only 3% of Australian residences will be serviced by Sky Muster™, RDAW modelling based on nbn's connected communities data<sup>7</sup> & <sup>8</sup> estimates that 26% of businesses and 18% of households in the Wheatbelt would have to connect to Sky Muster™ providers. In addition the analyses suggested that connections to Sky Muster in the two sub regions of Central East and Wheatbelt South that have a higher proportion of remote and outer regional locations would approximately be 49% and 73% respectively.

These high level of connections to Sky Muster™ represent some challenges for the Wheatbelt given that any efficiency shortcoming such as data availability or slow down load/up load speeds and or higher costs could constrain economic growth.

#### 1.3.1 Biggest Issues: Internet connectivity

Business participant's type of internet connection showed a diversity of connections. Agribusinesses were mainly connected to mobile WiFi or Sky Muster™ services or a combination of both (Figure 11). Alternately over half of non-agribusinesses were connected to either ADSL (46%) or Fixed Wireless services with a third (32%) connect to mobile WiFi.

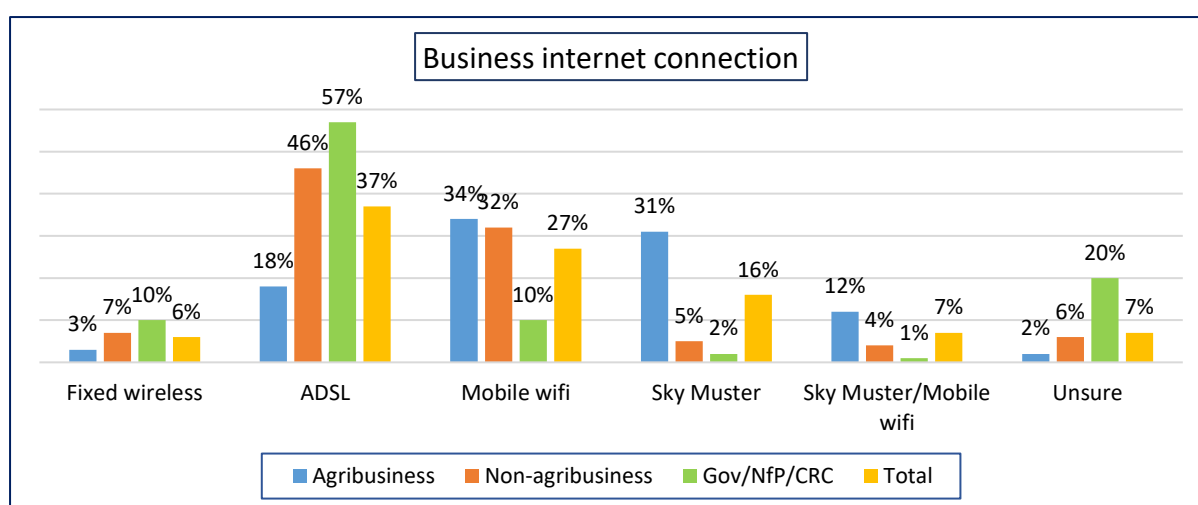


Figure 11

The biggest issues for businesses were to a degree influenced by what type of internet service the businesses or agencies were connected to. For the most part agribusiness participants connected to all types of service identified reliable connection as an issue with most (96%) of those connected to Sky Muster™ services indicating connectivity as a major issue (Figure 12).

Reliable connection was somewhat less of an issue for non-agribusiness participants with slightly fewer participants rating it as a big issue compared to agribusiness participants. Of note was that a

<sup>6</sup> RDA Wheatbelt. 2016. Submission to Productivity Commission: Issues paper; Telecommunications Universal Service Obligation – August 2016, pp. 3, 4 and 5. <http://www.rdawheatbelt.com.au/publications/current>

<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>

lower percentage of non-agribusiness participants than agribusiness participants connected to Sky Muster™ services rated reliable connectivity as an issue.

Conversely participants employed in Government, NfP or CRC agencies had fewer issues with reliable internet connection with a total of 65% identifying connectivity as an issue with those connected to mobile WiFi and Sky Muster™ services registering the highest level of issue with reliable connection (Figure 14)<sup>9</sup>

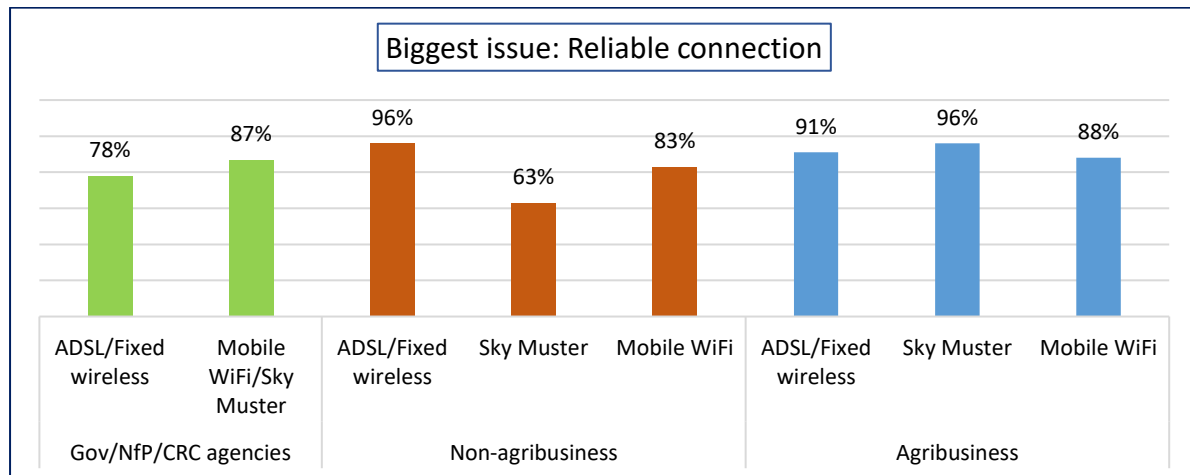


Figure 12

As shown in the analysis, reliable connection to the internet remained an issue for the majority of Wheatbelt businesses and agencies. In addition it would seem that connection to Sky Muster™ has added to connectivity issues rather than alleviated them. At the same time the high percentage of business participants connected to ADSL or Fixed Wireless services that identified reliable connection as an issue indicates possible shortcomings with delivery from these services.

It could be speculated that in the case of ADSL services, reliable connection may be subject to the state of existing infrastructure and or the number of customers allocated to a landline exchange. Alternately anecdotal evidence derived from several Wheatbelt customers connected to nbn Fixed Wireless services indicates that there has been intermittent dropout services. One customer observed that in the eight months they had been connected to Fixed Wireless, services had dropped out six times with a duration of one to two hours out to 18 hours. Despite contacting their service provider, they have received no official reason for the cause of the dropouts.

### 1.3.2 Biggest Issues: Data down/up load speeds and data allowances

Data down and up load speeds were also rated as a major issue for Wheatbelt businesses and agencies. It is likely that the higher level of issue attributed to speeds by non-agribusiness participants with ADSL/Fixed wireless and Sky Muster™ services reflected their greater reliance on online services compared to agribusiness and agency participants (Figure 13).

<sup>9</sup> Mobile WiFi and Sky Muster users were combined in the analysis as there was only 4 participants connected to Sky Muster.

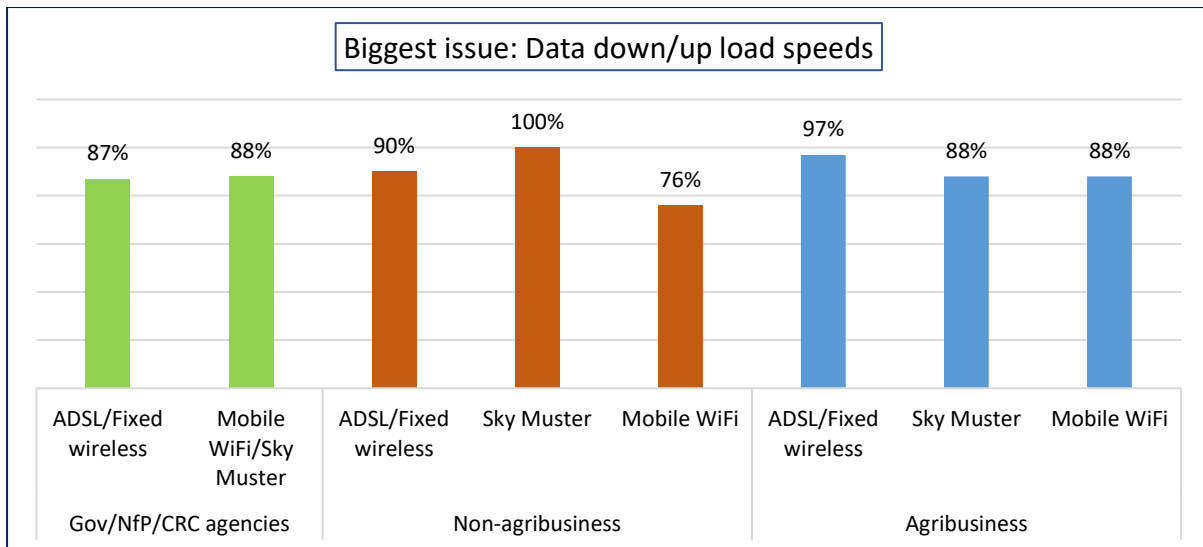


Figure 13

Similarly less agribusiness participants had issues with data allowances compared to non-agribusiness participants which also conceivably indicates the different online requirements between the two sectors (Figure 14).

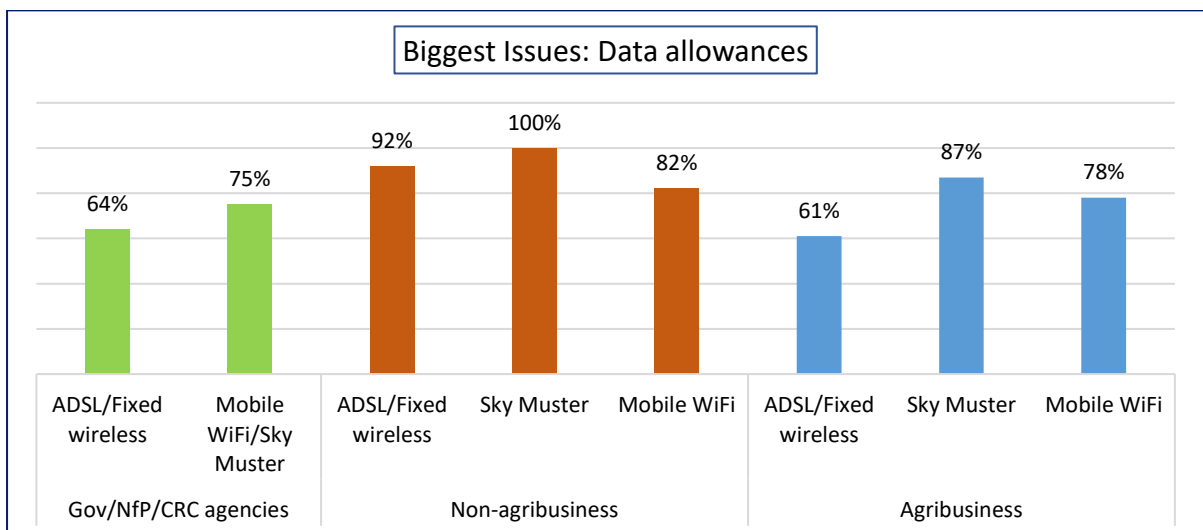


Figure 14

It is feasible that the combined issues of less than adequate data down/up load speeds and data allowances are reducing the productivity efficiencies of Wheatbelt businesses as well as increasing the challenges of undertaking business online. Added to these issues was the issue of cost. For the most part around three quarters of agribusiness and non-agribusiness participants rated high cost of services as an issue although more agribusiness participants had an issue with Mobile WiFi plan costs (Figure 15).

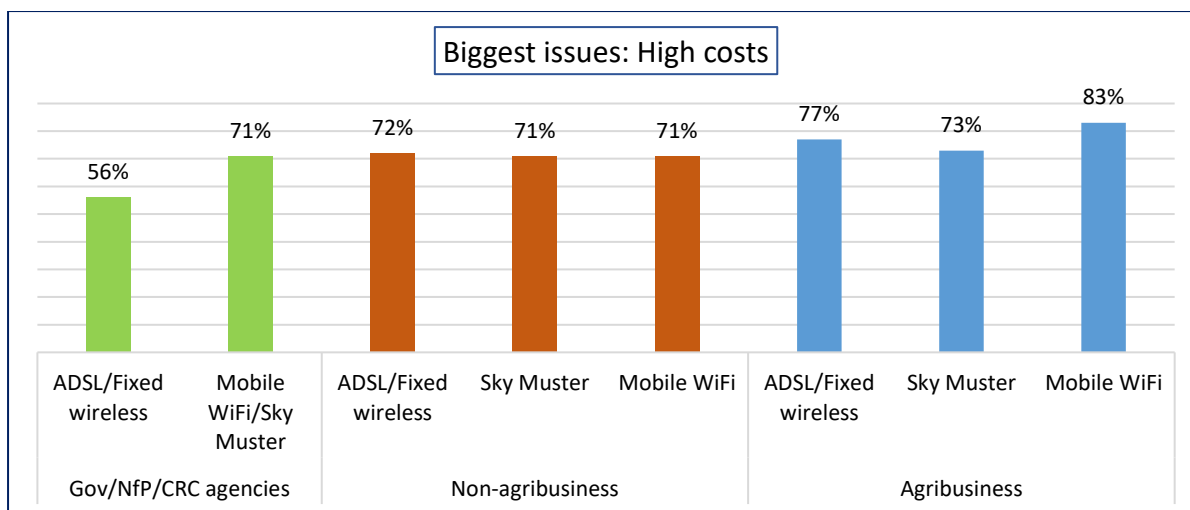


Figure 15

As figure 16 indicates, the issue of high costs may have been influenced by the number of business participants who were using multiple types of service connection. Overall almost a quarter (24%) of business participants had two types of connections. Of interest is that 19% of non-agribusiness participants were using a combination of ADSL or Fixed Wireless with mobile WiFi and 15% of agribusiness participants connected to Sky Muster™ services were also using mobile WiFi.

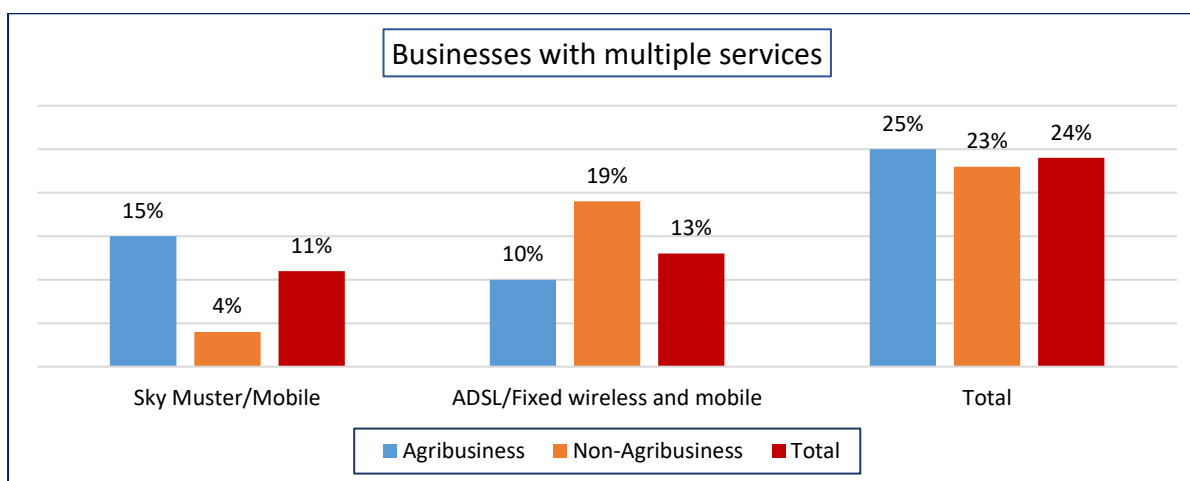


Figure 16

However despite the high costs, a considerable proportion of business participants were prepared to make a one off payment of varying amounts to ensure they had reliable, consistent internet connection (Figure 17). The disparity in connectivity between agribusinesses and non-agribusinesses was illustrated in the high percentage (43%) of agribusiness participants that would pay additional costs for reliable internet connectivity compared to 17% of non-agribusiness participants.

Equally the disparity between those businesses connected to Sky Muster™ services compared to other services was illustrated by the 82% of combined Sky Muster™-mobile and 42% of Sky Muster™ only agribusiness users who would spend more to ensure good connectivity. These responses were replicated to a slightly lesser degree by non-agribusinesses participants who used the same services.

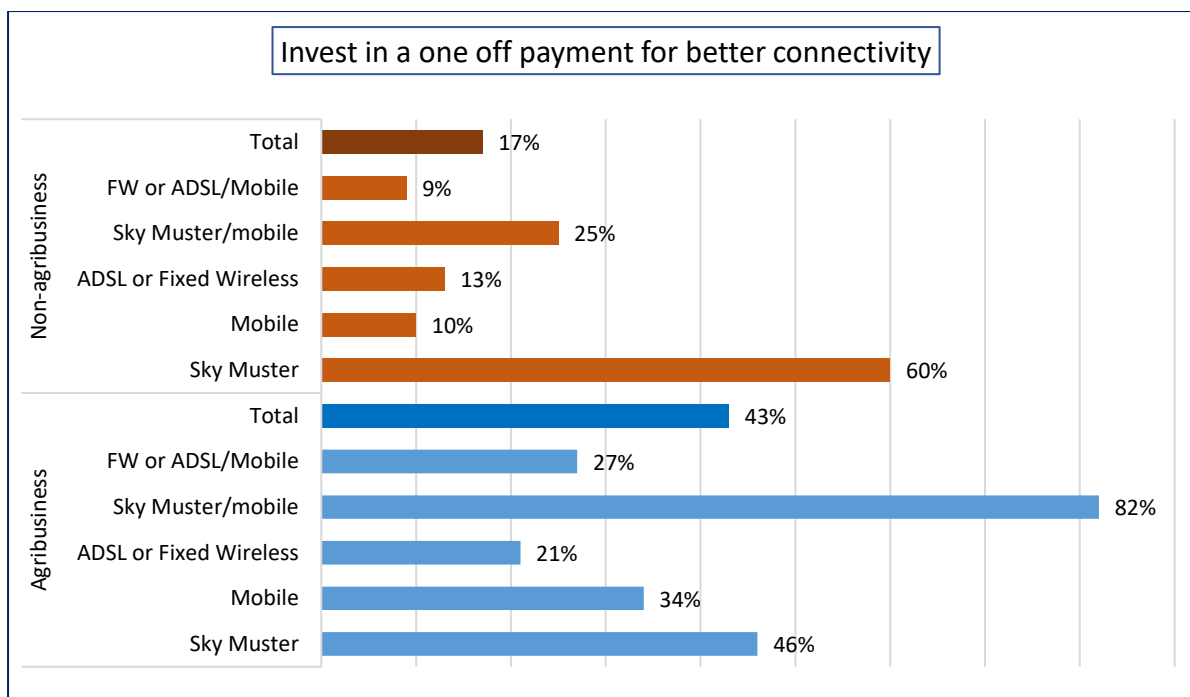


Figure 17

For the most part, agribusiness and non-agribusiness participants were prepared to spend an additional \$500- \$1,000 to ensure reliable connectivity and access to data (Figure 18). Of note was that proportionally more (40%) non-agribusiness participants connected to Sky Muster™ services were prepared to personally pay between \$500- \$1,000 for a more efficient service while more agribusiness participants were inclined to invest higher amounts to achieve better service. This is illustrated by the 19% of agribusiness participants who indicated that they would pay between \$4,001 and \$6,000 to achieve better connectivity.

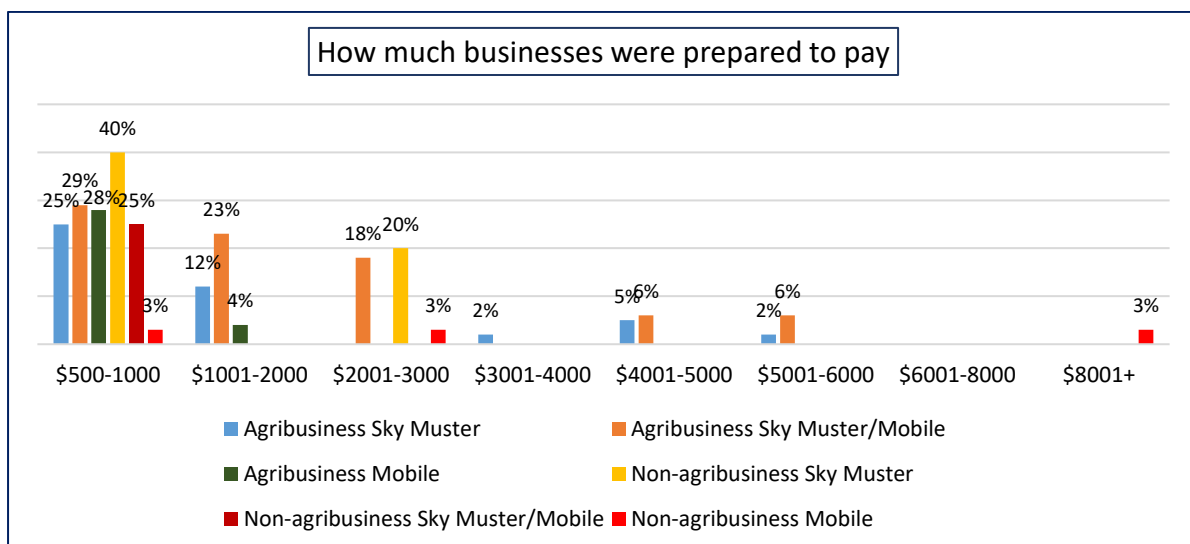


Figure 18

### 1.3.3 Discussion

From these results it could be ascertained that in as much as Wheatbelt businesses are utilising online options for conducting business, they are being constrained from optimising such options to the advantage of their business. In effect it could be proposed that they are operating from a point of competitive digital disadvantage that is not within their control to change with the exception of outlaying more money on alternative connections or higher cost high speed and or data plans.



While it is acknowledged that Sky Muster™ data allowances have been doubled since the survey was conducted, it remains a point of conjecture that these allowances will be sustainable in the face of increasing technological advances, particularly in the agribusiness sector. As observed by a Curtin University Agribusiness student<sup>10</sup>, the accumulation of agronomy and management data and the technology to enable farmers to access the data at paddock level as part of their decision making processes is becoming a reality. However to fully utilise the potential of the availability of the data, farmers will need the capacity to quickly download terabytes of data. Sky Muster™ with a maximum monthly data allowance of 300 gigabytes with 150 gigabytes available during peak periods<sup>11</sup> will not meet such requirements.

As the next section will detail, these issues of connectivity were seen by the majority of business participants as having a negative influence on starting, developing and establishing businesses in the region.

#### 1.4 Connectivity: Constraints on Business

During the survey, business participants identified benefits better digital connectivity would deliver to their businesses and the constraints poor connectivity had on starting a business. Whereas the participants were responding from a personal perspective, the aggregation of their responses indicate the potentially limiting effect poor digital connectivity will have on the region's economic growth if it is not acted on.

##### 1.4.1 Constraints on starting a business

There was a strong concurrence among agribusiness and non-agribusiness participants that poor internet connectivity was a constraint in starting a business (Figure 16). Of note was that there was a more pronounced agreement among agribusiness participants that used all forms of internet connection compared to non-agribusiness participants.

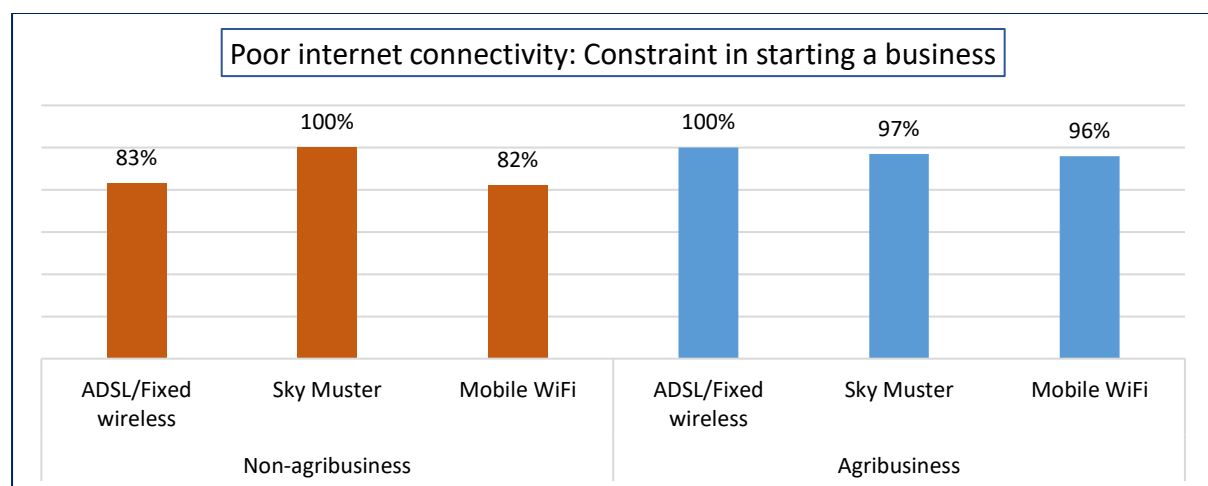


Figure 19

There was also an emphatic consensus that poor internet connectivity restricted access to markets (Figure 17). Again this appeared to resonate more with agribusiness participants than non-agribusiness participants.

<sup>10</sup> As part of the review, focus groups were conducted with Curtin and Charles Sturt Agribusiness students on the Curtin and Muresk Campuses.

<sup>11</sup> Peak periods are categorised as between 7am and 1am with off peak being between 1am and 7 am.

<https://www.activ8me.net.au/internet/skymuster>

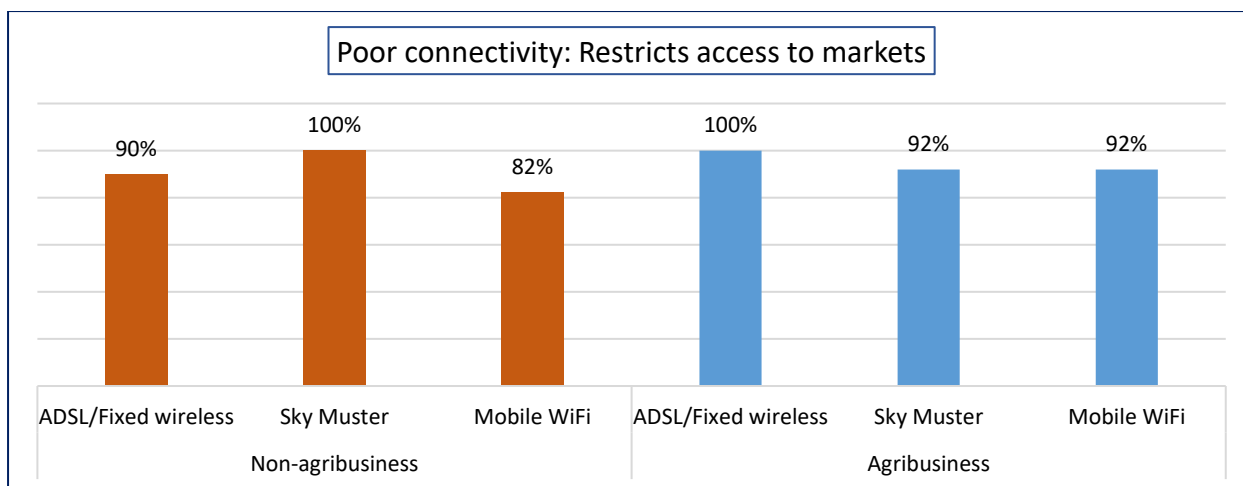


Figure 20

Accordingly, most business participants believed that better internet connectivity would increase the chances of start-up businesses succeeding and becoming established (Figure 18). As with responses to the other two statements concerning connectivity, more agribusiness participants concurred with the statement compared to non-agribusiness participants.

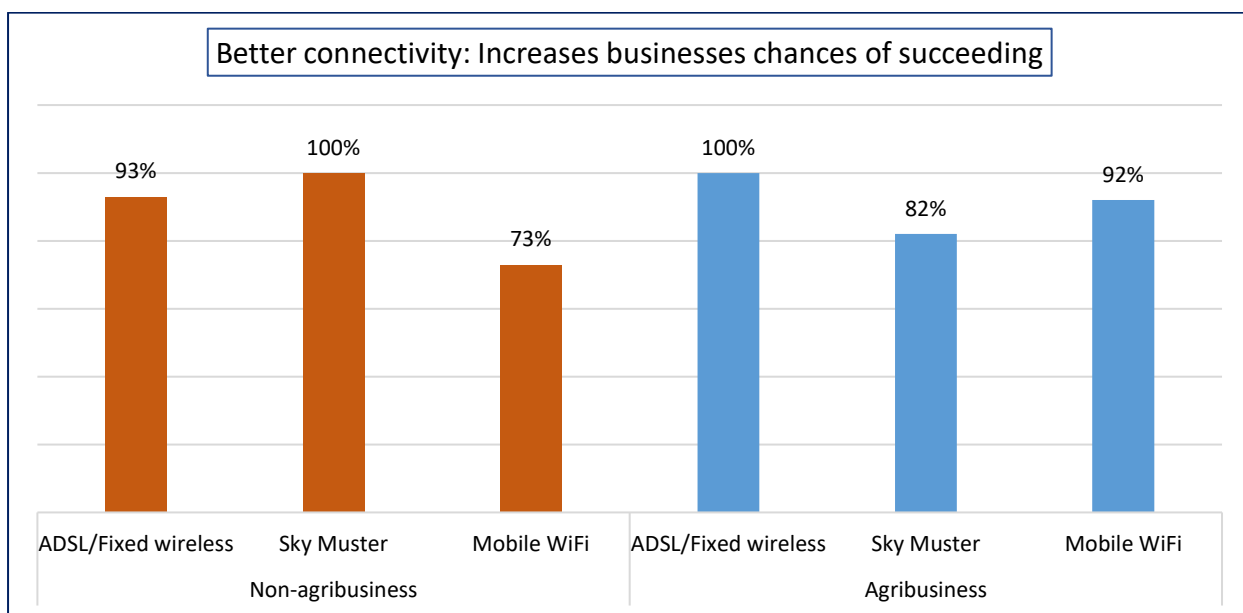


Figure 21

#### 1.4.2 Discussion

While the majority of business participants acknowledged the constrictions of poor internet connectivity and opportunities that could be derived from better connectivity, it is interesting to note the differences between the business sectors and types of connections. For instance fewer non-agribusiness participants felt that poor internet connectivity was a constraint on starting a business compared to agribusiness participants. On the other hand more non-agribusiness participants than agribusiness participants connected to Sky Muster™ services believed poor connectivity restricted access to markets and better connectivity increased businesses chance of succeeding.

This could be taken as a delineation between the two business sectors in the higher levels of reliance on market access of the non-agribusiness sector and the association between market access and business success. As such this also illustrates a divergence of digital needs between the two business

sectors and an indication that a ‘one size’ fits all approach to addressing connectivity issues in the Wheatbelt may not deliver the anticipated outcomes.

However the key message that could be taken from the business participants responses is that poor digital connectivity should be regarded as a critical constraint in starting and establishing businesses in the Wheatbelt. In turn it could be accepted that the poor digital connectivity is acting as an overarching restraint on the economic growth of the overall region and addressing the issue should be flagged as a critical priority.

### 1.5 Connectivity: Sky Muster™

Participant’s responses to the performance of Sky Muster™ services suggested that the issues of connectivity may not be addressed by the satellite service.

#### 1.5.1 Reliability and data speeds

Apart from a sizeable degree of uncertainty, business participants were divided in their opinions of the service (Figure 22). Only 31% of agribusiness participants and a quarter (24%) of non-agribusiness participants believed Sky Muster™ was or would be better than the services they had. Likewise over a quarter of agribusiness (28%) and non-agribusiness (27%) participants did not think the service would be reliable while 42% of agribusiness participants thought speeds were or would be adequate.

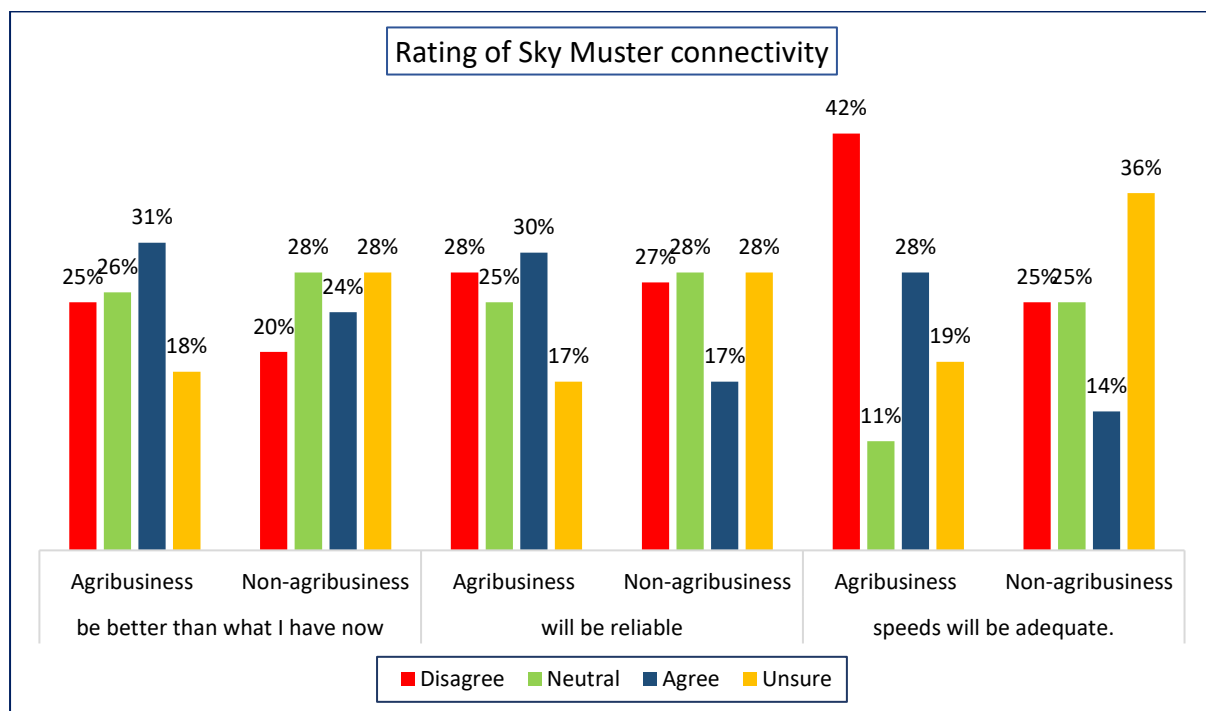


Figure 22

These responses particularly from agribusiness participants indicate that there are or anticipated residual concerns about Sky Muster’s capacity to meet both current and future needs of businesses in the Wheatbelt. That being said, 44% of agribusiness participants thought Sky Muster™ was the best alternative (Figure 23). This was somewhat more than those who believed it was better than the other services they were or had used but only 7% more than those who thought there were better alternatives.

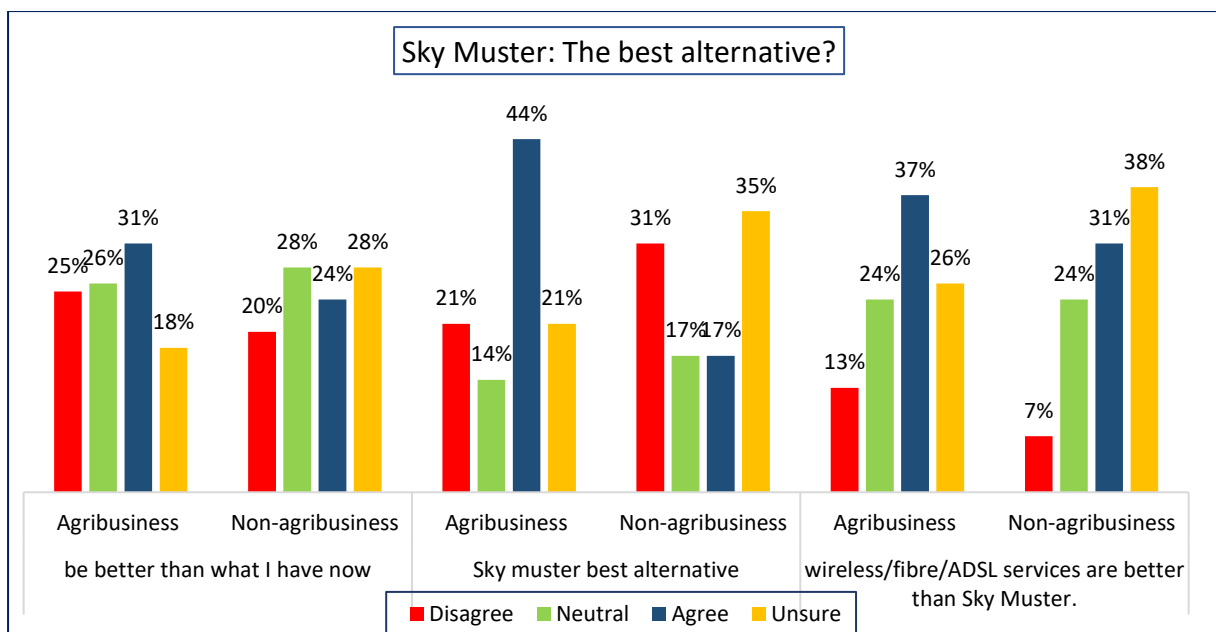


Figure 23

### 1.5.2 Discussion

The levels of uncertainty and dissatisfaction in regard to reliability and data speeds exhibited by business participants mirrored the same concerns that were raised during the Productivity Commission's Telecommunications Universal Service Obligation inquiry<sup>12</sup>. Arguably these issues could be seen as motivating factors in the high number of business participants using Sky Muster™ services willing to spend more to ensure they have a reliable service as shown in figure 18.

It would seem that these concerns are well founded given the observations of Laurie Patton<sup>13</sup>. Patton makes the point that the Sky Muster™ satellite service has pre-existing data and speed limitations which will only deteriorate as more businesses and residences use the services. The consequences of this Patton believes if action is not taken is that Australia will have two classes being the digital have and have nots.

## 2. Social connectivity update

Of equal importance in the Wheatbelt's digital space is the capacity to connect socially with friends, neighbours and the broader communities. The survey that underpinned parts of RDAW's 2013 Digital Action Plan identified an increasing trend within the region of people using digital communications to maintain social contacts, engage with the community and access services such as health and education. The following section examines where and what participants in the most recent survey were using the internet.

### 2.1 Where the internet is accessed

Apart from a marked increase between 2013 and 2017 in the percentage of participants who accessed the internet from home there were only small variances in the other points off access (Figure 24). The percentage accessing the internet at work has remained relatively static over the period while there has been a slight increase in accessing the internet at family and friends houses and Government agency/CRC<sup>14</sup>. Conversely accessing the internet at a café with a WiFi hotspot or library decreased.

<sup>12</sup> Productivity Commission 2017, *Telecommunications Universal Service Obligation*, Report No. 83, Canberra.

<sup>13</sup> Patton, L. 2016. Broadband: It's bugged in the bush: <https://johnmenadue.com/laurie-patton-broadband-its-bugged-in-the-bush/>

<sup>14</sup> The 2013 RDAW survey combined Government agency and CRC whereas the 2017 survey separated Government agency from CRC.

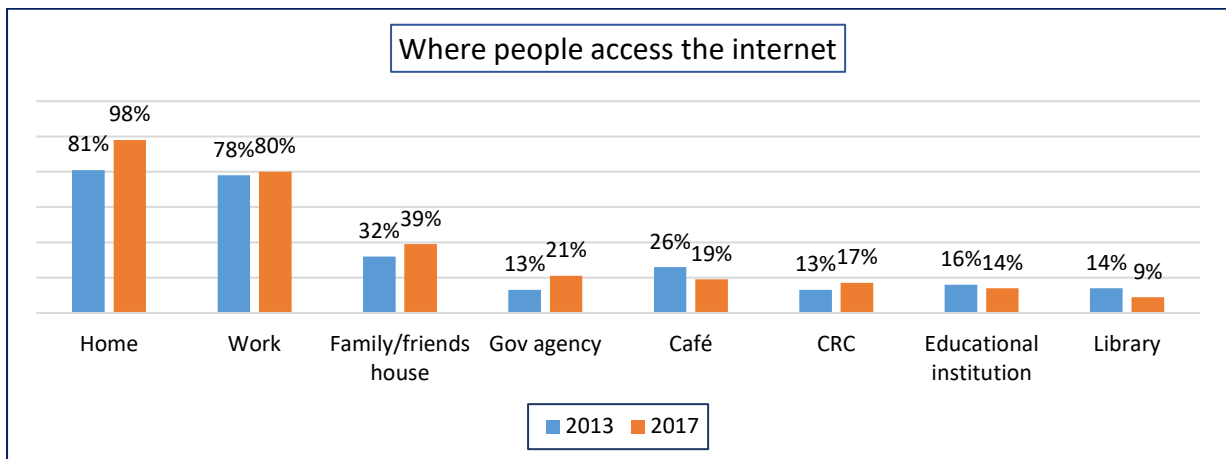


Figure 24

### 2.1.1 Internet access by age groups

To provide a more detailed context of the digital usage of participants, analysis by age was undertaken. One result of this analytical approach of interest was that 34 of the survey participants representing 10% of respondents were aged 65 years or over. Of these participants, 25 were still operating a business or employed and were accessing the internet at work.

A further analysis examined internet access and daily usage based on age categories. As would be reasonably accepted, 100% of the 18-34 years age group were accessing the internet and 93% were accessing it on a daily basis (Figure 25). Similarly almost all of the 35-44, 45-54 and 55-64 years age groups were accessing the internet with a daily level of access marginally less than the 18-34 years age group, while there was somewhat of a drop off of daily use among the 65 plus age demographic.

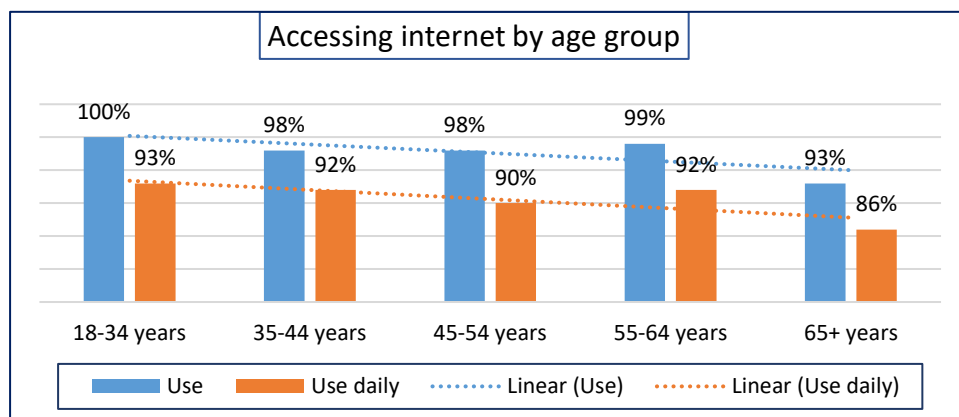


Figure 25

However these results indicate that there is a high level of general digital and internet competency across all age demographics in the Wheatbelt. This is further illustrated by the number of participants who used multiple digital devices. In total over half (54%) of the participants used four or more digital devices while just 19% used one (6%) or two (13%) devices (Figure 25). Across the age groups the highest percentage using only one device was in the 65 plus population, with the highest level of use of six devices was in the 18-34 years population.

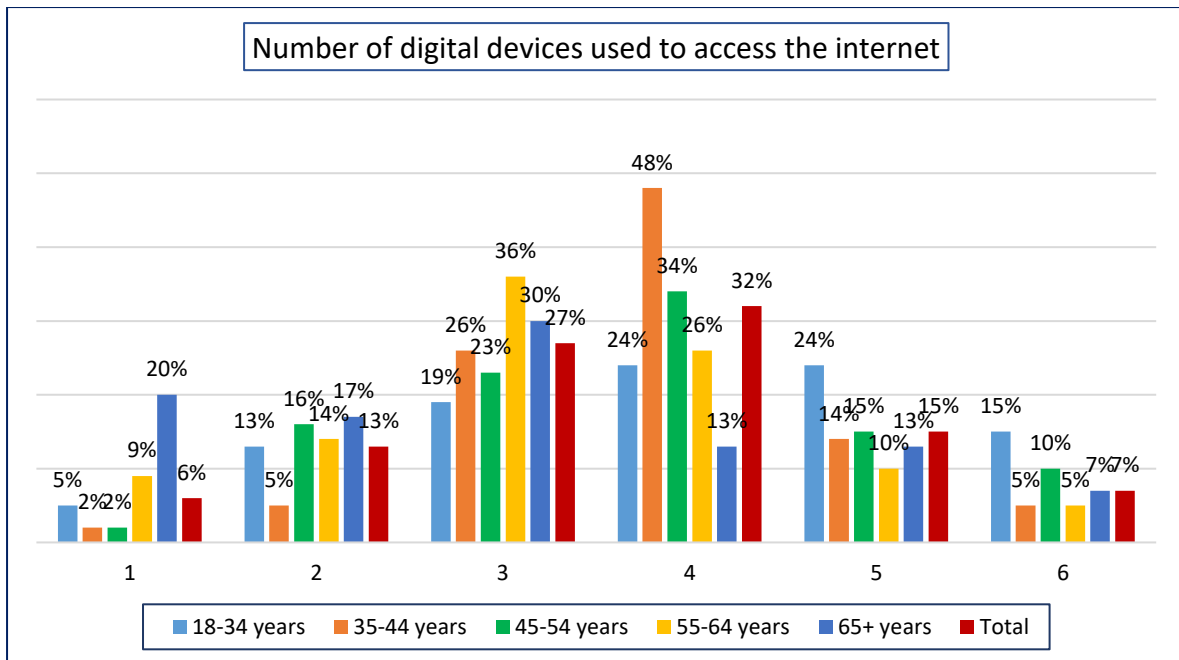


Figure 26

## 2.2 Devices used

As to what devices were being most used to access the internet, results showed compared to the 2013 results that there was substantial increase in the use of mobile phones, tablets and digital TV and a decreasing trend in the use of desk top and laptop computers (Figure 27). An addition to the devices cited in the 2017 survey was gaming devices of which 21% of participants used at varying levels of frequency.

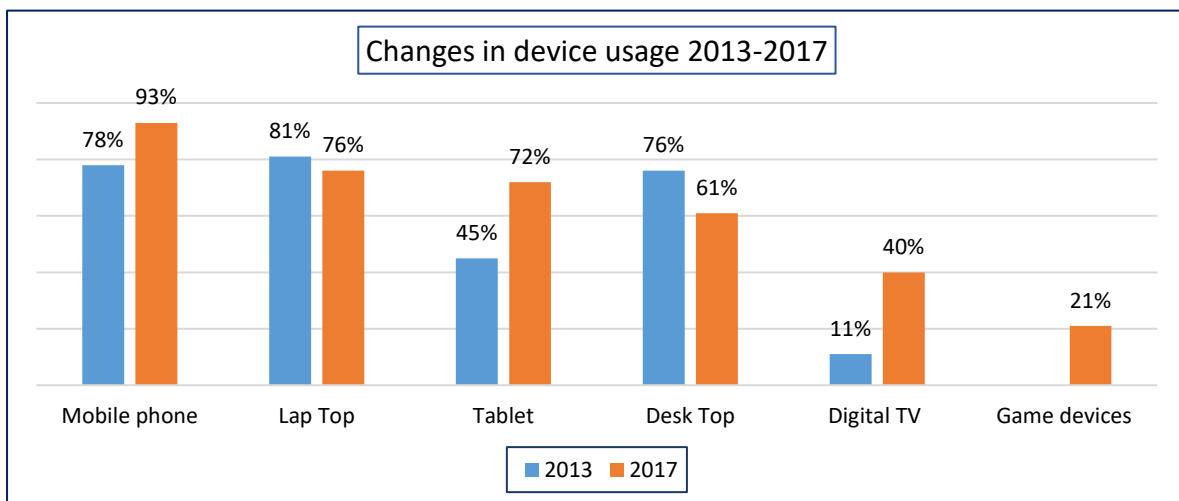


Figure 27

It could be speculated that the increased use of mobile phones is being influenced by both improved coverage delivered through the blackspot programs and the emergence of iPhone and such like technology that enables users access to the internet via their mobiles. These technological influences have increased the mobility of the device and it could be inferred, this has enhanced the appeal of the device to users. The procession towards increased mobility of devices is also shown in the increased use of tablet devices and the corresponding downward trend in the use of desk top and laptop computers.

It could be anticipated that from a user's perspective, the increased mobility of devices would be highly desirable and beneficial as they no longer need to rely on the static desk top computer and relatively cumbersome (compared to a tablet) laptop. In effect the increased mobility of devices allows the people of the Wheatbelt region, whether they be farmers, other business or residents to take the internet out of the office or home into the paddock and on the road or wherever else... **if they have connectivity.**

This has immense implications for the future economic development of the region as well as the potential to deliver highly beneficial social, educational and health outcomes.

### 2.2.1 Device use by age

As might be anticipated, the 35-44 and 18-34 and 45-54 years population were the highest users of mobile phones and tablets (Figure 28). Alternately the 35-44 years population were the highest users of the laptop and the 45-54 years population were more likely to use the desk top computer. From a social perspective 18-34 years population were more likely to use digital TV but perhaps unexpectedly the 45-54 and 35-44 years population were greater users of gaming devices than the 18-34 years population.

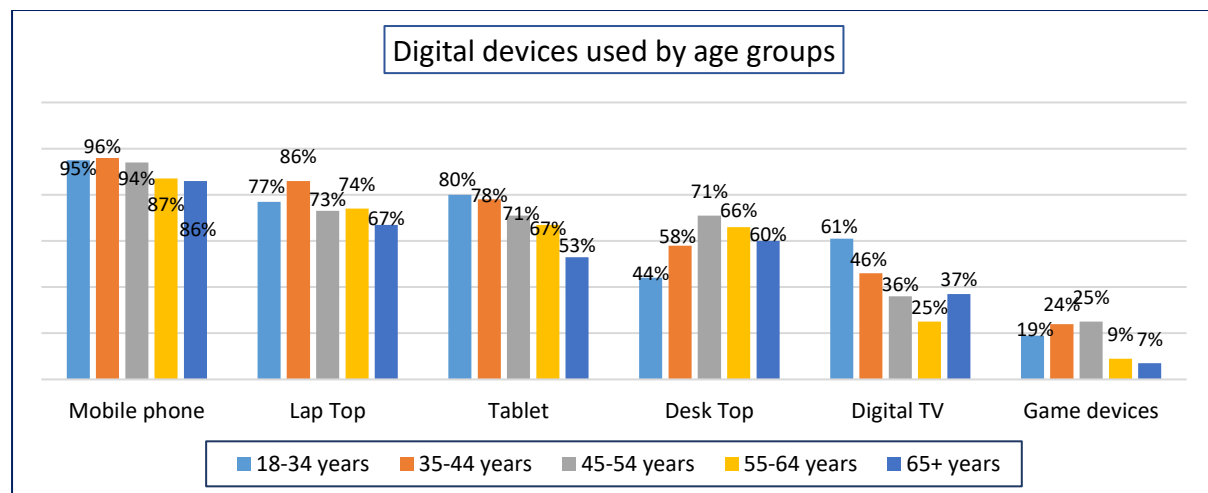


Figure 28

However when it came to the frequency of using devices it was the 18-34 years population who had the highest tendency to use the mobile phone with 93% out of the possible 95% using their mobile phone daily (Figure 29). On the other hand, while more 18-34 year olds used tablets it was the 35 through to 64 year olds who were using tablets more on a daily basis. The differentiation in the type of devices used by different age groups was also shown with the 65+ year's group being greater users of the laptop and the desk top computer than the majority of other age groups.



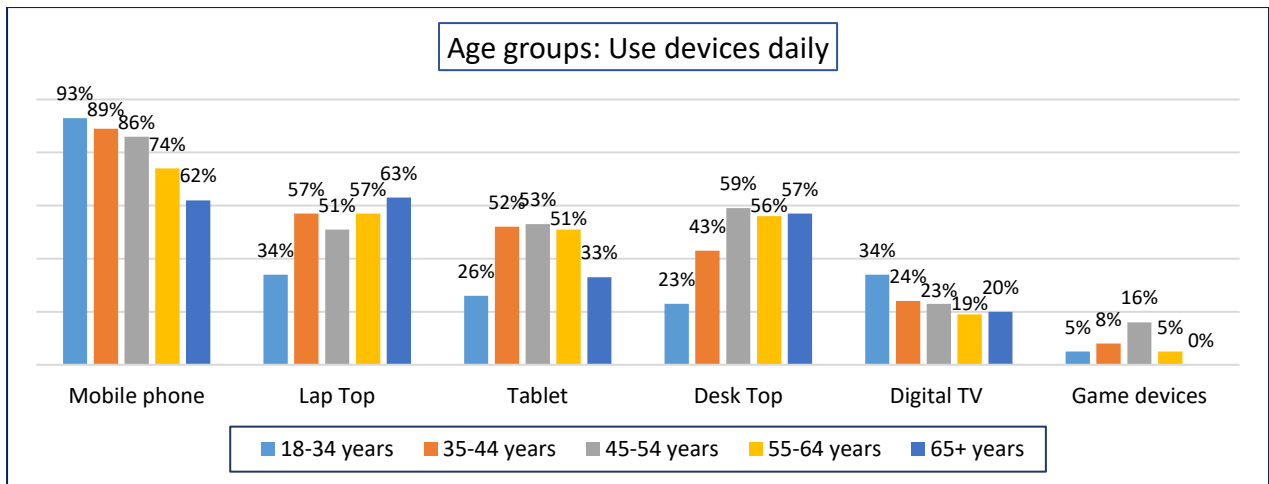


Figure 29

### 2.2.2 Number of devices used by age

The survey showed a decreasing trend across the various age groups in the number of devices participants used to access the internet with the 18-34 years age group using an average of four down to the 65+ age group using 3 (Figure 30). This could be seen as expected given that 18-34 years age group was born either at the start of the IT age or born into it. However the result also indicates that those age groups who grew up in a less technological period have adopted and adapted to the new technology. What is also noteworthy is the increase in the average number of devices used between 2013 and 2017 from 3 to 3.6.

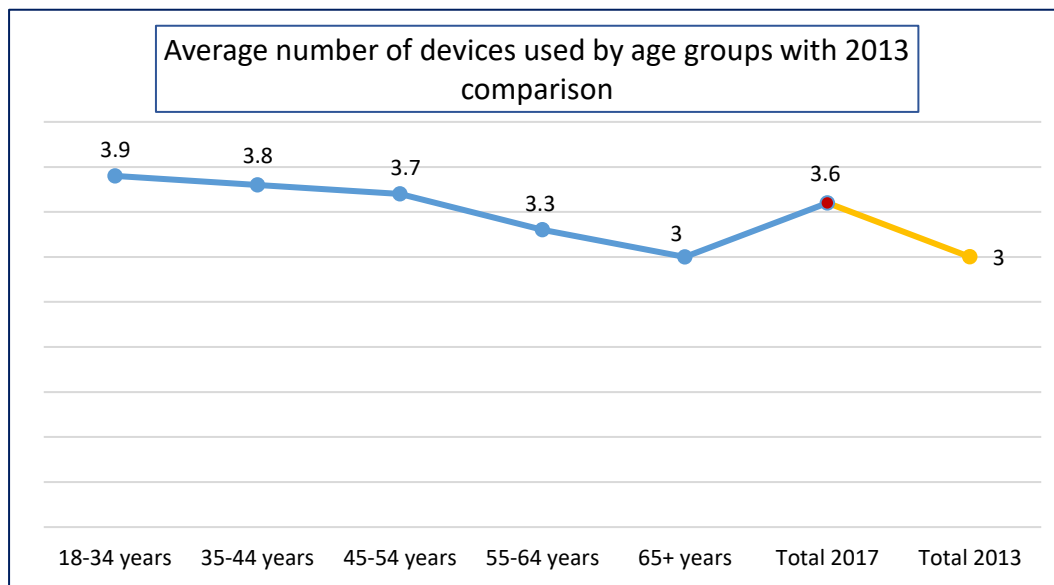


Figure 30

The level of change is illustrated in more detail in figure 31 which shows that only a third (32%) of the 2013 survey participants used four or more devices to access the internet. In comparison 55% of the 2017 survey participants were using four or more devices.

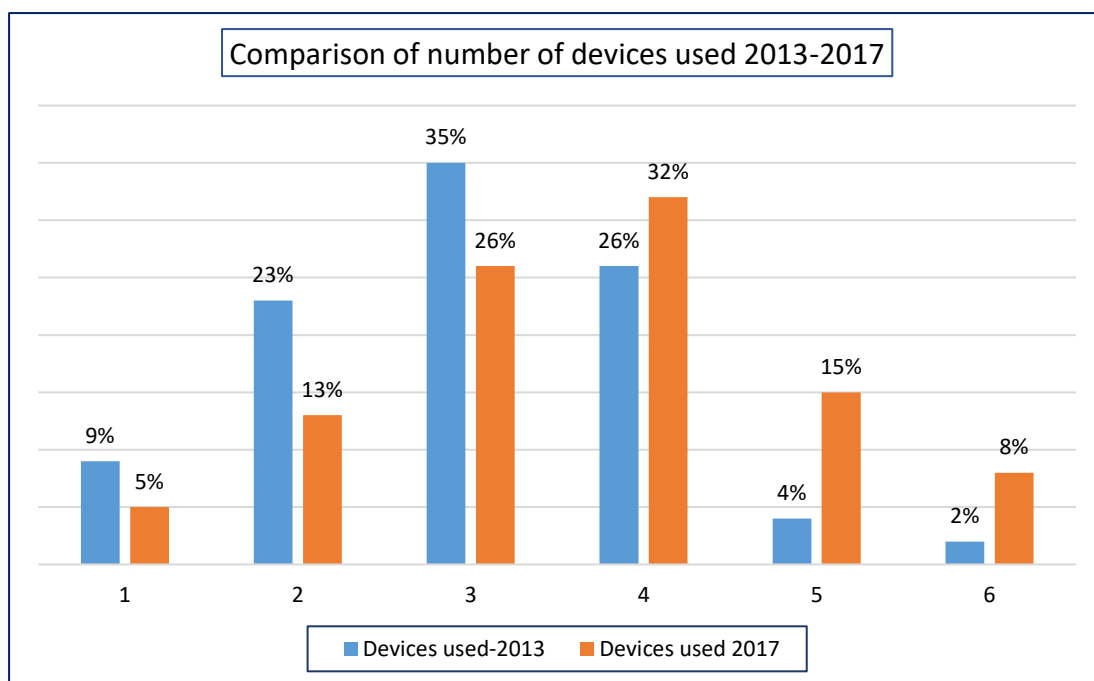


Figure 31

Additionally the numbers of devices used and the frequency of use suggests that business operators and residents in the Wheatbelt across all age groups have or are well on the way to utilising digital technology in their businesses and everyday life. This proposal is further borne out in the percentages of those participants who used four or more devices across the age groups and in total (54%) with 67% of the 35-44 years and 63% of the 18-35 years age groups using four or more devices (Figure 32).

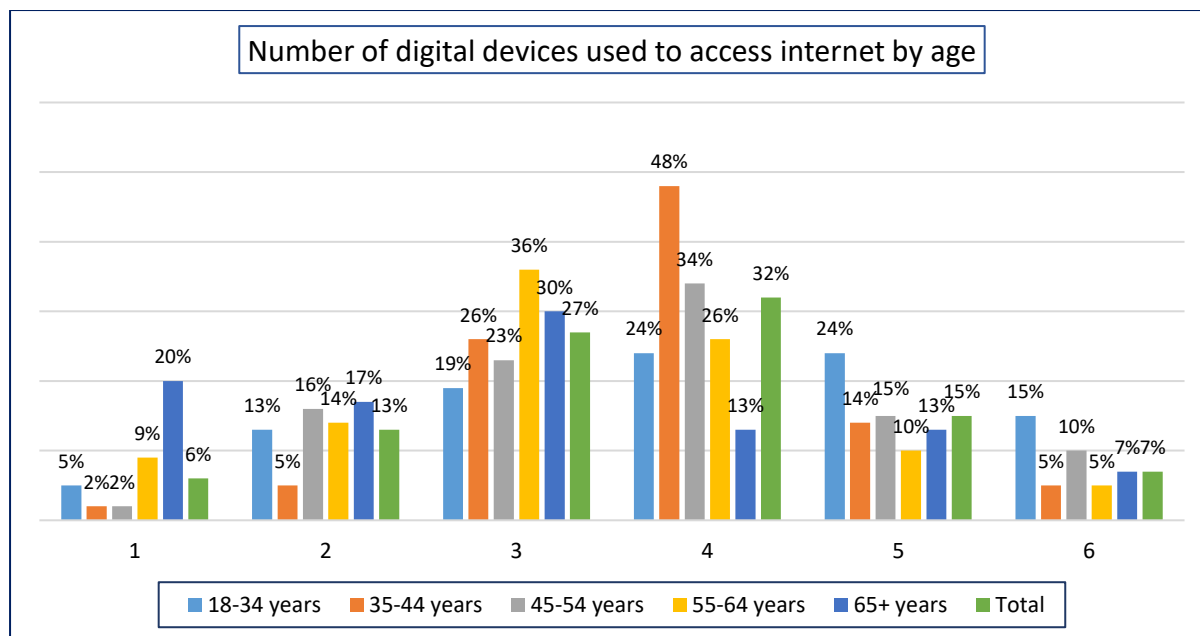


Figure 32

### 2.2.3 What is the internet being used for?

Some of the changes in what participants are using the internet for in 2017 compared to what it was being used for in 2013 add support to the observation that weekly and daily activity in the Wheatbelt is becoming highly digitalised. Almost all of the participants paid accounts and or banked online (96%) and used the internet for news and research (95%) (Figure 33). While these were relatively marginal increases on the 2013 survey results there was a major increase in the number of participants

accessing online health services with strong increases in accessing Government services and social media in the 2017 responses.

In addition, in regard to social internet use in staying connected to family and community, there was also an increase in the use of voice/video calls. Again this has positive implications for the Wheatbelt as it suggests that the internet is breaking down the tyranny of distance and reducing the isolation people may have experienced in the past.

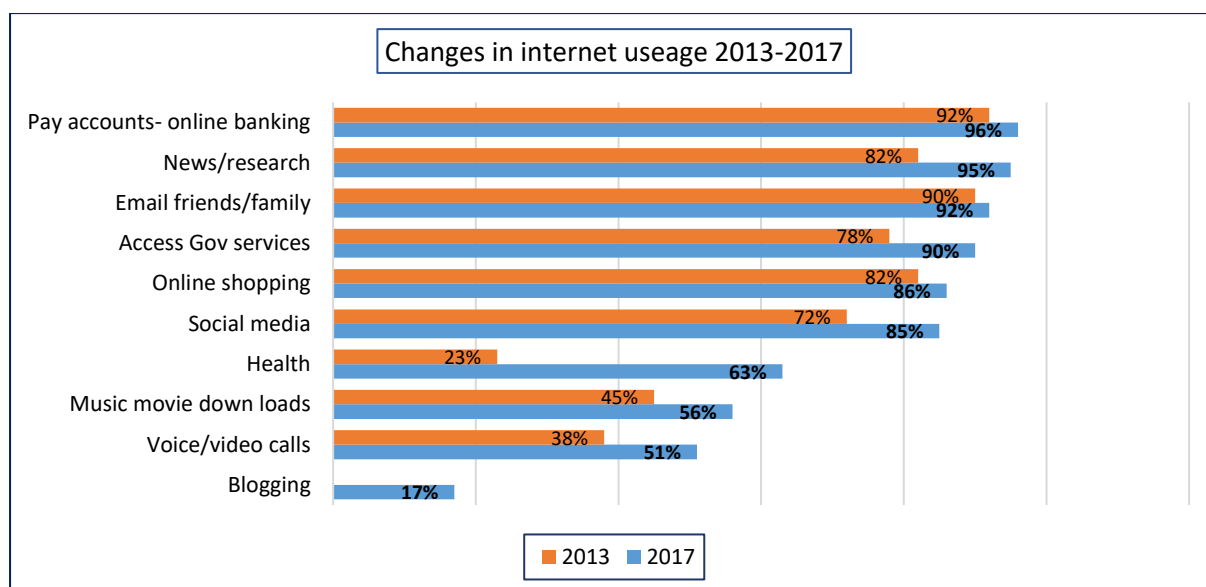


Figure 33

In terms of what each age group used the internet for in the undertaking of everyday activities, there was a high uptake across all age groups in paying accounts or banking online and using the internet for research/news (Figure 34). Similarly there was a high level of accessing Government services online in all age groups. It was only in the areas of online shopping and health that any differentiation became apparent between the age groups with the 65+ age group less likely to shop online or access online health services.

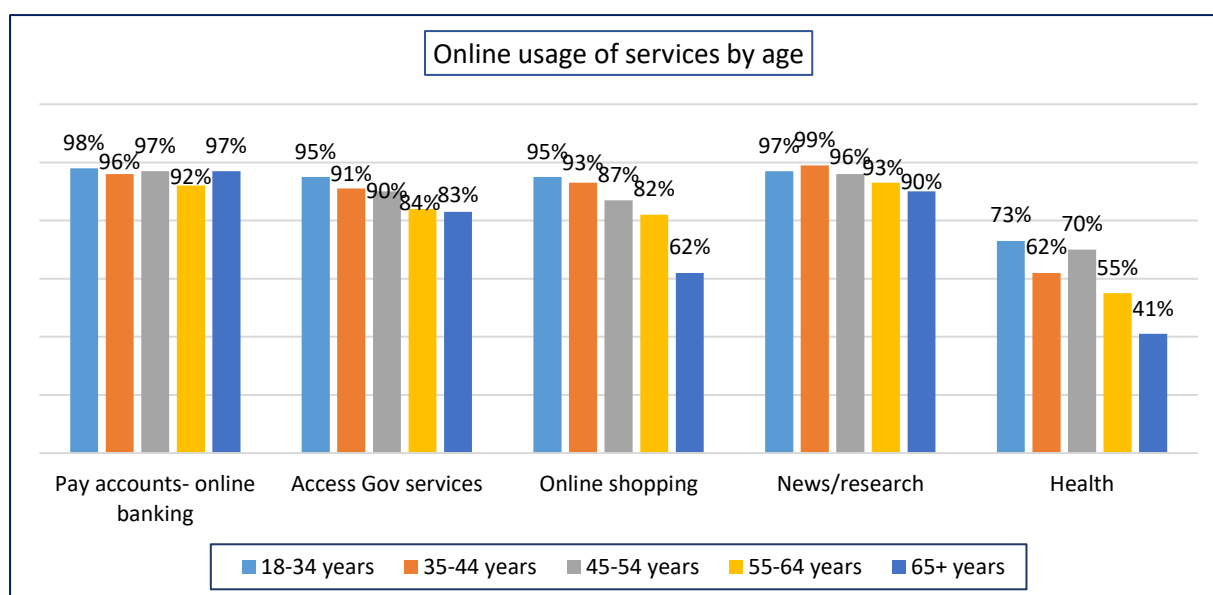


Figure 34

However from a social perspective there was a much greater differentiation between the age groups in the online mediums used with the exception of email (Figure 35). The younger age groups of the

18-34 and 35-44 years were the highest engagers in social media and voice/video calls as well as downloading movies and music.

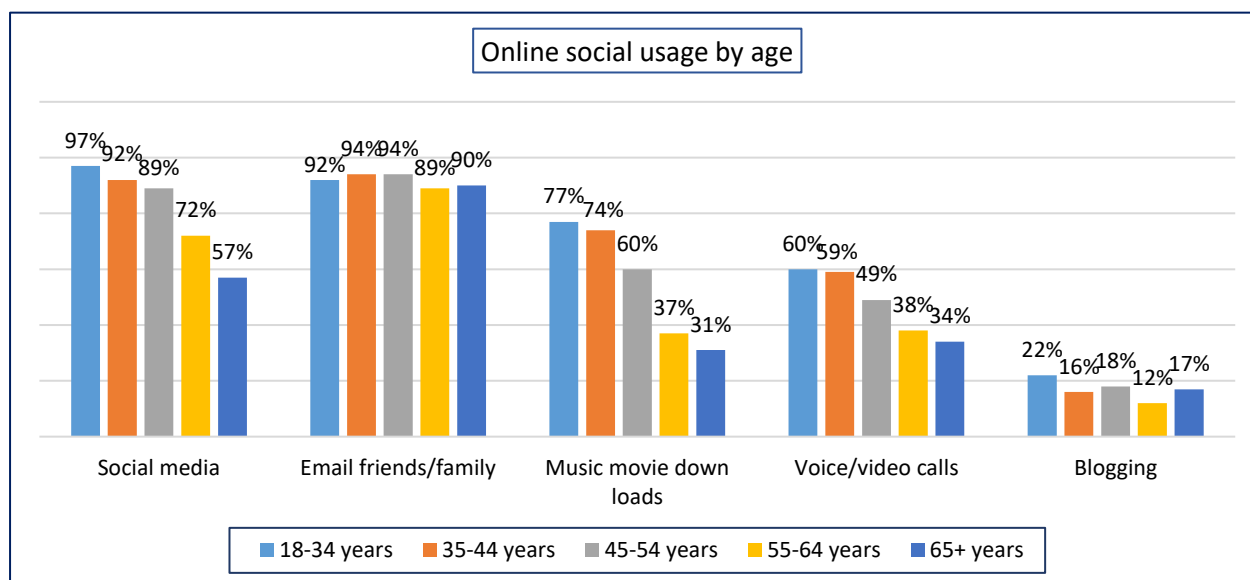


Figure 35

With the advent and increased accessibility of other online services such as employment, professional networking and education/training, the survey examined the level of uptake in the region. As would be anticipated it was the digital age group of 18-34 years who registered the most consistent high levels of access of these three services (Figure 36). That being said, the other three age groups showed relatively high usage levels of online professional networking and education/training services.

The increased utilisation of these services also reflects the initial levels of usage and perceptions of benefits expressed in the 2013 RDAW survey (Figure 36). While seeking employment online in 2017 did not match 2013 in overall terms, it did match the 18-34 years age group's propensity to use the service. However use of the internet for professional networking and education/training services increased substantially over the same period.

Again this growing high level of use suggests that increased digitisation in the Wheatbelt is and will be a disrupter in building business and employment skills and capacities in the region.

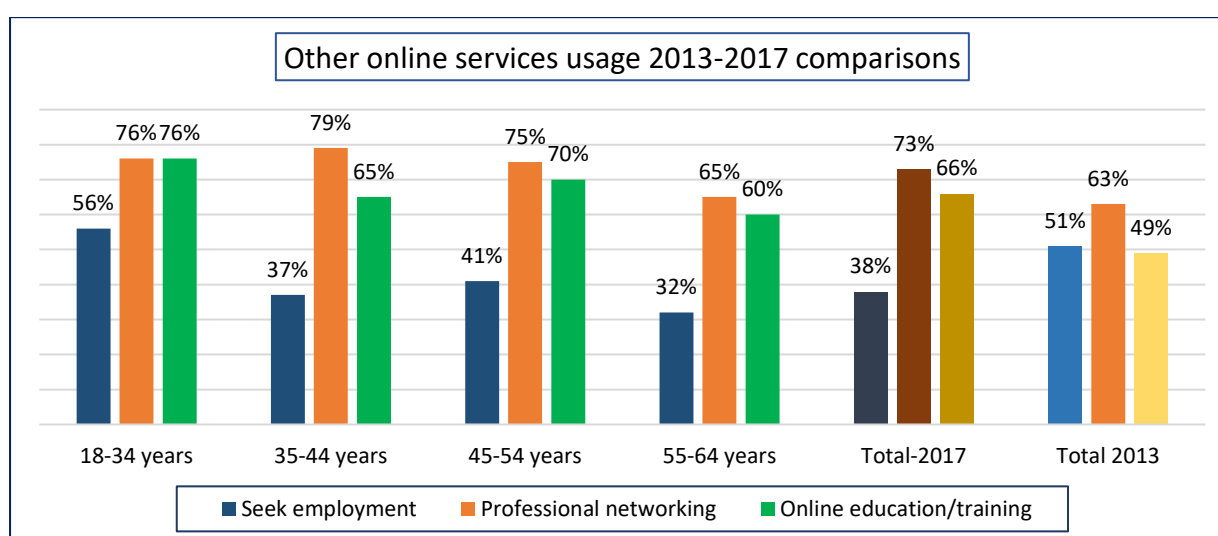


Figure 36

### 2.2.4 Community connectedness

From the 2017 survey results it is apparent that the increased digital competencies and increasing digital capacities in the Wheatbelt are influencing changes in the way people connect with their communities (Figure 37). In as much as word of mouth remains the principal process for connecting with community, participants were using the internet more to participate in online networks, research, access local shire websites and e-newsletters. The only community communication medium that showed a reduction in usage was the print media, which appears to be part of a broader universal trend across society in general.

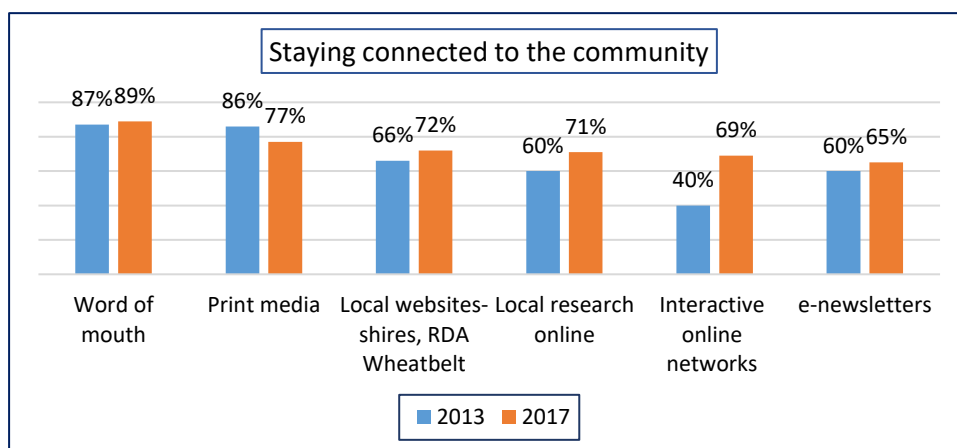


Figure 37

However the analysis showed, apart from word of mouth, a definitive segmentation of use by age groups with perhaps surprisingly, the 18-34 years age group being more likely to use local print media and less likely to use digital media to stay connected to the community (Figure 38). On the other had it could be proposed that the older age groups with particular reference to the 65+ were exhibiting strong proclivity in adopting and adapting to the digital mediums.

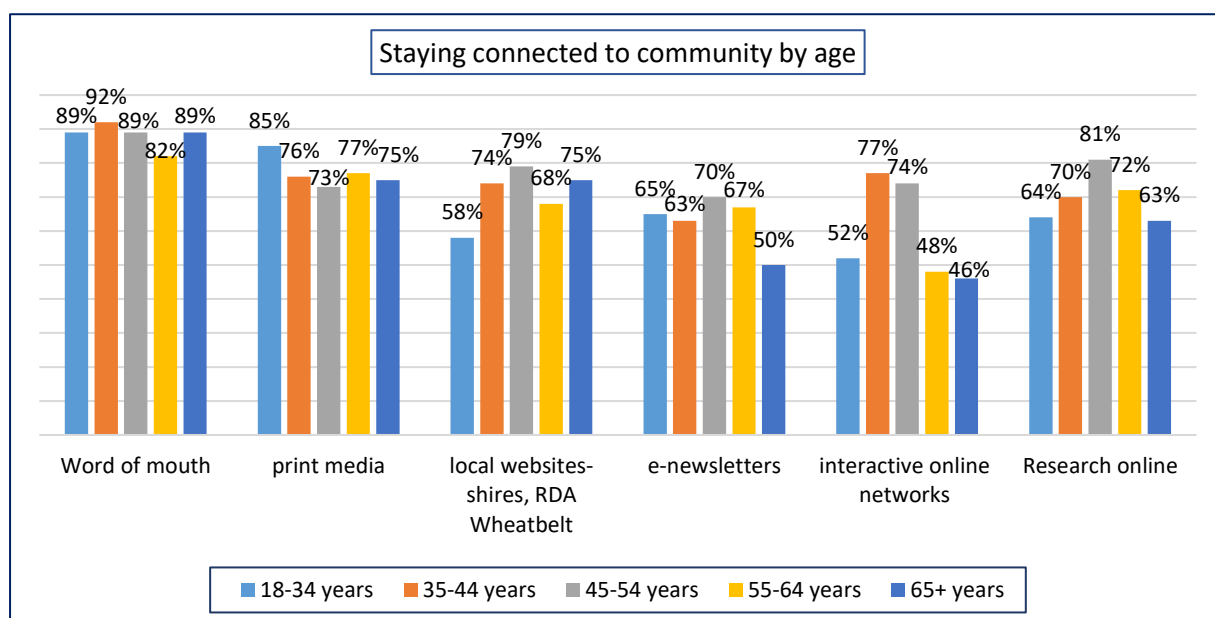


Figure 38

This tendency of the 65+ age group to adopt the digital mediums to stay connected with family and the community is further exemplified with the responses to the internet enabling a greater sense of connectedness with family and the community. The responses of the 65+ age group indicate that the internet has become an important mechanism for maintaining contact with families and continuing to

participate in and expend social and support networks (Figure 39). From these results, it could be posited that the internet is delivering beneficial social and mental health outcomes for the region's older population. Arguably this could largely be through reducing the sense of detachment and isolation that older people traditionally have experienced in a less digital time as they have retired had become less able to physically participate in community activities.

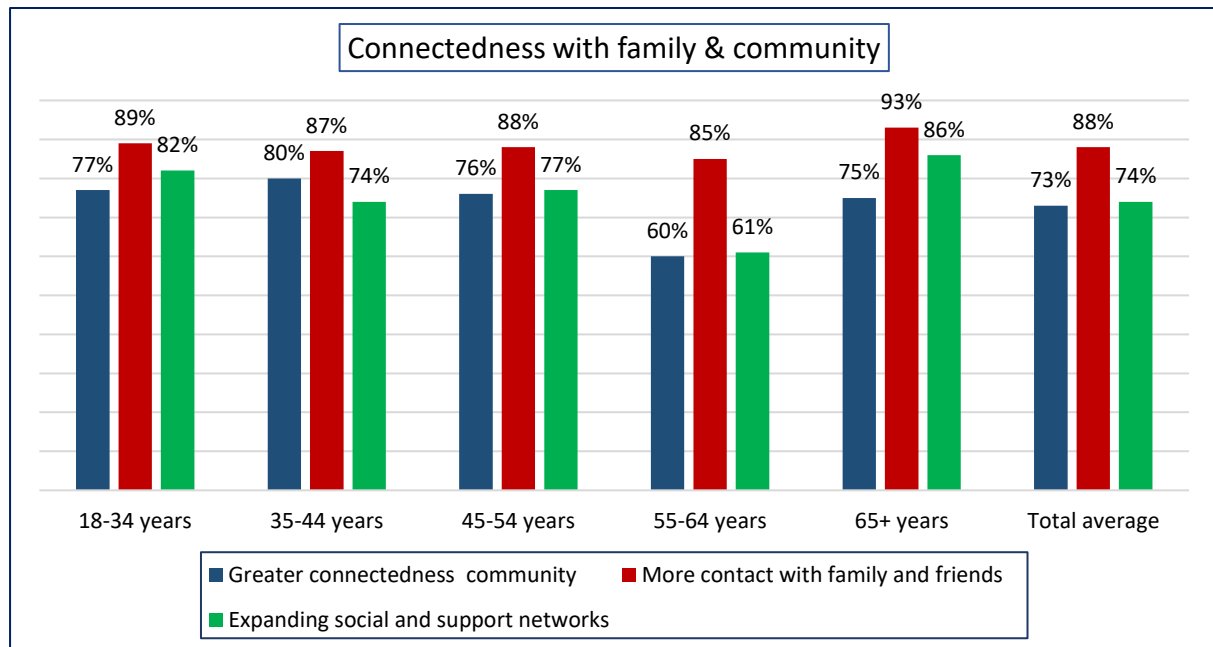


Figure 39

The shift of the region's population to a greater online engagement is further illustrated by the increase from 2013 to 2017 in the percentage of people receiving updates from police and emergency services, connecting with online communities of interest and engaging with Local Government via online tools (Figure 40).

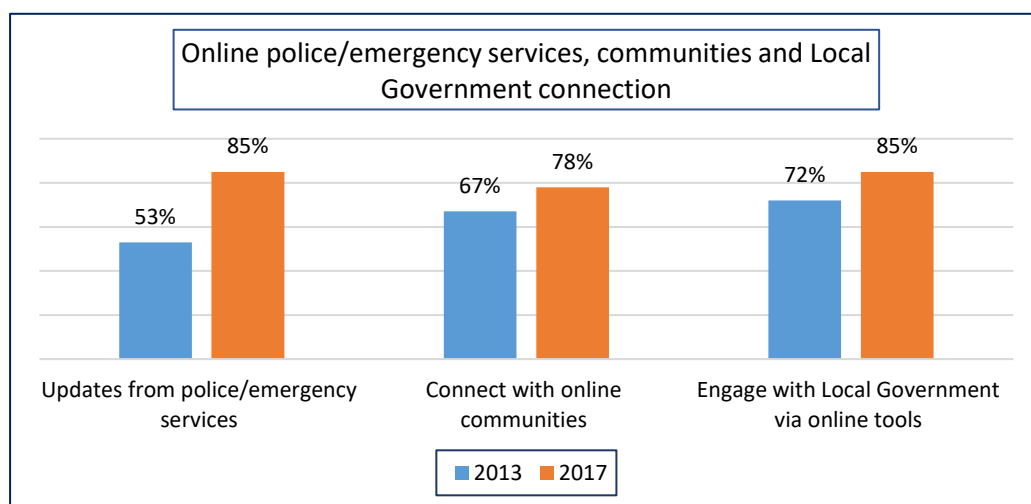


Figure 40

Yet again the analysis identified an age segmentation of utilisation of such services by age (Figure 41). For instance the Digital and Y generations (18-34 years) exhibited the highest propensity to receive updates from police and emergency services and connect with online communities while Generation X (35-54 years) had a higher than average tendency to engage with Local Government via online tools. Of note was that the 65+ age group were slightly above (79%) the overall average (78%) in connecting with online communities of interest.

The high levels of engagement across all the age groups with these digital options should be seen to not only indicate a rising level of digital competencies with the various age populations, but also indicate the increased availability and accessibility to these tools in the Wheatbelt Region.

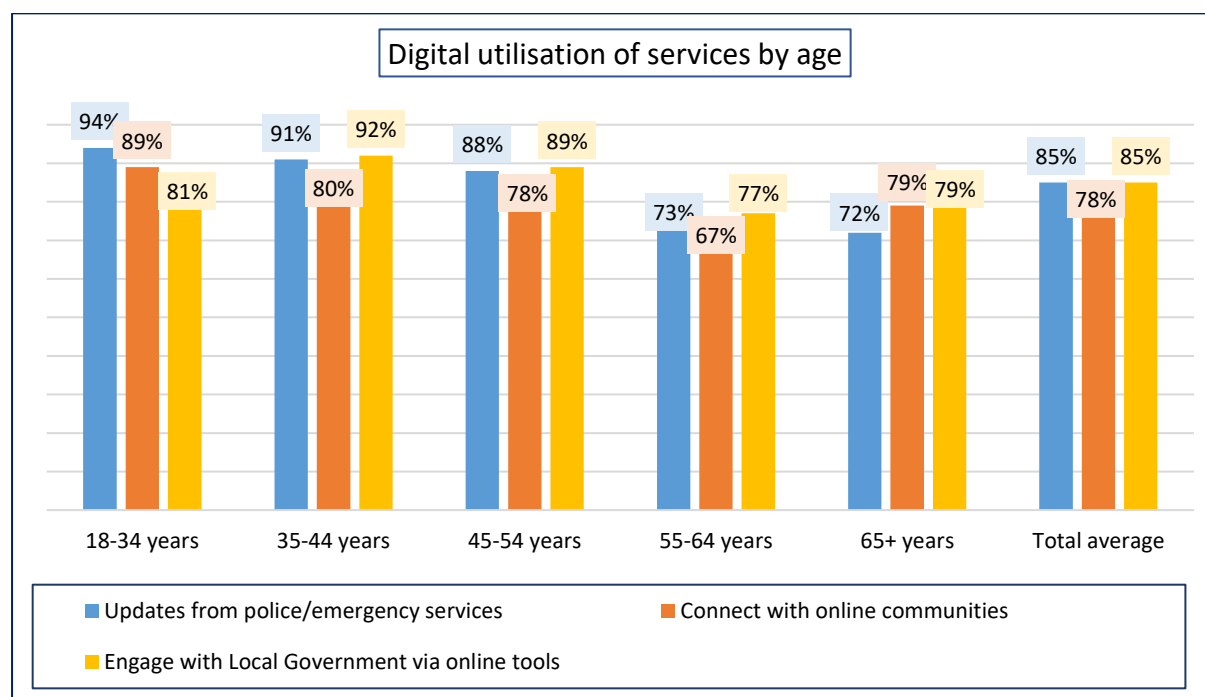


Figure 41

### 2.2.5 What's important and what's needed

Participants responses were emphatic that better mobile coverage, data speeds and reliable internet connectivity was important and by default, given the current state affairs, the most needed (Figure 42). Of interest is the importance of better mobile coverage and data speed has substantially increased on the 2013 survey responses. This rise in importance most likely reflects the increased use and reliance on mobile phones and other digital devices during the intervening period.

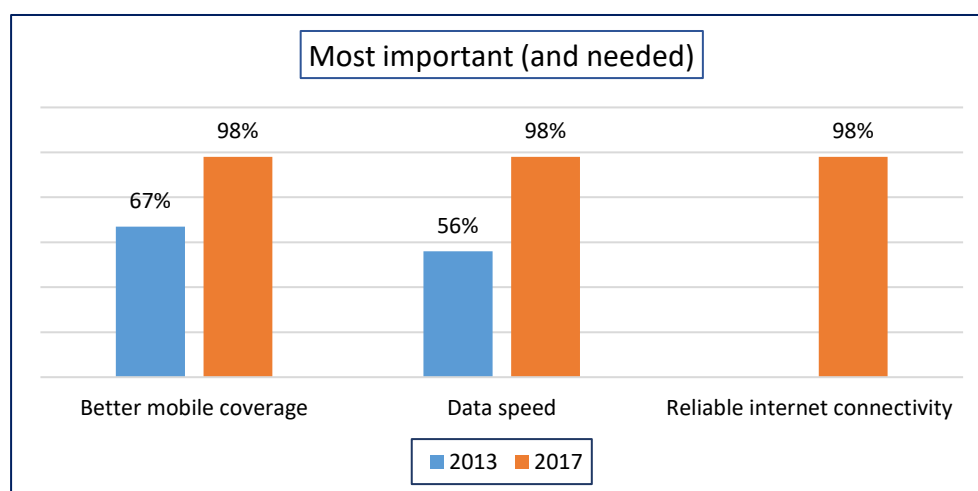


Figure 42

Conversely fewer (56%) participants thought it was important to access online health services which represented a decrease from the number (64%) of participants in the 2013 survey that were accessing the services in 2013 (Figure 43). Additionally fewer participants felt it was important that they have access to teleworking opportunities, alternative internet providers and online education and training



services. That being the case, the percentage of participants who placed importance on teleworking options and alternative internet services providers had increased from the 2013 levels.

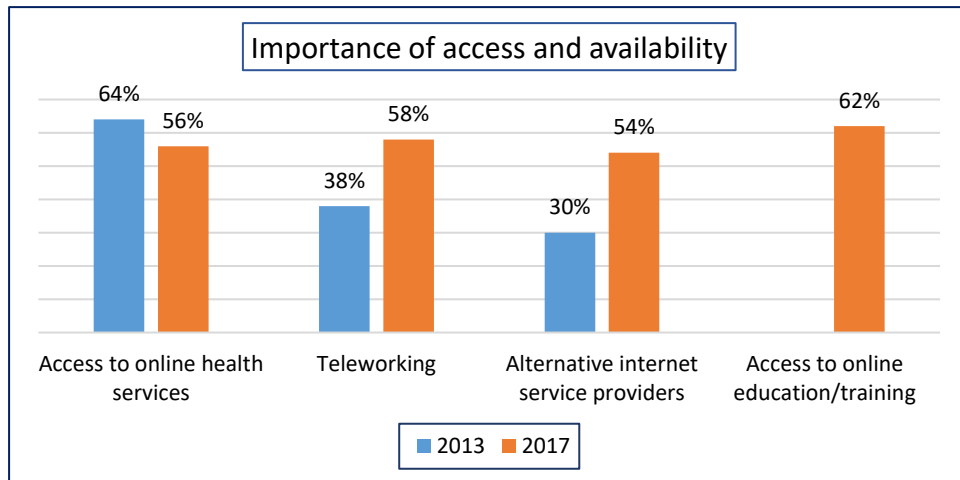


Figure 43

In addition there was segmentation within the survey sample's age groups. For instance, the 18-34 years age group had the highest percentage of participants who attributed importance to accessing online health services and education/training (Figure 44). In turn the 35-44 years age group were more likely to place importance on teleworking than the other age groups and a higher percentage of the 45-54 years age group placed importance on alternative internet services providers compared to the other age groups.

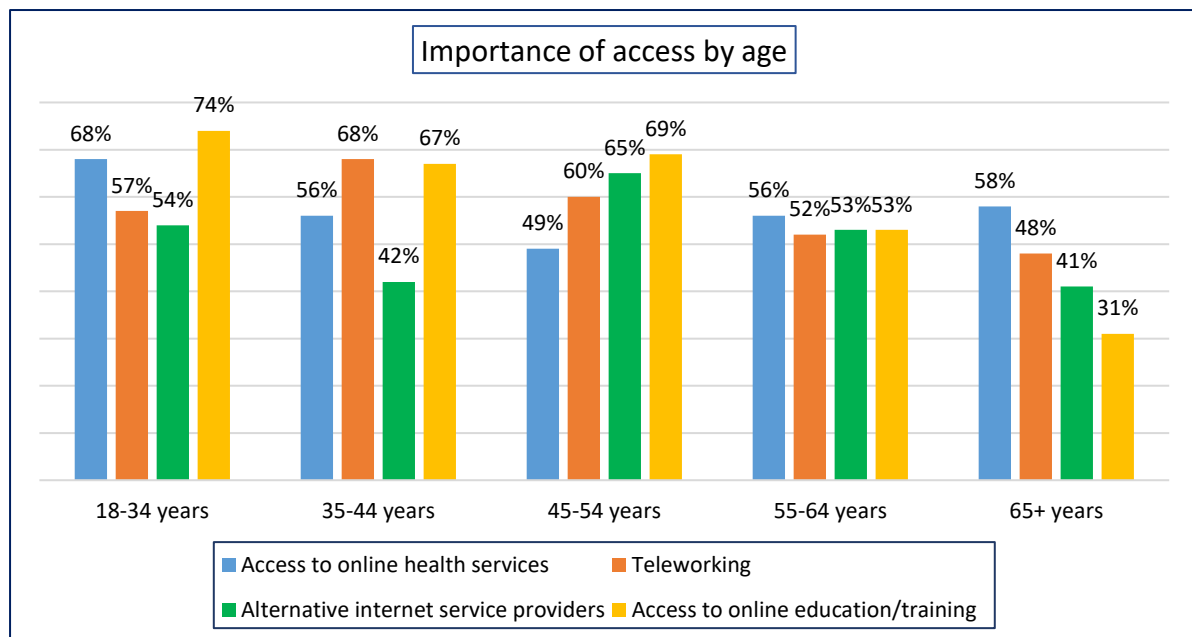


Figure 44

From a more general digital perspective most participants in all the age groups ascribed a high level of importance to digital innovation and technology but somewhat fewer participants' placed importance on the rollout of nbn (Figure 45). The high percentage of participants who acknowledged the importance of digital innovation and technology may suggest that there is a heightening awareness in the Wheatbelt of the potential economic and social benefits that the technology could deliver to the region.

Correspondingly the lower levels of appraisal of the importance of the nbn rollout may be derived from participant's cognitive dissonance with the quality of services after connection or the somewhat less than positive media coverage associated with the rollout.

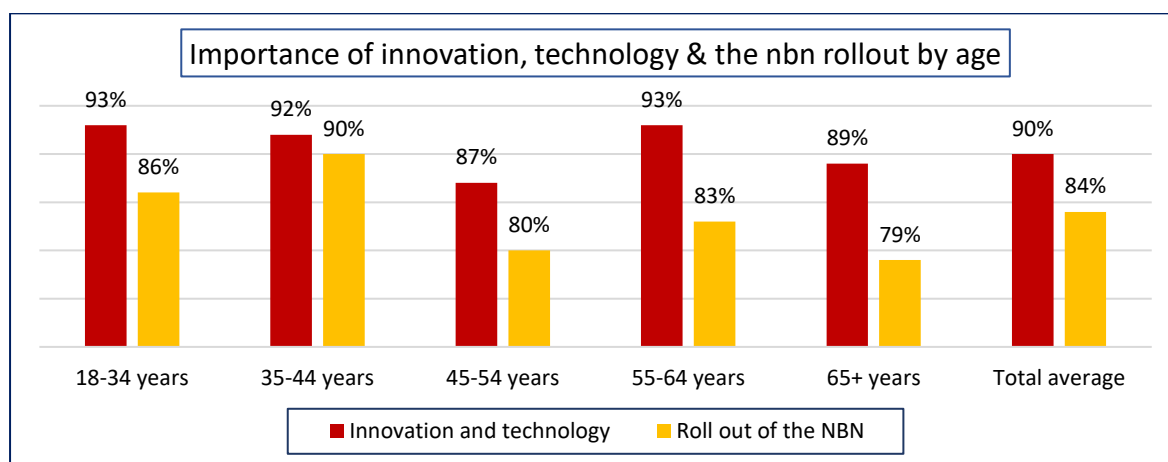


Figure 45

From a regional viewpoint within the digital context most participants across all age groups recognised the importance of digital connection and technology to creating employment, retaining youth in the region and increasing collaboration between the Wheatbelt's Sub regions and LGAs (Figure 46).

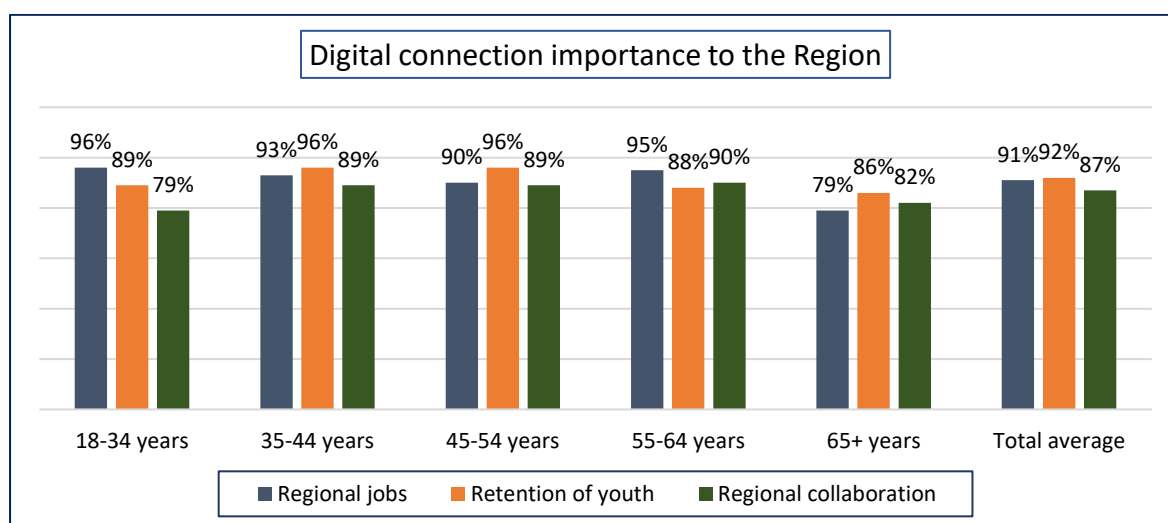


Figure 46

## 2.2.6 Challenges to optimising the internet

There was some differentiation across the age groups in what participants saw as challenges in them utilising and taking advantage of increased digital connectivity. Security was generally viewed as a challenge but slightly fewer participants rated it as an issue than participants in the 2013 survey (Figure 47). In regard to current technology being an issue, more participants in the 55-64 and 65+ age groups thought it was compared to the 18-34 year olds. Of interest, fewer participants in the 2013 survey believed current technology was a challenge than in the 2017 survey.

Responses to lack of understanding illustrated a non-linear spread across age groups with less participants in the 65+ age group identifying it as an issue than the 55-64 age group. Notably only about a third of 18-34 (32%) and 35-44 age groups (36%) felt lack of understanding was a concern. On the other hand there was a relatively high response across the age groups to the challenge of accessing IT services with the majority of participants in the 65+ age group indicating their apprehension.

Again in the 2013 survey, lack of understanding and IT support services were seen as a challenge by fewer participants.

It could be speculated that these responses again point to the exponential advances and expansion in digital technology and applications that are occurring across all sectors of industry and society. Therefore it is conceivable that many of the participants may have felt somewhat overwhelmed with the seemingly endless flow of new and updated technology that is being developed and applied.

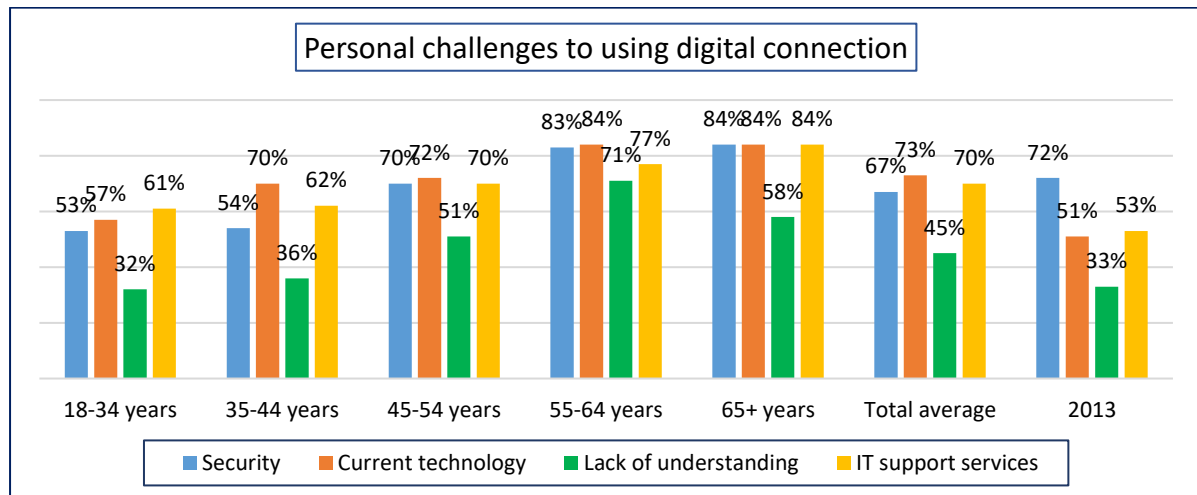


Figure 47

#### 2.2.6 Digital connectivity and Regional education

Access to reliable internet connectivity was important for many participants with school age children. More than half (56%) of parent participant agreed that access to reliable internet connectivity had or would influence their decision as to where their child/children undertook their secondary education (Figure 48). Of note was that more participants believed that reliable education internet connectivity would encourage more parents to leave their children in the region to complete their secondary education.

This has a certain level of resonance with Wheatbelt communities and stakeholders as they watch their schools populations drop dramatically at secondary level with students moving to the city for secondary education. A situation that has been exacerbated with the recent inclusion of year seven in the secondary curriculum. The migration of many of the region's 12-18 years population has an adverse impact on communities and activities such as junior sports programs as well as reducing the remaining class cohort's social and support networks.

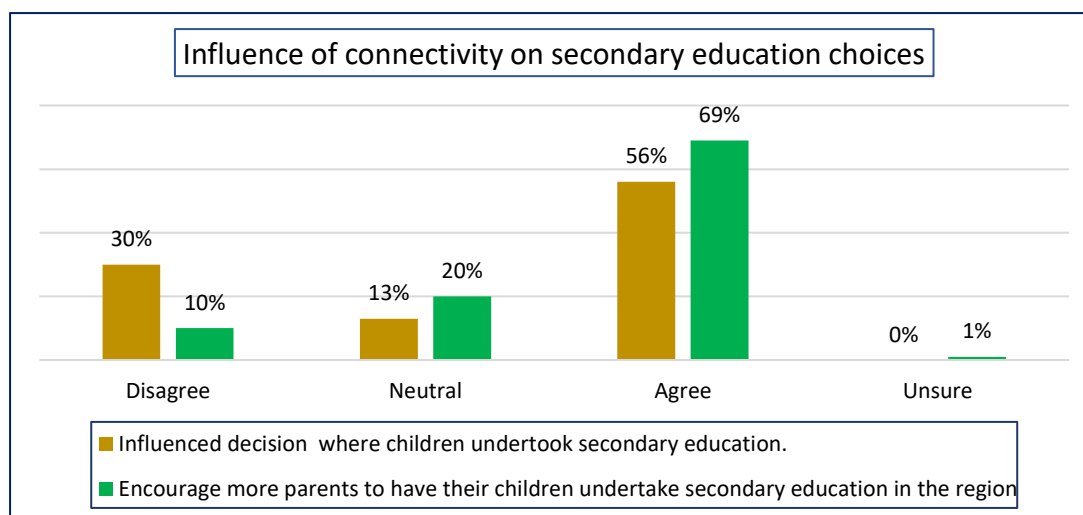


Figure 48

Alternately almost three quarters (73%) of parent participants felt that the nbn would contribute to reducing the secondary education outcomes gap between country and city students (Figure 49). Additionally it was thought by many that improved connectivity for regional students would improve their educational outcomes and increase their chances of attaining better types of employment.

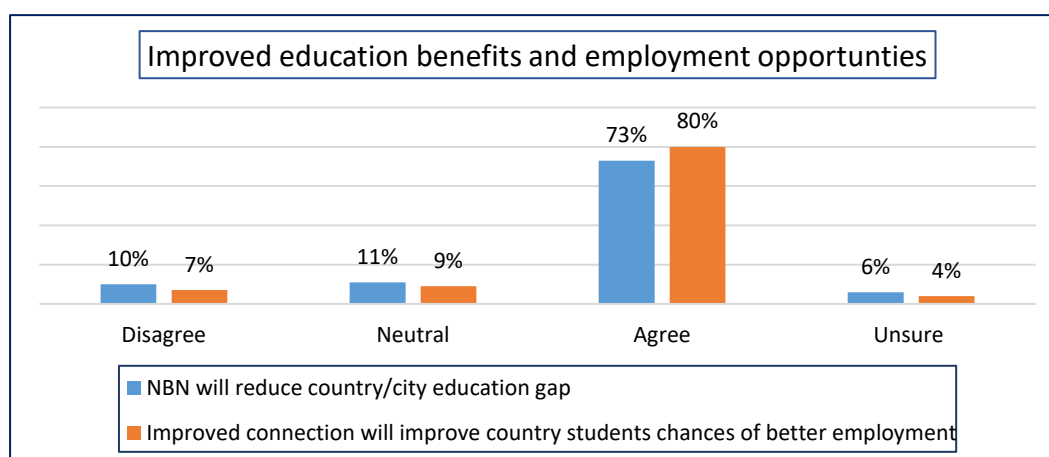


Figure 49

Again these topics resonate with Wheatbelt parents and education stakeholders as detailed in RDAW's recent submission to the Regional, Rural Remote Education Enquiry<sup>15</sup>. Both parents and teachers identified short comings in the digital technology curriculum that was due mainly to poor and unreliable connectivity and or lack of band width along with inadequate data allocations. However for the most part both parties believed that improved connectivity would not only deliver better outcomes in the IT curriculum, but would enable the smaller High Schools to provide a more diverse secondary curriculum and offer online ATAR options for senior secondary students who remained in the local area.

As such the digital revolution in regional education represents critical opportunities for the Wheatbelt in not only enabling the retention of a greater proportion of the 12-18 years population but in building education capital in the region.

<sup>15</sup> RDAW. 2017. RDA Wheatbelt Submission to the Independent Review into Regional Rural and Remote Education, Prepared by Chris Evans, the RDA Wheatbelt Research, Evaluation, Project Support Officer. Available at <http://www.rdawheatbelt.com.au/publications/current>

### 3. Reassessment of the Digital Action Plan 2013

#### 3.1 Introduction and overview

Given the latest survey results, it is apparent that the digital landscape in the Wheatbelt has rapidly evolved from where it was in 2013. This has had the effect that the focus of some of the initiatives identified in the RDAW 2013 Digital Action Plan has altered, which given the exponential expansion of technology is understandable.

This is no better demonstrated than by the changes in the devices used to access the internet with mobile phone usage increasing from 78% and tablet from 45% in 2013 to 93% and 72% respectively due to the technological improvement in both devices and increased access to services. The increased mobility of devices has in turn seen a down ward trend in the use of the static desk top computer and to a lesser extent the more cumbersome mobile laptop device.

Another pertinent illustration of the changes between 2013 and 2017 was the increase in the number of people using four or more devices to access the internet from 32% to 55%. Added to this level of usage is the upsurge in businesses in the region using online services. There were marked increases on the 2013 figures in the number of businesses using online services to source suppliers, undertake ordering and tracking, manage data, conduct market research and manage accounts and banking.

In broad terms the survey results suggest that adoption of digital technology among most Wheatbelt businesses and residents has rapidly transitioned from the early stages of the adoption process involving the innovators and early adopters through to the early and most likely the late majority of adopters<sup>16</sup>. This will most probably affect the approach to the main focus of areas of the 2013 Digital Action Plan such as Digital Learning and Building community and services online and Building Digital Innovation.

At the same time, the survey results highlighted the need for a more strenuous focus on ensuring digital connectivity and access for the region within a context of equity in terms of service efficiencies and costs parity with urban services. This approach should be viewed as critical given the overarching theme derived from business participant's responses that poor internet connectivity and data speeds were a major constraint for businesses in the Wheatbelt.

Furthermore it could be reasonably debated that that the other four focus areas identified for investment have been progressed by invested Regional stakeholders or organisations and or have developed in line with advances in technology . These focus areas included:

- Digital Learning – overcoming learning gaps with relevant, local demonstration of benefit and outcomes, followed by practical support to get more on-line and develop the regions capabilities.
- Leadership and Advocacy – generating a high degree of collaboration and cooperation between all key organisations and amongst communities. A governance model for the action plan has been proposed to achieve this.
- Building Community and Services on-line – support key service providers and communities to move on-line to drive and grow demand, and to capture new residents choosing to work, live or invest in the region.
- Building Digital Innovation – work with the exemplars and inspire and promote digital technology uptake, and support key sectors where adoption is already high and benefits well understood.

Given the increase in capacities within these four focus areas during the past five years it could on reflection be proposed that a point has been reached where any further development is contingent on reliable connectivity, adequate data speeds and data allowances. Therefore it could be held that

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<sup>16</sup>Diffusion of Innovations, Everett Rogers, 1962, P 150

‘Connectivity and access’ should at least precede all other areas of focus if not be the only area of focus as improved and enhanced connectivity will act as an enabler for progressing the other four focus areas.

### 3.2 Where is the Wheatbelt at now in digital competencies and literacy?

Responses in the 2017 survey suggested that although technology and understanding were slightly higher issues compared to responses in the 2013 survey, the increase in the use of devices (being mainly the mobile phone and tablet) and the number of devices used indicated a rise in digital competencies in the region. This could be taken to mean that in effect business operators, and employees in the region had a good working understanding of the functional capabilities digital telecommunications offered them in conducting businesses or fulfilling their roles as employees.

Similarly on a social level, the increased frequency of use and numbers of devices used along with increasing utilisation of the various digital social mediums indicate a rising level of digital competency within the region’s population. This brings into question, the priority, if not relevance of the first area of focus: ‘Digital Learning’. The question being; is it still necessary and if deemed so, particularly for older age groups, what approached should be used?

#### 3.2.1 Connectivity and access- What was actioned

Three actions on connectivity and access were proposed in the 2013 Digital Action Plan which were:

- Audit nbn technology and outcomes for communities, identify gaps between delivery and need, supply information on technology options.
- Expand mobile coverage and capacity through new investment models
- Create WiFi spots in pilot communities and build local platform for visitors

All three actions have been implemented to varying degrees during the last four years.

#### Audit nbn technology and outcomes for communities

In the past two years RDAW has been invested in respect to auditing nbn technology and outcomes for community via internal research towards two written submissions to the Productivity Commission’s Telecommunications Universal Services Obligation (USO) Draft Reports and a presentation at the WA consultation with the Commissioner.

In both submissions, RDAW advocated strongly that the USO be extended from landlines only to cover mobile and internet services in regional and remote areas. Additionally RDAW presented modelling that demonstrated that 45% of the Central East and 75% of Wheatbelt South regions residences and businesses would comprise the 3% of Australian residences and businesses that would have to connect to Sky Muster services. This was a major concern for RDAW given the apparent short comings of the service which included:

- Capped data allocations with uploads included in the data allocation (maximum of 150 GB which has since been increased to 300 GB)
- Curfews on data availability and access with a maximum of 75 GB available during ‘Peak period’ defined as 7am to 1am and a maximum of 75 GB available between 1am and 7am.
- Considerably higher costs for service plans compared to Fibre, Wireless and ADSL plans.
- Service dropouts due to inclement weather conditions at the main receiver repeater station in Tasmania.
- Slower than adequate data down and upload speeds at times with an overall slowing of speeds as more residence and businesses join the service. (i.e. An I phone serviced by a Sky Muster provider and used by a business operator in the Central East sub region took 12 hours to complete updates. This occurred in October 2017)

- Voice of Internet service rate is virtually unusable by all connected users due to buffering, poor, reception and drop out as noted by the Productivity Commission Commissioner during the WA public consultation.

In RDAW's estimation, these issues do not equate to a state of universal equity in providing all Australians the same levels of accessibility, availability and affordability of telecommunications services as stipulated by the USO charter. RDAW view these shortcomings in service delivery as less than acceptable for residences in the Wheatbelt and a major constraint for any Wheatbelt business that has to connect to Sky Muster services. For these reasons, RDAW has actively supported Wheatbelt LGAs that have sought investment and funding for alternative internet connection options.

Furthermore, RDAW contests the Productivity Commissions overriding narrative of the high cost of providing equitable digital telecommunication services to regional and remote areas based on the economies of scale of population. Rather, RDAW contends that expenditure on delivering reliable digital connection to regional and remote communities in the Wheatbelt should be seen as a future orientated investment in the economic growth and social development in the region.

This argument is supported by the revenue generated in the region which in 2011-12 was reported to be an estimated \$3.5 billion for agriculture and \$2.5 billion for mining<sup>17</sup>. Alternatively it has been projected by market research firm Ovum, that the National Broadband Network (nbn) will spend an average of \$7000 on connection per rural household<sup>18</sup>. An analysis of Wheatbelt ABS data shows that there was 26,925 households<sup>19</sup> in the region along with 9,166 businesses<sup>20</sup>. Based on Ovum's estimates, expenditure on connecting Wheatbelt residences to the network would amount to about \$188,475,000 with additional \$64,162,000 to connect businesses resulting a total outlay of approximately \$252,637,000.

At one level this sum appears to represent a disproportionate degree of expenditure for a small population base however two arguments could be proposed to challenge that view. The first argument could be drawn from the value the Wheatbelt generates from agriculture and mining (approximately \$6 billion) and the increasing value of the tourism industry which was estimated at \$246 million in 2011/2012<sup>21</sup>. Therefore it could be proposed that a one off spend of \$250 million to increase digital connectivity for three industry sectors generating \$6.25 billion is a sensible investment to increase efficiencies and economic sustainability of the industries.

At the same time it is worth considering the potential economic benefits reliable internet connectivity could deliver across the region's industry sectors and to WA and Australia. Just 5% growth in revenue in the tourism industry as a result of good digital connectivity would result in another \$12.5 million being injected into the State's economy. Equally if better digital connectivity increased the value of the overall Wheatbelt economy (calculated at an estimated \$10 billion in 2011/2012<sup>22</sup>) by just 1% that

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<sup>17</sup> Department of Regional Development Western Australia. 2014. Wheatbelt: a region in profile 2014. Wheatbelt Development Commission, Government of Western Australia.

<sup>18</sup> Whigham, N. 2017. nbn regional connections to cost about \$7000 per premise. News.com.au. accessed at <http://www.news.com.au/technology/online/nbn/nbn-regional-connections-to-cost-about-7000-per-premise/news-story/a067409cc4c04fc946ceef54c8d89f54>

<sup>19</sup> RDAW analysis of ABS 2017 Census of Population and Housing; General Community Profile by LGA. Catalogue number 2001.0

<sup>20</sup> ABS 2016. Regional Statistics by LGA, 2011-2015 by Economy and Industry accessed at <https://data.gov.au/dataset/stat-data-abs-gov-au-index.aspx-queryid-475>

<sup>21</sup> Department of Regional Development Western Australia. 2014. Wheatbelt: a region in profile 2014. Wheatbelt Development Commission, Government of Western Australia.

<sup>22</sup> Department of Regional Development Western Australia. 2014. Wheatbelt: a region in profile 2014. Wheatbelt Development Commission, Government of Western Australia.

would add an additional \$100 million per annum to the region's value. Correspondingly this suggests that at the most minimal rate of return on investment, the breakeven on the \$250 million expenditure on connecting the Wheatbelt to the network could occur within two and a half years.

#### Expand mobile coverage and capacity

During the past four years the Black Spot projects funded through Government sources have improved mobile coverage in the region. However as the 2017 survey showed, coverage is still not optimum for the majority and for an unacceptable proportion of participants was either arbitrary or wholly inadequate.

#### Create WiFi spots in pilot communities

Creating WiFi spots in pilot communities was actioned and funded in a partnership between RDAW, Heartlands, WDC, the Avon Community Development Foundation and the Shire of Northam. The project created WiFi hot spots in the main street and shopping precinct of Northam, with the aim of drawing people to the area and providing tourists with access to WiFi.

#### 3.2.2 Connectivity and access- Where to from here

As stated earlier, RDAW believes the social development in conjunction with economic and population growth in the Wheatbelt is highly reliant on reliable digital connectivity. In taking this position, RDAW will continue to strongly support LGAs and other invested stakeholders in accessing systems that will deliver reliable connectivity with the capacity to accommodate additional future consumers and technology upgrades without compromising service quality.

Similarly RDAW supports the continuance of the Black Spot programs to the point where residents and businesses have coverage wherever they may be in the Wheatbelt. The increased use and frequency of use of the mobile phone for both business and social pursuits illustrated in the survey results adds weight to this expectation.

RDAW has continued to investigate options to progress further WiFi spots within the region and targeting LGAs best suited to progress this. RDAW will continue to identify possible funding sources, support and collaborate with the relevant LGAs and other invested regional and local stakeholder organisations to progress this initiative.

From an overarching perspective, RDAW views the continuation of all three of these actions as an imperative for increasing business numbers, employment and populations growth. As Mr Philip Attard, Co-owner of Gostwyck farm at Uralla in NSW who is direct marketing the farm's wool to high fashion international knitwear brands, said in an interview on Landline<sup>23</sup>:

*"...patchy internet connectivity was a challenge... It's improved a little bit since the Sky Muster, but the speed and the amount of data that you need needs to improve. We're hoping the amount of data will improve again but we need to be able to get through into 100mb lines here in order to do those things comfortably and efficiently, otherwise you have to have an office in town and I want to avoid that. The other thing is we want to stay regional, we want to bring the jobs into the region not go down to the cities because that's where the skills are."*

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<sup>23</sup> ABC Landline. 2017. Sean Murphy-Reporter. "From fashion to farming: On-farm businesses embrace the world of online opportunities." <http://www.abc.net.au/news/2017-10-21/from-fashion-to-farming-and-the-world-online/9065434>



### *3.2.3 Digital Learning- What was actioned*

Four actions were proposed in the RDAW 2013 Digital Action Plan to address digital learning. These were:

- Build small business skills through pilot local trading platforms
- Get Local Government on-line through on-line Development Application system in 3 trialling shires
- Develop “Flying Squad” of regional capacity that builds skills and demonstrates benefit at local level
- Organise one-click Regional Digital Expo bringing together tools, technologies, speakers and knowledge experts, run as face to face and on-line event

Of these four actions, only two were initiated although through different approaches. These were: building small business skills and increasing digital competencies through expert education and training events. The reason for the change in approach and the non-implementation of the other actions was due to the limited availability of funding.

To overcome the limited availability of funding in regard to building small business skills, RDAW supported and continues to support the Wheatbelt Business Network (WBN) with in-kind assistance such as marketing to implement this action albeit on a smaller scale.

In the same vein the approach to organising a digital expo was downscaled to an individual community level with RDAW providing small amounts of funding to interested stakeholders such as local CRC's, LGA's and some tourism entities to initiate a face to face digital technology education and training program. The program was titled 'I Learn' and delivered across the Wheatbelt in all five sub regions to an estimated 200 participants. Additionally the program was targeted at the entry and advanced levels of competencies and ranged from attaining basic skills through to media web site building. Feedback from the local organisers that staged the workshops indicated that both types of the program were well received by participants.

### *3.2.4 Digital learning-Where to from here*

In reviewing the implemented, if somewhat altered digital learning actions and the non-implemented actions in view what is now required, RDAW believes it remains important to continue supporting the WBN and Wheatbelt businesses along with maintaining continuity of digital upskilling in the region.

In regard to supporting the business sector there is the potential for additional approaches to be incorporated with the current strategy that develops a more digital interface within the business structures and processes. This proposal is based on the evaluation of a recent RDAW business program initiative<sup>24</sup> that illustrated a gap in knowledge between a business having a digital presence and the owner/manager understanding how to more effectively utilise that presence to the business's advantage. During the course of the program the knowledge deficit was addressed with the result that all of the participant's had an improved understanding of how their digital presence could influence market reach, expansion and ultimately business growth.

The increase of knowledge in this area is particularly important for the Wheatbelt given the thinness of the market in the region. This means that if economic growth is to be sustainable, the many of the region's businesses must be prepared to operate in the broader state, national and international market spheres.

Therefore it is recommended that efforts to source funding, investment and programs that develop and build competencies within a digital context be continued.

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<sup>24</sup> Build Your Business Program 2017. An RDAW initiated Federal Co-Funded program to build business competencies in regional business owners and managers in all aspects of business over a five month course including resources, mentoring and workshops.

### 3.2.5 Leadership and advocacy- What was actioned

There were four actions ascribed to the focus area of 'Leadership and advocacy' being:

- Build an implementation team comprising representatives from RDAW, WDC and Local Government
- Develop a united Wheatbelt Digital Voice
- Build a network of (digital) exemplars, industry and government supporters to build a narrative for people to understand the change process
- Engage young people to define the digital future for the Wheatbelt

Of these actions the first was instigated which initiated the second action of developing a united Wheatbelt Digital Voice by default and the third action did not proceed past the initial stages.

The fourth action of engaging young people to define the digital future of the region was addressed within the RDAW initiative, the Y20 Wheatbelt Youth Summit, held in July 2014. The summit was attended by 32 young leaders aged 15-19 years, representing communities from across the Wheatbelt. The primary aim to provide an opportunity to hear from this cohort of young leaders, on how they view current and emerging issues impacting on the region and what solutions could be considered to help overcome these barriers. The two main themes of for the event were 'Growth and Jobs Creation' and 'Sustainable Development'.

The insights provided by the Y20 Wheatbelt delegates, showed that not only are young people in the region aware of the issues/barriers impeding growth in the region but they also have informed opinions about how we can make the Wheatbelt a better place to live, work and invest now and into the future. A strong association with and connectedness to the region was evident amongst the delegates.

As to the future, the delegates said that in their ideal, within 20 years, the Wheatbelt will have:

- 1) More social and community opportunities catering for a diverse range of interests
- 2) A high standard of education available within the region
- 3) Diverse and exciting employment opportunities
- 4) Improved health services coupled with healthier communities
- 5) Greater usage of renewable energy sources
- 6) Improved transport options for freight and passenger use
- 7) A diverse and strong agricultural industry.

Six of these outcomes will require a radical improvement in telecommunications to enable the actions to meet these expectations. In addition, *"it was felt that improving telecommunications across the region to enable access to alternative employment and educational options as well as improving social amenity in the region would be a possible solution to the challenge"*, therefore encouraging young people to relocate to the Wheatbelt.

### 3.2.6 Leadership and advocacy- Where to from here

While the original representatives from the various agencies of the implementation team have moved on they have left a collaborative interagency legacy that continues to represent the digital interests of the Wheatbelt.

In regard to the third action of building a network of digital supporters it could be proposed that the rate of digital uptake overtook the building of a narrative. This obviated the need to engage people in the change process as the people themselves were initiating and driving the change.

Likewise it could be said that engaging young people to define the region's digital future was precluded by the young people's willingness to adopt digital technologies and keep pace with the technology

upgrades thereby defining the new emerging future. To a certain extent this reflection is substantiated by the survey results of the 18-34 years age group who used more digital devices more often and were less likely to have issues with technology and understanding than the other age groups. In effect the Wheatbelt has a digital cohort that will, as they assume more responsibilities, dictate the digital agenda and definitively embody the regions digital future.

### *3.2.7 Building community and services online- What was actioned*

Again four actions were identified for the focus on building community and services online. These were:

- Invest in Heartlands to host and present digital content and become the delivery mechanism for supporting communities to move on-line
- Pilot demonstration communities and projects to move into on-line format via devolved funding program
- Work with Health MoU group to support e-health enablement - was done by RDAW until Health MoU group went into recess. Work with all training and education providers to provide training on-line, and address infrastructure and system issues- Engagement with TAFE was not progressed

The first action was initiated and completed through the Gov Hack program and workshops. In turn the third action to support e-health enablement was progressed with the Health MoU group but discontinued when the Health MoU group ceased to operate.

However WA Primary Health are now engaged in this space and have developed or are developing a suite of telehealth services for regional and remote people. Services that have been implemented or are on the verge of implementation include:

- Silver Chain Health Navigator Program- people are able to access this program if they have one or more of the following conditions:
  - i. Diabetes
  - ii. Heart disease
  - iii. Heart failure
  - iv. Chronic lung conditions
  - v. Metabolic syndrome
- Diabetes WA Diabetes Telehealth Service- provides diabetes education and support to people living in regional and remote WA where local services are limited or do not exist.
- Diabetes WA Endocrinology Telehealth Service- Telehealth appointments are conducted by Endocrinologist Dr Gerry Fegan from the Diabetes WA Subiaco office. The clinic operates on the fourth Wednesday of each month. Patients link in from a local WACHS facility, GP surgery or their home via Scopia or Skype. Diabetes WA provides full administrative support and help setting up video conferencing capabilities at medical practices, with no additional equipment required.
- Asthma Foundation WA Chronic Respiratory Telehealth Service- provides asthma and COPD education and support services delivered through videoconferencing technology ( Telehealth) to people in rural and regional WA, where local asthma or COPD services are limited or do not exist.
- WACHS Telehealth

The key service delivery areas for telehealth in WA are :

- i. Clinical outpatient telehealth service delivery – mostly videoconference outpatient appointments between regionally-based patients and specialists based in metropolitan public hospitals or other regional sites, for a vast array of medical treatments including:
- ii. The Emergency Telehealth Service is a telemedicine service provided by emergency medicine specialists in Perth using videoconferencing equipment to support regional clinicians treating very acute emergency patients.
- iii. Remote Patient Monitoring - enabling patients managing significant chronic diseases to share responsibility for their care through the process of self-monitoring in partnership with their healthcare provider.

In addition there is capacity to allow the secure sharing of images, clinical results and patient information along with training and education opportunities offered via video conferencing.

Initiatives that are close to be implemented are:

- Medicare Better Access Telehealth Psychology Services (from November 1<sup>st</sup> 2017)
- WAPHA funded Primary Mental Health Portals
- My Health Record- By the end of 2018 every Australian will have a My Health Record, unless they actively choose not to have one.

There has also been a project initiated titled WAPHA and Rural Health West Digital Readiness Project to identify the barriers and enablers that are influential in enabling or discouraging the use of digital technology in general practice so that strategies promoting digital uptake can be developed.

Further discussions with WA Country Health representatives unfortunately indicate there are still some issues with connectivity, band widths and speeds that restrict current delivery of telehealth services to people in some outer regional and remote areas of the Central Midlands, Central East and Wheatbelt South Sub regions.

The second action of pilot demonstration communities and fourth action of working with training and education providers were not progressed. The relevant regional training and education providers were approached but efforts to develop programs were not successful.

### *3.2.8 Building community and services online- Where to from here*

In assessing the situation as it now stands it could be acknowledged that the area of focus and actions are no longer applicable as the circumstances have changed as a result of technology advances and increased digital access and availability.

### *3.2.9 Building digital innovation-What was actioned*

The final focus area was building digital innovation which was to be undertaken through the following actions.

- Promote APP of the month, fund an annual APP competition and link digital innovators to Innovation Centre.
- Work with Wheatbelt NRM to fund a program to use digital technology to learn how to live more sustainably.
- Work with Heartlands to develop Inward Migration Strategy that is implemented digitally.
- Work with grower groups to further grower productivity through digital technology- have done some work and continue to forward information of relevance to the grower group data base.

Promotion of APP of the month was undertaken but was concentrated on APPs of relevance. This was discontinued as other methods of APP distribution became available. Alternately an annual APP competition was not initiated as was linking digital innovators to the Innovation Centre. Additionally working with grower groups was also actioned and still continues to a lesser extent with RDAW forwarding information of relevance to the grower group data base.

The other actions of working with Wheatbelt NRM to fund a digital program to promote sustainable living and working with Heartlands to develop inward migration strategy were not progressed.

### *3.2.9 Building digital innovation-Where to from here*

To a large extent it could be proposed that the state of focus on building digital innovation is similar to that of building communities and services on line. That being changes in technology, access and availability along with increased digital literacy have superseded the need for such top down actions.

## **4. Conclusion**

The RDAW 2013 Digital Action Plan on reflection was a product of the time and the focus and actions identified and or implemented contributed to meeting the needs of the Wheatbelt's evolving digital environment. In essence the overarching objective of the plan was to promote and encourage adoption of the then available and emerging technologies.

However as the results of the 2017 survey illustrated, people's utilisation of digital technology has become more gradually nuanced and sophisticated as specialised technologies have become available or more user friendly. An indication of this is the uptake of weed/pest/disease management apps within the agribusiness sector. In 2012, these apps were not available but in the intervening years the availability of the apps has moved from non-existent or highly limited to widespread, generating a parallel consumer demand that was reflected by the 75% of agribusiness participants that were using the products.

The same could be said from a social perspective with the increased use of social media, internet connected TV services and using online services for both general and local news and research. Yet despite the increased social and leisure engagement online, people were still connecting face to face to learn about their community. These behaviours suggest that the Wheatbelt population has adopted the relevant technologies and programs as additional mediums with which they are able to stay connected with family, friends and community. Of note is that the only conventional (non-digital) local social information medium that is losing traction is the print media which is mirroring a general trend nationally and globally.

As such the responses indicate that in broad terms the digital space in the region has progressed to a state of maturation. That is that it has become less about how to use the technologies and more about being able to consistently access and utilise the technologies for optimum benefit in terms of financial, economic and social outcomes. Therefore it would be reasonable to put forward that business participants in the survey have a growing cognisance of the potential opportunities the digital market place could offer them. It could also be proposed that they are gaining a greater understanding of the agility the various devices in combination with better connectivity could deliver in the ways they conduct business.

Equally it could be said that business participants exhibited a mounting awareness of the constraints that the less than adequate digital connectivity imposes on their businesses. The same could be said from an education standpoint with a sizeable proportion of parents indicating that reliable digital connectivity influenced their decision on where their children would complete secondary schooling. Their response posits the concept that poor connectivity is contributing to the migration of school and

post school age youth from the Wheatbelt to the city. Therefore it could be plausible, as participants responses suggested, that better and more reliable connectivity would go some way to reducing the levels of education migration in the region.

The participant's responses to the issues they faced, in aggregation are projected onto the broader canvass of the Wheatbelt. Their cumulative experiences articulate the undeniable importance that reliable and adequate digital telecommunications connectivity has for the region's economic future. Their responses could be seen in the same historical contexts of their forebears who lobbied for rail lines, roads and highways with the same justifications of promoting economic and population growth in the region.

In essence digital telecommunications are effectively the 21<sup>st</sup> century equivalent of the rail and road networks and are or could be delivering the same economic and social impacts to the region that rail and road delivered in the 19<sup>th</sup> and 20<sup>th</sup> centuries. That being the case, any shortcomings or inadequacies in the digital delivery systems has the potential to negate the best efforts of the Wheatbelt's business owners and other invested stakeholders to develop and expand businesses, create employment and drive population growth in the region. Therefore it remains incumbent on RDAW, WDC and other government organisations along with all levels of government with vested interests in the Wheatbelt to facilitate the funding and investment needed to ensure the region has reliable digital connection.