17 July 2018

2018 Regional Telecommunications Review Secretariat
Department of Communications and the Arts
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2018 Regional Telecommunications Review – Mid Murray Council – South Australia

The Mid Murray Council has noted with interest the 2018 Regional Telecommunications Review.

The Mid Murray Council in South Australia comprises an area of 6,256 square kilometres, contains the second largest road infrastructure length to maintain and upgrade in South Australia, is responsible for 220 kilometres of the Murray River, has 28 Community Wastewater Management Schemes and has over 2,000 shacks and 16 towns from the Riverland to the Murraylands and the Barossa. The Council's main centre, Mannum is 1.25 hours drive from Adelaide and has a population of 2500. The whole Council area has a population of 8,600.

Maps showing the Council area are attached.

Regional telecommunications is of particular interest to the Mid Murray Council, given the 17 towns as well as other communities throughout our area. The Mid Murray Council commissioned Optimi Digital in August 2016 to review digital services in the Mid Murray Council area. A copy of this report is attached. This included mobile phone coverage, broadband, radio and TV. The provision of digital infrastructure and services is considered critical to support the major industries in our Council area including tourism, agriculture, transportation and water resources.

The Council also commissioned Optimi Digital to produce a report in relation to Regional Mobile Phone Black Spot priorities within the Mid Murray Council area. A copy of this report is attached highlighting the four suggested cluster sites of Younghusband, Milendella, Mount Mary and Truro.

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It is noted in the Issues Paper that a new Universal Service Guarantee will be developed and modernised by ensuring consumers have access to broadband as well as voice services. It is suggested that the two reports commissioned by the Mid Murray Council in August 2016 be taken into account as part of the development of the new Universal Service Guarantee. Another major issue for Council is reliability of telecommunication services, as a number of towns and areas throughout the Mid Murray Council have poor coverage.

It would be appreciated if the reports undertaken and commissioned by the Mid Murray Council in relation to the Review Of Digital Services in the Mid Murray Council and regional mobile black spot priorities could be taken into account as part of this Review. Representatives from the Mid Murray Council are prepared to further discuss the reports that have been commissioned and undertaken.

Yours faithfully

Russell Peate
CHIEF EXECUTIVE OFFICER

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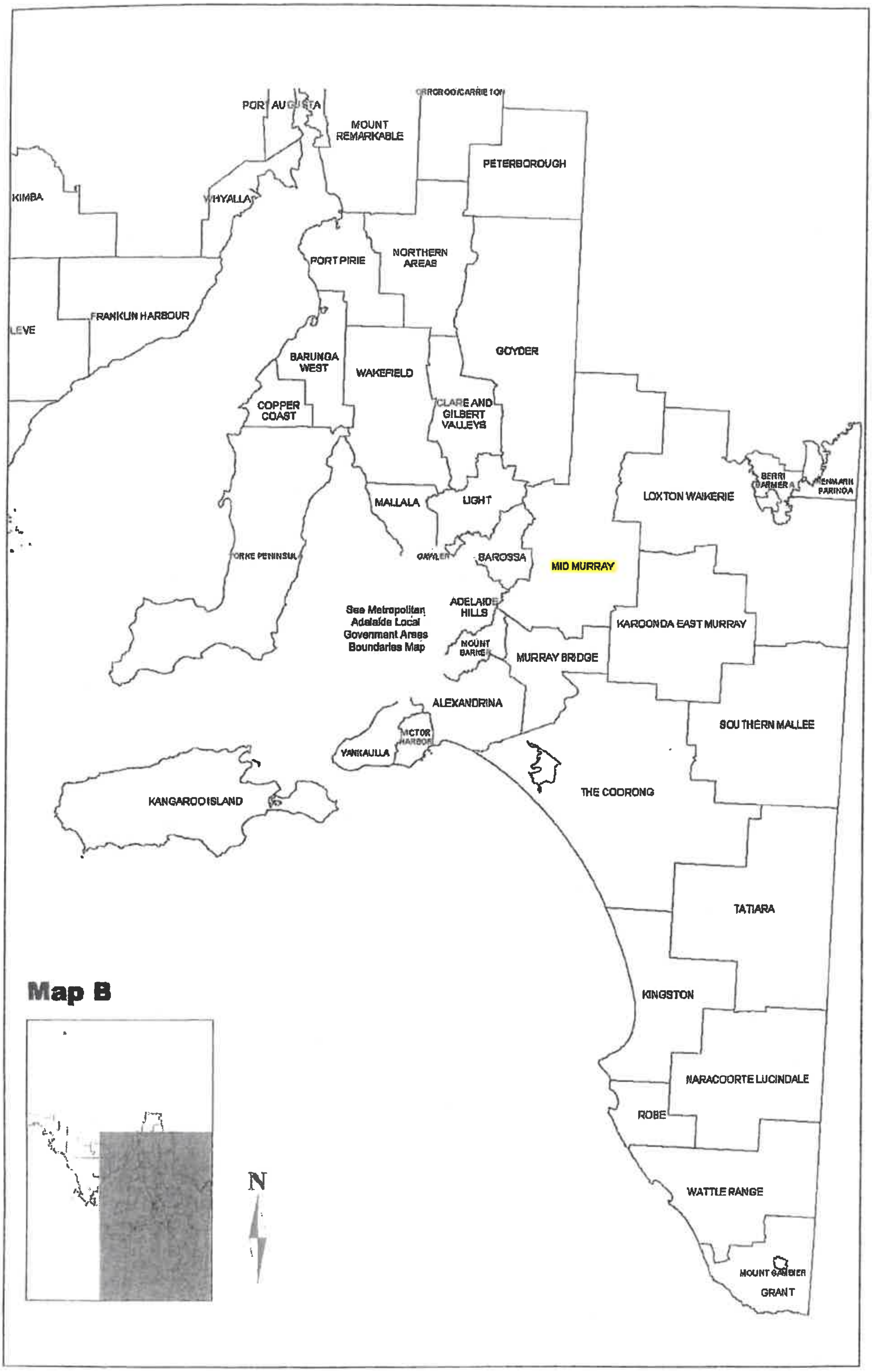
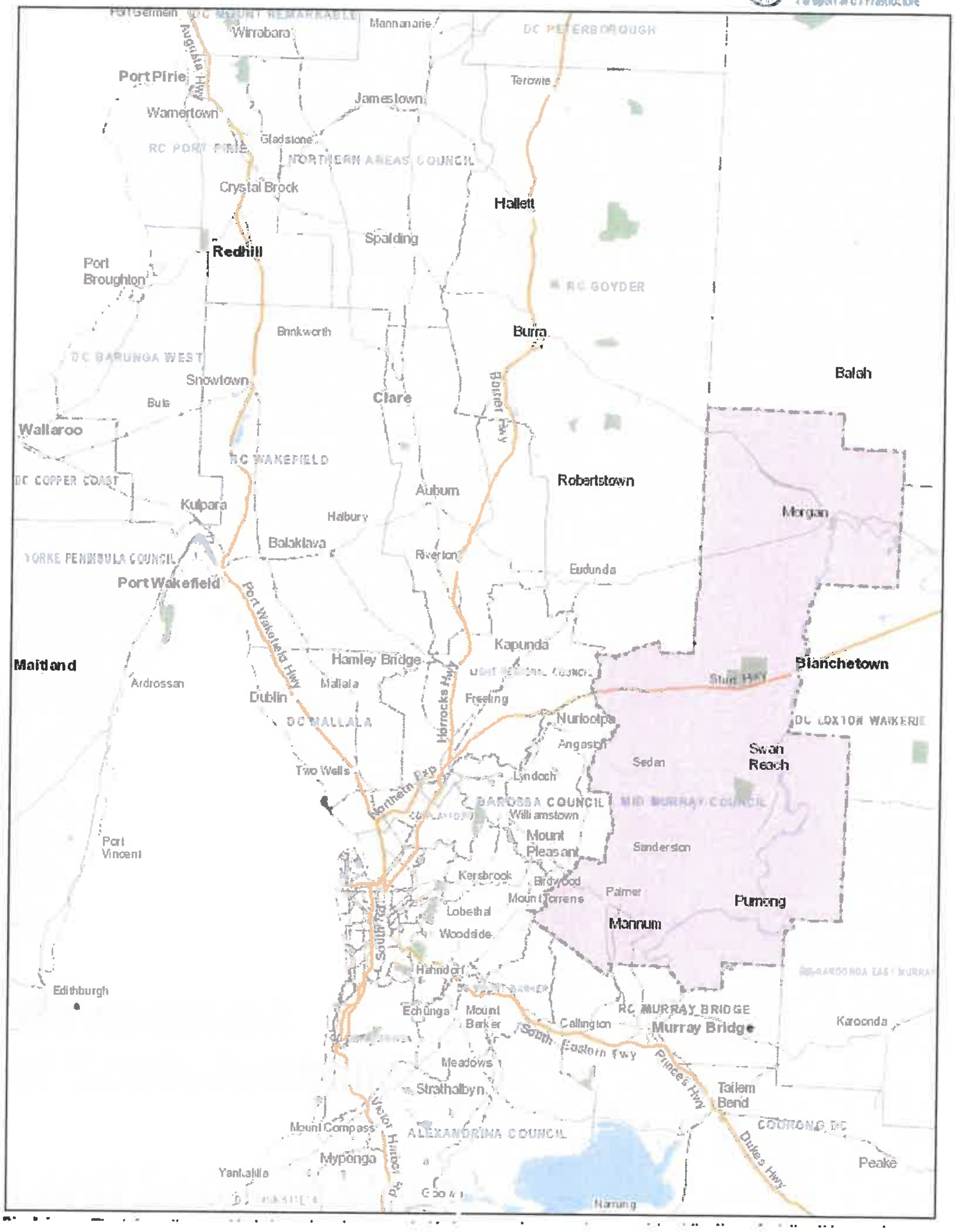


ORROROO/CARRIETON
PORT AUGUSTA
MOUNT REMARKABLE
PETERBOROUGH
KIMBA
WHYALLA
PORT PIRIE
NORTHERN AREAS
FRANKLIN HARBOUR
LEVE
BARUNGA WEST
WAKEFIELD
GOYDER
COPPER COAST
CLARE AND GILBERT VALLEYS
BERRI BARMERA
ENMARK PARINGA
LOXTON WAIKERIE
MALLALA
LIGHT
ORKE PENINSUL
GAWLER
BAROSSA
MID MURRAY
ADELAIDE HILLS
See Metropolitan Adelaide Local Govenment Areas Boundaries Map
KAROONDA EAST MURRAY
MOUNT BARKER
MURRAY BRIDGE
ALEXANDRINA
SOUTHERN MALLEE
VICTOR HARBOR
YANKALILLA
KANGAROO ISLAND
THE COORONG
TATIARA
KINGSTON
NARACOORTE LUCINDALE
ROBE
WATTLE RANGE
MOUNT GAMBIER
GRANT
N

Map B

Mid Murray Council

Government of South Australia
Department of Planning, Transport and Infrastructure



Optimi Digital

Review of Digital Services in the Mid Murray Council Area

By

Jim Wyatt, Optimi Digital
August 2016

EXECUTIVE SUMMARY

The Mid Murray Council is seeking to better understand the status of digital services (mobile coverage, broadband, radio and TV) within its municipal area. The purpose of this review is to assess the status and capability of digital services and to highlight any significant deficiencies, which the Councils may choose to address.

Using resources provided by the Australian Communications and Media Authority (ACMA), various telecommunications carriers, the NBN and Oz Towers.com, a detailed assessment was conducted of the operational digital infrastructure located within the Mid Murray region. Details were also recorded of all development activity underway, to provide updated or improved services.

This assessment was undertaken without the constraints of activities such as the Regional Mobile Black Spots program, where funding guidelines may or may not have skewed the focus and prevented areas of real demand from being identified and considered.

A range of factors have been identified as impacting on the scale, capability and serviceability of digital infrastructure in the region. These include proximity to major transport corridors, concentration of population, provision of social and economic infrastructure and the facilitation of tourism related activity. The single biggest issue for the region is the level of temporary or seasonal property use centered on 'shacks' along the river. The question of permanent residency may be influencing investment and development decisions in relation to the provision of digital services. This needs further exploration.

The other major consideration is the provision of digital infrastructure and services, to support the major industries in the region including:

- Tourism,
- Agriculture,
- Transportation, and
- Water resources.

There are also clear indications that the size of the region creates a degree of separation, to an extent that other adjacent regions can have more of an influence on the provision of and accessibility to some digital services. This means that when considering the improvement of such services it will be necessary to collaborate with adjacent Councils. An example of this is the influence that radio broadcasters have. There is a clear difference in available stations in the north of the region as compared to the south.

A major consideration in addressing deficiencies and substandard services will come through innovations in digital applications and infrastructure. There is a reasonable viewpoint that both radio and TV services could be significantly augmented across the region, through the provision of better broadband and education for users in how to adopt 'streaming' services in place of 'broadcasts'.

Digital radio and video on demand services could offer an ability in the near future, to provide many households across the region with better access to digital entertainment and information services.

CURRENT SITUATION

This section of the report provides a series of tables that set out the current situation regarding the digital infrastructure and services available across the Mid Murray region. Through the compilation of these tables it is possible to identify areas of deficiency in infrastructure, services and capabilities. It is also possible to identify trends and distinguish the circumstances that impact on service standards and capabilities. This could include distance, terrain, environmental and/or economic factors.

This analysis also will assist in identifying prospective priority areas that require addressing and potential solutions to assist with this. The digital landscape is ever evolving and there are significant possibilities presented through emerging technologies and convergence across the platforms, to present options for improving capabilities across the region. More details will be provided in relation to this concept in the observations section.

MOBILE COVERAGE

The following table sets out the distances the nearest Telstra and Optus towers are from each listed township. These measurements are provided through the online mapping tool supplied by OzTowers.com, using ACMA data. The table also provides an assessment of the coverage strength of Telstra and Optus at the Centre point of each township, using the carrier's own online coverage maps.

Good coverage for Telstra is based on an ability to use a handheld device consistently across the township. Patchy coverage reflects a mix of handheld and external antenna coverage. A status of 'none' means that the carrier has flagged this in a message box on the coverage map.

For Optus, each status relates to the stated signal strength indoors, Good, Marginal or None.

Distance, terrain and the type of mobile transmission technology all have an impact on the quality of the coverage. In some cases one carrier has good coverage when another has poor. In these circumstances access is deemed satisfactory. A blackspot is when both carriers represent poor coverage. Vodafone was not assessed as it was largely absent from the region.

Township	Nearest Telstra Tower	Nearest Optus Tower	Telstra Coverage*	Optus Coverage#
Big Bend	7.9Km	9.1Km	Good	Marginal
Blanchetown	.16Km	1.65Km	Good	Good
Bowhill	2.8Km	2.8K	Good	None
Brenda Park	4.5Km	5.5Km	Good	Good
Cadell	4.6Km	4.6Km	Good	Good
Caloote	7.2Km	7.9Km	Good	Good
Cambrai	15.7Km	15.7Km	Good	Good
Caurnamont	4Km	4Km	Good	Good
Cowirra	1.9Km	1.9Km	Good	Good
Dutton	7.9Km	7.9Km	Good	Good
Five Miles	5.8Km	5.5Km	Patchy	Good
Forster	2.8Km	11.5Km	Good	None
Frahns	3Km	2.9Km	Good	Good
Greenways Landing	14.6Km	14.6Km	Good	Marginal
Julanker Holdings	4.4Km	4.4Km	Patchy	Good
Keyneton	8.3Km	8.3Km	Patchy	Good
Lake Carlet	5.5Km	5.6Km	Good	Good
Langs Landing	3.2Km	3.3Km	Good	Good
Mannum	1.6Km	.67Km	Good	Good
Marks Landing	2.5Km	2.5Km	Good	Good
McBean Pound	7.5Km	7.3Km	Patchy	Good
Milendella	13.4Km	13.4Km	Patchy	None
Morgan	.14Km	1.14Km	Good	Good
Mount Mary	22.6Km	22.6Km	None	None
Murbko	13Km	12.5Km	Patchy	Marginal

Nildottie	10.45Km	18.3Km	None	None
North West Bend	1.2Km	2.3Km	Good	Good
Old Teal Flat	4.76Km	4.82Km	Good	Good
Palmer	12.05Km	12.05Km	Patchy	Good
Pellaring Flat	5.96Km	5.76Km	Good	Good
Pompoota	7.15Km	9Km	None	Good
Ponde	3.12Km	4.9Km	Good	Good
Punthari	11.8Km	10Km	Good	None
Punyelroo	5.5Km	5.5Km	Good	Good
Purnong	4.35Km	4.18Km	Good	Good
Rocky Point	9.44Km	9.21Km	None	None
Sanderston	14.7Km	14.3Km	Good	None
Sandelton	16.01Km	16.01Km	Good	Marginal
Sedan	17.41Km	17.45Km	Good	Good
Swan Reach	.62Km	1.63Km	Good	Good
Teal Flat	2.57Km	2.71Km	Good	Good
Truro	6.36Km	.56Km	Good	Marginal
Tungkillo	7.5Km	7.33Km	Good	Marginal
Walker Flat	2.32Km	12.2Km	Good	Good
Wombats Rest	9.01Km	9.88Km	Good	Good
Wongulla	6.47Km	11.36Km	Patchy	None
Younghusband	7.05Km	6.88Km	Patchy	Good
Zadows Landing	5.47Km	6.97Km	Good	Marginal

Findings

Generally, where the distance is in excess of 10 kilometers, this is likely to correspond with a deficiency in the standard of coverage. Terrain plays a major part in these circumstances and the flatter the landscape the further the signal strength can carry. The important value of this data is that it is not limited by program guidelines associated with funding initiatives or select reporting of anecdotal issues. It represents a holistic assessment of available infrastructure and correlating coverage for all major population centers across the region. Issue locations stand out (shaded grey) and can then be considered alongside other factors, to determine future strategies for addressing the deficiencies.

BROADBAND & NBN

Whilst Broadband was not listed as one of the areas for assessment by the Council, it is vital to understand the capabilities of this technology, as it will become a significant means for addressing issues that arise around radio and TV service provision.

Like the rest of Australia, the Mid Murray region is experiencing a transformation in the provision of broadband services through the National Broadband Network or NBN. The NBN is delivered through a mix of technologies, determined by several factors including population density and access to supporting infrastructure.

The primary technology format supplying NBN services across the Mid Murray region is Fixed Wireless. The next form of technology most prevalent is Satellite. Fixed wire solutions are largely restricted to the major population center of Mannum. There is potential scope to explore options to seek an upgrade in the standard of NBN technology across several of the towns in the region.

The important factor to consider is that once this NBN investment and deployment program is concluded, it is likely that any further upgrade to infrastructure will be well into the future. Therefore if there is a desire or business case for improved infrastructure, now is the time to consider this.

Township	Available NBN	Nearest NBN Tower	Comments
Big Bend	Satellite	5.62KM	? wireless coverage
Blanchetown	Wireless	1.65Km	
Bowhill	Satellite	2.8Km	? wireless coverage
Brenda Park	Wireless	5.5Km	
Cadell	Wireless	4.6Km	
Caloote	Wireless	7.9Km	
Cambrai	TBA	17.3Km	Likely need new tower
Caurnamont	TBA	4Km	Inside existing cover
Cowirra	Wireless	1.9Km	
Dutton	Satellite	5.5Km	? wireless coverage

Five Miles	Wireless	8.95Km	
Forster	Wireless	2.81Km	
Frahns	Satellite	5.92Km	? wireless coverage
Greenways Landing	Wireless	2.38Km	
Julanker Holdings	TBA	4.48Km	Inside existing cover
Keyneton	Wireless	4.04Km	
Lake Carlet	TBA	5.6Km	Inside existing cover
Langs Landing	Wireless	3.32Km	
Mannum	TBA	.67Km	FTTN – March 2016
Marks Landing	Wireless	2.48Km	
McBean Pound	Wireless	7.28Km	
Milendella	Satellite	14.68Km	Beyond coverage range
Morgan	Wireless	1.14Km	
Mount Mary	Satellite	22.59Km	Beyond coverage range
Murbko	Satellite	12.58Km	Beyond coverage range
Nildottie	Wireless	5.83Km	
North West Bend	Wireless	2.3Km	
Old Teal Flat	TBA	4.82Km	Inside existing cover
Palmer	TBA	12.05Km	Likely need new tower
Pellaring Flat	Wireless	8.89Km	
Pompoota	Wireless	5.38Km	
Ponde	Wireless	4.92Km	
Punthari	Satellite	10.07Km	
Punyelroo	Wireless	5.51Km	
Purnong	Wireless	4.18Km	
Rocky Point	Satellite	13.32Km	Beyond coverage range
Sanderston	TBA	14.42Km	Likely need new tower
Sandleton	Satellite	22.65Km	Beyond coverage range

Sedan	Satellite	18.92Km	Beyond coverage range
Swan Reach	Wireless	1.63Km	
Teal Flat	TBA	2.71Km	Wireless – Q1 2017
Truro	Wireless	.56Km	
Tungkillo	TBA	9.76Km	Border of coverage
Walker Flat	Wireless	2.32Km	
Wombats Rest	TBA	9.88Km	Border of coverage
Wongulla	Wireless	6.51Km	
Younghusband	TBA	12.02Km	Likely need new tower
Zadows Landing	TBA	6.97Km	Inside existing coverage

Findings

There are several sites where satellite is being offered as the only connection technology to the NBN, yet the location would be well within the coverage footprint of the closest NBN wireless tower. It would be worth seeking some clarification from NBN as to why these towns and sites are not being served by wireless technology.

There are several sites that are yet to be rolled out where it is anticipated that NBN intends to provide services via wireless technology, and due to the distance from the nearest tower it is likely a new transmission site will need to be constructed. If this is the case such sites may also prove of value to mobile carriers, to provide better mobile coverage at the same time. This is a preferred option under the Commonwealth's Regional Mobile Black Spot program. It is possible that NBN is waiting to see the results of round 2 of the program, to leverage any funded mobile sites.

Closer coordination between NBN and the mobile carriers could provide some options to address deficiencies in the region. 50% of sites across the region are already served by wireless. 23% of sites now provide NBN access via satellite. A further 27% of sites are yet to be rolled out. When compare to other regional areas in Australia, the Mid Murray region has a high percentage of wireless access sites as opposed to satellite but a lower level of fixed wired footprints. Some consideration should be given to upgrading major towns such as Morgan, Swan Reach and Blanchetown, to fixed line technology, especially to support businesses and social infrastructure (health and education).

RADIO BROADCASTERS

There are a range of radio broadcasters servicing the Mid Murray region. There is a distinctive separation in the nature and quantity of broadcasters based on geographical location, with greater choice being provided to communities in the norther part of the municipality.

Using ACMA data, the following table sets out the license area and broadcasters that service specific parts of the region based on postcode.

Post code	Townships	License Area & Broadcasters	Comments
5320	Morgan Murbko Brenda Park North West Bend Wombats Rest	<u>CENTRAL ZONE RA2</u> 8KIN <u>RIVERLAND RA1</u> 5ABCFM, 5JJJ, 5MV, 5PNN, 5RIV, 5RM & 5RN	
5321	Cadell	<u>CENTRAL ZONE RA2</u> 8KIN <u>RIVERLAND RA1</u> 5ABCFM, 5JJJ, 5MV, 5PNN, 5RIV, 5RM & 5RN	
5356	Dutton Truro Sandleton	<u>RIVERLAND RA1</u> 5ABCFM, 5JJJ, 5MV, 5PNN, 5RIV, 5RM & 5RN	
5357	Blanchetown McBean Pound	<u>CENTRAL ZONE RA2</u> 8KIN <u>RIVERLAND RA1</u> 5ABCFM, 5JJJ, 5MV, 5PNN, 5RIV, 5RM & 5RN	
5353	Sedan Keyneton Cambrai Black Hill	<u>ADELAIDE RA1</u> 5AA, 5ABCFM, 5ADD, 5ADL, 5AN, 5DDD, 5DN, 5EBI, 5FBI, 5JJJ, 5MMM, 5PB, 5RAM, 5RN, 5RPH, 5SBSFM, 5SSA & 5UV	

	Punyelroo Langs Landing	BAROSSA VALLEY RA1 5BBB MURRAY BRIDGE RA1 5EZY & 5MU	
5354	Swan Reach Marks Landing	MURRAY BRIDGE RA1 5EZY & 5MU	? why no reception to public FM channels.
5374	Mount Mary	REMOTE COMMERCIAL RADIO SERVICE CENTRAL ZONE RA1 5ABCRN, 5ABCRR, 5LC, 5SY, 8ABCRN, 8ABCRR, 8GO, 8JB, 8JJJ, 8RN & 8SAT CENTRAL ZONE RA2 8KIN	Picks up radio transmissions from across the border.
5238	Nildottie Walker Flat Purnong Bowhill Younghusband Punthari Mannum Ponde Pompoota Big Bend Caurnamont Cowirra Five Miles Frahns Forster Old Teal Flat Pellaring Flat Rocky Point	MURRAY BRIDGE RA1 5EZY & 5MU	Vision Radio 87.6FM broadcasts locally in Mannum. ? why no reception to public FM channels.

	Teal Flat Greenways Landing Julanker Holdings Lake Carlet Wongulla		
5237	Sanderston Milendella Palmer	MURRAY BRIDGE RA1 5EZY & 5MU	? why no reception to public FM channels.
5236	Tungkillo	MURRAY BRIDGE RA1 5EZY & 5MU	? why no reception to public FM channels.
5254	Caloote Zadows Landing	MURRAY BRIDGE RA1 5EZY & 5MU	? why no reception to public FM channels.

Findings

The obvious issue is the lack of reception for public based FM channels (5ABCFM, 5JJJ, 5ABCRN, 5SBSFM) across the southern half of the region. The escarpment between the region and Adelaide likely forms a barrier to signal carriage from the foothills based broadcasters around Adelaide. The solution would be to explore the establishment of a public transmission site in or near the southern part of the municipality.

TV BROADCASTERS

Much of the local (rebroadcast) terrestrial infrastructure has been replaced by the VAST satellite system, for the provision of TV broadcast signals to most of the townships across the region. A scan of the ACMA radio licenses database identified only three fixed rebroadcast sites in the region. A site is located within the Council officers in Morgan and supports both Win TV and the ABC. The other two sites are operated by TxAustralia Pty Ltd. One is located at Quarry Reserve and services Mannum (and parts of the surrounding area) and the other is located at Punyelroo and likely services Swan Reach and surrounds.

As much of the region is serviced by the VAST satellite service there is little avenue for customization of channels or injection of local content. The following table sets out the source of broadcast TV (by licensed area) and the listed channels available across each of the postcodes for the region.

Postcode	Townships	License Area & Channels	Comments
5320	Morgan Murbko Brenda Park North West Bend Wombats Rest	REMOTE CENTRAL & EASTERN AUSTRALIA TV1 ABC, IMP, SBS REMOTE CENTRAL & EASTERN AUSTRALIA TV2 CDT & QQQ RIVERLAND TV1 LRS, RDS & RTS	Multiple VAST broadcast options
5321	Cadell	REMOTE CENTRAL & EASTERN AUSTRALIA TV1 ABC, IMP, SBS REMOTE CENTRAL & EASTERN AUSTRALIA TV2 CDT & QQQ RIVERLAND TV1 LRS, RDS & RTS	Multiple VAST broadcast options
5356	Dutton Truro Sandleton	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS	Single VAST option
5357	Blanchetown McBean Pound	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS REMOTE CENTRAL & EASTERN AUSTRALIA TV1	Multiple VAST broadcast options

		ABC, IMP, SBS REMOTE CENTRAL & EASTERN AUSTRALIA TV2 CDT & QQQ	
5353	Sedan Keyneton Cambrai Black Hill Punyelroo Langs Landing	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS	Single VAST option
5354	Swan Reach Marks Landing	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS	Single VAST option
5374	Mount Mary	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS REMOTE CENTRAL & EASTERN AUSTRALIA TV1 ABC, IMP, SBS REMOTE CENTRAL & EASTERN AUSTRALIA TV2 CDT & QQQ	Multiple VAST broadcast options
5238	Nildottie Walker Flat Purnong Bowhill Younghusband Punthari Mannum	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS	Single VAST option

	Ponde Pompoota Big Bend Caurnamont Cowirra Five Miles Frahns Forster Old Teal Flat Pellaring Flat Rocky Point Teal Flat Greenways Landing Julanker Holdings Lake Carlet Wongulla		
5237	Sanderston Milendella Palmer	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS	Single VAST option
5236	Tungkillo	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS	Single VAST option
5254	Caloote Zadows Landing	ADELAIDE TV1 ABC, ADS, NWS, SAS & SBS	Single VAST option

Findings

There is little that can be done to improve access to more content since the switch over to the VAST system. Streaming TV and Video on Demand via broadband offer the best alternative solution, to improve access to content.

KEY OBSERVATIONS

Optimi Digital has drawn the following key observations from its review of the digital infrastructure and services across the Mid Murry Council area:

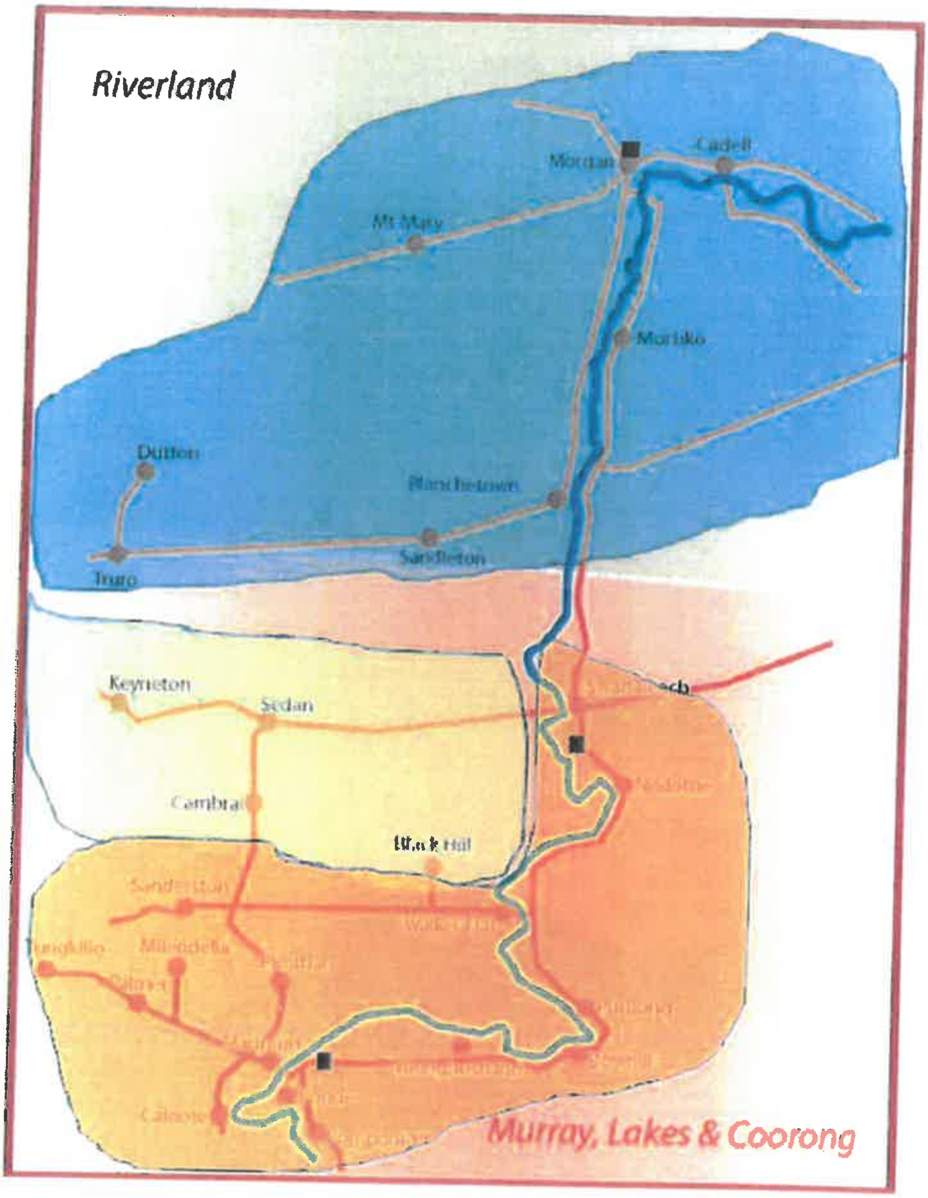
1. Important mobile blackspots were overlooked under round 2 of the Commonwealth program as they were not registered on the national database (a problem which the program needs to address). It would be preferred that the Commonwealth seek assessed and confirmed blackspots from Local Councils, as the source of data on which to base its funding support. There are clear target areas identified in this review for the Councils to register as part of any future funding programs, run by either the State or Commonwealth Governments.
2. Optimi Digital has lobbied hard for greater cohesion between mobile carriers and the NBN (wireless roll out). Given that the NBN is funded at this time by the Commonwealth Government whom also runs the Regional Mobile Black Spot funding program, it would be sensible for these initiatives to harmonise their infrastructure developments. There are clear synergies between future NBN fixed wireless deployment foot prints in the region and the need for improved mobile coverage. The Council has the ability to act as a central collaboration party, to bring together the NBN, Optus and Telstra, to seek out development solutions that will both improve broadband and mobile coverage in the region.
3. NBN access in several towns is via satellite, yet a NBN wireless tower would seem to be well within connection and coverage range. A preference for business would be to connect to the NBN via wireless in place of satellite.
4. Whilst the Council did not specify a requirement for broadband to be included in this review, Optimi Digital has done so given the significant opportunity for streaming content to provide a solution to issues relating to radio and TV broadcasts. A robust and affordable broadband capability is a necessity, to enable such alternate delivery platforms for radio and TV content.
5. Infrastructure located and controlled outside of the Mid Murray region is largely responsible for the delivery of radio and TV content across the region. This has led to a more diverse choice of content in some parts of the region as opposed to others. This differentiation is largely aligned north and south, with northern townships receiving a wider

choice of broadcaster and content, including significantly better options from public broadcasters.

RECOMMENDATIONS

Based on the key observations Optimi Digital recommends that the Mid Murray Council adopt the following actions.

1. The Council approach both Telstra and Optus to validate the identified blackspots in the region and seek an indication of investment requirement to address these. This can then form a foundation for the Council's submission under any future funding program for the improvement of regional mobile coverage.
2. The Council to hold a planning summit with NBN, Optus and Telstra, to explore options for colocation and development of new infrastructure that will lead to better broadband and mobile connectivity, focused on those locations yet to receive the NBN.
3. The Council should seek an explanation from the NBN as to why certain towns within range of an NBN Fixed Wireless tower can only gain access via satellite. What would be required to at least enable business and public facilities to be connected via wireless?
4. The Council consider the opportunity to enable better radio and TV content delivery using streaming application over broadband. This will likely require a broad based education and communication programs, to help residents understand this alternative means for accessing radio and TV content.
5. The Council needs to explore options to seek improvement of access to public broadcast content for the southern part of the Mid Murray region. This may require a rebroadcast site to be established in or near the southern parts of the region.



5ABCFM, 5JJJ, 5MV, 5PNN, 5RIV, 5RM & 5RN

5BBB, 5EZY & 5MU

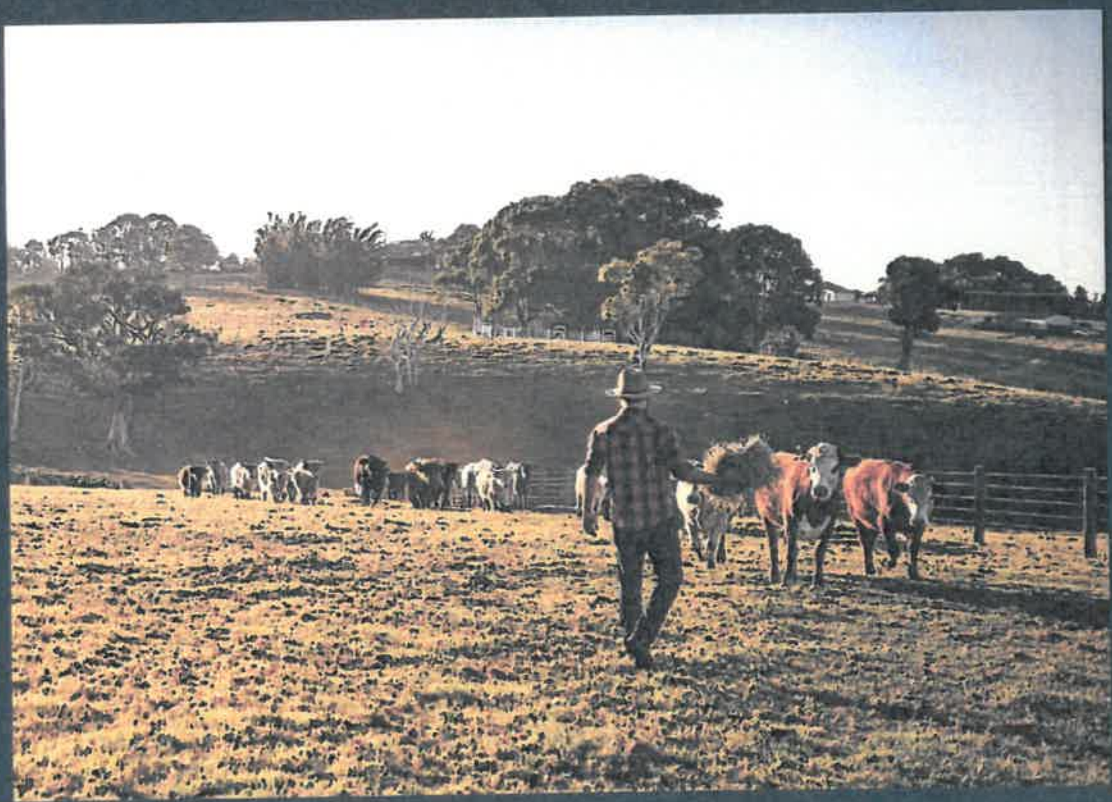
5EZY & 5MU

■ TV Rebroadcast location

Australian Government
Regional Telecommunications Review

Regional Telecommunications Review 2018

Issues Paper



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Contents

2018 Regional Telecommunications Review

A Regional Telecommunications Independent Review Committee (the Committee) is established every three years under Part 9B of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* to conduct a review into telecommunications services in regional, rural and remote parts of Australia.

The Committee in 2018 is comprised of Mr Sean Edwards (Chair), Ms Wendy Duncan, Ms Johanna Plante, Ms Robbie Sefton, Ms Kylie Stretton and Mr Paul Weller.

As part of the review, the Committee will consider:

- how regional communities can maximise the economic benefits of digital technologies
- how regional consumers use their broadband services and how they might derive further benefit from it
- the outcomes achieved through the Mobile Black Spot Program, and examine the extent of the existing gaps in mobile coverage in regional Australia.

The Committee will meet face-to-face with communities, business and governments across regional, rural and remote Australia. The Committee will report to the Minister for Regional Communications by 30 September 2018. The Committee's terms of reference are at **Appendix 2**.

Have your say

The Committee welcomes submissions from individuals, businesses, peak bodies and other interested organisations.

This issues paper provides an outline of key interest areas and invites submissions that share a range of experiences and perspectives.

There are questions to provide guidance and you can address all of the questions or just those that are relevant to you in your submission. Your comments are also not limited to the questions.

Submissions will be accepted until 5 August 2018 via:

- the Department of Communications and the Arts' website www.communications.gov.au/rtirc
- email to secretariat@rtirc.gov.au
- post: 2018 Regional Telecommunications Review Secretariat
  Department of Communications and the Arts
  GPO Box 2154
  CANBERRA ACT 2601

Visit www.rtirc.gov.au for more information about the Committee, the review and the consultation process.

Complementary reviews

There are a number of other relevant reviews underway. The Australian Government's Consumer Safeguards Review, which was launched by the Minister for Communications in April 2018, is due to report by the end of the year. There is also the Joint Standing Committee on the National Broadband Network and ongoing work to develop the Universal Service Guarantee for voice and broadband services. The Regional Telecommunications Review will complement this work and share relevant findings where appropriate.

Introduction

Telecommunications services are vital to participate in modern society. Business, education, health, social and safety activities all rely on connecting with others, and those without functional and reliable telecommunications services risk being left out.

There has been great progress towards ensuring all Australians can access telecommunications services. The rollout of the National Broadband Network (NBN) by NBN Co Limited (nbn) is well-advanced and on track for completion by 2020. Significant investment from mobile carriers and the Government's Mobile Black Spot Program has improved mobile coverage in regional and remote Australia. People in regional areas have been quick to take up the opportunities provided by these technologies and, as a result, have realised a range of economic and social benefits.

This review aims to gain a better understanding of how regional Australians use telecommunications services. In particular, it is focused on understanding any barriers to using digital technologies faced by people in regional communities and how these can be overcome. With many government, business and retail services now provided online, the Committee wants to better understand the telecommunications landscape for Australians living and working in regional areas, and examine what is needed going forward.

State of the market

While there are still some challenges to connecting with essential government and businesses services in regional Australia, the telecommunications market in Australia has transformed in the past three years. The NBN rollout is progressing faster in the regions than in the cities. These services are either already available or the infrastructure is under construction for 92 percent of all homes and businesses outside major urban areas.

- The NBN regional fixed line rollout is approximately 78 percent complete and 1,096,000 premises able to access services. The NBN fixed wireless rollout is well advanced with over three-quarters of the network complete and more than 233,462 properties connected.
- The NBN Sky Muster satellite service became available in April 2016 throughout Australia and to island territories including Norfolk Island, Christmas Island, Lord Howe Island and Cocos (Keeling) Islands. Sky Muster services are available to over 428,000 premises and more than 88,000 premises have taken up the service to date.

Public and private investment in telecommunications has significantly improved the mobile landscape across regional and remote Australia. The Mobile Black Spot Program is delivering 867 mobile base stations. This investment totals more than $680 million, with contributions from federal, state and local governments and communities. These base stations will provide almost 90,000 square kilometres of new and upgraded handheld mobile phone coverage and over 205,000 square kilometres of new external antenna coverage.

Key areas of interest

How are regional Australians using telecommunications services?

According to the Australian Communications and Media Authority's *Communications Report 2016–17* the volume of data downloaded nationally increased by 43 percent between June 2016 and June 2017 to over 3.1 million terabytes.[1] The mobile handset is now the most frequently used device for accessing the internet. In June 2017, 6.67 million Australian adults had a mobile phone and no fixed line telephone at home.

The Internet of Things is growing rapidly and major telecommunications carriers have committed to trial and roll out new technology. This has the potential to drive significant social and economic impacts.

1. **What are the main barriers to people in regional communities increasing their use of digital technologies and possible solutions for overcoming these barriers?**
2. **How are people in regional communities currently using their broadband service and how might they increase the benefits of using this technology?**

Business

Connectivity is a priority in regional areas, which are home to around a quarter of Australia's small businesses.[2] Regional cities are generating growth and jobs at the same rate as their larger metropolitan counterparts.[3] Regional businesses are using innovative approaches to solve problems every day. One example is Therapy Connect, a business founded in Deniliquin, New South Wales, which operates solely online. It is recognised as a leader in the field of providing online speech and occupational therapy support to children and families. It provides services to over 25 regional areas in Australia and into Asia, all from regional bases in New South Wales and Victoria.[4]

It is crucial to understand the significant contribution regional and remote areas make to the national economy. Regional Australia accounts for around 40 percent of Australia's economic output and employs one in three Australians.[5] Some of Australia's most innovative businesses are based in regional areas, largely in the export, agriculture and tourism industries. In fact, 43 cents of every tourist dollar in Australia is spent in the regions — 63 percent of domestic overnight visitors and 36 percent of international visitors travelled beyond capital cities in the year ending June 2017.[6] This highlights the importance of consistent communications infrastructure.[7]

1 Australian Communications and Media Authority, 2017, *Communications report 2016–17*, p. 1.
2 Australian Government, The Department of Treasury, 'Backing Small Business: creating jobs, opportunity and growth', p. 20.
3 Regional Australia Institute, 2017, *Investing In National Growth — Regional City Deals*
4 Regional Australia Institute, 2017, *Here's 49 small communities innovating as well as the big cities.*
5 Regional Australia Institute, 2015, *The economic contribution of regions to Australia's prosperity*, p. 4
6 AusTrade, 2018, *Regional Tourism Infrastructure Investment Attraction Strategy 2016–2021*
7 Minister for Trade, Tourism and Investment, 2018, 'Investing in regional tourism', media release, 10 May.

Regional cities have demonstrated they are willing and able to transition to new industries. Research from the Regional Australia Institute shows that service industries such as finance, education, health and professional services are producing more output than traditional industries such as agriculture, mining and manufacturing in regional cities.[8]

Education and Health

Education is among a range of critical services that nbn has prioritised. The company has identified a range of Public Interest Premises, including schools, Indigenous community organisations, not-for-profit organisations, educational and health facilities and local government offices. nbn can provide additional data allowances for these Public Interest Premises over the Sky Muster service.

Another priority is distance education. There are currently over 725 students using the Sky Muster distance education satellite across regional and remote Australia. This satellite product provides an additional monthly download of 50 gigabytes per student for up to three students at the same site. One of the priorities is to further improve the delivery of education services via Sky Muster with features including multicast video, pooling of data allowances and un-metering of education content for specified websites.

Currently the services are available to distance education and a small number of home-schooled children. Keeping in mind there are limits to the capacity of the Sky Muster service, the Committee is interested in understanding whether there are other students who could benefit from this access.

In the health sector, nbn has partnered with the Royal Flying Doctors Service (RFDS) to provide broadband to 24 bases and 300 remote area clinics across Australia.[9] Many of these

8 The Regional Australia Institute, 2017, *Lighting Up our Great Small Cities: Challenging Misconceptions*, p. 11

9 Minister for Regional Communications, 2017, 'Sky Muster to supply broadband to remote Flying Doctor Clinics', media release, 5 July.

remote clinics previously had little or no internet connectivity and will now receive broadband through the Sky Muster satellites.

The Committee is interested in hearing views about the order-of-magnitude increases in data capability that will be required to provide quality education, health and social services to regional Australians.

3. **What data-intensive activities are occurring in regional, rural and remote Australia? What digital technologies are needed for these?**
4. **How can regional businesses better utilise digital technologies to maximise economic benefits?**

Remote Indigenous communities

Access to online services offers enormous opportunities for people in remote communities, including extending education, supporting culture and language and growing business opportunities. On this point, the NBN Sky Muster satellite service will enable remote Indigenous communities to take advantage of the social and economic benefits of the NBN. The satellite service provides broadband internet access with enough capacity for everything from basic web browsing and banking to more advanced services such as e-health and distance education.[10]

There are 93 Indigenous community organisations registered as Public Interest Premises. The Northern Territory has the highest number with 45. Many of these organisations use the Public Interest Premises product to offer Wi-Fi in remote Indigenous communities. The Department of the Prime Minister and Cabinet maintain and monitor about 300 Wi-Fi Telephones and 245 Community Payphones in remote Indigenous communities.

However, getting and keeping remote communities connected can be difficult.[11] There are a number of barriers to internet access in remote communities including language barriers, affordability and awareness of what is available. Evidence suggests that a community Wi-Fi model may help to overcome these barriers and increase access to the internet in remote communities.

The 2015 Regional Telecommunications Review Independent Committee (the 2015 Committee) flagged in its report that some isolated Indigenous communities may be better suited to infrastructure that supports mobile connectivity or Wi-Fi, as many Indigenous Australians have bypassed desktop computers, opting instead for portable devices and wireless connectivity.[12] Research from the Swinburne Institute for Social Research supports this. Their case study research of Ali Curung, an Indigenous community 170 km south of Tennant Creek, found there was a strong preference for mobile devices and prepaid billing services to access the internet.[13]

10 Australian Government, *Closing the Gap: Prime Minister's Report 2018*, Department of Prime Minister and Cabinet, p. 95.

11 Australian Communications Consumer Action Network, 2017, 'Connecting remote Indigenous communities', *Hot issues paper*.

12 Regional Telecommunications Independent Review Committee, 2015, Regional Telecommunications Review, p. 34

13 Swinburne Institute for Social Research, *Home Internet in Remote Indigenous Communities*, June 2015.

The 2017 Australian Digital Inclusion Index Report found that Indigenous Australians have lower digital inclusion than the national average.[14] While the data collected for this report did not extend to remote Indigenous communities, the Committee is interested in better understanding the experiences of people in these communities. The concept of digital inclusion is based on the premise that everyone should be able to make full use of digital technologies and is measured in the report by three measures: access, affordability, and digital ability.[15] This report reveals the digital inclusion of Indigenous Australians in non-remote areas is improving at a faster rate than the national average.[16]

Data from this survey also shows that many Indigenous Australians are much more likely to be mobile-only users compared with the total population, and that they are generally willing to embrace technology, and to go out of their way to learn new things.[17]

5. **What can be done to improve access to and uptake of telecommunications services in remote Indigenous communities?**
6. **Are there practical examples of how communications services can improve the well-being of people in remote Indigenous communities?**

Digital Literacy

The Committee is interested in exploring more broadly digital inclusion and affordability in regional Australia. Despite the progress in communications services in regional Australia the Australian Digital Inclusion Index of 2017

14 Thomas, J, Barraket, J, Wilson, C, Ewing, S, MacDonald, T, Tucker, J & Rennie, E, 2017, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2017*, RMIT University, Melbourne, for Telstra, p. 7.

15 Thomas, J, Barraket, J, Wilson, C, Ewing, S, MacDonald, T, Tucker, J & Rennie, E, 2017, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2017*, RMIT University, Melbourne, for Telstra, p. 5.

16 Thomas, J, Barraket, J, Wilson, C, Ewing, S, MacDonald, T, Tucker, J & Rennie, E, 2017, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2017*, RMIT University, Melbourne, for Telstra, p. 16.

17 Thomas, J, Barraket, J, Wilson, C, Ewing, S, MacDonald, T, Tucker, J & Rennie, E, 2017, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2017*, RMIT University, Melbourne, for Telstra, p. 18.

found substantial and widening gaps between those who are digitally included and those who are digitally excluded.[18] In general, Australians with low levels of income, education and employment are significantly less digitally included. While some regional areas are substantially below the national average,[19] nationally digital access has improved steadily over the past four years.

Cyber safety

As has been well-canvassed in this paper, the internet is a vital tool for education, research, entertainment and social interaction in a modern day society. While this has created exciting opportunities for users and business, it has also brought about many challenges and concerns for regulators, including a lack of control over content on the internet that may lead to increased opportunity for illegal and antisocial activities.

Online safety is a rapidly changing environment that incorporates a number of wide ranging issues. Issues include cyberbullying, pornography, imagebased abuse, violence against women, violent extremism and child sexual abuse. In 2015, the Government implemented measures to create a safer online environment for Australian children. The key measure was the establishment of the eSafety Commissioner, under the Enhancing Online Safety for Children Act 2015, to help protect Australian children from cyberbullying harm and to take a national leadership role in online safety for children. In December 2015, the functions of the Children's eSafety Commissioner were expanded to include online safety for persons at risk of family or domestic violence, and in 2017, the functions were further expanded to include online safety for all Australians. The eSafety Commissioner administers the cyberbullying complaints scheme, the take-down regime for prohibited content (including child sexual abuse material) and the image-based abuse portal.

The Committee is interested in how equipped regional people are to manage online safety and security.

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

Government investment

National Broadband Network

In addition to providing NBN fixed line broadband services to 2.5 million regional premises, the Government is investing around $2.1 billion in capital expenditure on nbn's fixed wireless network and approximately $1.9 billion on the Sky Muster satellite service. The fixed wireless rollout is well advanced with over three-quarters of the network complete and more than 233,000 properties connected.

The Sky Muster satellite service has improved access to broadband for many regional and remote Australians. While these satellite services can deliver wholesale speeds of 12/1 Megabits per second (Mbps) or 25/5Mbps, this is not always the experience for everyone.

Actual speeds experienced by end-users can be affected by a range of factors including weather conditions and network configuration. For example, isolated rainfall may affect services in a whole region. After the initial reliability challenges of Sky Muster, the service has stabilised. In October 2017, data allowances were increased and nbn is continuing to look at different ways to improve the satellite service, including plans to introduce new enterprise grade products in early 2019.

Retail service providers have a direct service relationship with customers, and are the connecting factor between nbn and the customer. Consequently, the retail service

18 Thomas, J, Barraket, J, Wilson, C, Ewing, S, MacDonald, T, Tucker, J & Rennie, E, 2017, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2017*, RMIT University, Melbourne, for Telstra, p. 5.

19 Thomas, J, Barraket, J, Wilson, C, Ewing, S, MacDonald, T, Tucker, J & Rennie, E, 2017, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2017*, RMIT University, Melbourne, for Telstra, p. 5.

providers play a critical role in the provision of NBN services. Retail service providers are the first point of contact for customers to get connected and to resolve complaints. The effectiveness of retail service providers can have a significant impact on the customer's NBN experience.

The Committee would like to understand how consumers have managed any ongoing issues with their satellite or fixed wireless services and is also interested in finding out who people turn to as trusted sources of information when dealing with issues.

8. **Have you had ongoing issues affecting your satellite or fixed wireless broadband service? If so, how have you overcome these issues?**
9. **If you are in an area with access to the Sky Muster satellite service and you have not taken it up, why not?**

Mobile coverage

Expanding mobile coverage has clear economic, social and public safety benefits for people living, working and travelling in regional and remote Australia. However, it is not always commercially viable for service providers to invest in expensive infrastructure in areas with small populations or complex geography. To fill this gap, the Commonwealth and state governments have invested in telecommunications infrastructure to improve mobile coverage across Australia through the Mobile Black Spot Program.

The program promotes new investment to improve mobile coverage in regional and remote Australia. The Commonwealth's original $160 million commitment for rounds 1 and 2 of the program was complemented by $287 million from the mobile network operators, $141.2 million from state governments and an additional $2.2 million from local governments, businesses and community organisations.

Mobile phone operators and network infrastructure providers were asked to put forward proposals to build new or upgraded mobile base stations to deliver improved coverage. Under rounds 1 and 2 there was a requirement to address black spots identified by the public. The Priority Locations round identified sites pre-announced by the Government. The program used a merit-based competitive selection processes to award funding for all three rounds. Proposals were ranked according to assessment criteria outlined in the Program Guidelines, which included coverage benefits and cost.

The Mobile Black Spot Program is delivering substantial improvements to mobile coverage across Australia and carriers have recently announced large regional mobile investment programs.[20] However, there continues to be strong demand for further investment in mobile coverage, particularly in regional and remote areas. In addition to the strong demand from areas that have no mobile coverage at all, communities that have poor mobile coverage or experience seasonal congestion are seeking network upgrades.

In the absence of a game-changing technology that fundamentally alters the business case for investing in more remote areas of Australia, it appears that co-investment is the main way forward to improve mobile coverage. There is now a better understanding of the costs of co-investing in mobile coverage after three rounds of the Mobile Black Spot Program and the associated or standalone state government initiatives. However, it is not always easy to quantify the benefits of improved mobile coverage as it is an enabler across so many parts of everyday life. The Committee is interested in understanding what indicators, economic or otherwise, could be used to guide future co-investment programs.

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

20 Optus, 2017, 'Our commitment to improving coverage in regional Australia,' 17 August, https://www.optus.com.au/enterprise/accelerate/communications/our-commitment-to-improving-coverage-in-regional-australia

Making the most of mobile coverage

As well as infrastructure investments to improve mobile coverage, there are many ways for individuals or businesses to improve their own mobile reception. For example, products such as external antennas, in-building repeaters, or specific mobile phones recommended by the mobile carriers can greatly improve access to coverage in marginal areas. Anecdotally, there seems to be a low level of awareness and understanding of these solutions.

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

Alternative and emerging technologies

In addition to major broadband projects such as the NBN, there are commercial fixed wireless providers offering services in many parts of regional Australia. The Wireless Internet Service Provider Association of Australia (WISPAU), an association of 40 wireless service providers, indicates its members provide broadband services to over 200,000 regional Australians. Fixed wireless providers appear to offer a competitively priced alternative to services such as the NBN Sky Muster service. The Committee is interested in the experiences of individuals and businesses who use these services, either as a broadband to the home service or to run their business, i.e. to provide an on-farm Wi-Fi service.

More generally, on-farm Wi-Fi services appear to be increasing in popularity and there are many reported instances of individual farmers investing in innovative approaches to access broadband. With the growing numbers of connected devices that can be used to collect large amounts of data and improve farm productivity, the Committee would appreciate hearing first-hand accounts of the costs and benefits of investing in this type of technology.

As new technologies evolve, competition grows. Providers other than nbn are using medium orbit, geostationary and leased satellites to deliver voice, broadband and Pay TV services. For example, SES Networks, an international satellite company, uses Medium Earth Orbit satellites to service Norfolk Island with high capacity broadband.

Low Earth Orbit satellites have the potential to address some of the issues with the current technology. These satellites have low latency and high capacity broadband. Additionally, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is developing and trialling a next-gen wireless technology called 'Ngara'. This new 'beam forming' wireless technology could reduce the amount of required spectrum and allow for data to be transmitted over greater distances.

Finally, 5G is expected to be an improvement on previous generations of mobile technology by providing faster download speeds, better connectivity and lower latency over mobile networks. Trials of 5G in Australia are already underway with an expected rollout from 2019.[21]

The Committee is also interested in what work businesses and other organisations are doing to install telecommunications infrastructure and technologies in regional areas, and if there are opportunities for the surrounding communities to benefit.

21 Telstra, 2018, 'Telstra turns on free 5G-enabled Wi-Fi and Australia's first 5G Connected Car', media release, 27 March and Optus, 2018, 'Optus brings 5G to the Commonwealth Games through world first achievement' media release, 5 April.

In general, competition leads to better outcomes for the end-user. It remains to be seen what opportunities these new technologies will present and the Committee is interested in the experiences and ideas of people using services other than the NBN.

12. **What emerging digital services will be of most benefit to regional businesses and what are the data needs of these services?**
13. **What broadband services are people using other than those available through the NBN?**
14. **How can more competition be encouraged in the provision of broadband services in regional Australia?**

Re-thinking consumer protections and policies

Australia has an open and competitive telecommunications market. The industry is subject to extensive and complex consumer and competition regulation. It operates on a commercial basis and regulation is only applied where there are competition or consumer concerns.

Access to quality, reliable, affordable telecommunications services across Australia continues to be a touchstone of Australian telecommunications policy. Effective communications is vital to social wellbeing and economic prosperity. This is particularly true in regional, rural and remote Australia where access to other services may be limited and distance can be a formidable barrier.

The 2015 Committee found that people in regional Australia were moving away from standard telephone services and towards mobile and internet-based services. In particular, the 2015 Committee noted that the standard telephone service use was of rapidly declining relevance and that regional consumers were moving to mobiles, Voice over Internet Protocol (VoIP) and other social media applications as their primary communication method. As the Mobile Black Spot Program and NBN rollout near completion, this is truer than ever. The relevance of current regulatory frameworks needs to be examined.

A new Universal Service Guarantee

Australia has long had a universal service obligation (USO), which recognises the importance of providing up-to-date telecommunications to regional, rural and remote communities. The USO ensures people across Australia have ready access to fixed voice and payphone services wherever they reside or conduct business. The provision of these services is locked in from 2012 to 2032 under a binding $5.4 billion 20-year contract with Telstra. Under the contract, Telstra receives $230 million per annum to provide telephone services, and $40 million per annum to provide payphone services across Australia. However, consumers are using data and mobile services more and fixed voice and payphone services less. These changes have called into question the relevance of the current USO.

Following the 2015 Regional Telecommunications Review, the Government asked the Productivity Commission to review the future of the USO. In response to the report of the Productivity Commission, the Government indicated in December 2017 it would develop a new Universal Service Guarantee (USG). The USG will modernise the existing USO arrangements by ensuring consumers have access to broadband as well as voice services. The Department of Communications and the Arts is currently developing options for the USG for the Government.

With the rollout of the NBN and the extensive coverage and uptake of mobile services, a key issue in the development of the USG is whether it is still good value for money to fund Telstra to deliver voice and payphone service. Alternatively, would it be better to place greater reliance on alternative networks, potentially freeing up existing USO funding for other purposes? For example, if more consumers could use mobile networks rather than fixed line networks, would there be savings from supplying copper services that could be directed to further investment in mobile services.

While the Department of Communications and the Arts' work on the USG is a separate process to the 2018 Regional Telecommunications Review, it is of interest to people in regional, rural and remote areas. The Committee is therefore open to hearing community views on the USG and will ensure these are referred to the Government.

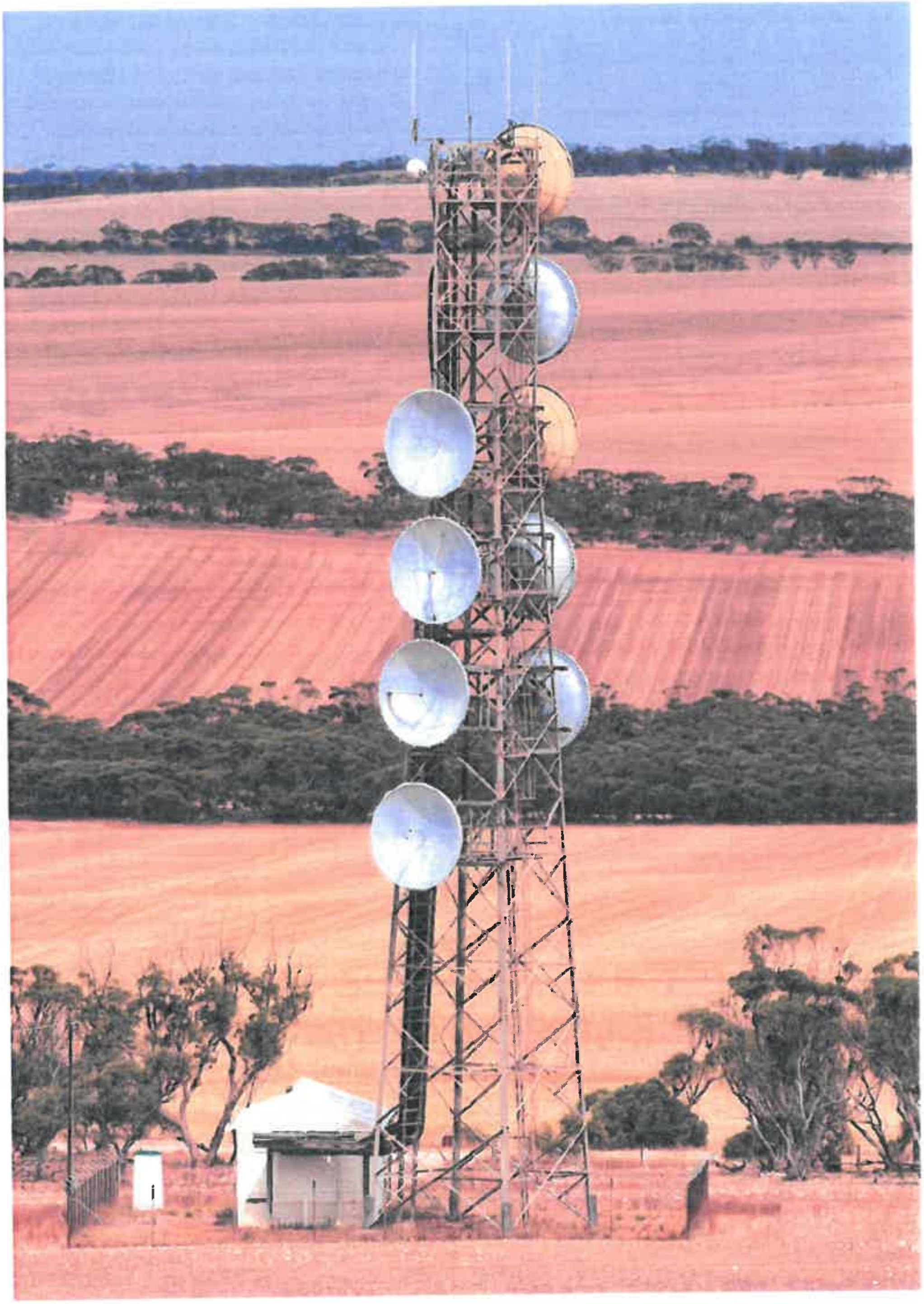
Consumer Safeguards Review

The Government is also conducting the Consumer Safeguards Review, which will make recommendations on telecommunications consumer safeguards for post-2020 when the NBN rollout is complete.

The Consumer Safeguards Review is being undertaken in three parts:

- *Redress and complaints handling* – ensuring that consumers have access to an effective redress scheme to handle complaints that provides transparency and holds telecommunications companies accountable for their performance.
- *Reliability of telecommunications services* – ensuring consumers have reliable telecommunications services including reasonable timeframes for connections, fault repairs and appointments and potential compensation or penalties.
- *Choice and fairness in the retail relationship between the customer and their provider* – ensuring consumers are able to make informed choices and are treated fairly in areas such as customer service, contracts, billing, credit and debt management and switching providers.

While the Consumer Safeguards Review is being conducted separately, information from the Regional Telecommunications Review can inform understanding of what is needed for consumer safeguards from a regional perspective. There will be ongoing discussion between the Committee and the Department of Communications and the Arts in regards to the Consumer Safeguards Review. Therefore, the Committee will also consider relevant views from the Consumer Safeguards Review and will endeavour to refer these to Government, particularly if relevant to regional Australians.



Appendix 1 — List of questions

1. What are the main barriers to people in regional communities increasing their use of digital technologies and possible solutions for overcoming these barriers?
2. How are people in regional communities currently using their broadband service and how might they increase the benefits of using this technology?
3. What data-intensive activities are occurring in regional, rural and remote Australia? What digital technologies are needed for these?
4. How can regional businesses better utilise digital technologies to maximise economic benefits?
5. What can be done to improve access to and uptake of telecommunications services in remote Indigenous communities?
6. Are there practical examples of how communications services can improve the well-being of people in remote Indigenous communities?
7. What skills do people need to get the most from their digital technologies, and where can they learn these skills?
8. Have you had ongoing issues affecting your satellite or fixed wireless broadband service? If so, how have you overcome these issues?
9. If you are in an area with access to the Sky Muster satellite service and you have not taken it up, why not?
10. What economic or social indicators could be used to guide investment to further improve mobile coverage?
11. Is information readily available regarding how to use devices to improve mobile reception in areas with poor coverage? E.g. information about external antenna equipment?
12. What emerging digital services will be of most benefit to regional businesses and what are the data needs of these services?
13. What broadband services are people using other than those available through the NBN?
14. How can more competition be encouraged in the provision of broadband services in regional Australia?

Appendix 2 — Terms of Reference

A Regional Telecommunications Independent Review Committee (RTIRC) is established every three years by Part 9B of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (the Act) to conduct reviews into telecommunications services in regional, rural and remote parts of Australia.

1. The Committee must conduct a review of the adequacy of telecommunications services in regional, rural and remote parts of Australia.
2. In determining the adequacy of those services, the Committee must have regard to whether people in regional, rural and remote parts of Australia have equitable access to telecommunications services that are significant to people in those areas and currently available in one or more urban areas.
3. In conducting the review, the Committee must make provision for public consultation, particularly with people in regional, rural and remote parts of Australia.
4. In conducting the review, the Committee is to have regard to:
   - the Government's policy for the rollout of, and investment in, the National Broadband Network
   - the Government's commitments to a consumer safeguards review and the Universal Service Guarantee
   - the Government's policy for the rollout of, and investment in, the Mobile Black Spot Program.
5. Taking into account Term of Reference 4, the Committee is to:
   - consider how to maximise the economic benefits for regional communities through the use of digital technologies
   - consider how regional consumers use their broadband service and how they might derive more benefit from it
   - undertake an analysis of the coverage achieved under the Mobile Black Spot Program and examine the extent of the existing gaps in mobile coverage in regional Australia.
6. The Committee must prepare a report of the review and give it to the Minister for Regional Communications. The report may set out recommendations to the Government.
7. In formulating a recommendation that the Government should take a particular action, the Committee must assess the costs and benefits of that action.

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Agenda

Regional Mobile Blackspot priorities – Mid Murray Councils Area

By

Jim Wyatt, Optimi Digital
May 2016

EXECUTIVE SUMMARY

The Mid Murray Council commissioned Optimi Digital to undertake an evaluation of mobile black spot sites within its council area and carry out an assessment of up to four priority locations with a view to establishing justification for support to improve coverage through the Australian Government's Mobile Black Spot Program (MBSP), round two.

Following a review of the National Black Spot database released in February 2016, a total of 31 sites had been registered for the Mid Murray Council area. 11 of these sites related to roads and the remaining 20 represented gazette localities. Following a check against the eligibility criteria for the MBSP, 16 sites were deemed ineligible for funding and were not included as part of any further assessment.

Using Optimi Digital's social and economic benefits model the remaining 15 eligible sites were scored and ranked in an order of priority. A geographic assessment was also carried out to group eligible sites where it was deemed possible that a new mobile tower could provide spill over coverage to more than one location. These 'cluster sites' were given higher priority over single isolated locations.

After presenting these findings to the Councils and a discussion about local factors, four sites were given top priority and agreed on to be included in the qualitative assessment process. These included:

- The Younghusband cluster, including Pellaring Flat and Five Miles,
- The Milendella cluster, including Palmer and Sanderston,
- The Mount Mary cluster, including Eba, and
- Truro

The qualitative assessment process intended to flesh out the nature and scale of any impact that poor mobile coverage presented across each of the priority locations. The process adopted a focus on homes as well as businesses, to determine unique and significant factors where poor mobile coverage would have a detrimental impact. The process also provided the ability to measure the depth of concerns within the aligned population in order to prove that the registration of a blackspot issues represented more than just anecdotal concerns or an isolated incident.

A strong response was received across three of the four priority locations, producing more than effective statistical results for key digital and mobile activity indicators used to benchmark again national trends. The responses represent the strongest results measured by Optimi Digital in the 30 plus assessments it has carried out to date. This reinforces the deep desire measured across all sites bar Truro, for improver mobile coverage. Based on these results

Optimi Digital believes that there is a compelling case to improve mobile coverage across the Younghusband, Milendella and Mout Mary cluster sites.

SITE RESULTS

The same online survey instrument was used to assess each of the four priority locations. The design of the survey instrument aimed to identify digital awareness, participation and sophistication within the community and corresponding businesses. In comparison an assessment is also undertaken on the standard of digital readiness and accessibility provided by local infrastructure, service providers and investment in digital equipment. This enables a gap analysis between accessibility and capacity versus digital capability.

In past assessments (elsewhere in Australia) there has been a higher standard of digital capability and inclusion identified within regional areas as compared to the national averages. This suggests that people in regional areas are generally digitally aware and rely much more heavily on the use of online systems to support their economic and social activities.

YOUNGHUSBAND CLUSTER

The Younghusband cluster represented an unusual locality assessment. Whilst comprised of three different gazette localities none could be labeled as a township. The primary characteristic of this cluster could best be described as holiday or retirement properties located along the banks of the Murray River interspersed with tourism related businesses.

A number of significant factors emerged as part of the assessment that are believed to highlight the existence of a mobile culture within this location. These include:

1. Only 45% of homes indicated they had broadband and 54% said that their main access to the internet was via a mobile phone or tablet.
2. 94% of homes indicated a daily use of their mobile phones
3. 47% of businesses indicated they operated under a mobile model and not in a fixed location.
4. 100% of businesses indicated they owned and used mobile phones.

Given that this mobile culture exists across the Younghusband cluster the lack of good coverage is likely to impact on the following:

- Use of digital activities and the internet by school children,
- Accessibility to mobile businesses (47%) for new business, follow up or suppliers,
- Reinforcement of social connections via social media (57% - home, 47% - Business),
- Access to news, information and directions when moving around the area (63%), and

- Businesses carrying out online transactions such as banking (100%) and purchasing (87%).

Businesses within the tourism sector are likely to feel the hardest impact. There would likely be an expectation from visitors and tourists that their mobile devices would work while they are in the area. Tourism activities associated with the River could be significantly impacted by poor coverage and there is cause for concern that emergency support and response could not be achieved in times of trouble.

Ratings

The significantly low rating of the coverage in the area by both homes (3.4 out of 10) and businesses (2 out of 10) points to a systemic problem and this is reinforced by the high rating for the need for improvement (9.7 out of 10). It is clear that the circumstances that represent a Black Spot do exist in the Younghusband cluster and as such would warrant some attention through the MBSP.

MILENDELLA CLUSTER

The Milendella cluster consist of the town of Palmer and the settlements of Milendella, Sanderston and Apamurra. The primary characteristic of this cluster could best be described as an agricultural district supported by Palmer as its services centre. The distance between Palmer in the south to Sanderston in the north is less than 15 kilometers. Much of the area sits at the foot of the Mount Lofty ranges. Telstra and Optus both show adequate coverage in the area yet experience on the ground does not live up to their claims (Optimi Digital witnessed this first hand on a visit on 7 April 2016).

A number of significant factors emerged as part of the assessment that are believed to highlight the existence of a mobile culture within this location. These include:

1. Only 45% of homes indicated they had broadband and 61% said that their main access to the internet was via a mobile phone or tablet.
2. 42% of homes indicated that children also owned mobile phones.
3. 97% of homes indicated a daily use of their mobile phones
4. 41% of online responses to the survey were carried out using a mobile phone.
5. 100% of businesses indicated they owned and used mobile phones.

Given that this mobile culture exists across the Milendella cluster the lack of good coverage is likely to impact on the following:

- Ability for children with phones (42%) to remain in contact with parents whilst away from home,

- Ability for farm based (out of town) businesses (70%) to utilize mobiles as an operational management tool,
- Ability for business people moving around the region to navigate using online maps (77%),
- The ability for businesses to access cloud based services (75%) when out and about the region, and
- The ability for email to remain an effective communications medium via a mobile phone (Home -79% and 88%).

A high proportion of homes 64% and businesses 70% indicated that they were located out of town. Given that this cluster could be encapsulated in a radius of less than 10kilometers from the center point of the area it is reasonable to assume that a single new mobile site could provide adequate coverage to the town of Palmer as well as the many outlying homes and businesses if sited as close to this centre point as possible.

There is also considerable opportunity for any new mobile site to provide significant accessibility and connectivity for smart farming initiatives across the area given the high number of agricultural businesses that exist.

Ratings

The significantly low rating of the coverage in the area by both homes (3 out of 10) and businesses (2.7 out of 10) points to a systemic problem and this is reinforced by the high rating for the need for improvement (9.5 out of 10). It is clear that the circumstances that represent a Black Spot do exist across the Milendella cluster and as such would warrant some attention through the MBSP.

MOUNT MARY CLUSTER

The Mount Mary cluster consists of the settlements of Mount Mary and Eba, located along the Thiele Highway. These settlements are surrounded by broad acre agricultural properties that mainly stock sheep or pigs. The primary characteristic of this cluster could best be described as micro settlements where Mount Mary stands out as the main locality offering limited services to travelers between Eudunda and Morgan.

A number of significant factors emerged as part of the assessment that are believed to highlight the existence of a mobile culture within this location. These include:

5. Only 42% of homes indicated they had broadband and 74% said that their main access to the internet was via a mobile phone or tablet.
6. 96% of homes indicated a daily use of their mobile phones.

7. A high use of phones by individuals (85%) to get directions and follow maps.
8. 55% of businesses indicated they operated under a mobile model and not in a fixed location.
9. 100% of businesses indicated they owned and used mobile phones.

This location is located in the far northern region of the Mid Murray Council and is sparsely populated. The primary benefits of any coverage improvement would likely flow to travelers using the Thiele Highway and not necessarily to the sparse populated agricultural properties in the area.

Based on previous experience Optimi Digital estimates that the construction cost for a new coverage site in this type of location is likely to be nearly double that of a similar facility deployed in any of the other three priority locations. Based on the sparse population this is likely to make the business case for a new site in the Mount Mary location problematic.

Evidence of the need for improved mobile coverage to support vehicle traffic along this section of the Thiele Highway was not able to be collected as part of the qualitative assessment. A desktop search by Optimi Digital could not find any indications or concerns of this nature or issues raised in relation to a lack of mobile accessibility to support emergency situations or regular transporters using this route.

Evidence was received from one major primary production business in the area of the impact that poor mobile coverage has on ongoing operations and the ability to employ additional staff. However, without further corroborating evidence this alone would not prove sufficient to support a high cost investment at this time. It is likely that a supplementary funding contribution above what would be likely from both the State and Commonwealth Governments would be needed to convince a carrier to deploy further infrastructure in the area.

Ratings

The significantly low rating of the coverage in the area by both homes (3.4 out of 10) and businesses (3 out of 10) points to a systemic problem and this is reinforced by the high rating for the need for improvement (8.8 out of 10). It is clear that the circumstances that represent a Black Spot do exist in the Mount Mary cluster yet the high cost to low user ratio is likely to make the case for attention through the MBSP problematic. It would be expected that this site would score very lowly in the Commonwealth assessment process and as such miss out on being awarded Federal funding. This is likely to make the site less attractive also to the State in relation to a funding allocation.

TRURO

Truro produced the lowest response of the four locations assessed. There were reasonable questions as to the nature of the mobile coverage issues at this location. A site visit by Optimi Digital on the 7th of April 2016, did not demonstrate any real coverage issues. Whilst there is not a mobile tower located within the town precinct the nearest transmission site is well within (6.4 kilometers) a distance that should support reasonable coverage.

Truro produced similar results to the other three sites when it came to the level of digital awareness and activity. The major differences emerged in the level of infrastructure and capacity. 80% of homes indicated they had broadband. Daily mobile use was slightly lower at 90% but still within the parameters of a 'mobile culture'.

There was a higher proportion of businesses connecting to the internet using familiar forms of broadband (36% ADSL, 27% wireless and 27% satellite). Only 9% indicated they used their mobile phones to connect to the internet.

A high proportion of homes (60%) and businesses (40%) indicated they were located in town where the evidence suggested mobile coverage was adequate. No business respondents indicated they utilized a mobile model of operation.

Interestingly the Truro responses represented the highest percentage to use a Laptop or PC, to respond to the online survey. Only 4% completed the survey using a mobile phone.

The fact that the assessment validated that some issues exist could prove sufficient for one or more of the carriers to consider bidding for State and Federal funds to improve coverage around Truro. Whilst it would not seem to be as high a priority or problem as the other three sites the level of social and economic activity that it supports could make it more attractive as an investment option. Optimi Digital expects that it will be of interest to possibly one of the carriers based on the fade out of coverage to the north of the town.

Ratings

Whilst the ratings produced for Truro indicate that the degree of coverage problems are nowhere near as bad as they are in the three other priority locations there was still evidence of some level of issue. Home rating (3 out of 10) and the business rating (3.2 out of 10) were nearly as low as the other locations yet things fell away when considering the need for improvement (7.9 out of 10). Whilst this may also seem high by comparison to other assessments including some in WA that involve towns of a similar size to Truro and have a mobile tower located within their locality (9.4 and 8.8 out of 10) this is a low figure.

It demonstrates that when it comes to mobile coverage even those with adequate services still want better. It comes down to a degree of difference from the very high range (9 out of 10).

KEY OBSERVATIONS

Optimi Digital has drawn the following key observations from its review of the registered Black Spots within the Mid Murry Council area:

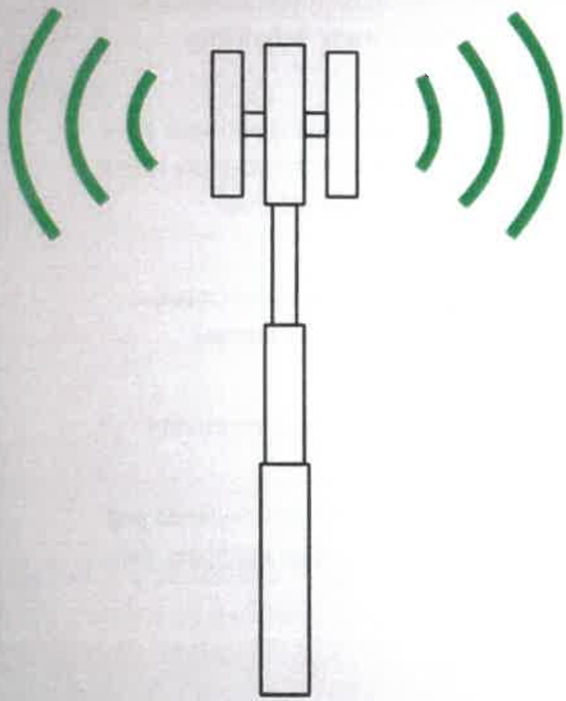
1. As we have found several times since the inception of the MBSP by the Commonwealth Government, many of the sites recorded on the national database may represent troublesome mobile coverage issues but when assessed in relation to the program guidelines do not fit eligibility. This should not dismiss the need to investigate these issues as the Truro example has shown there can be clear indications of substandard mobile coverage even in a place that largely would fail to qualify under the MBSP. As funding becomes more competitive (in the case of the State's contribution it will show shortly that this has already occurred) it will not be sufficient to simply nominate a site on to the database. The value of the baseline review profiles will place each of the Mid Murray priority sites ahead of the pack as each will be able to present clear evidence of a systemic Black Spot issues.
2. The Qualitative assessment coupled with desktop research and identification of existing infrastructure has provided a deep validation process for the anecdotal indication of a coverage issue at each of the priority sites. The assessment has also highlighted social and economic areas where poor mobile coverage impacts heavily on the local community and businesses. This should produce the level of evidence and benefit analysis that Government funding bodies and mobile network operators desire, to validate the need for action. Each of the four priority sites provided sufficient evidence of a real coverage issue.
3. The Qualitative assessment was able to highlight the strong mobile culture that exists within the Mid Murray region and therefore draw into perspective the impact that poor mobile coverage would have on this. By benchmarking against national averages and a set of similar towns with identical issues in Western Australia (WA) this mobile culture was reinforced as a unique characteristic of the Mid Murray region. This presents a strong justification for addressing the priority sites in this region.
4. The Qualitative assessment also highlighted the lower than average level of fixed (including fixed wireless) broadband connecting homes across three of the four priority sites. We believe that this is a significant factor in the depth of the mobile culture across the region. Comparison with WA regional towns has demonstrated that when high levels of broadband connection occur there is less reliance on mobiles for meeting people's digital online needs.
5. In the case of business there was a very high reliance on the use of fixed wireless or mobile devices to access the internet and carry out online tasks. The other surprising indication was the very high use of cloud based applications by business across all four sites. The area's deep mobile culture is further reinforced by this factor of highly digitally active businesses that only have limited technology choices to conduct their online tasks.

6. The other distinguishing factor for business was the high proportion that operate under a mobile model. This puts the use of and need for good mobile communications into a significant value as it can mean the difference between a growing business and one that is stagnant or declining.

RECOMMENDATIONS

Based on the key observations Optimi Digital recommends that the Mid Murray Council adopt the following actions.

1. Provide a copy of the report and profiles to the local Federal member. This will enhance the likelihood of their support as part of the MBSP and also contribute to an understanding of the depth of concerns felt by individuals and business. This will also assist in building support for further funding assistance programs and rounds.
2. Provide a copy of the report and profiles to the South Australian Government and seek their support to negotiate with any carriers submitting for State funding support under the MBSP, to include the Milendella Cluster, Truro and Younghusband Cluster as part of their submission.
3. Provide a copy of the report and profiles to key representatives from Tesltra and Optus, seeking a response on what they intend either within the MBSP or as part of normal network investment, to do about mobile coverage at each site.
4. Build on the strong response received to the surveys and ensure that those respondents that provided feedback contact details are advised of any outcomes.
5. Consider investigating with the South Australian Government and the RDA Murraylands and Riverlands, the benefits to transport and travelers in addressing mobile coverage along the Thiele Highway, in the vicinity of Mount Mary.



Mobile Blackspot Program
Site Baseline

Pellaring Flat – Five Miles

May 2016

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Baseline Site Background

Regional Mobile Black Spot

Pellaring Flat is a small Gazetted Locality within the Mid Murray area, in South Australia. It is part of the State Suburb of Walker Flat, for census collection purposes. It primarily consists of a cluster of river front properties along Pellaring Lane (22 lots) and some adjacent farming properties. There is no significant social or economic infrastructure. Up river is the Rivershare Lodge Houseboat Marina. **Five Miles** is another small Gazetted Locality on the opposite shore of the Murray River to Pellaring Flat. It consists of a mix of residential properties and small businesses located along East Front Road, surrounded by farming properties. There is also a substantial Houseboat mooring (Kia Marina) with space for up to 60 vessels.

- A single listing exists on the National Black Spots database for East Front Road (@ Lat: -34.87058739, Long: 139.390353).
- A search of the Telstra online coverage map shows consistent black spots along East Front Road, between Five Miles and Rocky Point.
- Kia Marina primarily supports tourist use of Houseboats on the Murray river. There is a level of transient population in the area.
- Pellaring Reach is considered a difficult part of the Murray River to navigate. Possibility of houseboat tourists needing to call for help.
- A desktop assessment of the Pellaring Flat and Five Miles localities identified ? businesses (including family owned farms)..
- Pellaring Flat and Five Miles are not serviced by a local Post Office.
- Pellaring Flat lies within the State Electorate of Schubert and Five Miles within the State Electorate of Hammond. Both lie within the Federal Electorate of Barker. Both sit within the Murraylands and Riverlands economic region and come under that Regional Development Australia Committee.
- Pellaring Flat and Five Miles are administered by the Mid Murray Council. The administrative centre for the Council is located in Mannum.

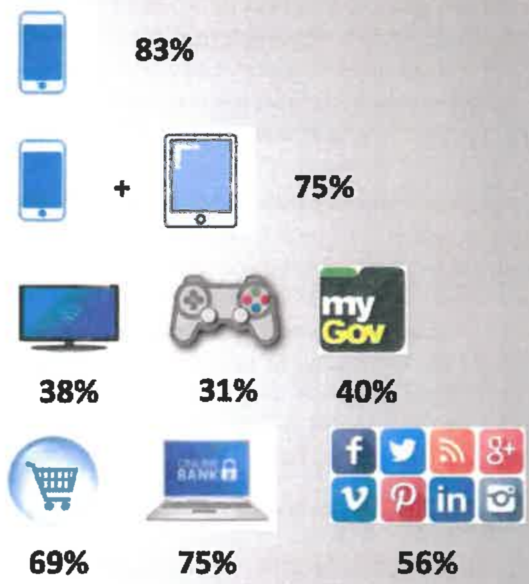
Nearest A/B Road	Nearest Exchange	Nearest Major Town	Nearest Cell Tower	Adjacent Towns
B36 – Ridley Road:10km	Mannum: 10km	Mannum: 10km	Telstra: 10km	Younghusband, Cowirra

Community	Government	Major Business	ESO
None	None	Kia Marina Houseboat Hire	None
		New Horizons Houseboats	
		Rivershare Lodge	

Measure	Baseline	BM1	BM2	BM3
Digital Access				
Broadband	53%	81%(i)	86%(m)	
Primary access via Mobile/Tablet	53%	29%(f)	34%(i)	
No Broadband	47%	6%(f)	14%(n)	
Digital Devices				
Home Computer	89%	95%(a)	94%(n)	
Mobile Phone	97%	94%(l)		
Have a Smartphone	83%	89%(l)	77%(a)	86%(n)
Children own phones	37%			
Have tablet as well	75%	60%(l)	56%(a)	62%(n)
Have a Smart TV	38%	29%(o)	46%(i)	25%(p)
Have a game deck	31%	22%(o)	51%(t)	
have a myGov account	40%	33%(q)		
Online activity				
Check news/weather	67%	84%(o)	77%(a)	
Stream TV/Movies	13%	30%(o)	34%(u)	58%(a)
Bank online	75%	91%(o)	74%(i)	77%(a)
Shop online	69%	62%(o)	60%(i)	66%(a)
Entertainment	42%	65%(o)	68%(i)	58%(a)
Search (Google)	93%	93%(o)	79%(i)	80%(a)
Update social media	56%	81%(o)	54%(i)	73%(a)
Upload and share pictures/videos	60%	38%(o)	31%(a)	
Get direction – online maps	69%			
Connect				
Skype	36%	33%(u)	35%	
Email	89%	63%(o)	88%(i)	
Online Account				
iTunes	33%			
Microsoft	17%			
Google Plus	37%			
Other	13%			

Digital Citizen Profile

Regional Mobile Black Spot



Demographics

Age:
<18: 2% 19-34: 0% 35-54: 26% >55: 72%

Mal: 53% Female: 47%

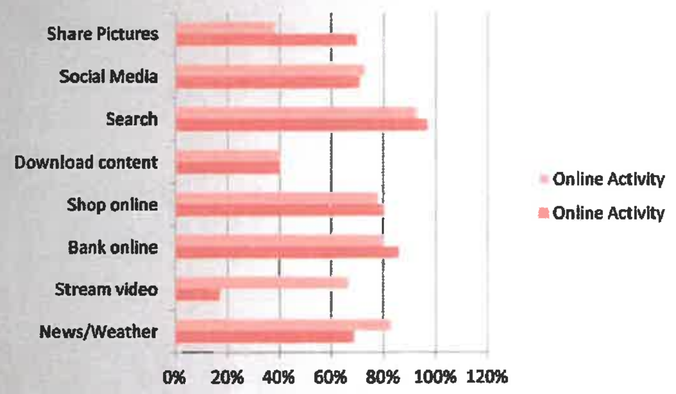
In Town: 11% Out of Town: 84% Visitor: 5%

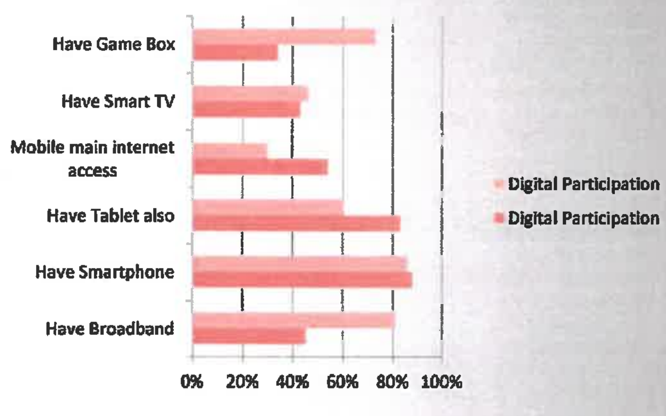
Digital Citizen: Visual

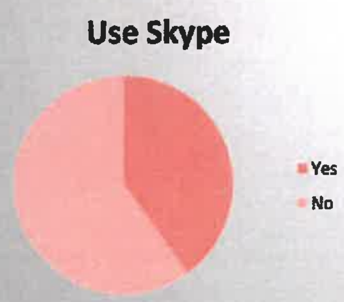
Regional Mobile Black Spot

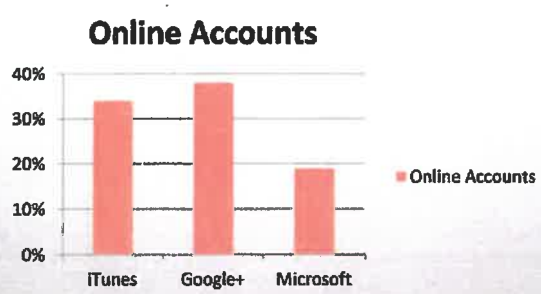
Areas to target

- Increased broadband connectivity (closure to national average)
- Increased access to fixed broadband options (NBN)
- Use of Skype as a communication tool, and
- sufficient bandwidth to support video stream services.

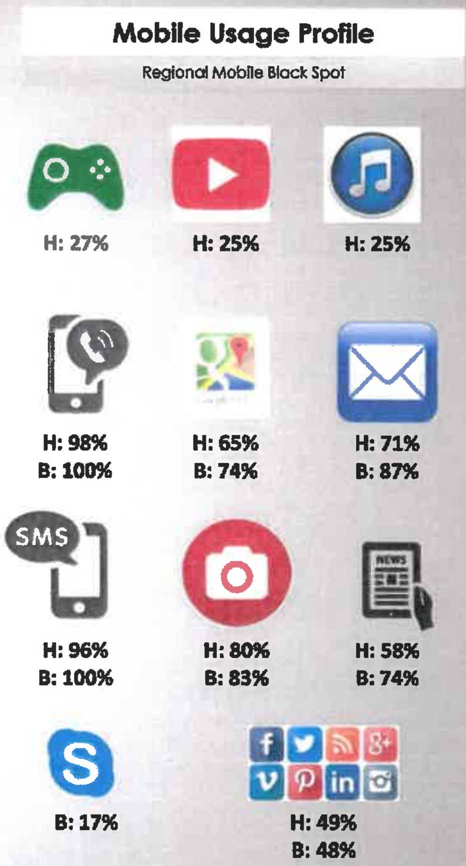








Measure	Baseline	BM1	BM2	BM3	BM4
Reliance					
Only use mobile (H)	53%	34%(I)			
Frequency					
Daily (H)	96%	74%(I)	29%(f)		
Use of Mobile : Personal					
Access Internet	67%	86%(I)	79%(i)	73%(a)	95%(e)
Check news/weather	58%	72%(I)	61%(i)	43%(a)	62%(e)
Update social media	49%	61%(I)	55%(i)	51%(a)	75%(e)
Entertainment	25%	83%(I)	68%(i)	36%(a)	30%(e)
Get directions (maps)	65%	82%(I)		45%(a)	24%(e)
Make/take calls	98%	98%(I)	92%(i)		100%(e)
Play games	27%	83%(I)	54%(i)		
Send/receive email	71%	81%(I)	86%(i)		57%(e)
Send/receive txt	96%	99%(I)			91%(e)
Take pictures	80%	62%(I)		16%(a)	90%(e)
Use of Mobile: Business					
Search the internet	91%	68%(a)	76%(e)		
Check news/weather	74%	73%(a)	62%(e)		
Update social media	48%	70%(a)	75%(e)		
Get directions (maps)	74%	80%(a)	24%(e)		
Make/take calls	100%		100%(e)		
Send/receive email	87%		91%(e)		
Send/receive txt	100%		90%(e)		
Take pictures	83%				
Skype someone	17%				
Coverage status					
Av rating for households	3.1/10				
Av rating for businesses	2/10				
Av rating for around town (H)	5.4/10				
Av rating for 'out of range' (H)	5.9/10				
Av rating need to improve (H)	9.5/10				
Av rating for around town (B)	4.2/10				
Av rating for 'out of range' (B)	2.5/10				
Av rating need to improve (B)	9.7/10				

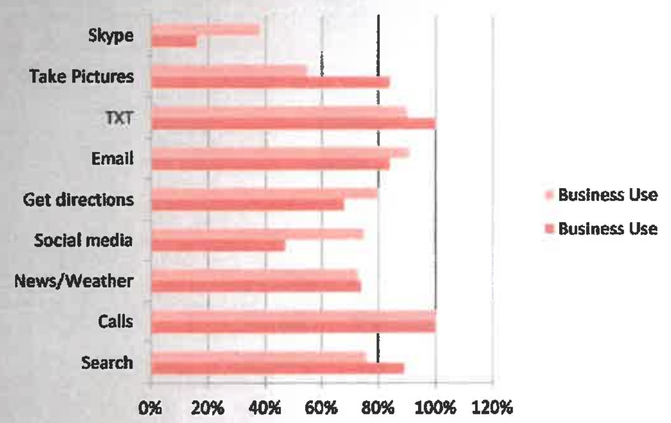


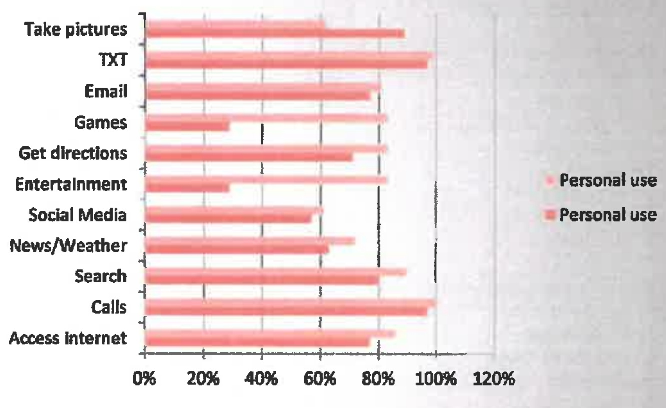
Mobile Usage: Visuals

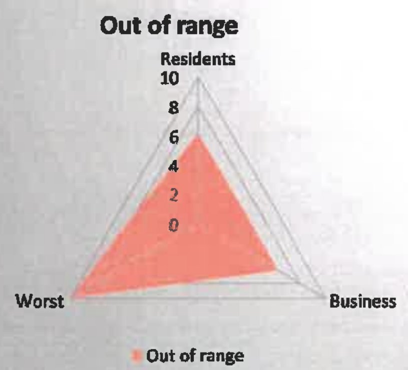
Regional Mobile Black Spot

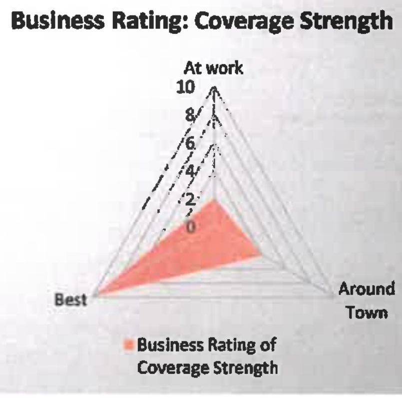
Areas to target

- Reduction in 'Out of Range'
- Increase in coverage 'at home'
- Increase in coverage 'at work'
- Increase in coverage 'around town'
- Greater awareness of Skype and Social Media for business.









Measure	Baseline	MYOB	ACMA	ABS	Sensis
Digital Participation					
Have a Computer	100%		94%	93%	84%
Have Broadband	79%		87%	99%	95%
•ADSL	13%		75%	72%	54%
•Mobile	17%		4%	9%	
•Wireless	48%			8%	44%
•Satellite	17%		2%	2%	1%
•Other/NBN	4%		1%	0.1%	21%
Have a website	69%	42%	66%	47%	56%
Mobile Phones	100%	38%	70%	85%	63%
Tablets	70%	23%	24%		52%
Online banking	100%	48%	77%		90%
eCommerce					
•Buy online	89%	18%	54%	53%	71%
•Sell online	32%	25%	31%	30%	51%
Use online accounting	65%	12%			8%
Social Media					
Use Social media	43%	35%	26%	26%	31%
Top Five					
1.	Facebook		Twitter		Facebook
2.	LinkedIn		Facebook		Twitter
3.	Google+		YouTube		LinkedIn
4.	YouTube		Instagram		Google+
5.	Twitter		Pinterest		Pinterest
Security					
Use security software	96%				
Backup systems	87%				
Cloud	69%	40%	47%		
Top five apps					
1.	Webmail				
2.	Online Accounts				
3.	Video Call				
4.	File Share				
5.	Online Docs				

Digital Business Profile

Regional Mobile Black Spot

100%

\+ 70%

11% 100% 33% 34%

Demographics

Staff:
<5: **83%** 5 – 10: **17%** 10 – 20: **0%** >20: **0%**

Location:
In Town: **4%** Out of Town: **52%** Mobile: **43%**

Business Conditions:
Grow Strongly: **9%** Grow Slowly: **39%** Stagnant: **48%**
Decline slowly: **4%** Decline Strongly: **0%**

Digital Business: Visuals

Regional Mobile Black Spot

Areas for Targeting

- Increase online presence, website
- Greater use of social media by business – focus on LinkedIn
- Reduce reliance on satellite and wireless broadband
- Greater use of selling online.

Top 5 Cloud Apps

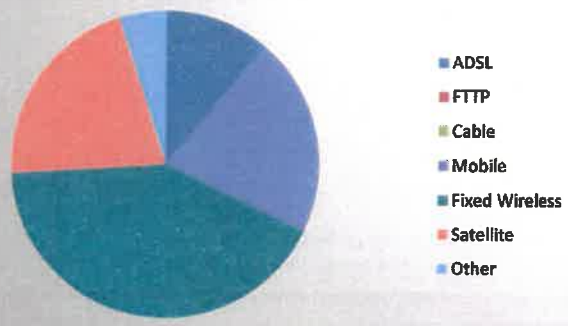
Baseline	National
Online Accounts	Webmail
Webmail	Online Docs
Video conference	File Share
File Share	Video conference
Online Docs	Online Accounts

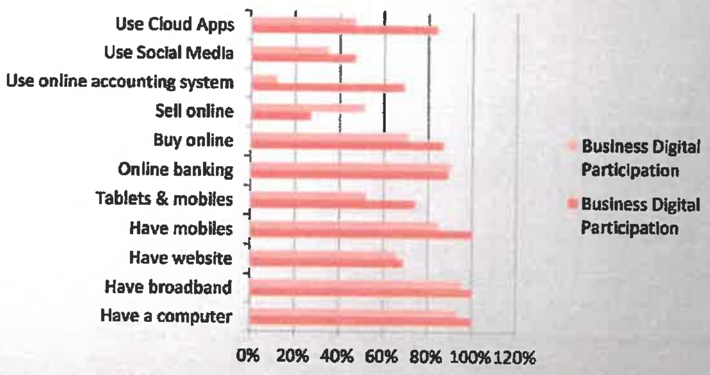
Top 5 Social Media

Baseline	National
Facebook	Facebook
LinkedIn	Twitter
Google+	LinkedIn
YouTube	YouTube
Twitter	Pinterest

Industry	
Services (2)	Communication (1)
Building (2)	Real Estate (3)
Agriculture (6)	Health (0)
Professional (3)	Tourism (4)
Retail (1)	Other (0)

Business Internet Connection





Key Economic Characteristics

Regional Mobile Black Spot

There is little in the way of diverse industry in the area. The main sectors are Real Estate, Tourism and Agriculture.

House Boat Operators

The Mid Murray region is well known for its fleet of houseboats providing options for tourists and short stay owners alike. There are several marinas and berthing points located between Mannum and Morgan, feeding a constant stream of boats up and down the river. Summer and Spring represent the peak seasons for houseboats and associated tourism however, visitors inhabit the region all year around. Within the Pellaring Flat/Five Miles to Younghusband section of the river, there are several marina's and houseboat berthing points including Kia Marina, Rivershare Lodge, New Horizons Houseboats and the Mannum Marine slipway at Greenings Landing. Mobile communications is seen as an essential service for both the houseboat operators, marinas and the tourist and short stay owners that frequent the area.

Shacks and Holiday Homes

Between Mannum and Walker Flat there are numerous clusters of residential properties that front onto the Murray river. Many of these properties represent short stay holiday homes and shacks for people who live outside of the region. The localities of Five Miles, Pellaring Flat, Rocky Point and Younghusband are examples of this mixed occupancy communities. Properties range in size and sophistication and also provide accommodation to a sizable retired senior citizen population. Options for fixed line communications are minimal so mobile access is considered vital.

Key Infrastructure

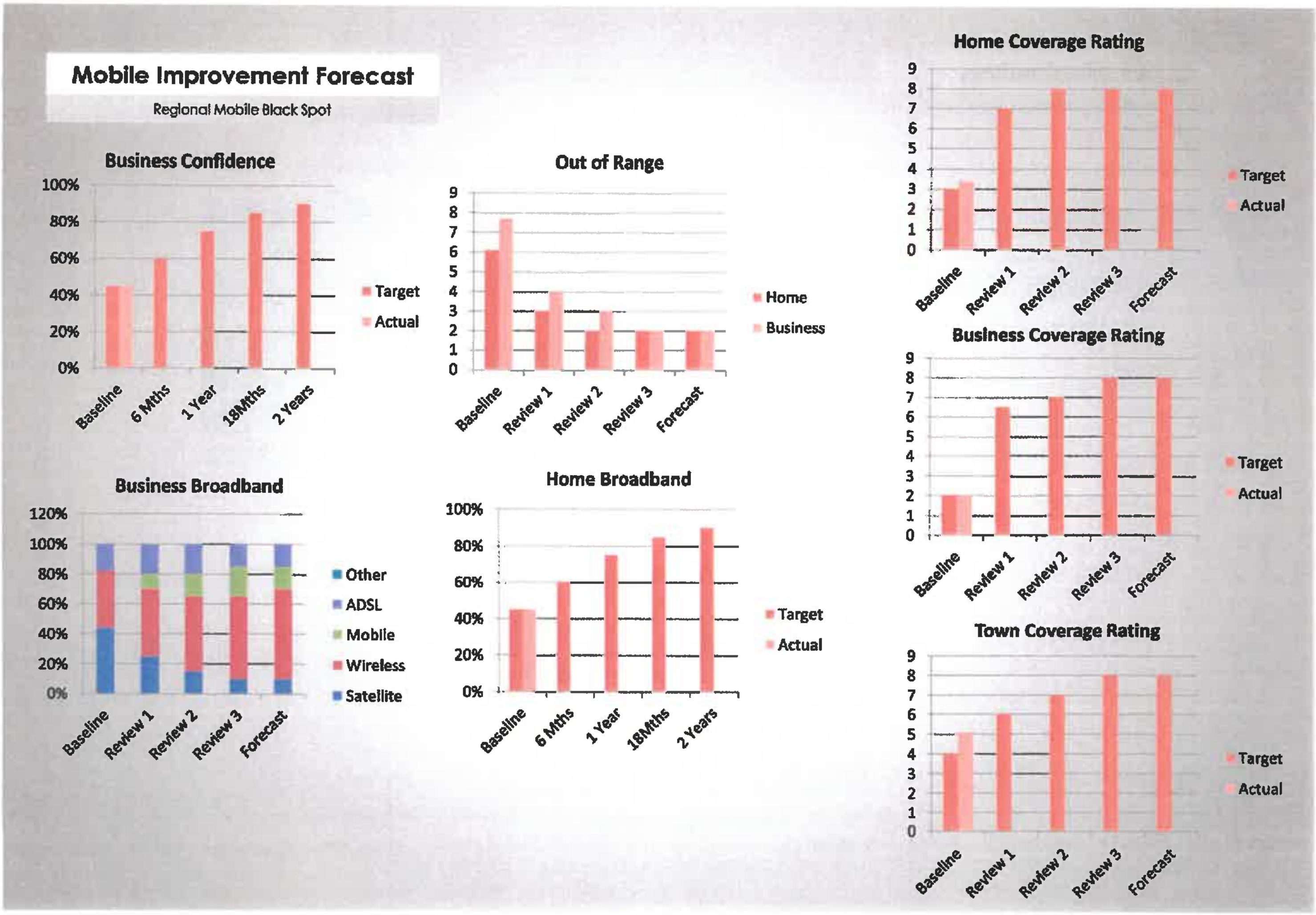
Regional Mobile Black Spot

There is some social and economic infrastructure within the area that would benefit from improved mobile coverage.

Kia Marina

Rivershare Lodge & Houseboats

Greening's Landing



Mobile Improvement Forecast
Regional Mobile Black Spot
Business Confidence
100% 80% 60% 40% 20% 0%
Baseline 6 Mths 1 Year 18Mths 2 Years
Target
Actual
Out of Range
9 8 7 6 5 4 3 2 1 0
Baseline Review 1 Review 2 Review 3 Forecast
Home
Business
Home Coverage Rating
Target
Actual
Business Coverage Rating
Target
Actual
Town Coverage Rating
Target
Actual
Business Broadband
120% 100% 80% 60% 40% 20% 0%
Baseline Review 1 Review 2 Review 3 Forecast
Other
ADSL
Mobile
Wireless
Satellite
Home Broadband
100% 80% 60% 40% 20% 0%
Baseline 6 Mths 1 Year 18Mths 2 Years
Target
Actual

Qualitative Summary

Regional Mobile Black Spot

Pellaring Flat & Five Miles provided a strong survey result. Households made up 65% (35) of the responses with Business contributing 35% (19). Along similar lines to Palmer/Milendella broadband remains a significant issue and as such a major impact on the use of mobiles. 54% of homes stated that mobiles were their primary source of access to the internet this is nearly double the national average. The majority of responses were made using a PC or laptop (75%) with a tablet the next highest form of technology (19%). Surprisingly, only 6% used a smartphone as compared to the 42% for Palmer/Milendella.

After compiling the survey results a number of significant statistics and indicators were observed. These included:

- 55% of homes indicated they did not have a broadband connection. 54% indicated that their mobile was their main link to the internet .
- Despite the location not having a dedicated exchange some 11% of businesses and 17% of homes believed they had ADSL broadband?
- 46% of homes indicated that they had a myGov account. This is some what higher than the national average and may reflect the older demographic.
- Only 17% of homes indicated that they used video streaming services like Presto, Stan, Netflix or Fetch TV. Half the national average.
- Similar to other regional centres there was a low utilisation of videoconferencing by businesses. It was three times higher for homes.
- Online banking and shopping were not as high as Palmer/Milendella. More in line with the national averages.
- Similar to other towns in the study, business was much more critical of the lack of mobile coverage than homes.
- Cloud utilisation was at 84%. Online accounting services was strong at 69%, even with local accountants available at Mannum.
- Mobile access is considered crucial to business with 47% mobile and 53% located outside a town.

The key baseline measures that are expected to change significantly with investment in better mobile coverage:

1. Shift away from satellite connectivity to mobile initially and then NBN fixed wireless in to the future.
2. Change in business confidence away from stagnant towards 'Growing slowly or Strongly'.
3. Increase in home broadband connections (closure to the national average).
4. Greater use of video streaming by homes.
5. A halving of the incidence of mobiles (both at home and work) being 'out of range'.
6. Sharp improvement in the rating for coverage at home, at work and around town.

This area is unique in that it does not reflect the normal regional town structure. There is a heavy focus on tourism and much of the population centres on retirees with a seasonal influx of tourists and holiday makers. There are good grounds for recommending improved mobile coverage, to support local business and augment the tourism activities. Better mobile would also support greater independent living for senior citizens.

Resources List

Regional Mobile Black Spot

a. *Sensis e-Business Report*, Sensis, 2015
b. *The economic impacts of mobile broadband on the Australian economy, from 2006 to 2013*, ACMA May 2014
c. *Communications report, Report 2 – Cloud computing in Australia*, ACMA, March 2014
d. *MYOB Business Monitor*, MYOB, October 2015
e. *2014 Mobile Behaviour Report*, Salesforce, 2014
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j. *Communications report 2012-13 series, report 1-Australian SMEs in the digital economy*, ACMA, January 2014
k. *Australian Internet and Social Media Statistics*, March 2015, David Morton
l. *Australian Mobile Phone Lifestyle Index*, AIMIA, 2014
m. *Internet Activity*, Australia, December 2015, ABS
n. *Household Use of IT*, Australia, 2014-15, ABS
o. *Digital Australia: State of the Nation 2015-16*, EY Sweeney
p. *Sensis Social Media Report*, Sensis, May 2015
q. Australian Government media Release, 30th September 2014
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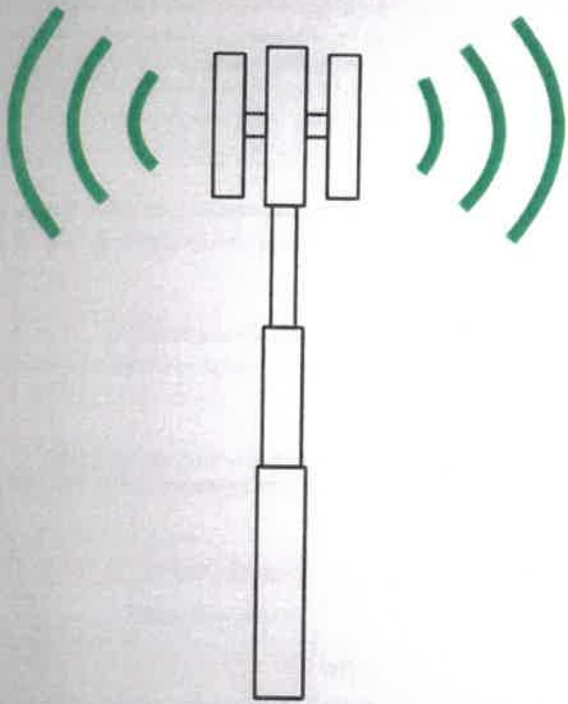

Mobile Blackspot Program
Site Baseline

Palmer - Milendella

May 2016

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Baseline Site Background

Regional Mobile Black Spot

Palmer is a small **Gazetted** Locality just east of the Adelaide Hills region along the Adelaide-Mannum Road, 70 kilometres east-north-east of Adelaide and 15 km west-north-west of Mannum. Palmer is a State Suburb as part of the census collection arrangements. At the 2011 census, Palmer had a population of 74, living in 33 private dwellings. The town was settled in the 1860s as a mining and agricultural settlement. Today, Palmer provides a social and economic hub for the surrounding agricultural district. **Milendella** is a small Gazetted Locality to the north east of Palmer (approximately 6kms in a direct line). The size of the population and number of dwellings are to small to be defined separately under the census and as such it forms part of the Mannum State Suburb collection area. There is a local Lutheran Church.

- Several listings exist on the National Black Spots database associated with the area including one for Palmer, Milendella and Davenport Road.
- A search of the Telstra online coverage map indicates adequate hand held coverage but an 'on the ground' audit identified real coverage issues and indications of clear black spots.
- Unusually, the Palmer exchange is located several kilometres away from the town site, closure to Milendella.
- The Apamurra Grain Silos operated by Viterra offer a unique high vantage point to deploy mobile antenna as a cost effective solution.
- A desktop assessment of Palmer identified ? businesses (including family owned farms). This includes a general store and post office, hotel, several retail outlets, a decorative blacksmith, a number of transport related enterprises and an auto electrician.
- Palmer is serviced by a licensed Post Office.
- Palmer and Milendella sit within the State Electoral District of Schubert. Both sit within the Federal Electorate of Barker. Both sit within the Murraylands and Riverland economic region. Both localities are administered by the Mid-Murray Council. The administrative centre for the Council is located in Mannum.

Nearest A/B Road	Nearest Exchange	Nearest Major Town	Nearest Cell Tower	Adjacent Towns
B36 – Ridley Road:15km	Palmer: 0km	Mannum: 15km	Telstra: 12.1km	Mannum, Tungkillo

Community	Government	Major Business	ESO
Palmer Cricket Club	Palmer Primary School	Viterra – Apamurra Grain Silos	Palmer CFS
Palmer & Districts Community Association	SA Water – Pumping stations	General Store & Post Office	
Palmer Hotel Social Club			

Measure	Baseline	BM1	BM2	BM3
Digital Access				
Broadband	45%	81%(i)	86%(m)	
Primary access via Mobile/Tablet	70%	29%(f)	34%(i)	
No Broadband	55%	6%(f)	14%(n)	
Digital Devices				
Home Computer	96%	95%(a)	94%(n)	
Mobile Phone	97%	94%(i)		
Have a Smartphone	85%	89%(i)	77%(a)	86%(n)
Children own phones	42%			
Have tablet as well	83%	60%(i)	56%(a)	62%(n)
Have a Smart TV	49%	29%(o)	46%(i)	25%(p)
Have a game deck	47%	22%(o)	51%(t)	
have a myGov account	53%	33%(q)		
Online activity				
Check news/weather	79%	84%(o)	77%(a)	
Stream TV/Movies	11%	30%(o)	34%(u)	58%(a)
Bank online	83%	91%(o)	74%(i)	77%(a)
Shop online	74%	62%(o)	60%(i)	66%(a)
Entertainment	53%	65%(o)	68%(i)	58%(a)
Search (Google)	96%	93%(o)	79%(i)	80%(a)
Update social media	70%	81%(o)	54%(i)	73%(a)
Upload and share pictures/videos	68%	38%(o)	31%(a)	
Get direction – online maps	77%			
Connect				
Skype	28%	33%(u)	35%	
Email	87%	63%(o)	88%(i)	
Online Account				
iTunes	63%			
Microsoft	44%			
Google Plus	78%			
Other	39%			

Digital Citizen Profile

Regional Mobile Black Spot

85%

\+ 83%

49% 47% 53%

74% 83% 70%

Demographics

Age:

<18: 0% 19-34: 19% 35-54: 30% >55: 52%

Mal: 32% Female: 68%

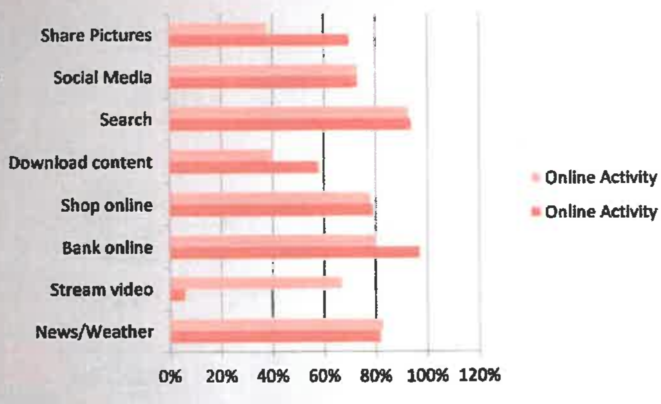
In Town: 32% Out of Town: 68% Visitor: 0%

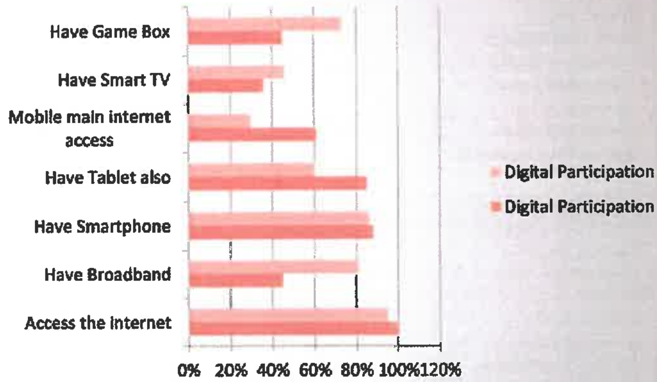
Digital Citizen: Visual

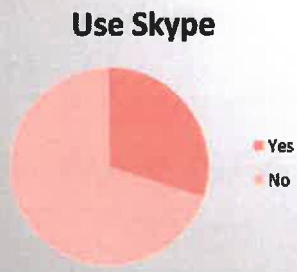
Regional Mobile Black Spot

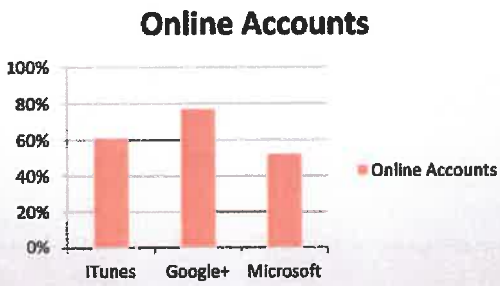
Areas to target

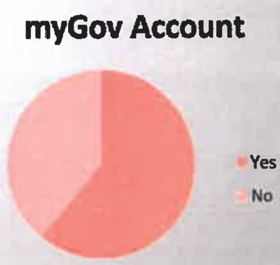
- Increased consumption of streaming video (Online TV/Movies)
- Increased broadband connectivity (closure to national average)
- Reduction in reliance on satellite (NBN Fixed Wireless & Mobile)
- Use of Skype as a communication tool.







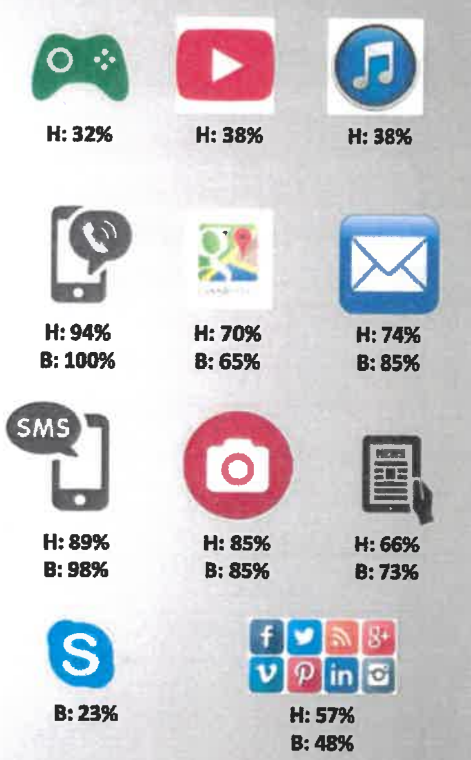




Measure	Baseline	BM1	BM2	BM3	BM4
Reliance					
Only use mobile (H)	70%	34%(l)			
Frequency					
Daily (H)	96%	74%(l)	29%(f)		
Use of Mobile : Personal					
Access internet	77%	86%(l)	79%(l)	73%(a)	95%(e)
Check news/weather	66%	72%(l)	61%(l)	43%(a)	62%(e)
Update social media	57%	61%(l)	55%(l)	51%(a)	75%(e)
Entertainment	38%	83%(l)	68%(l)	36%(a)	30%(e)
Get directions (maps)	70%	82%(l)		45%(a)	24%(e)
Make/take calls	94%	98%(l)	92%(l)		100%(e)
Play games	32%	83%(l)	54%(l)		
Send/receive email	74%	81%(l)	86%(l)		57%(e)
Send/receive txt	89%	99%(l)			91%(e)
Take pictures	85%	62%(l)		16%(a)	90%(e)
Use of Mobile: Business					
Search the internet	78%	68%(a)	76%(e)		
Check news/weather	73%	73%(a)	62%(e)		
Update social media	48%	70%(a)	75%(e)		
Get directions (maps)	65%	80%(a)	24%(e)		
Make/take calls	100%		100%(e)		
Send/receive email	85%		91%(e)		
Send/receive txt	98%		90%(e)		
Take pictures	85%				
Skype someone	23%				
Coverage status					
Av rating for households	2.9/10				
Av rating for businesses	2.6/10				
Av rating for around town (H)	4.4/10				
Av rating for 'out of range' (H)	6.3/10				
Av rating need to improve (H)	9.4/10				
Av rating for around town (B)	3.6/10				
Av rating for 'out of range' (B)	4/10				
Av rating need to improve (B)	9.6/10				

Mobile Usage Profile

Regional Mobile Black Spot

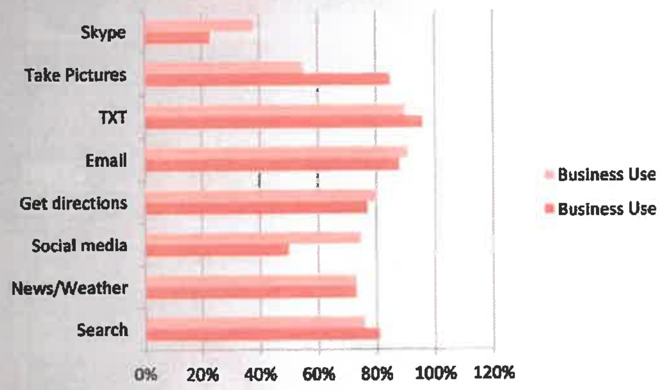


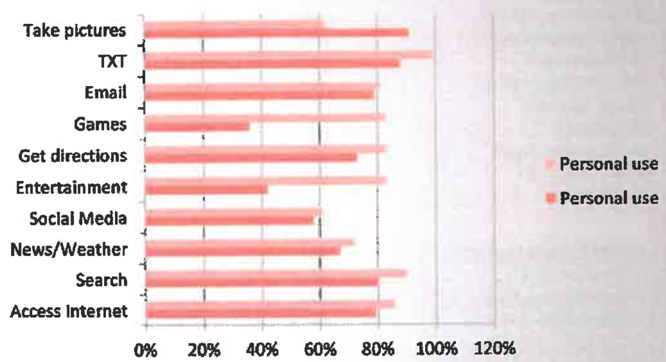
Mobile Usage: Visuals

Regional Mobile Black Spot

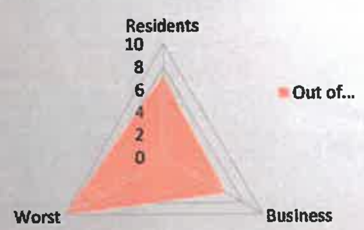
Areas for Targeting

- Reduction in 'Out of Range'
- Increase in coverage 'at home'
- Increase in coverage 'at work'
- Increase in coverage 'around town'
- Higher penetration of smart phones leading to broader use of mobile.

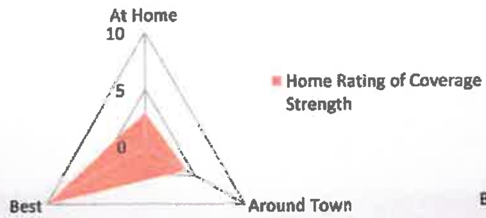




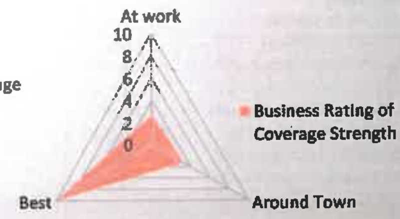
Out of Range



Home Rating of Coverage Strength



Business Rating of Coverage Strength



Measure	Baseline	MYOB	ACMA	ABS	Sènsis
Digital Participation					
Have a Computer	100%		94%	93%	84%
Have Broadband	100%		87%	99%	95%
•ADSL	15%		75%	72%	54%
•Mobile	20%		4%	9%	
•Wireless	46%			8%	44%
•Satellite	20%		2%	2%	1%
•Other	0%		1%	0.1%	21%
Have a website	61%	42%	66%	47%	56%
Mobile Phones	100%	38%	70%	85%	63%
Tablets	71%	23%	24%		52%
Online banking	93%	48%	77%		90%
eCommerce					
•Buy online	94%	18%	54%	53%	71%
•Sell online	56%	25%	31%	30%	51%
Use online accounting	59%	12%			8%
Social Media					
Use Social media	51%	35%	26%	26%	31%
Top Five					
1.	Facebook		Twitter		Facebook
2.	Other		Facebook		Twitter
3.	LinkedIn		Youtube		LinkedIn
4.	Google +		Instagram		Google+
5.	Pinterest		Pinterest		Pinterest
Security					
Use security software	90%				
Backup systems	85%				
Cloud	83%	40%	47%		
Top five apps					
1.	Webmail				
2.	Online Account				
3.	Online docs				
4.	File share				
5.	Skype				

Digital Business Profile

Regional Mobile Black Spot

100%

\+ 71%

10% 81% 19% 0%

Demographics

Staff:
<5: **85%** 5 – 10: **10%** 10 – 20: **2%** >20: **2%**

Location:
In Town: **20%** Out of Town: **66%** Mobile: **15%**

Business Conditions:
Grow Strongly: **8%** Grow Slowly: **68%** Stagnant: **20%**
Decline slowly: **3%** Decline Strongly: **3%**

Digital Business: Visuals

Regional Mobile Black Spot

Areas for Targeting

- Increase online presence, website
- Greater use of social media by business – focus on LinkedIn
- Reduce reliance on satellite broadband
- Increased use of broadband, including mobile.

Top 5 Cloud Apps

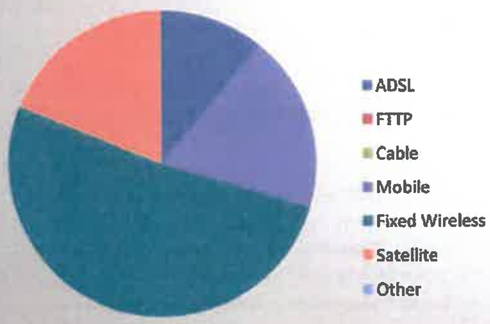
Baseline	National
Webmail	Webmail
Online Accounts	Online Docs
Online Docs	File Share
File Share	Video conference
Video conference	Online Accounts

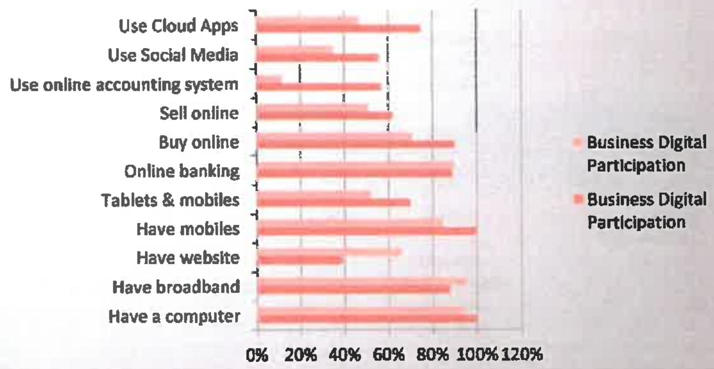
Top 5 Social Media

Baseline	National
Facebook	Facebook
Other	Twitter
LinkedIn	LinkedIn
Google+	Youtube
Pinterest	Pinterest

Industry	
Finance (1)	Manufacture (2)
Building (3)	Music (1)
Agriculture (15)	Health (1)
Professional (3)	Tourism (3)
Retail (1)	Other (0)

Business Internet Connection





Key Industry Summary

Regional Mobile Black Spot

There is little in the way of diverse industry in the area. The main sectors are Tourism and agriculture.

Rail & Grain Siding

Strategically sited between Palmer and Milendella is the Apamurra Grain Silos, operated by Viterra Operations Pty Ltd (Viterra). Optus has collaborated with Viterra, to install mobile antenna on grain silos elsewhere in regional South Australia (example Quorn). The optic fibre trunk line that connects the Palmer exchange runs directly past the front of the silos. The silos also represent a significant business operation for the area, with numerous transport movements during harvest season. Trucks form the most viable means of moving the grain stored in the silos to its export destination via Port Adelaide.

Tourism

Palmer hosts several important regional tourism events. The Rockarama "Crystal and Craft Fair" will again be held at Collier Park, Palmer, South Australia, over the weekend of Friday April 29th, Saturday April 30th and Sunday May 1st. This will also include the **South Australian Metal Detecting Championships.** The SA Championship is the largest detecting event held annually in the State. The Palmer Hot Rod Street Party is the town's biggest event of the year and turns the main street into an automotive showcase and dance floor. The event is normally held in late September to early October and features hot rods, bands and a carnival atmosphere including food stalls and other forms of entertainment. People from all over the world come to participate in the party. The region is also known for its giant granite rock formations that take on distinct shapes including the famous Bear Rock (Polar Bear). Palmer also offers a panoramic lookout to a stunning vistas across the Murray Plains.

Transport

The area is home base to several transport businesses that support much of the freight movements in and out of the region. These include some seven different transport businesses located in Tungkillo, Palmer and Mannum. Communications is a vital aspect of the efficient operation of any transport business. The ability to connect with clients seeking urgent freight services and early notification of available 'loads' when in close proximity can make all the difference between profit and loss and the quality of certain perishable goods when presented to the market.

Key Infrastructure

Regional Mobile Black Spot

There is significant social and economic infrastructure within the area that would benefit from improved mobile coverage.

Palmer CFS

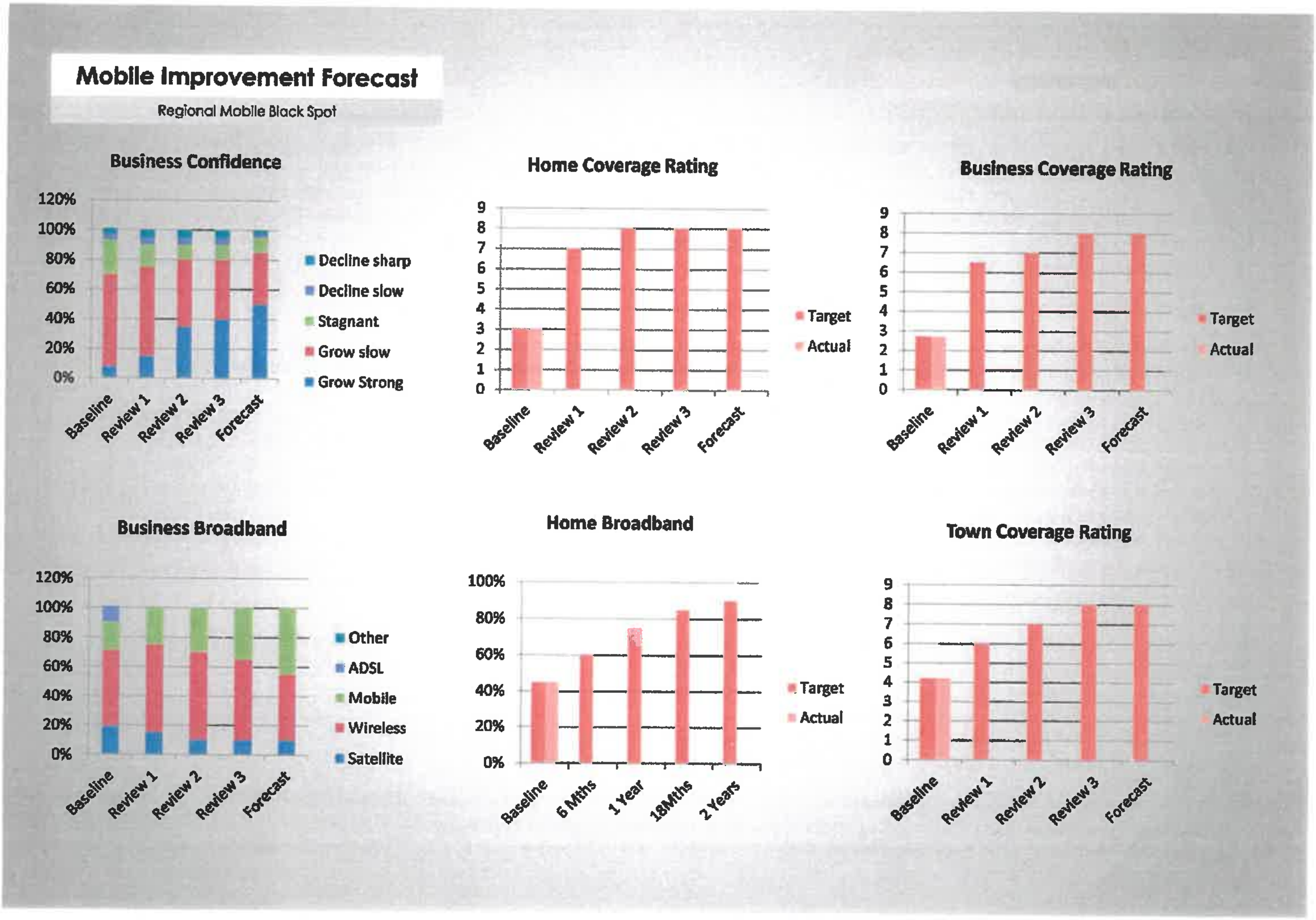
Palmer Primary

Palmer General Store & PO

Milendella Lutheran Church

Palmer Hotel

Apamurra Viterra Grain Silos



Mobile Improvement Forecast
Regional Mobile Black Spot
Business Confidence
120%
100%
80%
60%
40%
20%
0%
Baseline
Review 1
Review 2
Review 3
Forecast
Decline sharp
Decline slow
Stagnant
Grow slow
Grow Strong
Home Coverage Rating
9
8
7
6
5
4
3
2
1
0
Baseline
Review 1
Review 2
Review 3
Forecast
Target
Actual
Business Coverage Rating
9
8
7
6
5
4
3
2
1
0
Baseline
Review 1
Review 2
Review 3
Forecast
Target
Actual
Business Broadband
120%
100%
80%
60%
40%
20%
0%
Baseline
Review 1
Review 2
Review 3
Forecast
Other
ADSL
Mobile
Wireless
Satellite
Home Broadband
100%
80%
60%
40%
20%
0%
Baseline
6 Mths
1 Year
18Mths
2 Years
Target
Actual
Town Coverage Rating
9
8
7
6
5
4
3
2
1
0
Baseline
Review 1
Review 2
Review 3
Forecast
Target
Actual

Summary

Regional Mobile Black Spot

Palmer and Milendella provided a strong response to the qualitative survey. The results are representative of a digitally engaged community. There were 133 visits to the survey and a total of 65 responses (49%). This suggests there was a significant level of 'survey snooping' before responding. Business (46%) to household (54%) responses were high and representative of a community made up of SME business owners. The high percentage of business responses is useful to demonstrate the commercial value in improvement of mobile coverage. The majority of respondents used a PC/Laptop to complete the survey (48%). There was a high number of respondents who used a Smartphone (42%), which validates the mobile culture within the community and as such supports the need for good coverage.

After compiling the survey results a number of significant statistics and indicators were observed. These included:

- A low percentage of homes have broadband access (45%), placing greater reliance on mobile connectivity.
- This is validated by the high number of households (61%) that state a mobile or tablet as their main way to access the internet.
- 11% of businesses indicated they had ADSL broadband yet the Palmer exchange is not enabled for this technology.
- 61% of homes indicated they had a MyGov account. This is 50% higher than the national average and suggests a strong use of eGovernment.
- A low 6% of homes indicated that they used video streaming services like Presto, Stan, Netflix or Fetch TV. Reflects lack of broadband.
- The utilisation of Skype (videoconferencing) by both homes and businesses was similar to urban areas and above previous regional results.
- Home use of online banking and shopping were again above the national average at 97% and 79% respectively. Reflective of isolated community
- Similar to other regional towns, business was much more critical of the lack of mobile coverage than homes
- Cloud utilisation by business was high at 75% and there was also a strong use of online accounting at 57%. There is no local accountant.
- There was a high frequency of daily mobile use despite the poor reception at 97%.

The key baseline measures that are expected to change should improved mobile coverage be provided:

1. Shift away from satellite connectivity to mobile initially and then NBN fixed wireless in to the future (subject to NBN site sharing).
2. Change in business confidence towards 'Growing slowly or Strongly'.
3. Increase in Home broadband connections (closure to the national average).
4. Increase in the use of video streaming by homes.
5. A large reduction of the incidence of mobiles (both at home and work) being 'out of range'.
6. Sharp improvement in the rating for coverage at home, at work and around town.

There is a strong case for mobile coverage improvement based on the assessment ratings and the high number of local businesses that demonstrate good digital literacy and participation. The lack of broadband could hinder the benefits of any new mobile infrastructure as it would be heavily used to provide access to the internet. This could potentially reduce the reach of any new coverage

Resources List

Regional Mobile Black Spot

a. *Sensis e-Business Report*, Sensis, 2015
b. *The economic impacts of mobile broadband on the Australian economy, from 2006 to 2013*, ACMA May 2014
c. *Communications report, Report 2 – Cloud computing in Australia*, ACMA, March 2014
d. *MYOB Business Monitor*, MYOB, October 2015
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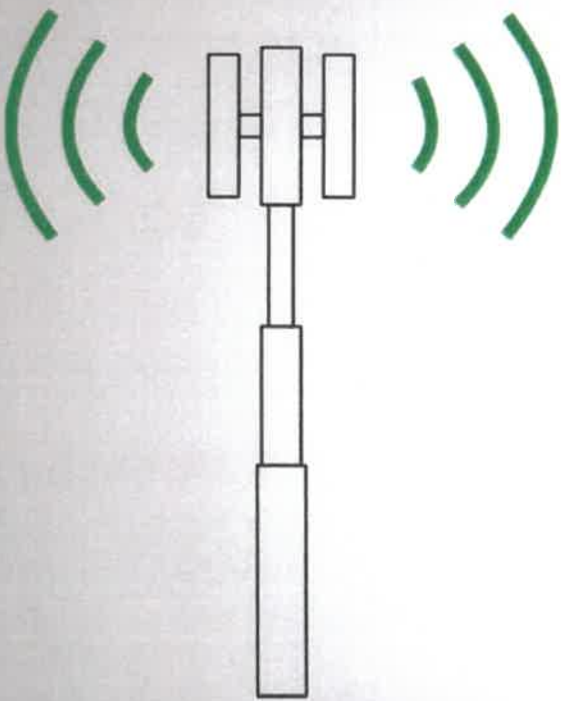
u. *Communications Report 2014-15*, ACMA



Mobile Blackspot Program
Site Baseline

Mount Mary - Eba

May 2016

Optimi Digital

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Baseline Site Background

Regional Mobile Black Spot

Mount Mary is a small Gazetted Locality approximately 35 kilometres east of Eudunda on the road to Morgan. The settlement consists of about a dozen residences and the historical pub. The settlement forms part of the State Suburb of Morgan, for census collection purposes. It primarily consists of the town limits and several surrounding broad acre farms. There is no significant social or economic infrastructure apart from the hotel. **Eba** is another small Gazetted Locality on the same road as Mount Mary. The two settlements are approximately 14 kilometres apart. Eba is largely abandoned now with only the surrounding broad acre farms remaining.

- The B81, Thiele Highway is a major transit link within the north of the Mid Murray region and links the towns of Morgan and Eudunda.
- A search of the Telstra online coverage map shows a significant blackspot along the B81 between Bower and Mount Mary (inclusive of both these localities). This becomes more sporadic towards Eba and then fades approaching Morgan.
- Mount Mary has a Telstra Pay Phone box located adjacent to the historical hotel.
- Top Multiplier Pty Ltd runs a large scale Piggery across two sheep stations within the Mount Mary area. This employs some 10 staff.
- The primary beneficiaries of improved coverage would be broad acre farms in the area and traffic along the B81.
- A desktop assessment of the two localities identified no significant economic or social infrastructure and only agri businesses in the form of farms.
- Neither locality is serviced by a local Post Office.
- Mount Mary and Eba form part of the State Electoral District of Stuart. Both sit within the Federal Electorate of Barker. Both sit within the Murraylands and Riverlands economic region and come under that Regional Development Australia Committee.
- Both Mount Mary and Eba are administered by the Mid-Murray Council. The administrative centre for the Council is located in Mannum.

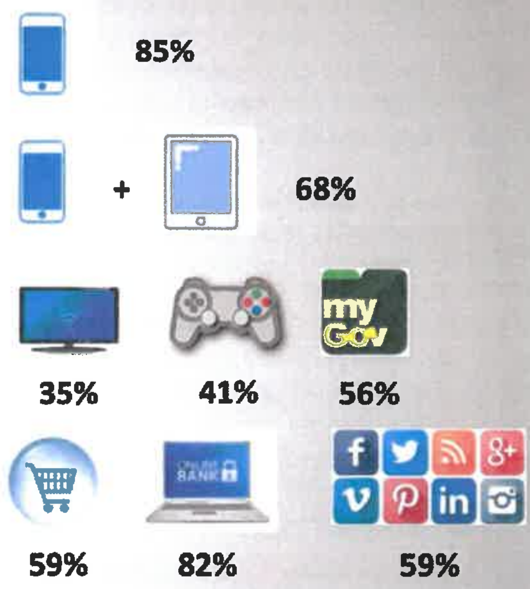
Nearest A/B Road	Nearest Exchange	Nearest Major Town	Nearest Cell Tower	Adjacent Towns
B81 – Thiele Highway	Morgan: 25km	Morgan: 25km	Mixed Site: 22.6km	Bower, Morgan

Community	Government	Major Business	ESO
None	None	Mount Mary Hotel	None
		Top Multiplier Pty Ltd	

Measure	Baseline	BM1	BM2	BM3
Digital Access				
Broadband	35%	81%(i)	86%(m)	
Primary access via Mobile/Tablet	67%	29%(f)	34%(i)	
No Broadband	65%	6%(f)	14%(n)	
Digital Devices				
Home Computer	79%	95%(a)	94%(n)	
Mobile Phone	100%	94%(i)		
Have a Smartphone	85%	89%(i)	77%(a)	86%(n)
Children own phones	47%			
Have tablet as well	68%	60%(i)	56%(a)	62%(n)
Have a Smart TV	35%	29%(o)	46%(i)	25%(p)
Have a game deck	41%	22%(o)	51%(t)	
have a myGov account	56%	33%(q)		
Online activity				
Check news/weather	71%	84%(o)	77%(a)	
Stream TV/Movies	21%	30%(o)	34%(u)	58%(a)
Bank online	82%	91%(o)	74%(i)	77%(a)
Shop online	59%	62%(o)	60%(i)	66%(a)
Entertainment	50%	65%(o)	68%(i)	58%(a)
Search (Google)	91%	93%(o)	79%(i)	80%(a)
Update social media	59%	81%(o)	54%(i)	73%(a)
Upload and share pictures/videos	65%	38%(o)	31%(a)	
Get direction – online maps	68%			
Connect				
Skype	38%	33%(u)	35%	
Email	82%	63%(o)	88%(i)	
Online Account				
iTunes	61%			
Microsoft	32%			
Google Plus	71%			
Other	32%			

Digital Citizen Profile

Regional Mobile Black Spot



Demographics

Age: <18: 0% 19-34: 15% 35-54: 36% >55: 50%

Male: 47% Female: 53%

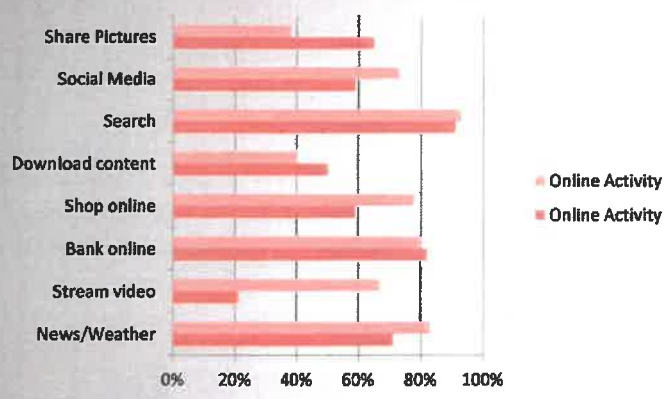
In Town: 21% Out of Town: 64% Visitor: 15%

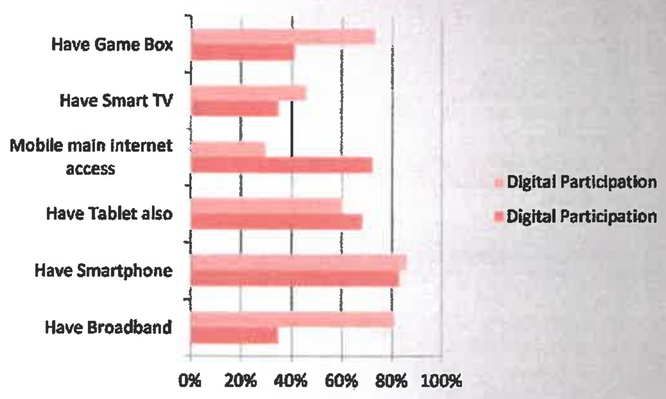
Digital Citizen: Visual

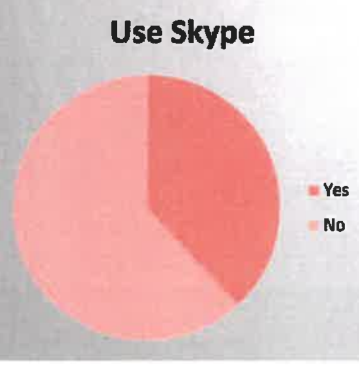
Regional Mobile Black Spot

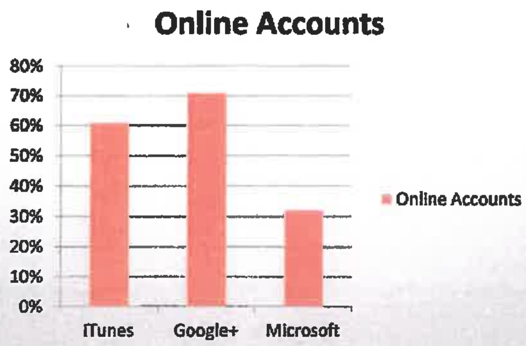
Areas to target

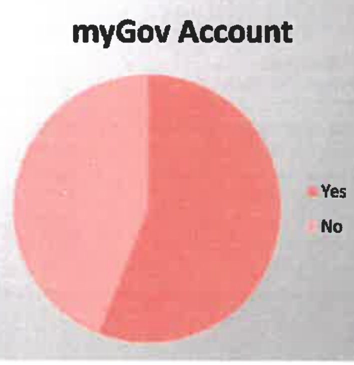
- Greater use of social media,
- Improve connectivity to support video streaming,
- Increased broadband connectivity,
- Increased access to fixed broadband options, and
- Use of Skype as a communication tool.











Measure	Baseline	BM1	BM2	BM3	BM4
<u>Reliance</u>					
Only use mobile (H)	67%	34%(l)			
<u>Frequency</u>					
Daily (H)	96%	74%(l)	29%(f)		
<u>Use of Mobile : Personal</u>					
Access Internet	82%	86%(l)	79%(l)	73%(a)	95%(e)
Check news/weather	68%	72%(l)	61%(l)	43%(a)	62%(e)
Update social media	50%	61%(l)	55%(l)	51%(a)	75%(e)
Entertainment	38%	83%(l)	68%(l)	36%(a)	30%(e)
Get directions (maps)	76%	82%(l)		45%(a)	24%(e)
Make/take calls	94%	98%(l)	92%(l)		100%(
Play games	35%	83%(l)	54%(l)		e)
Send/receive email	71%	81%(l)	86%(i)		57%(e)
Send/receive txt	91%	99%(l)			91%(e)
Take pictures	76%	62%(l)		16%(a)	90%(e)
<u>Use of Mobile: Business</u>					
Search the internet	93%	68%(a)	76%(e)		
Check news/weather	86%	73%(a)	62%(e)		
Update social media	57%	70%(a)	75%(e)		
Get directions (maps)	57%	80%(a)	24%(e)		
Make/take calls	100%		100%(e)		
Send/receive email	93%		91%(e)		
Send/receive txt	100%		90%(e)		
Take pictures	79%				
Skype someone	14%				
<u>Coverage status</u>					
Av rating for households	3.6/10				
Av rating for businesses	3/10				
Av rating for around town (H)	5/10				
Av rating for 'out of range' (H)	5.5/10				
Av rating need to improve (H)	9/10				
Av rating for around town (B)	5.3/10				
Av rating for 'out of range' (B)	4.5/10				
Av rating need to improve (B)	8.9/10				

Mobile Usage Profile

Regional Mobile Black Spot

H: 35%

H: 38%

H: 38%

H: 94%
B: 100%

Google Maps
H: 76%
B: 57%

H: 71%
B: 93%

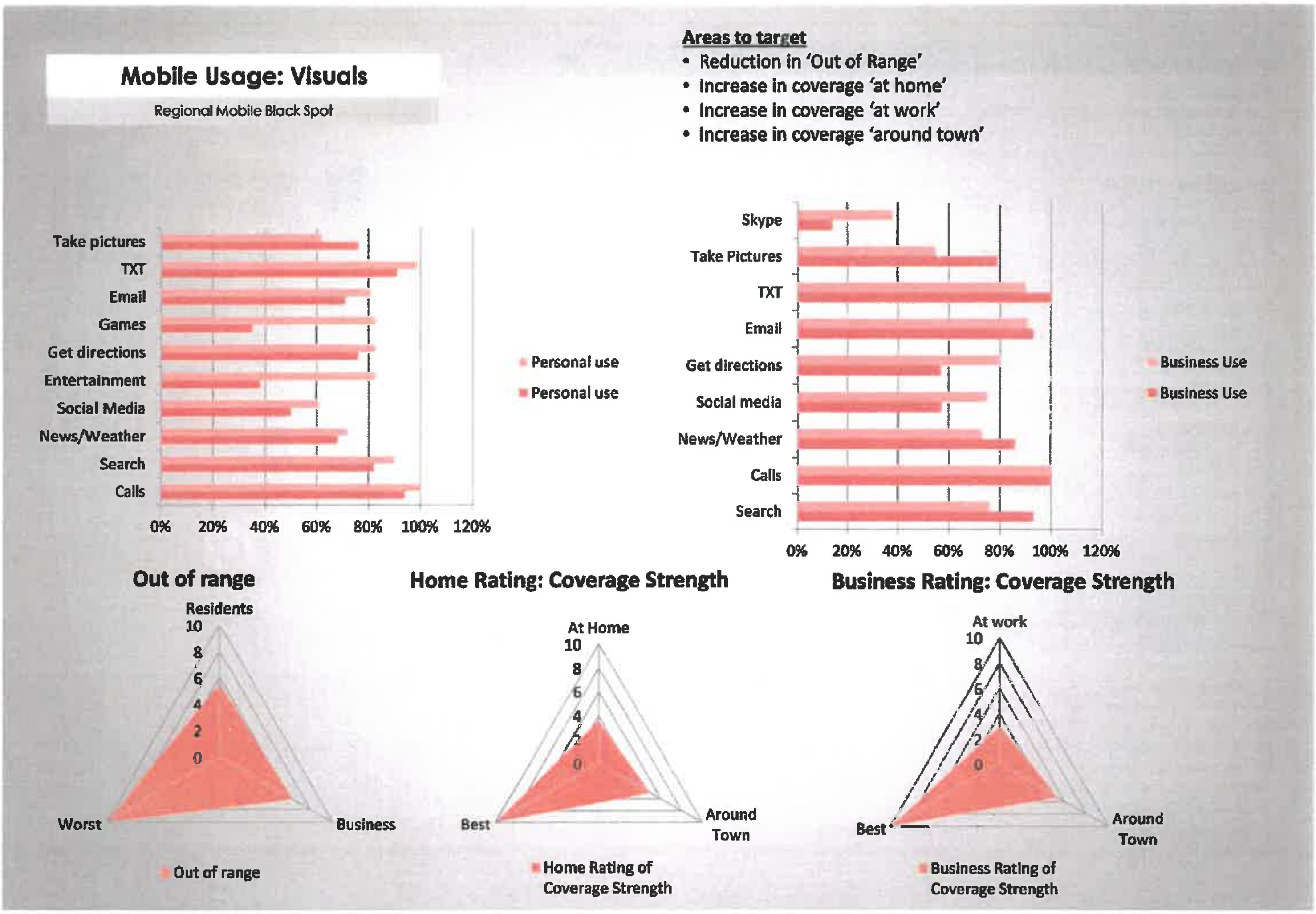
SMS
H: 91%
B: 100%

H: 76%
B: 79%

NEWS
H: 68%
B: 86%

B: 14%

H: 50%
B: 57%


Mobile Usage: Visuals
Regional Mobile Black Spot
Areas to target
• Reduction in 'Out of Range'
• Increase in coverage 'at home'
• Increase in coverage 'at work'
• Increase in coverage 'around town'
Take pictures
TXT
Email
Games
Get directions
Entertainment
Social Media
News/Weather
Search
Calls
0% 20% 40% 60% 80% 100% 120%
Personal use
Personal use
Skype
Take Pictures
TXT
Email
Get directions
Social media
News/Weather
Calls
Search
0% 20% 40% 60% 80% 100% 120%
Business Use
Business Use
Out of range
Residents
10 8 6 4 2 0
Worst
Business
Out of range
Home Rating: Coverage Strength
At Home
10 8 6 4 2 0
Best
Around Town
Home Rating of Coverage Strength
Business Rating: Coverage Strength
At work
10 8 6 4 2 0
Best
Around Town
Business Rating of Coverage Strength

Measure	Baseline	MYOB	ACMA	ABS	Sensis
Digital Participation					
Have a Computer	100%		94%	93%	84%
Have Broadband	100%		87%	99%	95%
•ADSL	14%		75%	72%	54%
•Mobile	50%		4%	9%	
•Wireless	36%			8%	44%
•Satellite	0%		2%	2%	1%
•Other	0%		1%	0.1%	21%
Have a website	75%	42%	66%	47%	56%
Mobile Phones	100%	38%	70%	85%	63%
Tablets	79%	23%	24%		52%
Online banking	100%	48%	77%		90%
eCommerce					
•Buy online	92%	18%	54%	53%	71%
•Sell online	42%	25%	31%	30%	51%
Use online accounting	43%	12%			8%
Social Media					
Use Social media	43%	35%	26%	26%	31%
Top Five					
1.	Facebook		Twitter		Facebook
2.	LinkedIn		Facebook		Twitter
3.	Google+		Youtube		LinkedIn
4.	Pinterest		Instagram		Google+
5.	Twitter		Pinterest		Pinterest
Security					
Use security software	100%				
Backup systems	86%				
Cloud	100%	40%	47%		
Top five apps					
1.	Webmail				
2.	Online Acct				
3.	Online Docs				
4.	Video Call				
5.	File Share				

Digital Business Profile

Regional Mobile Black Spot

100%

+ 79%

17% 83% 83% 17%

Demographics

Staff:
<5: 57% 5 – 10: 29% 10 – 20: 14% >20: 0%

Location:
In Town: 0% Out of Town: 54% Mobile: 46%

Business Conditions:
Grow Strongly: 14% Grow Slowly: 43% Stagnant: 36%
Decline slowly: 7% Decline Strongly: 0%

Digital Business: Visuals

Regional Mobile Black Spot

Areas to target

- Greater awareness of ecommerce options
- Improved access to fixed line broadband

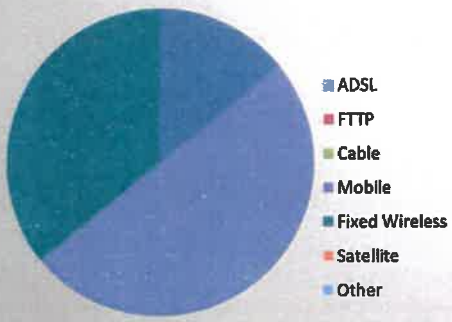
Top 5 Cloud Apps

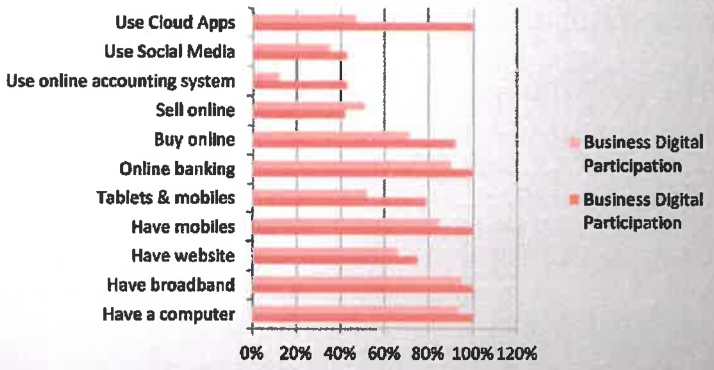
Baseline	National
Online Accounts	Webmail
Webmail	Video Call
Video Call	File Share
File Share	Online Docs
Online Docs	Online Accounts

Top 5 Social Media

Baseline	National
Facebook	Facebook
Linkedin	Twitter
Google+	Linkedin
YouTube	Youtube
Twitter	Pinterest

Business Internet Connection





Key Industry Summary

Regional Mobile Black Spot

There is little in the way of diverse industry in the area. The main sectors are graziers (livestock) and grain growers.

Top Multiplier Pty Ltd

Top Multiplier business which is a modern commercial pork farm. This farm operates over two large sheep stations along Boundary Road at Bower SA. The sections that operate in the Mid-Murray Council are Sections 155, 156 HD of Beatty. We currently employ 10 permanent staff and support local contractors and trades with the consistent workload and regular production systems that we operate. We believe that we have the location to provide a good source of full-time employment to neighbouring towns including Morgan, Mount Mary, Eudunda and Robertstown. Following the acquisition of the business we have reviewed many facets of the business. One which has great concern for us is the lack of mobile phone coverage and access to reasonable internet coverage. We would request that you consider applying to register this region as part of the black spot programme for mobile phones and also internet. The lack of reasonable service in this area is an impediment to future growth development.

Transport

The Thiele Highway is an arterial road in South Australia connecting the outskirts of Adelaide to the North west bend of the Murray River at Morgan, South Australia. This forms part of a major transport corridor from South Australia into Victoria and the southern parts of NSW via the Goyder Highway. The section of the Thiele Highway between Eudunda and Morgan, passing through Bower and Mount Mary, experiences significant black spots in mobile coverage. This is seen as detrimental to information flows and communications support for the many transporters using the route, To move goods between South Australia, Victoria and NSW.

Graziers

The primary agricultural practice in around the Mount Mary, Bower and Eba localities is Grazing of livestock. There is also a significant piggery in the area. Due to the focus on grazing there is a very low density level of premises and population, per square kilometre for the region. This also reinforces the value of mobility to businesses that operate over large distances and also rely on efficient transport services, to get their produce to key markets and other parts of the supply chain.

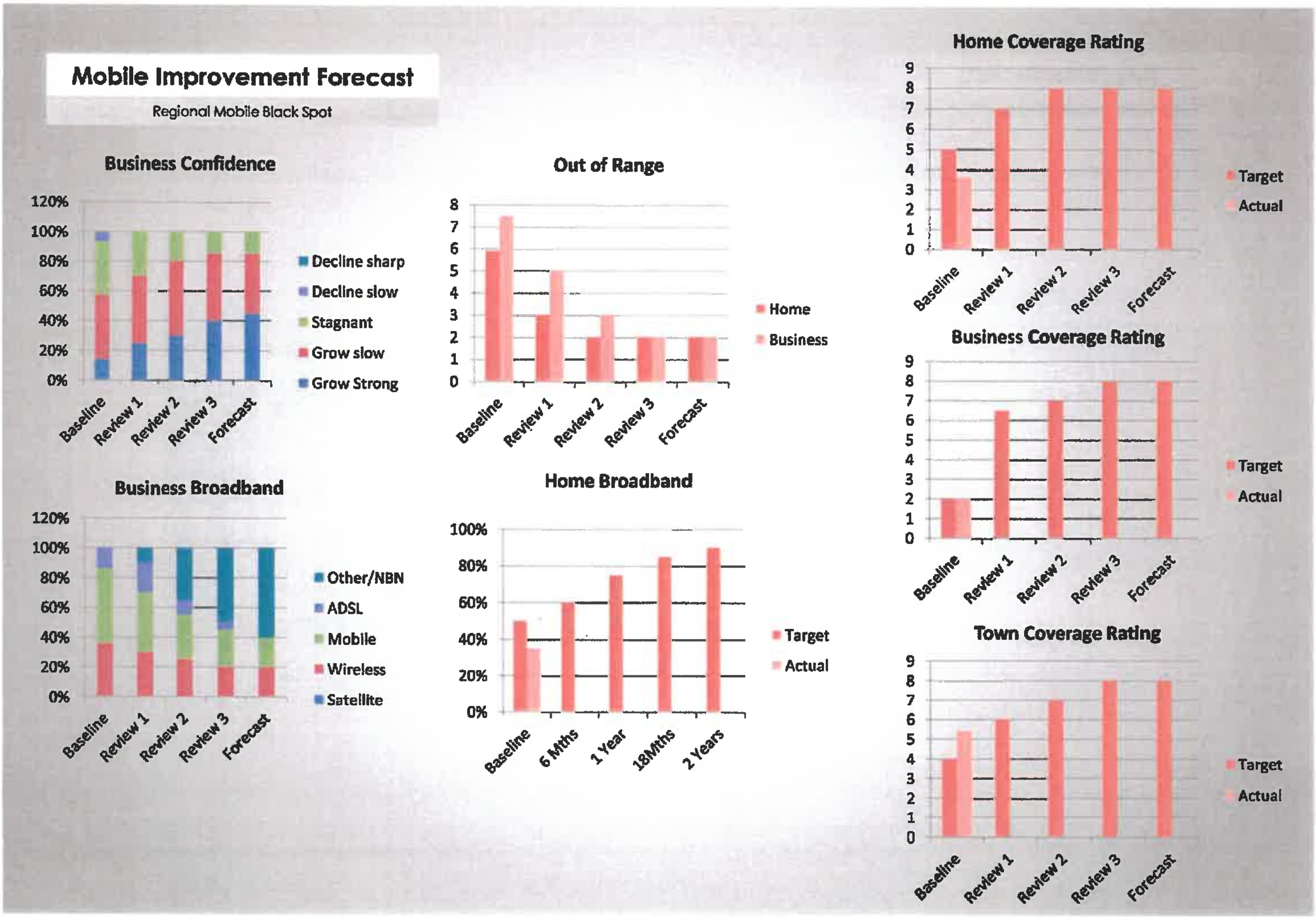
Key Infrastructure

Regional Mobile Black Spot

There is limited social and economic infrastructure within the area that would benefit from improved mobile coverage.

Mount Mary Hotel

Eba Rest Area, Thiele Hwy



Mobile Improvement Forecast
Regional Mobile Black Spot
Business Confidence
120%
100%
80%
60%
40%
20%
0%
Baseline
Review 1
Review 2
Review 3
Forecast
Decline sharp
Decline slow
Stagnant
Grow slow
Grow Strong
Out of Range
8
7
6
5
4
3
2
1
0
Home
Business
Home Coverage Rating
9
Target
Actual
Business Coverage Rating
Town Coverage Rating
Business Broadband
Other/NBN
ADSL
Mobile
Wireless
Satellite
Home Broadband
6 Mths
1 Year
18Mths
2 Years

Summary

Regional Mobile Black Spot

Mount Mary and Eba produced a very strong response to the Qualitative Assessment. This demonstrates a high degree of 'feeling' in the community for improved mobile coverage. Given the reaffirmation from the results of the strong mobile culture seen elsewhere in the region it is not surprising that such a result was achieved. The major challenge is the low population density and anticipated high construction costs for such a location. This is like to present a major challenge to attracting a mobile network operator, to consider an investment in new infrastructure without considerable 3rd party subsidy (funding support).

After compiling the survey results a number of significant statistics and indicators were observed. These included:

- Only 35% of homes indicated they have a broadband connection. 72% indicated that their mobile was their main link to the internet
- There are few options for fixed broadband in the region and none expected through the NBN.
- 54% of homes indicated that they had a myGov account. This suggests a higher than average use of digital for Government services
- A surprisingly high number (31%) of homes indicated that they used video streaming services like Presto, Stan, Netflix or Fetch TV. This is unusual given the limited access to fixed broadband.
- Online banking and shopping were well below that of other priority sites and unusual for a regional centre, below the national average.
- Similar to other towns in the study, business was much more critical of the lack of mobile coverage than homes.
- Cloud utilisation was at an incredible 100%, including a high 55% use of online accounting services.
- There were very high utilisation of online accounts (iTunes, Google+ and Microsoft), signifying high levels of digital participation.

The key baseline measures that are expected to change significantly should mobile coverage be improved in the area are:

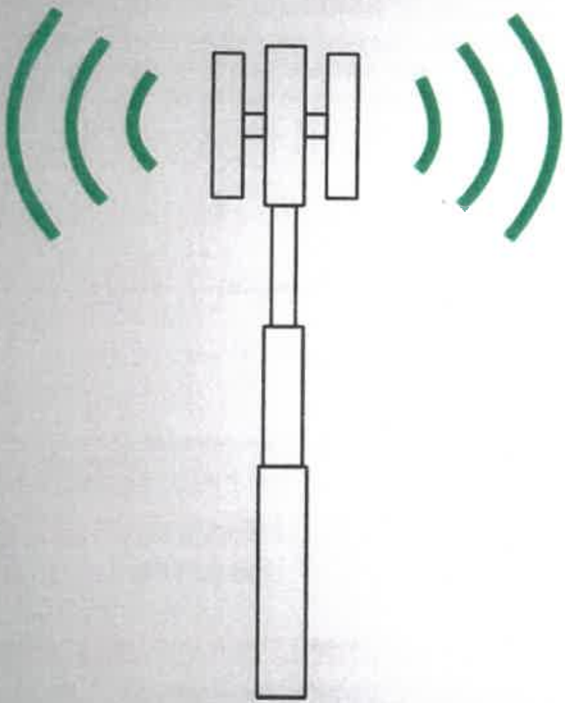
1. Change in business confidence towards 'Growing slowly or Strongly'.
2. Increase in Home broadband connections (closure to the national average).
3. Increase in the use of social media by both homes and business.
4. Awareness of video streaming by homes.
5. A halving of the incidence of mobiles (both at home and work) being 'out of range'.
6. Sharp improvement in the rating for coverage at home, at work and around town.

Unfortunately due to the low population density and expected high construction and service costs for any new mobile infrastructure it is likely that this site will struggle to be competitive in the Mobile Black Spot Program and also in attracting State funding. There is a possibility of seeking support based on improved coverage for the highway and associated traffic/transport operations along this route. It is suggested that future improvements be investigated in cooperation with State based agencies, to explore a mutual business case along these lines.

Resources List

Regional Mobile Black Spot

a. *Sensis e-Business Report*, Sensis, 2015
b. *The economic impacts of mobile broadband on the Australian economy, from 2006 to 2013*, ACMA May 2014
c. *Communications report, Report 2 – Cloud computing in Australia*, ACMA, March 2014
d. *MYOB Business Monitor*, MYOB, October 2015
e. *2014 Mobile Behaviour Report*, Salesforce, 2014
f. *Australians Get Mobile*, ACMA, June 2015
g. *Regional Australia in the digital economy*, ACMA, 14 August 2014
h. *Australian Digital Statistics 2014*, 3RDSENSE, 9 January 2014
i. *Communications report 2013-14 series, Report 1-Australians' digital lives*, ACMA, March 2015
j. *Communications report 2012-13 series, report 1-Australian SMEs in the digital economy*, ACMA, January 2014
k. *Australian Internet and Social Media Statistics*, March 2015, David Morton
l. *Australian Mobile Phone Lifestyle Index*, AIMIA, 2014
m. *Internet Activity*, Australia, December 2015, ABS
n. *Household Use of IT*, Australia, 2014-15, ABS
o. *Digital Australia: State of the Nation 2015-16*, EY Sweeney
p. *Sensis Social Media Report*, Sensis, May 2015
q. Australian Government media Release, 30th September 2014
r. *Digital Marketing Report*, Margin Media, 2015
s. *Australian Digital Stats Compilation 2014*, Digital Marketing Lab, October 2014
t. Deloitte Media Consumer Survey 2015, Deloitte
u. *Communications Report 2014-15*, ACMA



Mobile Blackspot Program
Site Baseline

Truro

May 2016

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Baseline Site Background

Regional Mobile Black Spot

Truro (postcode 5356) is a town in South Australia, 80 km northeast of Adelaide. It is situated in an agricultural and pastoral district on the Sturt Highway, east of the Barossa Valley, where the highway crosses the Mount Lofty Ranges. At the 2011 census, Truro had a population of 395. Rainfall in Truro is lower than in the neighbouring Barossa Valley region. For this reason dry grain crop farming, mainly of wheat and barley, is more prevalent than viticulture. There are two hotels in Truro. The town is also notable for its service facilities, particularly its bakeries, which provide refreshment for tourists and travellers along the Sturt Highway.

- A single listing exists on the National Black Spots database for Truro.
- A search of the Telstra online coverage map shows consistent black spots to the north and west of the town.
- Truro is a popular stop off and rest point along the Sturt Highway leading into Adelaide and for day trippers from the city.
- Truro is in close proximity to the Barossa valley and its wine growing industry.
- A desktop assessment of Truro identified 50 businesses (including family owned farms). This includes a supermarket, news agency, Licensed Post Office, hotel, several retail outlets, cafes and a number of trades and construction related enterprises.
- Truro lies within the State Electorate of Schubert. The town is in the Federal Electorate of Barker.
- Truro is administered by the Mid Murray Council. The administrative centre for the Council is located in Mannum, some 88km away.

Nearest A/B Road	Nearest Exchange	Nearest Major Town	Nearest Cell Tower	Adjacent Towns
A20 - through town	Truro: 0km	Nuriootpa: 15km	Telstra 6.4 km	Stockwell, Dutton

Community	Government	Major Business	ESO
Truro Town Hall	Truro Primary School	Truro Supermarket	CFS Region 2 Brigade
Truro and District Raceway	Truro Post Office	Truro Hotel	
Truro Play Centre		Truro Agencies	

Measure	Baseline	BM1	BM2	BM3
Digital Access				
Broadband	69%	81%(i)	86%(m)	
Primary access via Mobile/Tablet	38%	29%(f)	34%(l)	
No Broadband	31%	6%(f)	14%(n)	
Digital Devices				
Home Computer	92%	95%(a)	94%(n)	
Mobile Phone	95%	94%(l)		
Have a Smartphone	62%	89%(l)	77%(a)	86%(n)
Children own phones	38%			
Have tablet as well	69%	60%(l)	56%(a)	62%(n)
Have a Smart TV	46%	29%(o)	46%(l)	25%(p)
Have a game deck	31%	22%(o)	51%(t)	
have a myGov account	54%	33%(q)		
Online activity				
Check news/weather	62%	84%(o)	77%(a)	
Stream TV/Movies	31%	30%(o)	34%(u)	58%(a)
Bank online	77%	91%(o)	74%(l)	77%(a)
Shop online	77%	62%(o)	60%(l)	66%(a)
Entertainment	69%	65%(o)	68%(l)	58%(a)
Search (Google)	100%	93%(o)	79%(l)	80%(a)
Update social media	62%	81%(o)	54%(l)	73%(a)
Upload and share pictures/videos	62%	38%(o)	31%(a)	
Get direction – online maps	69%			
Connect				
Skype	38%	33%(u)	35%	
Email	85%	63%(o)	88%(l)	
Online Account				
iTunes	73%			
Microsoft	0%			
Google Plus	27%			
Other	0%			

Digital Citizen Profile

Regional Mobile Black Spot

Demographics

Age: <18: 0% 19-34: 8% 35-54: 31% >55: 62%

Male: 85% Female: 15%

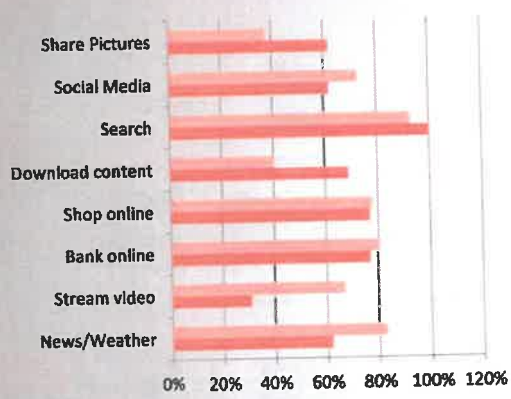
In Town: 46% Out of Town: 54% Visitor: 0%

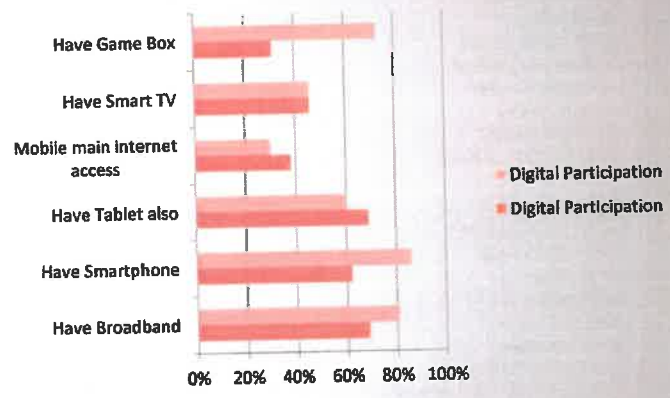
Digital Citizen: Visual

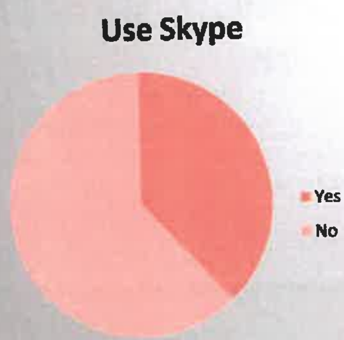
Regional Mobile Black Spot

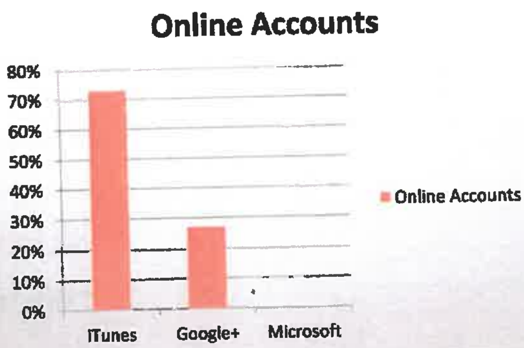
Areas to target

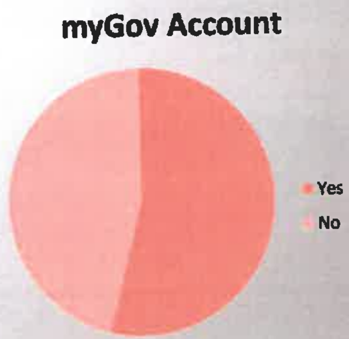
- Increased consumption of streaming video (Online TV/Movies)
- Increased broadband connectivity (closure to national average)
- Increased access to fixed broadband options (NBN launch)
- Use of Skype as a communication tool, and
- Increased use of internet for accessing Government services.











Measure	Baseline	BM1	BM2	BM3	BM4
Reliance					
Only use mobile (H)	38%	34%(l)			
Frequency					
Daily (H)	93%	74%(l)	29%(f)		
Use of Mobile : Personal					
Access Internet	62%	86%(l)	79%(l)	73%(a)	95%(e)
Check news/weather	62%	72%(l)	61%(l)	43%(a)	62%(e)
Update social media	54%	61%(l)	55%(l)	51%(a)	75%(e)
Entertainment	31%	83%(l)	68%(l)	36%(a)	30%(e)
Get directions (maps)	62%	82%(l)		45%(a)	24%(e)
Make/take calls	100%	98%(l)	92%(l)		100%(e)
Play games	23%	83%(l)	54%(l)		
Send/receive email	62%	81%(l)	86%(l)		57%(e)
Send/receive txt	100%	99%(l)			91%(e)
Take pictures	69%	62%(l)		16%(a)	90%(e)
Use of Mobile: Business					
Search the internet	92%	68%(a)	76%(e)		
Check news/weather	69%	73%(a)	62%(e)		
Update social media	46%	70%(a)	75%(e)		
Get directions (maps)	69%	80%(a)	24%(e)		
Make/take calls	100%		100%(e)		
Send/receive email	77%		91%(e)		
Send/receive txt	100%		90%(e)		
Take pictures	92%				
Skype someone	23%				
Coverage status					
Av rating for households	3/10				
Av rating for businesses	2.6/10				
Av rating for around town (H)	3.8/10				
Av rating for 'out of range' (H)	5.9/10				
Av rating need to improve (H)	8.1/10				
Av rating for around town (B)	3.5/10				
Av rating for 'out of range' (B)	3.5/10				
Av rating need to improve (B)	9.5/10				

Mobile Usage Profile

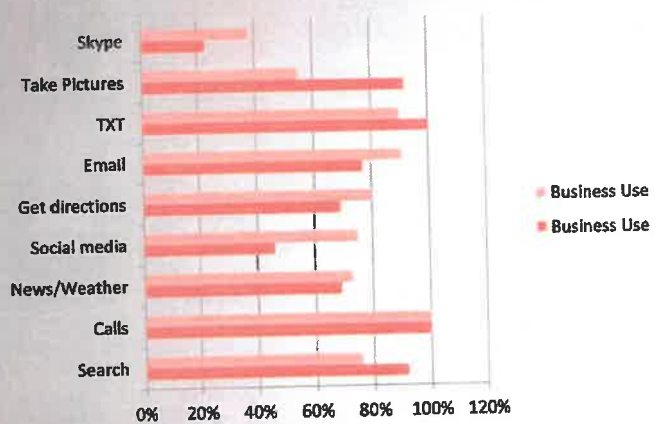
Regional Mobile Black Spot

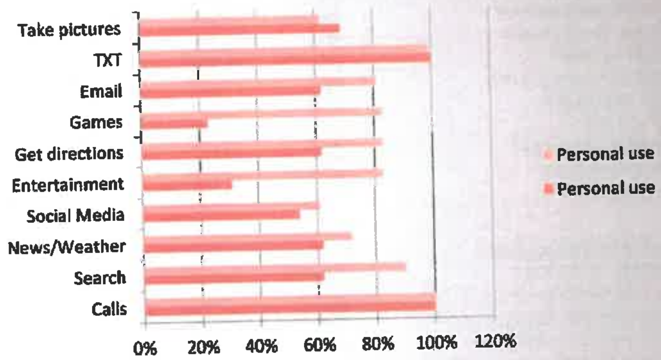
Mobile Usage: Visuals

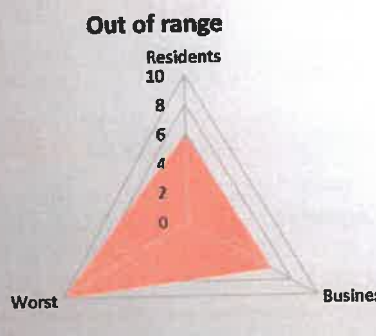
Regional Mobile Black Spot

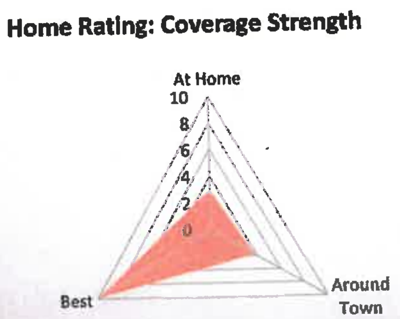
Areas to target

- Reduction in 'Out of Range'
- Increase in coverage 'at home'
- Increase in coverage 'at work'
- Increase in coverage 'around town'









Measure	Baseline	MYOB	ACMA	ABS	Sensis
Digital Participation					
Have a Computer	93%		94%	93%	84%
Have Broadband	100%		87%	99%	95%
•ADSL	36%		75%	72%	54%
•Mobile	14%		4%	9%	
•Wireless	21%			8%	44%
•Satellite	21%		2%	2%	1%
•Other	7%		1%	0.1%	21%
Have a website	88%	42%	66%	47%	56%
Mobile Phones	100%	38%	70%	85%	63%
Tablets	86%	23%	24%		52%
Online banking	86%	48%	77%		90%
eCommerce					
•Buy online	82%	18%	54%	53%	71%
•Sell online	27%	25%	31%	30%	51%
Use online accounting	55%	12%			8%
Social Media					
Use Social media	343%	35%	26%	26%	31%
Top Five					
1.	Facebook		Twitter		Facebook
2.	Google+		Facebook		Twitter
3.	Other		Youtube		LinkedIn
4.	LinkedIn		Instagram		Google+
5.	Twitter		Pinterest		Pinterest
Security					
Use security software	93%				
Backup systems	86%				
Cloud	79%	40%	47%		
Top five apps					
1.	Webmail				
2.	Online Acct				
3.	Online Doc				
4.	File Share				
5.	Video Call				

Digital Business Profile

Regional Mobile Black Spot

100%

\+ 86%

17% 83% 33% 0%

Demographics

Staff:

<5: 65% 5 – 10: 21% 10 – 20: 14% >20: 0%

Location:

In Town: 38% Out of Town: 62% Mobile: 0%

Business Conditions:

Grow Strongly: 15% Grow Slowly: 54% Stagnant: 31%

Decline slowly: 0% Decline Strongly: 0%

Digital Business: Visuals

Regional Mobile Black Spot

Areas to target

- Reduction in access by satellite and an increase in access by mobile and NBN,
- Greater use of social media by business – focus on LinkedIn,
- Increased use of online banking, and
- Increase in selling online.

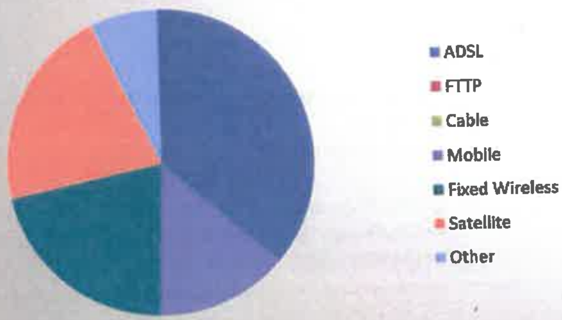
Top 5 Cloud Apps

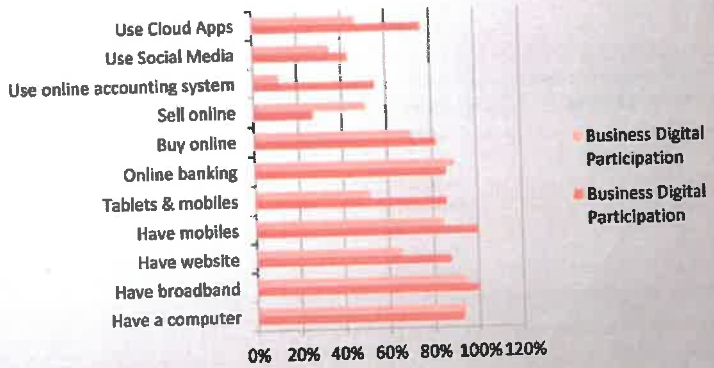
Baseline	National
Webmail	Webmail
Online Accts	Video Call
Online Docs	File Share
File Share	Online Docs
Video Call	Online Accounts

Top 5 Social Media

Baseline	National
Facebook	Facebook
Google+	Twitter
Other	LinkedIn
LinkedIn	Youtube
Twitter	Pinterest

Business Internet Connection





Key Industry Summary

Regional Mobile Black Spot

There is a diverse range of industry in the area. The main sectors are Tourism and agriculture.

House of Olives

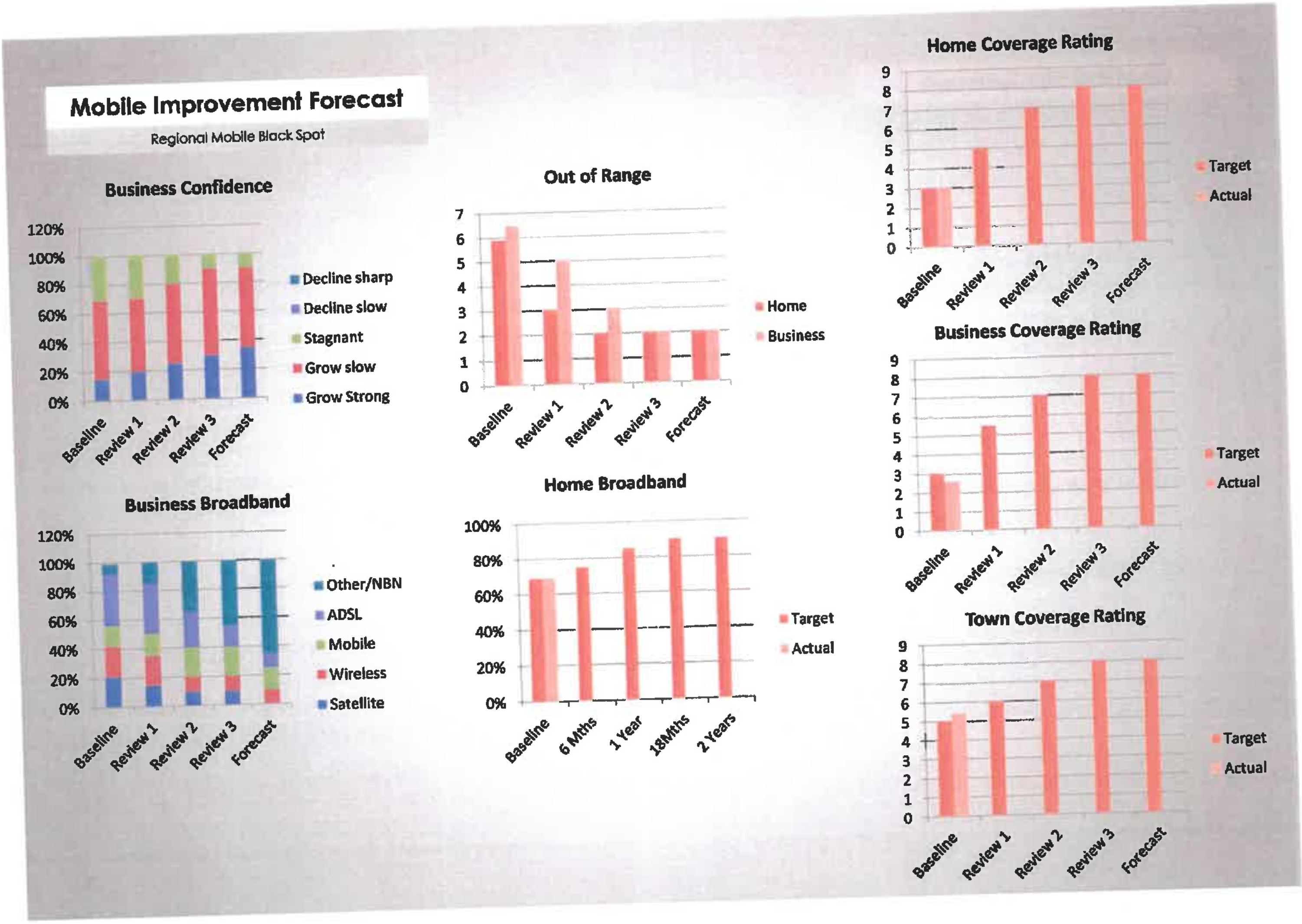
The 'House of Olives' retail outlet in Truro offers a wide selection of South Australian olive oils, ranging from mild to robust. They include several oils from medal winners in the South Australian Olive Oil Competition, organic oils and oils infused with lemon, garlic, chilli, basil, citrus, lime and lemon myrtle. All can be tasted before purchase to ensure satisfaction. The House of Olives also stocks olives, spreads, mustards, dips and dukkah. Body products include olive oil based hand cream, shampoo, conditioner, body butter, moisturisers, soap, lip balm and insect repellent. The perfect gift can be found amongst the oil cans, dishes, olive spoons, forks and pitters.

Sunrise Bakery

Sunrise Bakery is a retail and wholesale bakery group in South Australia with three shops located in Angaston, Truro and Gawler. They provide quality pastries and cakes and have a reputation amongst travellers a the perfect place to stop for a snack along the Sturt Highway. Many people journey from Adelaide on weekends to sample their produce.

Hospitality and Accommodation

Truro has a range of cafes and restaurants catering to short stay visitors and traffic passing through to the Barossa Valley. It also has a reasonable range of short stay accommodation for a town of its size, which again caters to travellers visiting the Barossa Valley. These include the two local hotels, Barossa Valley Retreat and the Soul Start wellness group of enterprises.


Mobile Improvement Forecast
Regional Mobile Black Spot
Business Confidence
120%
100%
80%
60%
40%
20%
0%
Baseline
Review 1
Review 2
Review 3
Forecast
Decline sharp
Decline slow
Stagnant
Grow slow
Grow Strong
Out of Range
7
6
5
4
3
2
1
0
Baseline
Review 1
Review 2
Review 3
Forecast
Home
Business
Home Coverage Rating
9
8
7
6
5
4
3
2
1
0
Baseline
Review 1
Review 2
Review 3
Forecast
Target
Actual
Business Coverage Rating
9
8
7
6
5
4
3
2
1
0
Baseline
Review 1
Review 2
Review 3
Forecast
Target
Actual
Business Broadband
120%
100%
80%
60%
40%
20%
0%
Baseline
Review 1
Review 2
Review 3
Forecast
Other/NBN
ADSL
Mobile
Wireless
Satellite
Home Broadband
100%
80%
60%
40%
20%
0%
Baseline
6 Mths
1 Year
18Mths
2 Years
Target
Actual
Town Coverage Rating
9
8
7
6
5
4
3
2
1
0
Baseline
Review 1
Review 2
Review 3
Forecast
Target
Actual

Summary

Regional Mobile Black Spot

Truro produce the lowest response of the four sites surveyed. This was surprising considering it was by far the largest locality to be included in the assessments. This could demonstrate the degree of variation within the community towards the issue of mobile coverage. This variation was evident in the rating of coverage issues and the need for improvements. Whilst the final results would suggest an issue exists it is clear that the community feeling on this does not run as deep as in the other sites. Based on the assessment of local coverage maps and the high proportion of respondents that indicated they were located 'out of town' it is likely that the coverage issues are also beyond the main populated areas. The fact that the closest cell tower is some 6.4km away from the town would indicate that intermittent coverage issues under certain conditions could prevail.

After compiling the survey results a number of significant statistics and indicators were observed. These included:

- Fixed line broadband was freely available to homes and businesses within the town and this would have reduced the reliance on mobile we have seen in the other three sites.
- The low number of homes that indicated mobile was the primary means of connecting to the internet (38%) also provides a clear indication that fixed broadband is compensating for any mobile issues.
- Digital activity was largely consistent with the other three sites.
- Video streaming services like Presto, Stan, Netflix or Fetch TV were in greater use, again a symptom of the availability of better broadband.

Given there is a question over the requirement for improved mobile coverage it is not possible to predict of suggest specific digital traits that may or may not transform based on better coverage. Truro does however provide a good benchmarking site for the other three localities. It had better business confidence and higher levels of activity based on its enhance level of broadband and mobile accessibility. These standards could be used to track and forecast improvements in the other parts of the region should connectivity and accessibility be upgraded to a similar standard. Items to monitor include:

- Business confidence,
- Social media usage,
- Online presence (website or social media),
- Use of multiple devices (phones and tablets),
- Use of skype and video conferencing applications, and
- Streaming of video and music entertainment content.

Resources List

Regional Mobile Black Spot

a. *Sensis e-Business Report*, Sensis, 2015
b. *The economic impacts of mobile broadband on the Australian economy, from 2006 to 2013*, ACMA May 2014
c. *Communications report, Report 2 – Cloud computing in Australia*, ACMA, March 2014
d *MYOB Business Monitor*, MYOB, October 2015
e. *2014 Mobile Behaviour Report*, Salesforce, 2014
f. *Australians Get Mobile*, ACMA, June 2015
g. *Regional Australia in the digital economy*, ACMA, 14 August 2014
h. *Australian Digital Statistics 2014*, 3RDSENSE, 9 January 2014
i. *Communications report 2013-14 series, Report 1-Australians' digital lives*, ACMA, March 2015
j. *Communications report 2012-13 series, report 1-Australian SMEs in the digital economy*, ACMA, January 2014
k. *Australian Internet and Social Media Statistics*, March 2015, David Morton
l. *Australian Mobile Phone Lifestyle Index*, AIMIA, 2014
m. *Internet Activity*, Australia, December 2015, ABS
n. *Household Use of IT*, Australia, 2014-15, ABS
o. *Digital Australia: State of the Nation 2015-16*, EY Sweeney
p. *Sensis Social Media Report*, Sensis, May 2015
q. Australian Government media Release, 30th September 2014
r. *Digital Marketing Report*, Margin Media, 2015
s. *Australian Digital Stats Compilation 2014*, Digital Marketing Lab, October 2014
t. Deloitte Media Consumer Survey 2015, Deloitte
u. *Communications Report 2014-15*, ACMA