

Mobile Black Spot Program-5A- Discussion Paper

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Compared with other regions, the Murraylands and Riverland has made significant progress in terms of its telecommunications network. Nevertheless, several identified black spots are yet to be resolved in many localities across the region which require continued focus. The Mallee region has significant mobile black spots, including major transport corridors and should be a targeted area for this round. Towns such as Lameroo and Pinnaroo need to be upgraded from satellite NBN to fixed wireless technology.

In the case of both prolonged power outages and natural disasters, new and existing macro cell base stations should be constructed and upgraded with both solar power and generator back up to eliminate any outages therefore reducing safety issues.

Opportunities to further subsidise and facilitate telecommunications investment via leveraging other infrastructure and industry needs will assist the region as a whole and should actively be sought.

There are multiple areas throughout the region where there is significant agricultural production but a notable lack of phone coverage. This results in reduced business efficiency and inhibits economic growth.

The region has identified the continued extension and upgrading of mobile phone services to be a key priority, in particular, to support local industry as well as distance education.

RDAMR is investigating alternative technology solutions, for instance, smart industry and farming, LoRaWan, small cell towers and Totem Wi-Fi.

NB. It should be noted that our three Riverland Councils – District Council of Loxton Waikerie, Renmark Paringa Council and Berri Barmera Council – are currently developing a LoRaWan network that will soon be at the testing phase. Once successful testing has been completed, we will then be able to use this data as a case study for the other Murraylands and Mallee Councils.

As a reference, attached is a map of our region demonstrating where new macro cell base stations have been approved in both Mobile Black Spot Program Rounds 4 and 5.

Also attached is a recent digital transformation study completed by Jim Wyatt from Optimi Digital. This study outlines alternative technology solutions including, LoRaWan, case studies for smart farming, including NBN, identifying co-investment examples and building collaboration hubs.



Digital transformation and the impact on your region

Jim Wyatt, April 2019



Digital Transformation

Fundamentally, digital transformation, captures the idea that various technology trends – cloud computing, mobility, the Internet of Things, blockchain – are ushering in business benefits, but also massive upheaval within enterprises.

The pace of change is so fast and so furious that it's, well, hard to manage. This shift requires a digital-first mentality, and places a premium on data analytics and optimisation.

Smart Cities are an example of Digital Transformation.



6 Stages of Digital Transformation



BUSINESS AS USUAL:

Organizations operate with a familiar legacy perspective of customers, processes, metrics, business models, and technology, believing that it remains the solution to digital relevance.



PRESENT AND ACTIVE:

Pockets of experimentation are driving digital literacy and creativity, albeit disparately, throughout the organization while aiming to improve and amplify specific touchpoints and processes.



FORMALIZED:

Experimentation becomes intentional while executing at more promising and capable levels. Initiatives become bolder and, as a result, change agents seek executive support for new resources and technology.



STRATEGIC:

Individual groups recognize the strength in collaboration as their research, work, and shared insights contribute to new strategic roadmaps that plan for digital transformation ownership, efforts, and investments.



CONVERGED:

A dedicated digital transformation team forms to guide strategy and operations based on business and customer-centric goals. The new infrastructure of the organization takes shape as roles, expertise, models, processes, and systems to support transformation are solidified.

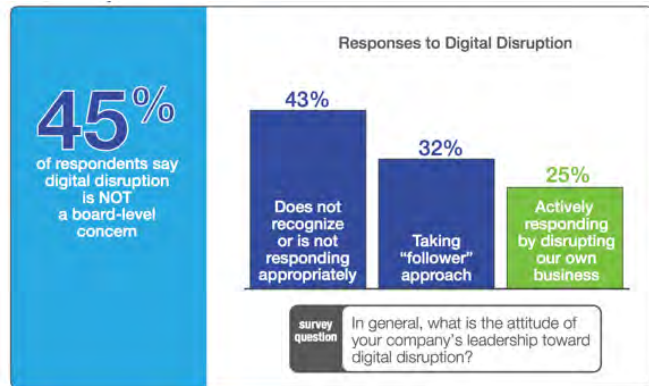
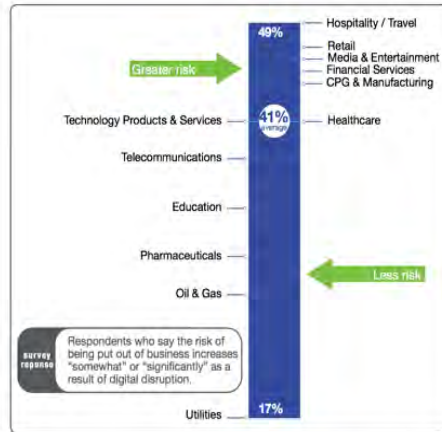
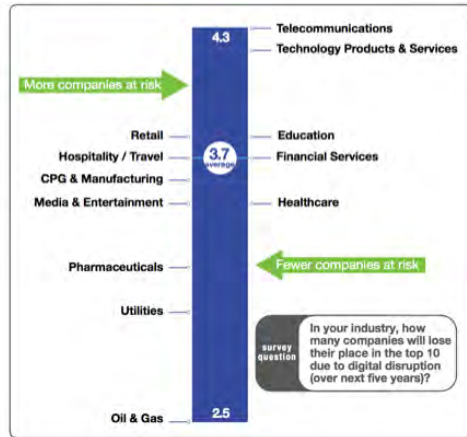


INNOVATIVE AND ADAPTIVE:

Digital transformation becomes a way of business as executives and strategists recognize that change is constant. A new ecosystem is established to identify and act upon technology and market trends in pilot and, eventually, at scale.

Digital Vortex

How Digital Disruption Is Redefining Industries



Survey of 941 businesses across 12 Industries

Survey respondents believe four out of ten will be displaced by digital disruption, 45% of Boards not concerned

Global Center for Digital Business Transformation –
IMD & Cisco Initiative

Digital Transformation: The rules have changed



Crowdsourcing



Big Data Decisions



Instant entrepreneurs



Internet of Everything

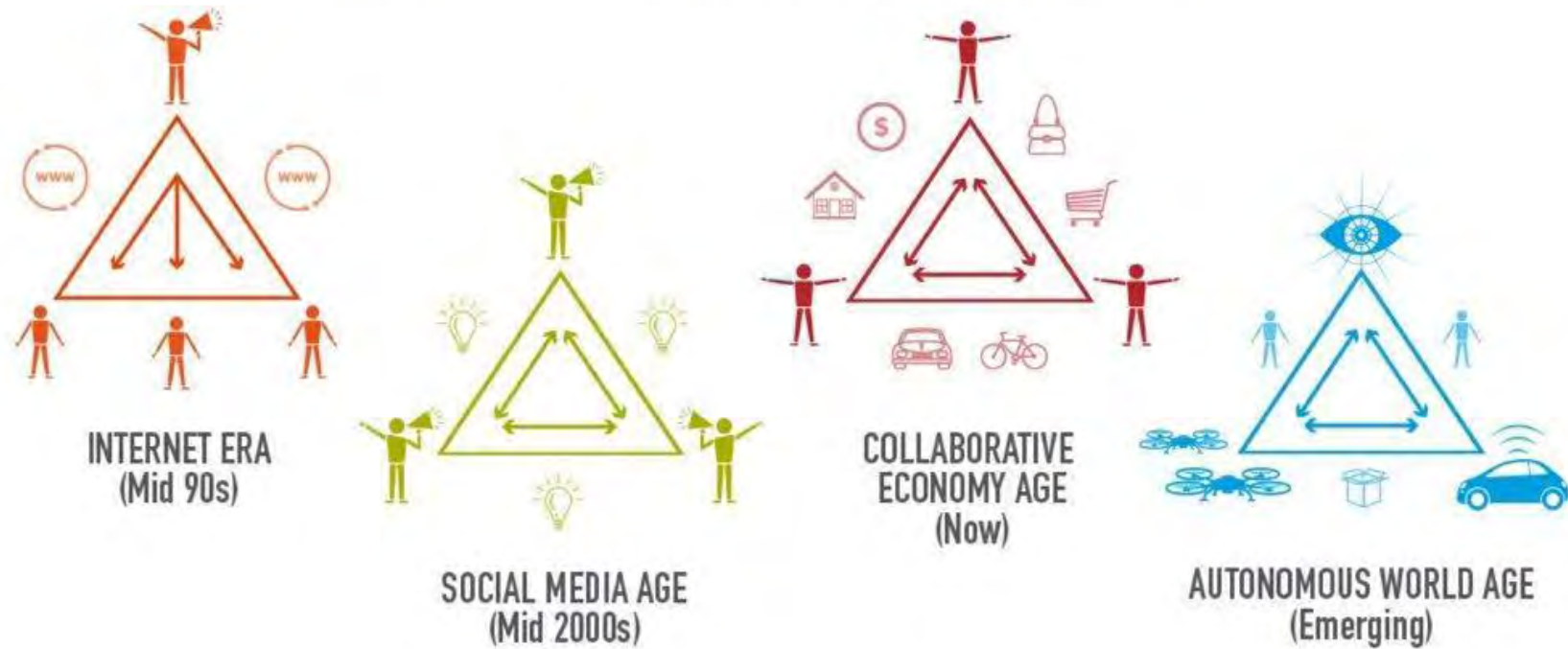


Mobility



Shared Economy


FOUR PHASES OF DIGITAL ERAS





The Future


6 Industries changed forever


You know the Digital Disruption has already happened when....


▶ World's largest taxi company owns no taxis → 
U B E R

▶ Largest accommodation provider owns no real state → 
airbnb

▶ Largest phone messaging company owns no phones → 
WeChat

▶ World's most valuable retailer has no inventory → 
Alibaba.com

▶ Most popular media owner creates no content → 
facebook

▶ World's largest movie house owns no cinemas → 
NETFLIX

The Digital Transformation Roadmap



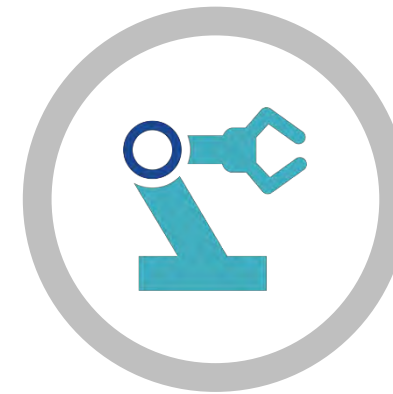
Digitise



Analyse

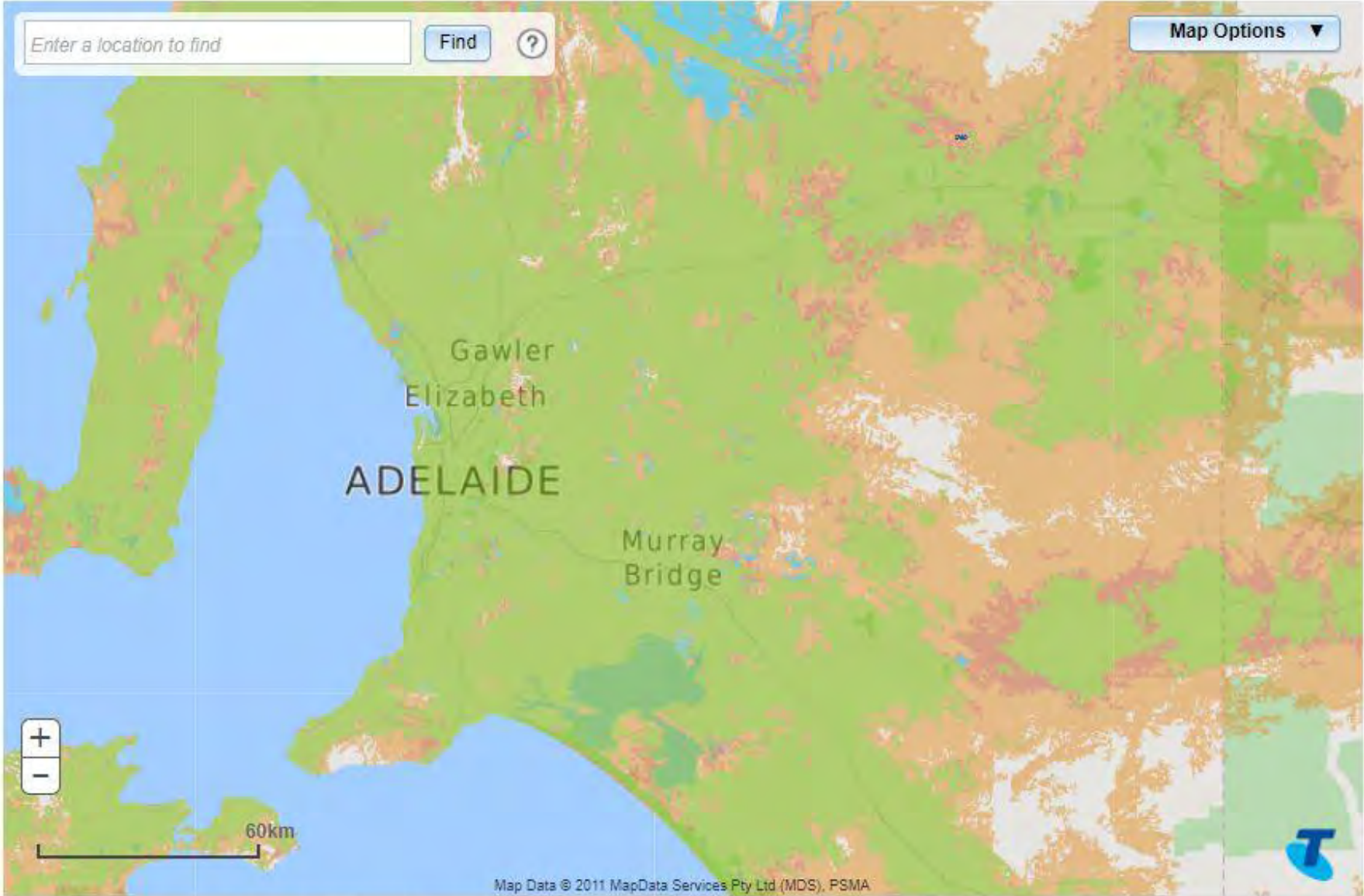


Optimise



Automate

The Connectivity Picture



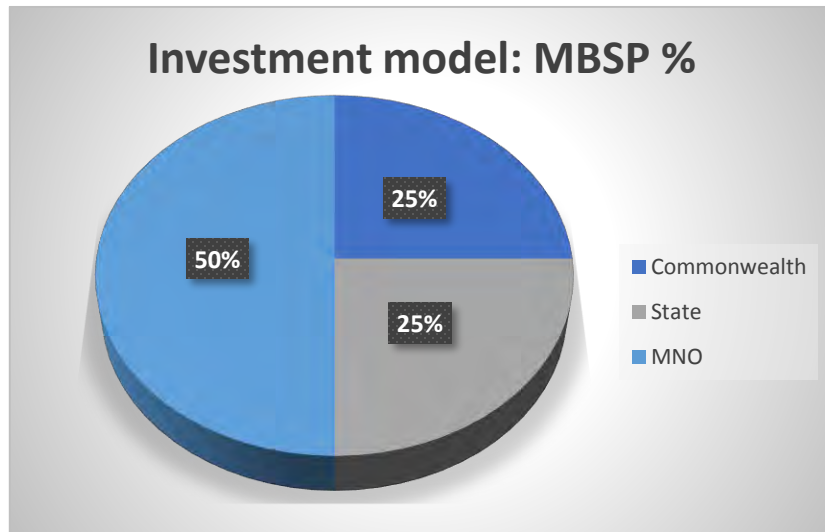
This is approximate coverage only and does not include indoor coverage. Speed and performance depends on your location and device and can be improved with an external antenna at additional cost. Voice is available over all the defined coverage areas.

- 4GX device only typical download speed 2 to 75Mbps
- 4G device only typical download speed 2 to 50Mbps
- 3G device only
- 3G external antenna

Demand drives investment: The Golden Rule

Federal Motivation

Under the Commonwealth assessment formula for selecting which sites to allocate funding to, the level of 3rd party contributions (by a State/Territory Government and sponsoring MNO) is the single most significant criteria to enabling success.



State Motivation

SA Liberal leader Steven Marshall has pledged \$10 million to fix mobile phone blackspots if elected in March. January 2018, pre election

The NSW Government will pump \$50 million into improving phone and data connectivity in the state's rural and regional areas as part of the NSW Government's \$1.3 billion Regional Growth Fund, announced in the 2017/18 NSW Budget.

The \$5 million WA Digital Farm program is the first step the State government is taking to improve farm digital technology and provide regional businesses with fast, reliable and affordable connections. January 2018

Carrier Motivation

Telstra announced its commitment to continued regional investment. Over the next 4 – 5 years it will invest \$350 million in new technology and regional base stations, \$240 million to continue its work on the first two rounds of the successful Mobile Black Spot Programme, and a further \$100-\$200 million set aside for new regional co-investments. November 2016

Optus has announced its intention to spend \$1 billion to improve and expand its mobile network in regional Australia by the end of June 2018. This includes Continuing to roll out innovative satellite small cell technology, which provides mobile voice and data services to remote areas of Australia. August 2018

RDAMR Success – MBSP Rounds 1 and 2

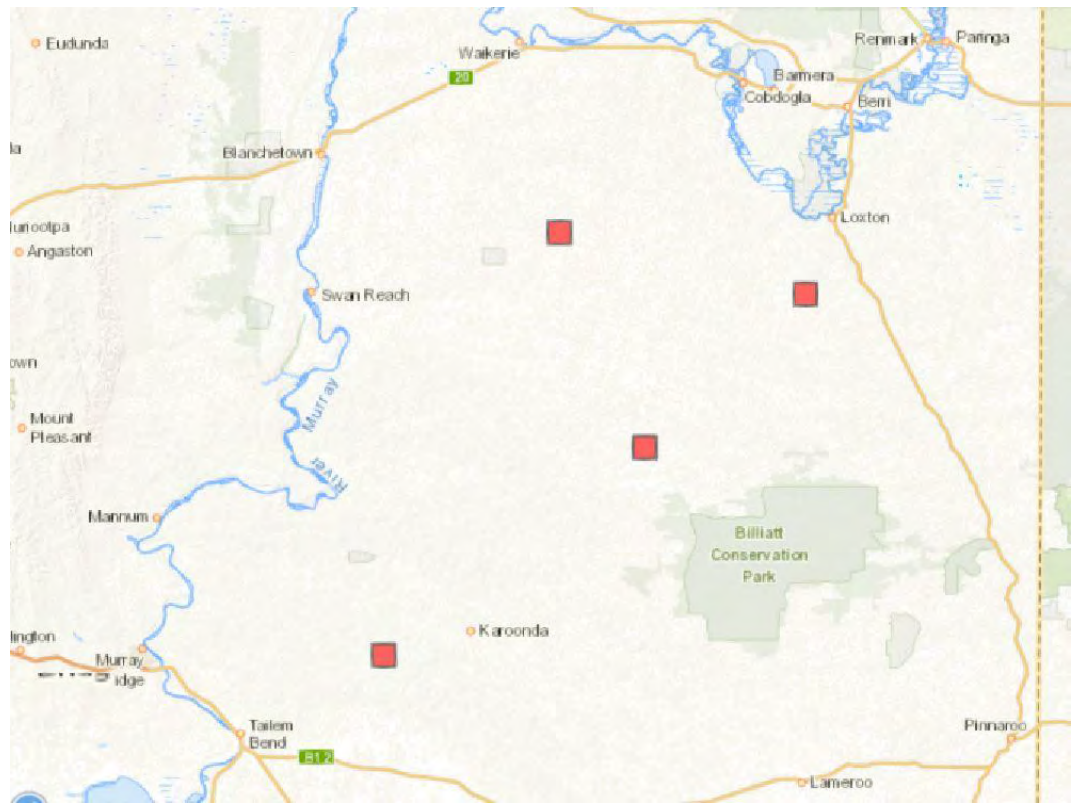
MBSP Round 1



Round 1 Site:
Paruna
Meribah

Round 2 Site:
Wynarka
Mindarie
Pata
Maggea

MBSP Round 2



MBSP Rounds 4, 5 and 6

Rounds 4

On 18 March 2019, the Minister for Regional Services, Senator the Hon Bridget McKenzie, announced the results of the Round 4 competitive assessment process. Round 4 will deliver **180 new mobile base stations** (49 Optus and 131 Telstra) to address more coverage issues in regional and remote Australia. The rollout is expected to commence shortly, with the first new base stations being activated by the second half of the year. **8 sites were awarded to the region.**

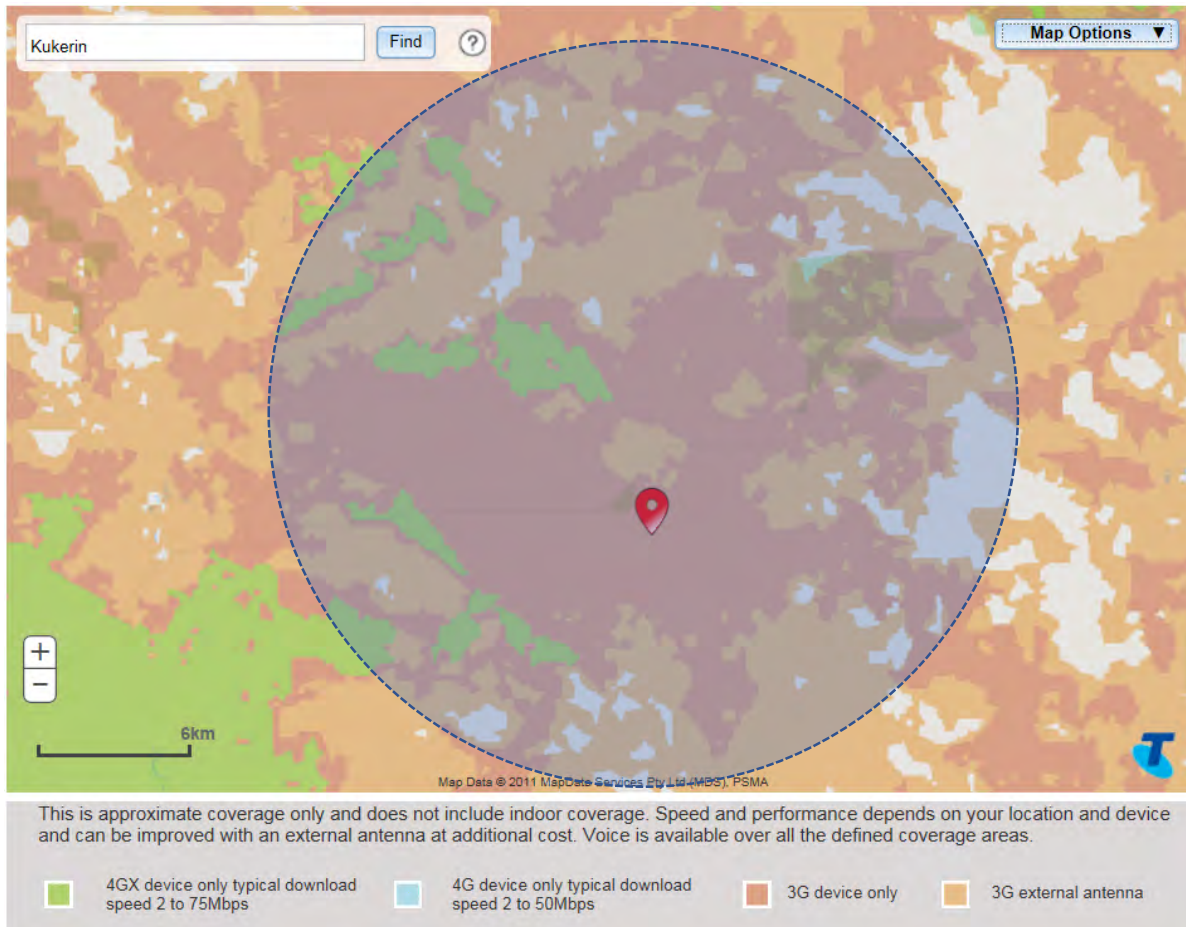
Rounds 5

The Guidelines for Round 5 were released on Grant Connect on 5 April 2019 and the Grant Opportunity (GO2529) was opened for applications. Up to \$80 million in funding has been allocated for Round 5. Like previous rounds of the Program, Round 5 encourages the mobile industry and state and local governments to work together to address mobile black spots across regional and remote Australia. Interested communities are encouraged to contact the mobile network operators and state and local government authorities to make their needs known. Mobile Network Operators and Infrastructure Providers have until 26 July 2019 to submit their applications.

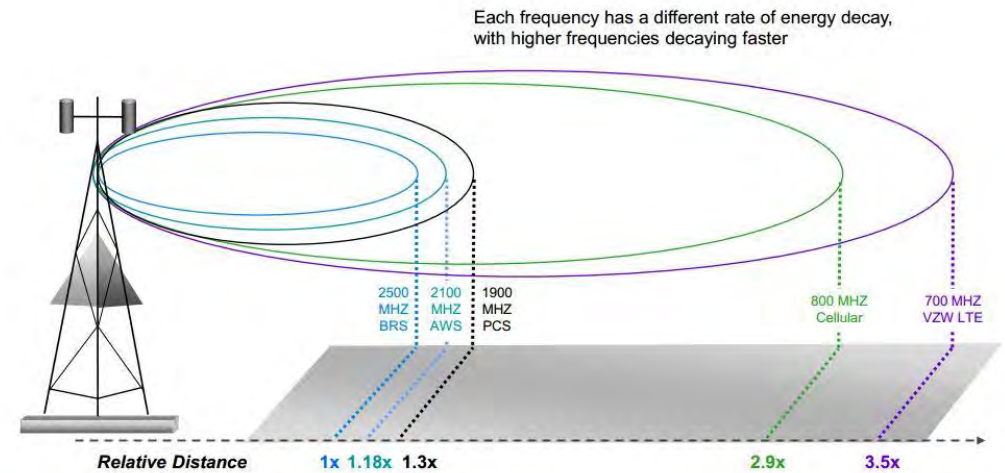
Round 6

The Government has committed \$80 million for Round 6 of the Program. Round 6 is expected to commence after the Round 5 process is complete.

Mobile: Upgrade before Build – 3G to 4GX/Plus



700 MHz Coverage Comparison

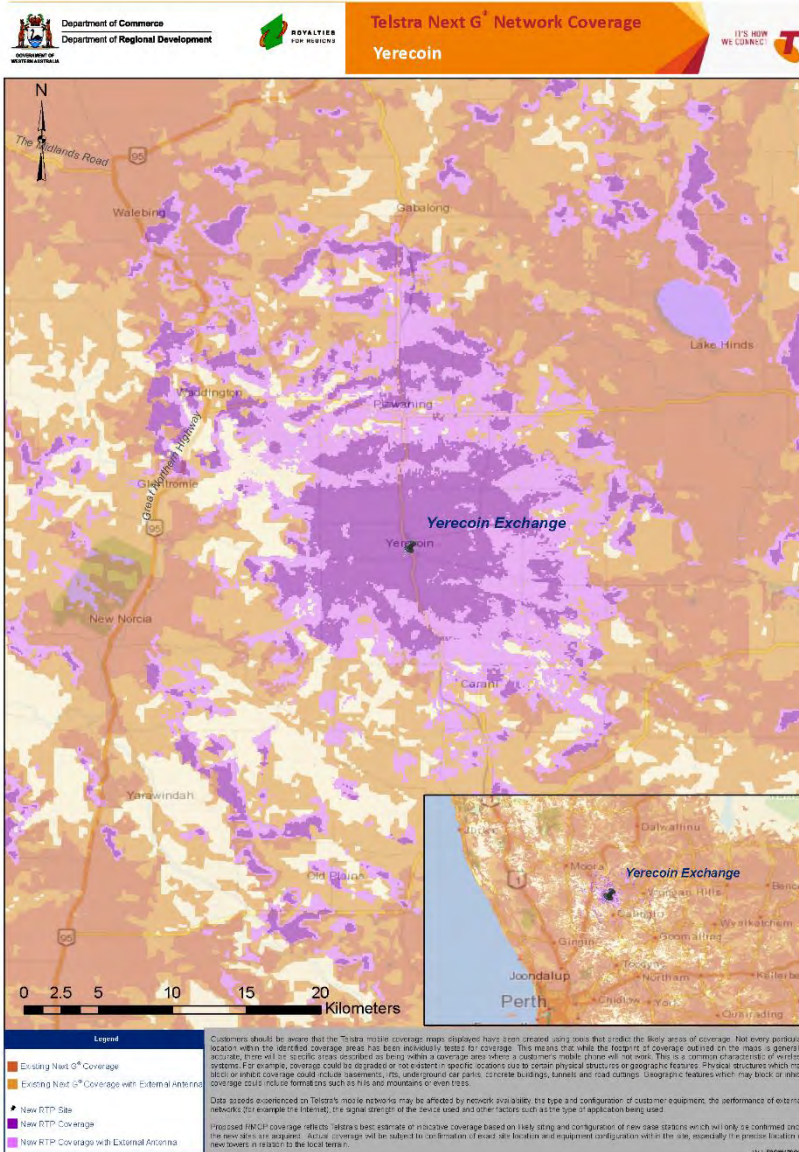


700 MHz delivers superior coverage

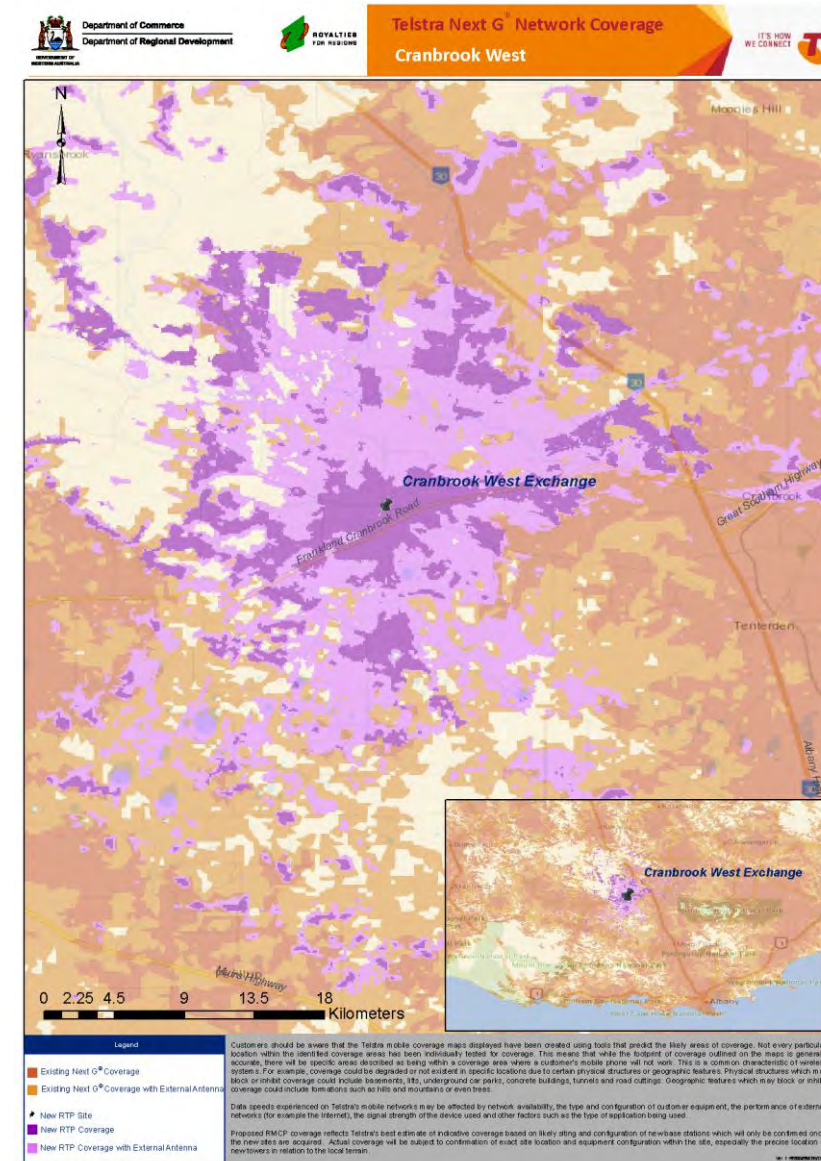
Mobile: Build it right 1st time



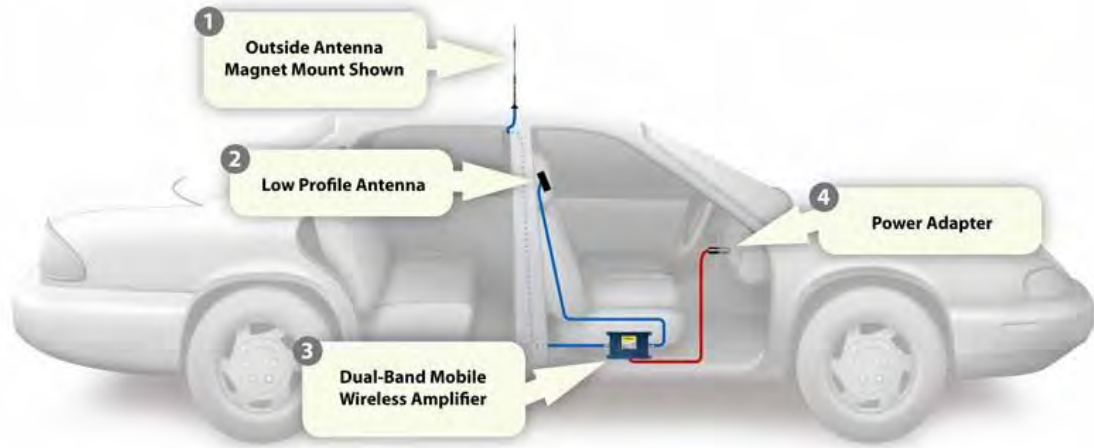
Yerecoin - 60m Tower



Cranbrook West - 30m Tower

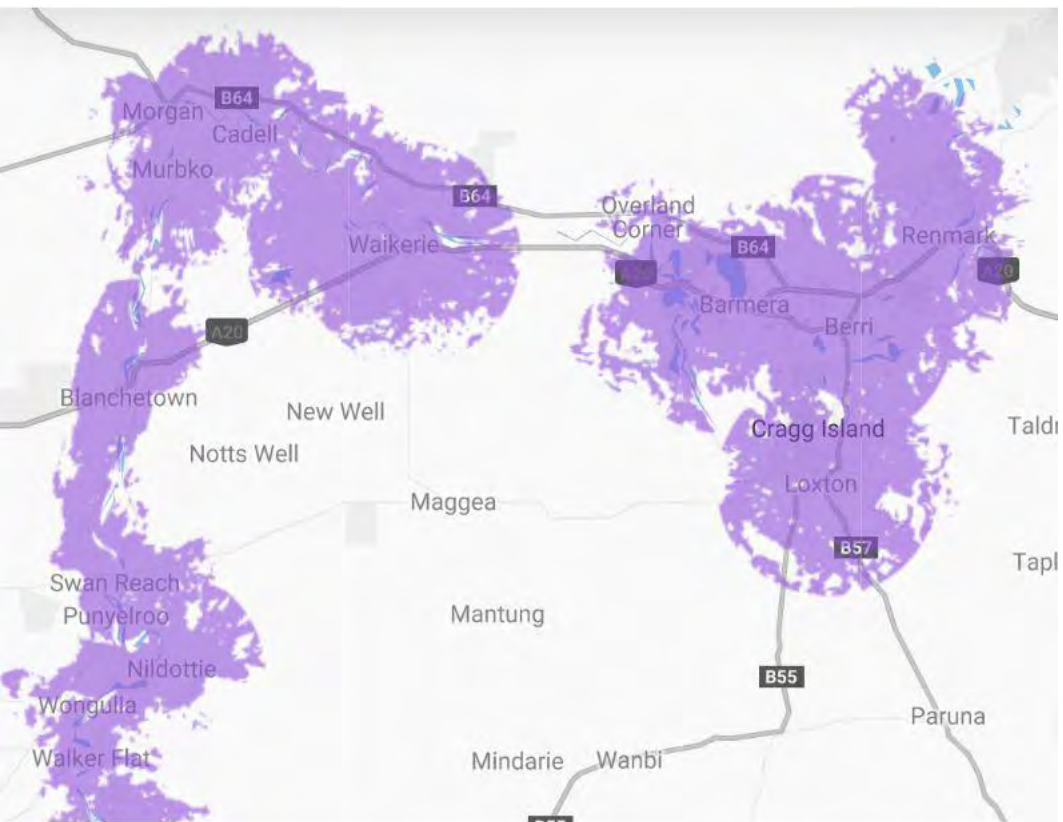


Mobile: Covering the roads

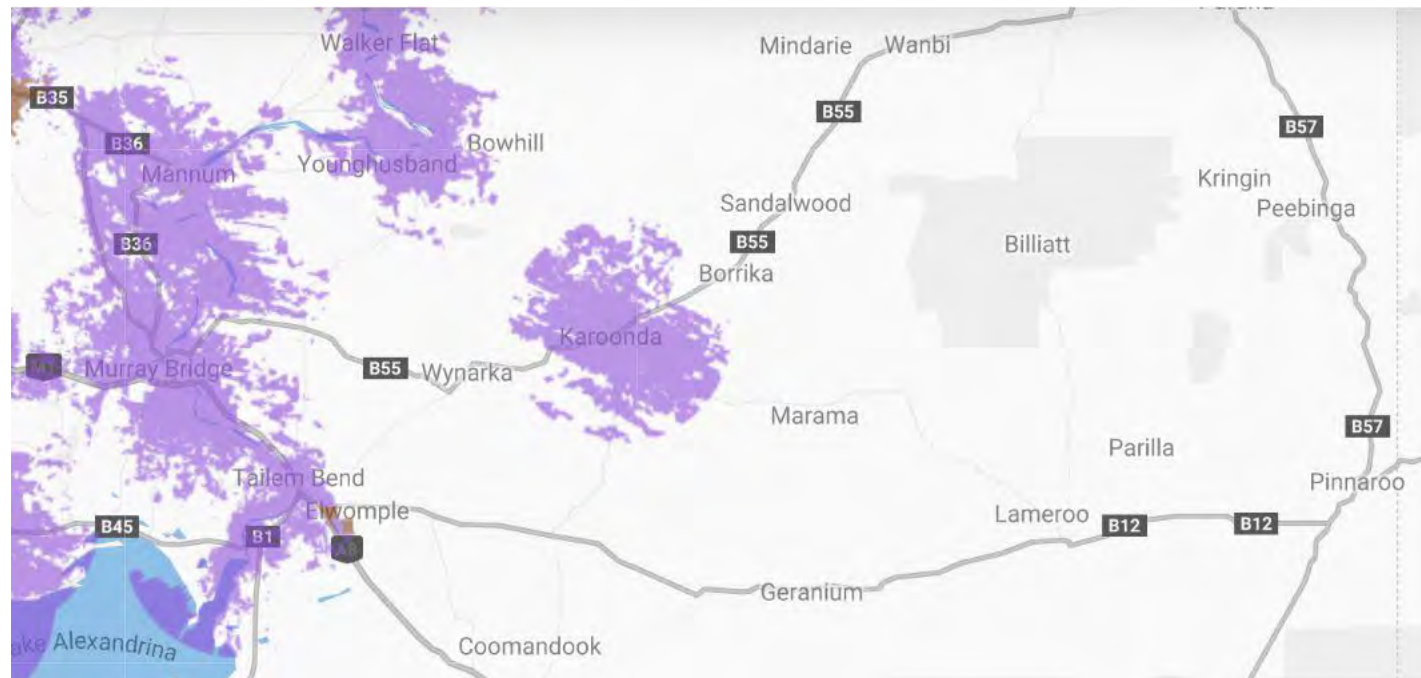


RDAMR NBN Deployment

Northern part of region



Southern part of region



The Bush is full of Businesses – Is NBN up to the task?

Consolidated Pastoral Company rolls out \$750,000 internet service



Skymuster NBN not an option for CPC. Mr Setter said no minimum service guarantees from the Skymuster NBN made it too unreliable for them to use.

"It's just not simply going to be good enough for us to run basic internet connectivity," he said.

"We wouldn't be able to use VOIP [Voice over Internet Protocol] or any [enterprise resource planning] applications to without predictable internet speeds and the NBN doesn't do that for us."

Farmers forced to go to extreme lengths to access reliable internet



A south-west Queensland cotton grower has spent the recent school holidays building a 53-metre tower that will allow him to access high speed internet from a nearby town.

It is an innovative solution to the data drought plaguing so many in rural Australia, and Andrew Sevil hopes it will future-proof his property.

"I'm not comfortable with Sky Muster due to latency using the satellite technology, so we made a decision a couple of years ago and it's just been a project we've been working on for a little while." Mr Sevil said he was motivated by the need for a good, reliable internet connection.

Data Drought: Satellite NBN service failing to pass muster



FARMER Lee Longmire is astounded the NBN Sky Muster satellite is being touted "as the be all and end all for rural and regional residents".

"The reality is it's a third-rate service that goes nowhere near giving satellite users equity or parity with fixed wireless or cable NBN customers," Ms Longmire, of Sandigo NSW, said.

Ms Longmire and her husband, Geoff, have tried and failed to use cloud-based accounting software, reverting instead to a \$600-\$700 a month mobile plan to gain 142 gigabytes of data.

Identifying Co-Investment



Brookfield, farmers take on Telstra with WA SuperNet rollout. December 2017

West Australian farmers fed up with slow internet speeds are working on a plan to take on Telstra and revolutionise broadband internet services in rural areas. Arc Infrastructure, a subsidiary of Brookfield Asset Management, is working with CBH, a co-operative controlled by about 4000 grain growers in WA, and community leaders on the idea.

Internet experts say farmers could establish their own purpose-built broadband network. July 2017

Farmers are being advised to consider investing in their own, cooperatively built and managed internet network, linking farm businesses. Jude De Silva, an internet and communications specialist, is proposing a scheme for farmers in the Southern Highlands of New South Wales to establish the sort of internet capacity they want, and to do it themselves.

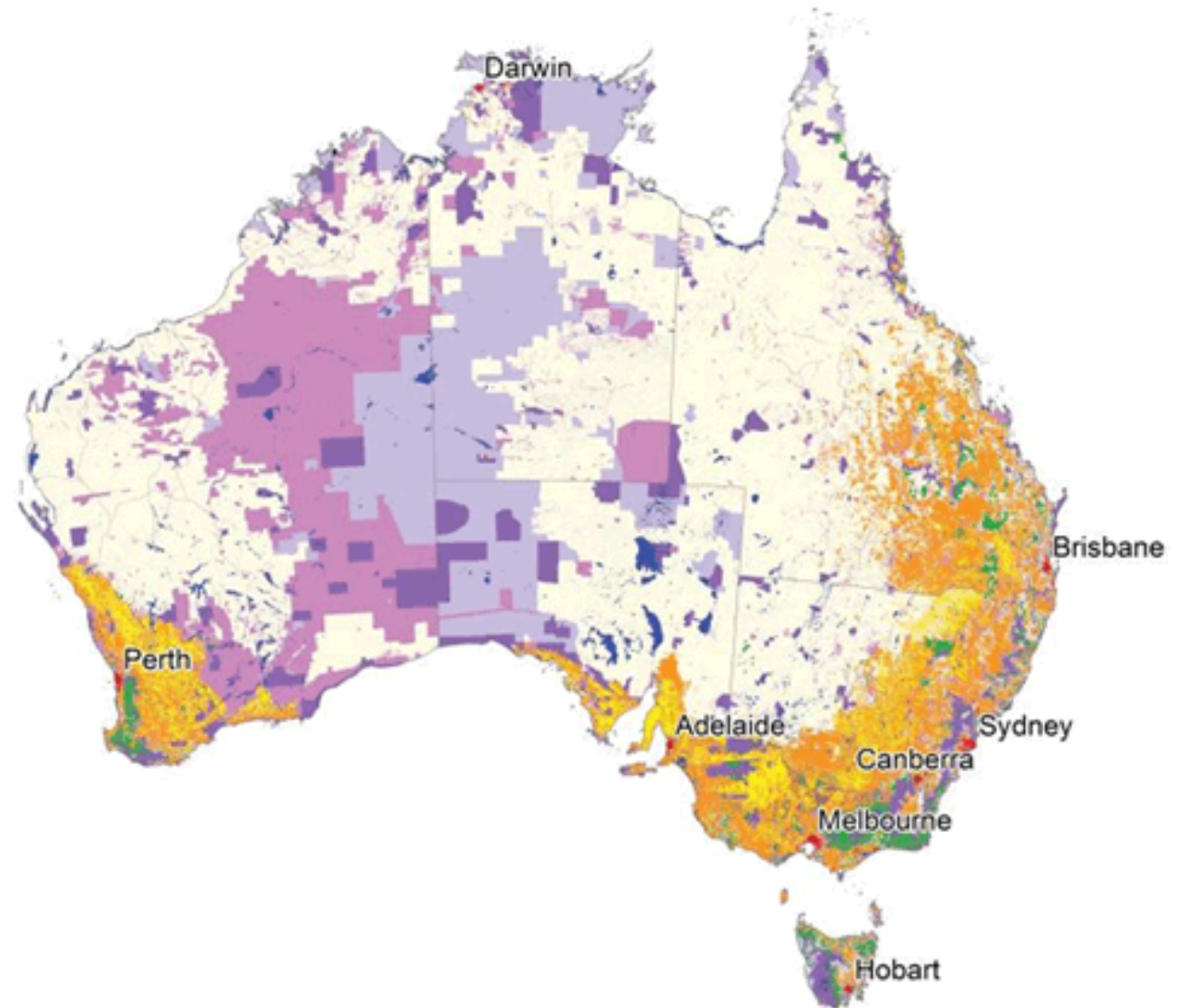


The B4RN project has already connected 400 homes in the British countryside, and it's faster than the big guys. June 2014

Frustrated by the major internet service providers and failed attempts to get local government funding, they're going it alone. They're building their own fibre network—digging the routes, laying the fibre, splicing the wires—and it's not just superfast but hyperfast, bringing broadband speeds of one gigabit per second to every home.

Agriculture is to Regional.....

- Nature conservation
- Other protected areas
- Minimal use
- Grazing native vegetation
- Production forestry
- Dryland cropping
- Plantation forestry
- Grazing modified pastures
- Dryland horticulture
- Irrigated cropping
- Irrigated pastures
- Irrigated horticulture
- Urban intensive uses
- Intensive animal and plant production
- Rural residential
- Mining and waste
- Water



The Smart Farming phenomenon

Smart Farming – how the innovation boom could supercharge agricultural productivity

HopgoodGanim Lawyers, 16 May 2016

National Farmers Federation launches Digital Agriculture Service to crunch vast amounts of data and boost farm profit

ABC, 14 December 2015

Agricultural Competitiveness White Paper



Commonwealth of Australia, 2017

Australian producers falling behind on intelligent agriculture

Michael Madigan, The Courier-Mail, August 12, 2016



Demand determines infrastructure: Irrigation



Natural Rangelands, scrub



Fruit & Nut orchards

Leveraging other Infrastructure

Rail



Road



Water



Gas



Electricity



Often someone's path is going from here to there

Is NBN Smart Farm Ready?

Consolidated Pastoral Company rolls out \$750,000 internet service



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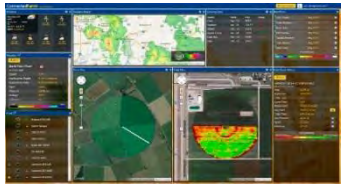


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Smart Farm Case Study 1



LMU dashboard located at the Homestead and fed by data from devices and systems deployed across each specific paddock



Central water point with sensors monitoring consumption and quality, data fed back to Homestead.

Walk over weight scales located as part of paddock water points. Data sent back to Homestead via LoRa network.



Paddock weather station providing data back to Homestead via LoRa network



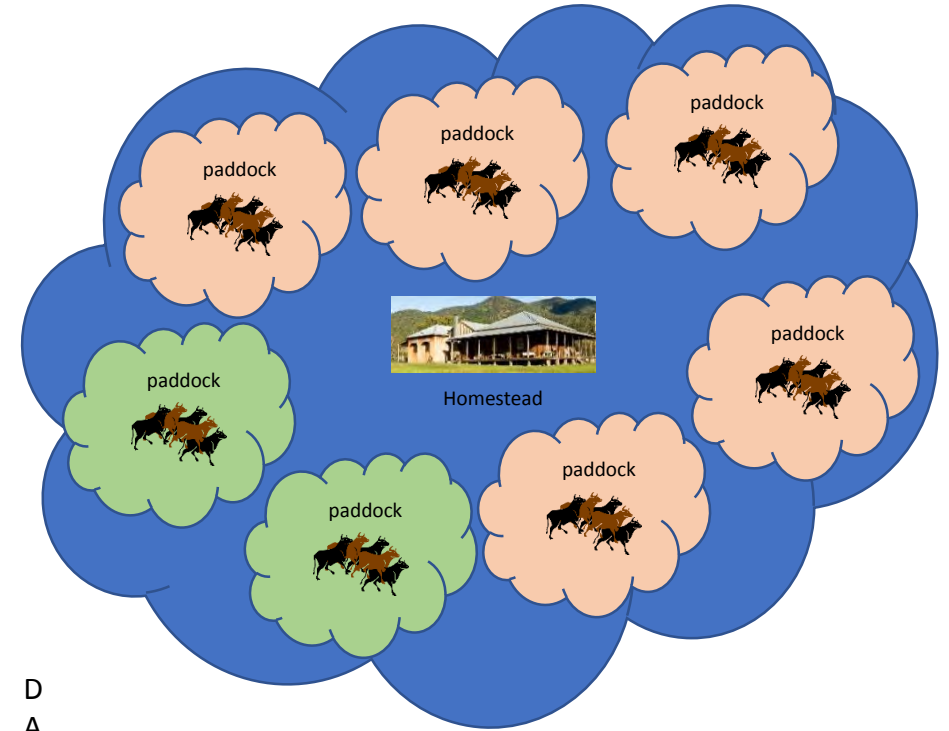
Paddock meshed with other paddocks and linked back to homestead using carrier grade wireless/satellite service



LoRa edge network, connecting in-paddock instrumentation back to the Homestead via wireless mast



Long range, large payload commercial drones, recording data on pasture, soil, moisture, feed consumption, erosion, pests and fire monitoring.



D
A
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Soil Condition



Water Resources



Pasture Condition & volume

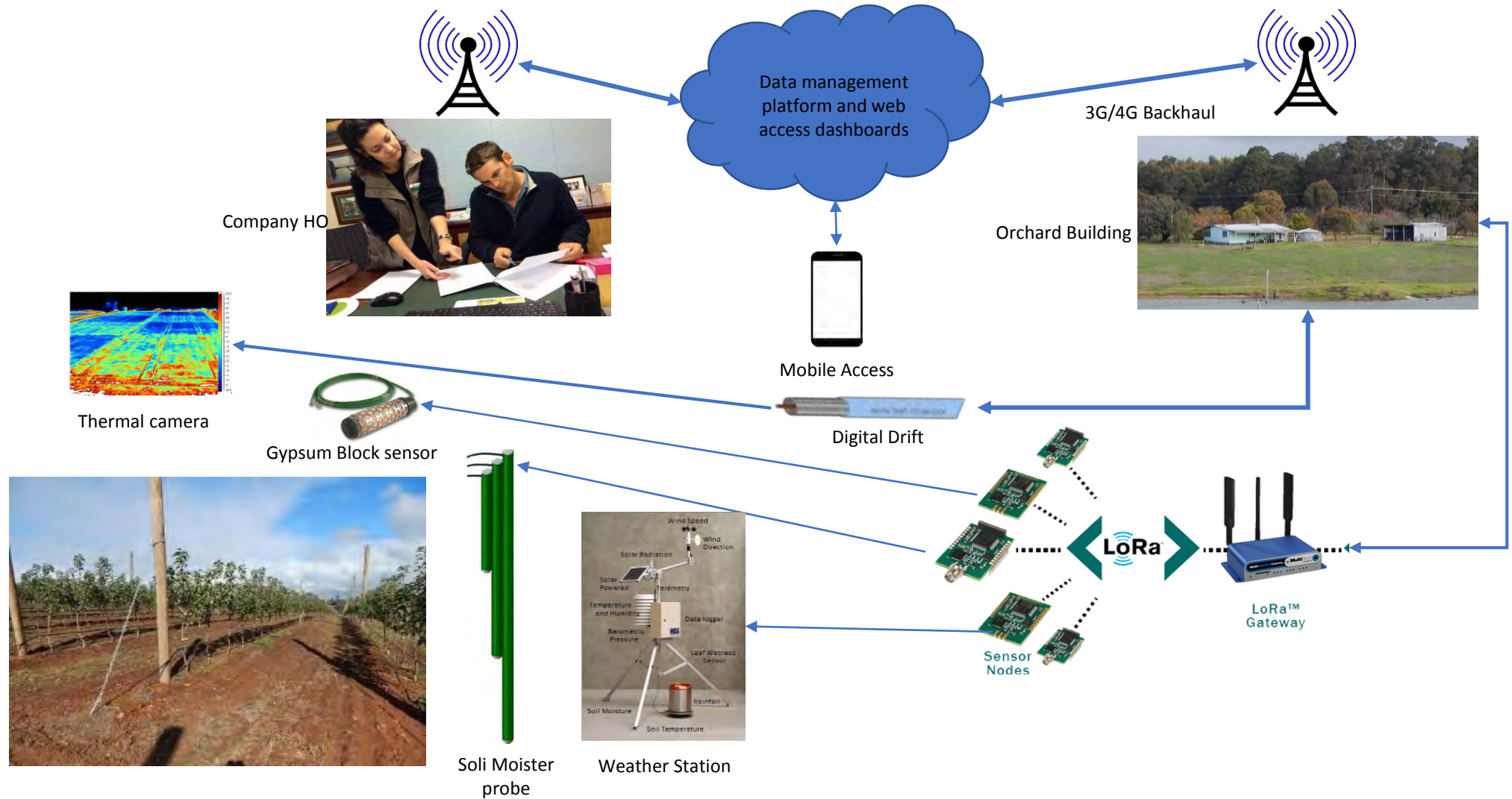


Cow classification & growth status

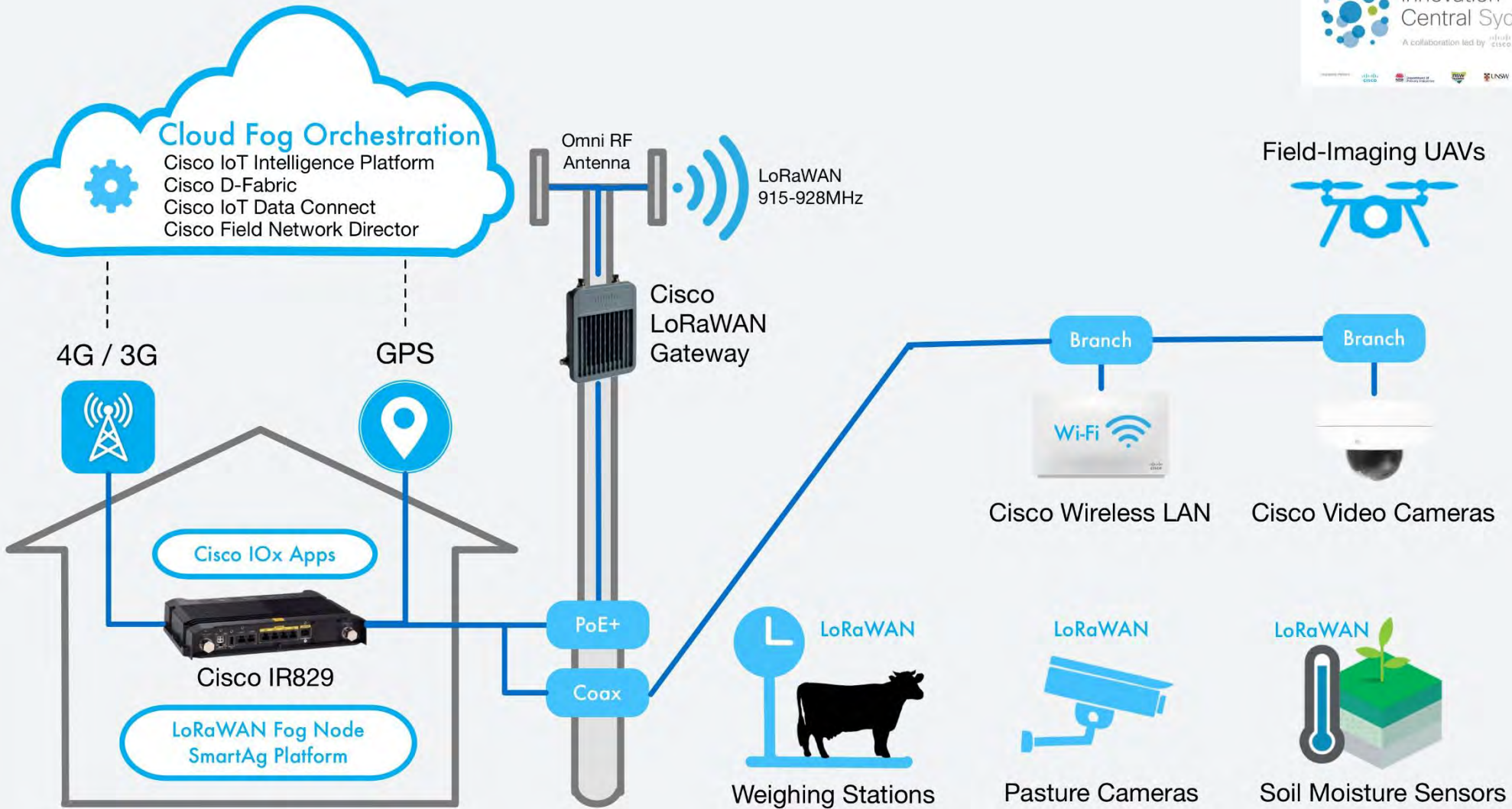


Weight to pasture conversion

Smart Farm Case Study 2



The Farm Decision Platform - Cisco



Opportunity 1: Leverage Regional Stakeholders



Operates over 5,500 km of rail networks across southern WA. This includes extensive communications infrastructure used in the coordination, management and control of rail operations, involving over 180 train movements each day.



Operates 195 receival and storage facilities located across the Western Australian wheatbelt. Aligns with Brookfield Rail networks.



Research the latest technology applications in agriculture. Recently launched FERTview, an online nutritional services tool that uses growers agronomic and mapping data to help support better fertiliser decisions.



In a desperate bid to fight the "data drought" in the bush, farmers and rural groups are joining forces with consumer advocates. 14 organisations have come together to lobby form the Regional, Rural and Remote Communications Coalition.



Municipal broadband deployments are broadband Internet access services provided either fully or partially by local governments. Common connection technologies include unlicensed wireless (Wi-Fi, wireless mesh networks), licensed wireless, and fiber optic cable.

Microsoft puts up \$10B to bring broadband internet to millions of rural Americans

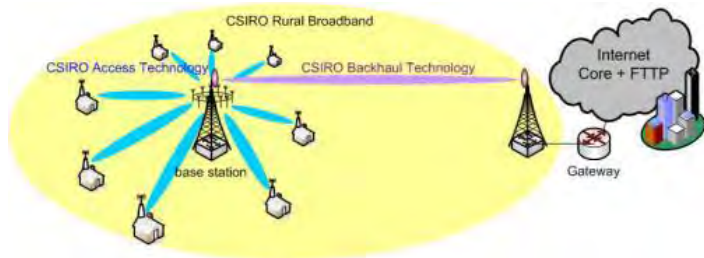
Opportunity 2: Apply Fit for Purpose Technology



Where possible expedite the upgrade from 3G to 4Gx/Plus, to create extra coverage and improve performance, before investing in new sites.



Investigate the use of narrowband wireless solutions and the deployment of LPWAN technologies on a fit for purpose basis. Options such as LoRa present a cost effective solution for extending connectivity, to support IoT applications (in agriculture, tourism, transport, environmental and resources management) across a broad range of industries and functions.



Leverage Australian based innovation such as NGARA Wireless, to provide next generation solutions across rural and regional areas, releasing pressure on the NBN Satellite platform and enabling enterprise grade solutions for rural businesses.

Opportunity 3: Explore Local Cooperative Networks

NEWROC & PEEL



A new business promising “super fast” internet has launched at a Peel Chamber of Commerce and Industry function in Pinjarra.

South Western Wireless, which offers fixed wireless internet, is a small business run by Jeremy Devenish, Maree Gooch and Sara Ballard, who all live in regional Western Australia.

A company spokeswoman said their technology was capable of internet speeds of up to 100 Mbps rather than the 10 Mbps currently offered by the major providers, but did not rely on NBN or satellite technology.

The company’s mobile data centre consisted of a modified 20 foot shipping container with a satellite dish and aerial, doubling as a wireless transmission tower designed to deliver high speed internet.

Albany & Great Southern



The loss of business in the Great Southern because of the lack of high-speed broadband could end after an agreement was signed this week between a local technology service provider and a community radio station.

The signing of a memorandum of understanding on Tuesday between Albany Community Radio 100.9 and Australian Telephone Networks on the use of the station’s radio mast on Mt Clarence will introduce technology for faster internet downloads in Albany sooner than expected.

The agreement will use microwave technology to cover a wider section of the Albany area.



The Digital Farm Grants program is a \$5 million State Government initiative, administered by the Department of Primary Industries and Regional Development (DPIRD). Grants of up to \$500 000 have been made available on a matching co-contribution basis, to cover capital costs of improving connectivity to multiple farming enterprises and associated stakeholders. The fund targets agricultural and pastoral regions which lie outside the current or planned National Broadband Network (NBN) fixed wireless and fixed line footprints. This potentially makes the entire Shire of Dumbleyung eligible.

Under the first round of Digital Farm Grants, a total of \$2.3 million has been allocated to four successful applicants who have committed to extend services across nearly 40 000 square kilometres. The new services are expected to be rolled out in the next 18 months as the infrastructure is completed, providing more rural businesses and people living in the regions with a fast, reliable, affordable and scalable broadband service.

Superloop Limited (Superloop) has confirmed its receipt of funding under the program with a commitment to build a new rural network worth \$1,000,000, between Narrogin and Gnowangerup, in conjunction with the WA State Government. The objective of the new network will be to support the widespread adoption of digital farm technologies.

Mr Drew Kelton, CEO of Superloop has confirmed that the network will consist of both fixed fibre and fixed wireless solutions. In April 2017 Superloop acquired Big Air Wireless (a national fixed wireless broadband provider, specialising on regional services) to develop its regional capability. The Digital Farm network will be Superloop's first regional network deployment in Western Australia. It intends to expand on this in the future.

Optimi Digital recommends that the Shire of Dumbleyung make representations to Superloop and the DPIRD, to ascertain if the route of the new Digital Farm Network will pass through the district. If not, what could be done to scope out an expansion to enable this to occur.

Digital Farm Fund: Pivotal

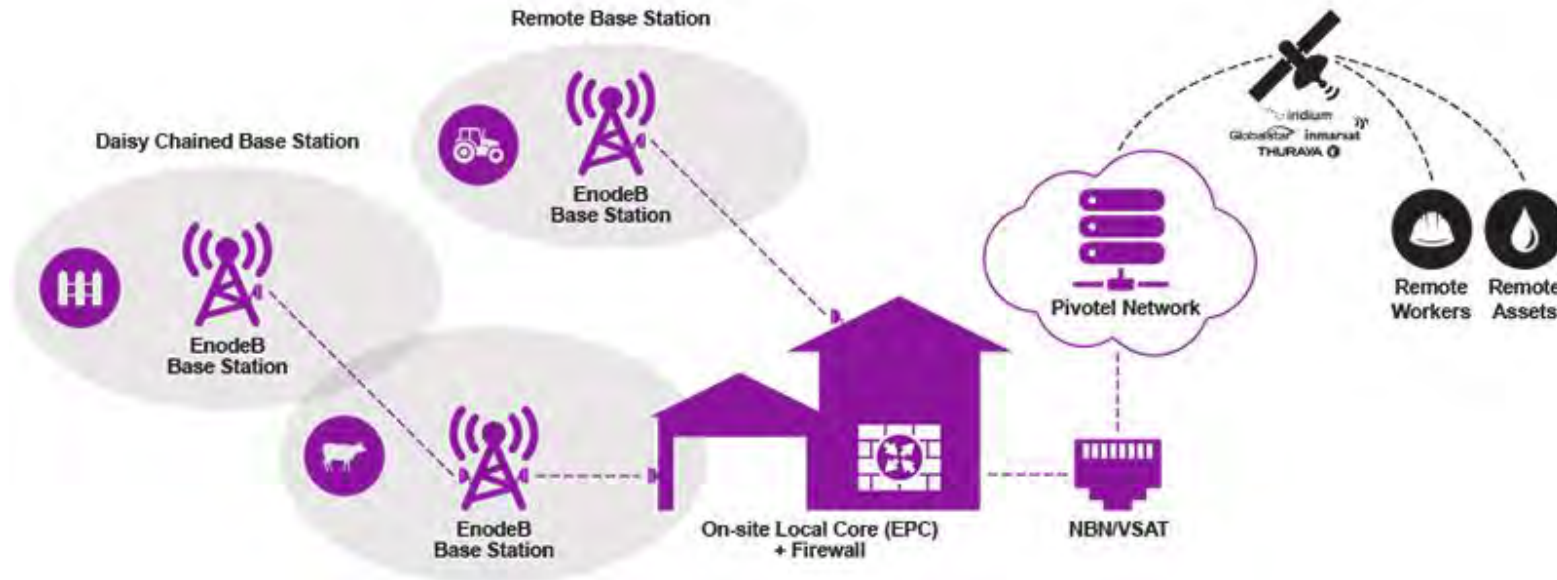
Funded Provider



**LTE (4G) & SATELLITE TECHNOLOGY
DELIVERING COST EFFECTIVE
COVERAGE EVERYWHERE.**

Another option for rural areas is through the national mobile and satellite carrier, Pivotal. They have also received funding through the Digital Farm Fund, to deploy new infrastructure around Wickpin and Mount Barker using their Ecosphere product. As there is expected to be follow up rounds of funding for the Digital Farm Fund, it would be useful to explore how Pivotal may be able to address some of the mobile and broadband connectivity issues identified by the Digital Census and assessment. The Pivotal model is best aligned with a Grower Group. If the Shire is aware of any local Grower groups that may be interested in exploring this option Optimi Digital can facilitate an introduction to Pivotal WA.

Pivotal offers a dedicated farm/rural property based custom-designed network for voice, data and M2M connections. With a mix of LTE (4G) and satellite connectivity, ecoSphere® by Pivotal offers secure voice, data, video, tracking and monitoring connections for on-site and remote assets and personnel to maximise safety and operational efficiency.



Digital Farm Fund: Cyphertel

Funded Provider



On the 10th of October 2018, the WA Regional Development Minister announced that CIPHERTEL would receive a grant of \$1,5 million to roll out improved broadband services to areas of the South West and Peel region. Bunbury-based service provider CIPHERTEL will receive the funding to cover residents and businesses across a total of 3000sq m. CIPHERTEL chief executive officer Matthew Frontino said a full roll-out of the service would be delivered within 12 to 18 months. This latest round of funding under the Digital Farm Grants program will cover farms near Myalup, Wagerup, Williams, Boddington, Capel and Busselton.

CIPHERTEL is a 100% Australian owned licensed communications Carrier based in Bunbury, Western Australia. Established in 2002, CIPHERTEL acquired the business of Gateway Internet Services in 2003 and has been engineering and building sophisticated networks, communication infrastructure, hardware and software projects over the last decade. Delivering reliable and high-speed network services to its customers. Our head office, network exchange, datacentre and Network Operations Control (NOC) is located in Bunbury, WA with a second data centre located at QV1 in Perth CBD. CIPHERTEL is a retail and wholesale Internet Service Provider (ISP) offering NBN, ADSL, BDSL, microwave multipoint, Microwave Point To Point (MPTP) and direct dark fibre and managed fibre network builds, operating Multi-Protocol Label Switching (MPLS) within its network backbone.



The development will be undertaken as three separate networks, each receiving \$500,000 in funding to implement. This second tranche of funding, forms part of the first round of the Digital Farm Grants program announcements which were made in August 2018. The funding is meant to target agricultural and pastoral regions which lie outside the current or planned National Broadband Network (NBN) fixed wireless and fixed line footprints. This is a marginal achievement for the CIPHERTEL projects and 5 of the 6 sites to be covered all have existing NBN Fixed Wireless coverage.

It would be prudent for the Shire to approach CIPHERTEL, to explore options for extension of any of the 3 developments into the district. The Boddington Williams project may be able to be extended to the West Arthur Shire.

Rural IoT Connectivity

Funded Provider

There is an increasing need to look beyond mobile phone coverage, to support the Internet of Things (IoT). Many farmers, resource companies, environmental agencies, governments, defense agencies and rural industries with remote operations have a strong demand for remote machine-to-machine connectivity. However they simply cannot justify the cost of existing services because the application only require small amounts of data from tens of thousands of sensors. Thankfully there are solutions emerging on to the market. Results on page 16 indicate that 43.5% of farms within the Shire already implement technology as part of their operations. This is something that the Shire should support.



Myriota offers a highly scalable global service for this new category of customer. They have developed a system that is fit-for-purpose, and can be delivered at a disruptively low price that closes the business case for deployment.



<http://myriota.com/>



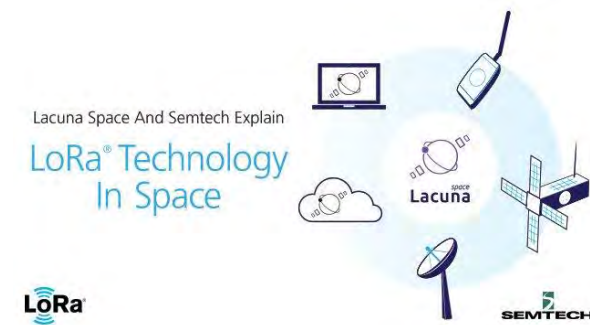
Fleet is an agile new space company. It specialises in creating low-cost satellite based systems for Industrial Internet of Things applications.



<https://www.fleet.space/>



Low-cost, simple and reliable global connections to sensors and mobile equipment. It just works everywhere, and all the time, so you can focus on using your data.



<http://lacuna.space/>

Opportunity 4: Consider Regional Recognition in legislation

Telecommunications Reform Package, 2017: Regional Broadband Scheme

Enable services to regional areas to be sustainably funded into the future through the introduction of the Regional Broadband Scheme, that will require all eligible broadband network providers to contribute, alongside nbn, towards the long-term costs of regional Australia's nbn satellite and fixed wireless services.

NBN backhaul: Cell Site Access Service (CSAS)

Enables a Customer or its Downstream Customers to supply public mobile telecommunications services (as that term is defined in the Telecommunications Act) via Customer Equipment at a CSAS Point.

Telecommunications Universal Services Obligation Inquiry

This report was sent to Government on 28 April 2017 and publicly released on 19 June 2017. The report recommends taking a new and modernised approach to the subsidy and support arrangements that form the current universal telecommunications services in Australia. Implications for regions.

Non-NBN high-speed internet services

The ACCC's final decision exempts superfast broadband access service - SBAS (but not Local Bitstream Access Service - LBAS) providers supplying up to 12,000 end users from all wholesale access obligations. The arrangement covers broadband services built before and after January 2011. It does not cover fixed wireless, mobile or satellite services.

The Smart Economy & Society

Globally, communities are challenged in similar ways ...



Job Creation



Economic Diversity



Limited Revenue Growth



Escalating costs to provide services



Environmental sustainability



Growing international competition



Expectations of citizens for 'Google-like' services

Building Capacity: Collaboration Hubs

At its core, collaboration is about partnerships. Working in tandem with like-minded people to achieve a common goal and reach a sustainable level of operation. Collaboration can help individuals and SME's to achieve their shared goals and objectives by:

- Reducing costs through pooling resources, sharing common infrastructure and equipment and eliminating potential duplication of services;
- Sharing expert knowledge and skills between partners, thereby allowing each individual party to strengthen their own capabilities;
- Creating economies of scale for the purpose of procuring goods and services and deploying marketing and promotional activities, to attract new clients and expand into new markets.

The core aims of a collaboration space are:

1. Providing common user infrastructure, equipment and facilities, to reduce the need for high capital outlay.
2. Bringing people with diverse backgrounds, skills and experience together, to pursue common goals.
3. Supporting new ideas and ventures through mentoring and the sharing of experience and knowledge.

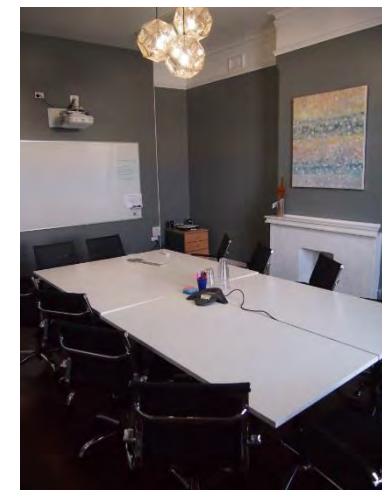


Make Place is described as the “ maker factory”, where game changing innovation happens. The Makers have created a co-working and innovation space in the heart of Mandurah, bringing like-minded people together to be inspired, solve problems and make change. The centre aims to provide a bit of inspiration in the form of a new type of workplace filled with different people. If you have a big new idea, run a business, study, freelance or commute, or you just need a motivating place to work, Make place is the location for you!





CityHive is run by Pollinators to provide coworking, meeting, event and office space on Marine Tce in the Geraldton CBD. Whether your version of 'getting things done' requires coffee, a team of twenty, or a quiet space for creating on your own, you can find it at CityHive. Pollinators Inc also provides a range of training, networking and collaboration events at CityHive. CityHive's professional and inspiring co-working and private offices, casual and corporate meeting spaces are all offered at varying rates depending on the duration and frequency of use.





Pop Brixton is a pioneering new space created with the local community in mind to showcase the best and most exciting independent start-ups and businesses from Brixton and Lambeth (London UK), where they can share space, skills and ideas. Pop Brixton will house the next generation of local food and drinks entrepreneurs, retail outlets, workspaces for local business and artists, tech enterprises and a community event space, to be enjoyed by all. Affordable space for start-ups and small businesses is provided with 10 units available at 20-50% of market rate.



Where to start: Local Government, Digital Leaders

Experience & Education

- Demonstration
- Digital literacy
- Promotion events
- Digital engagement
- Social media training

Innovation & Collaboration

- Coworking
- Hacks
- School & TAFE links
- Start-up Programs

Common User facilities

- Computer – media lab
- Meeting – collaboration lab
- Developer “sandpit”
- Creative studio

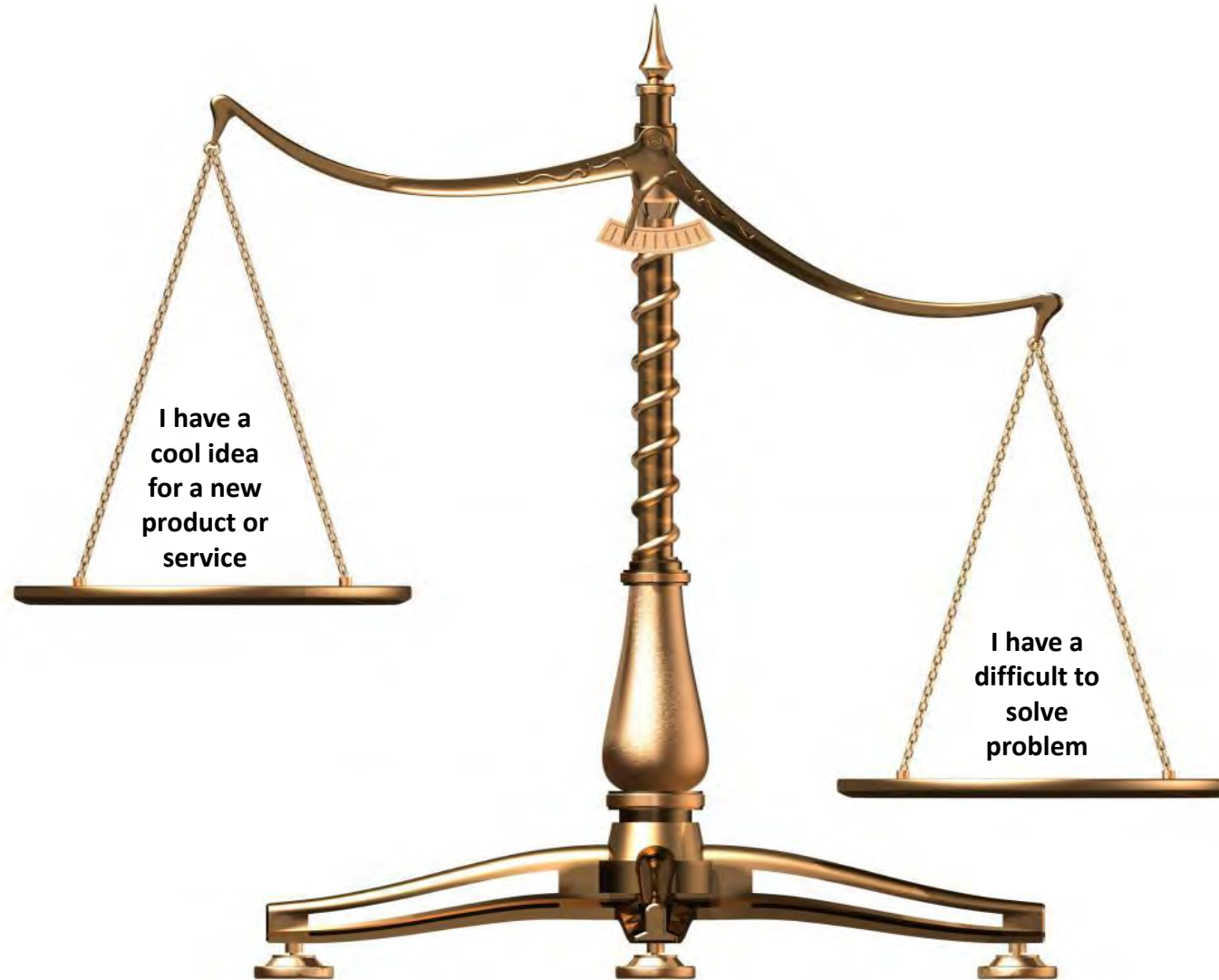
Incubation & Commercialisation

- Business planning
- Mentors
- Investment & funding
- Facilities hire
- Promotion & networking

Five things for Local Government to Focus on

1. Connectivity deficiencies: without the best infrastructure you could be left behind!!!
2. Digital participation: ensure access, affordability and the literacy to be part of the online world.
3. The Smart Community Model: improve social & economic amenity through technology.
4. Smart Industry: facilitate exploitation of digital to enable local business to remain competitive.
5. Digital tourism: thousands of digitally active consumers on your doorstep, looking for something engaging to do (Pokemon Go).

A Different Approach to Innovation



I have a cool idea for a new product or service

I have a difficult to solve problem

Innovation Central – a transformational solution



Innovation
Central

A collaboration led by  cisco.

Connect
Innovation

Solve
Problems



Showcase
Innovation



Tap Global
Networks



Engage MR
Eco-System



Industry
Collaboration



Design
Thinking



Test Ideas &
Concepts



Co-Develop



Access
Research



Build
Prototypes

Digitally Advanced Farming Ecosystem



Data-driven

Data Driven Beef



Water Optimisation



Fitbits for Sheep



Connected Apples



Farm Decision Platform



Farm Drones



Wireless Sensor Networks



Education



Energy

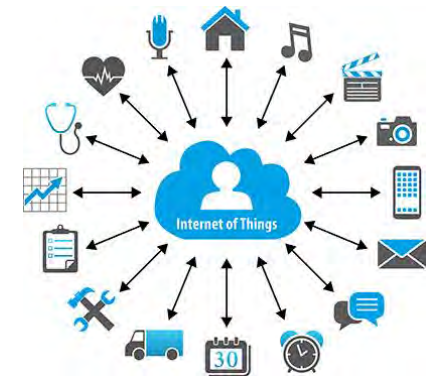


Industrial



Remote Power

Ecosystem of Sensors & Controllers



WAVI: ICP in a box



Local
Innovation
Hubs

Local
Innovation
Hubs



Local
Innovation
Hubs



Showcase
Innovation



Tap Global
Networks



Engage MR
Eco-System



Industry
Collaboration



Design
Thinking



Test Ideas &
Concepts



Co-Develop



Access
Research



Build
Prototypes

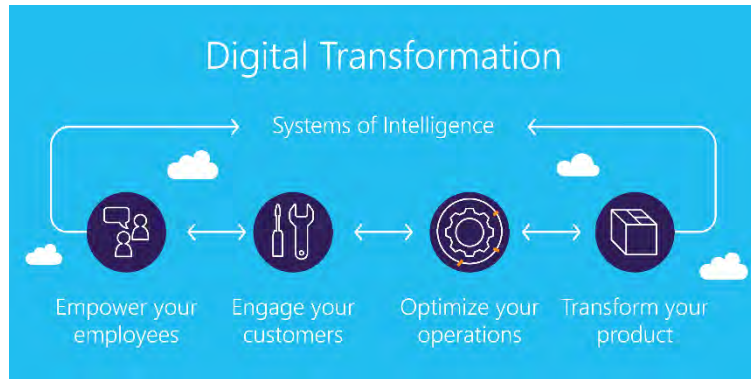


Do you need a broader digital plan of action?

Digital Infrastructure improvement



Digital Transformation of key Industries



Digital Inclusion – Close the Gap



Manage Digital Impact

- Defining the problem
- Talking to people
- Analysing evidence
- Delivering policy

a DIGITAL & COMMUNICATIONS strategy for the Mid West

GUIDING PRINCIPLES

- Bank transformational innovation
- Close the gap: Reduce the "digital divide" across the region by providing access, affordability, speed and capacity
- Minimise and mitigate possible, adverse world's best practice
- Maximise the return from all effort and investment, across the entire region
- Adopt a sharing economy approach
- Build trust, power stability and accountability – from going
- Seek collaborative innovation amongst public and private knowledge that produces sustainable outcomes
- Focus on inclusion – and on education
- Develop a complex value ecosystem with other Mid regional areas
- Adopt a 2-Filter hierarchy of infrastructure, innovation and included support

STRATEGIC FOCUS AREA	PROGRAM	PROJECT
1. COMPETITIVE MID WEST INDUSTRY Implement a program of focus initiatives that will reposition Mid West industry to innovative practices and opportunities enabled by digital technologies and enabling digital capabilities and technologies	Smart Agriculture	1. Chapman Valley smart farm cluster 2. Migratory sheep counting cluster 3. Data monitoring by drones 4. Livestock sensor network pilot
	Video to Knowledge	1. Digital asset bank 2. Mid West 100km / Tourism Study 3. Primary Centre Mid West analysis
2. VIBRANT MID WEST COMMUNITIES Building vibrant communities, leveraging, as well as transforming digital technologies and opportunities, while enhancing community digital awareness	Smart Communities	1. Community APP (23 communities) 2. Digital village grant 3. Digital-Way community hubs 4. Smart community mapping 5. Community analytics platform
	Digital Services	1. Mid West "Maker" network 2. DFC pilot consumer research 3. WA marketplace expansion 4. Urban innovation professionals
3. AN INNOVATION DRIVEN FUTURE Enable conditions, innovation facilities, skills and talent, and resources that create digital by industry and communities across the Mid West, to help respond to social and economic challenges related to the Mid West	Innovate Ems Culture	1. Mid West Innovation Hub team 2. Mid West Co-Op participation 3. Mid West Digital Incubation 4. Regional tech innovation challenge
	Digital Capabilities	1. Digital Skills 2. DFC Innovation hubs
4. ANYBODY TO EVERYWHERE, GLOBALLY CONNECTED Lead in establishing a region-wide communication network that provides a top priority information and advice to leading the digital education of necessary and capability local parts of the Mid West	Mid West Star	1. Mid West ESP (Mid West) Pilot 2. Mid West Innovation Pilot
	Digital Public Services	1. TechHub network expansion 2. Virtual education platform 3. Drive State government 4. Best Connect emergency services
	Mid West Virtual Co-Op	1. Mid West online tool 2. Mid West online space support 3. Mid West Online Services
5. ENVIRONMENTAL SUSTAINABILITY Increase the footprint of a region-wide, innovative, and digital smart energy, to enable sustainable and resilient economic opportunities in public and private organisations	Regional Smart Energy	1. Sustainable energy value network 2. Transport corridor study 3. Power grid trading
	Digital Waste Management	1. Mid West digital waste collector 2. Digital device recycling
6. REGION-WIDE DIGITAL CAPABILITY AND CONNECTIVITY Investment in digital capabilities and connectivity to enable sustainable economic growth, innovation and employment opportunities across the Mid West	HighSpeed	1. Mid West competitive broadband 2. Regional video project 3. Mobile hotspot program 4. Connectivity demand study
	Digital Regional Networks	1. North Midlands Digital network 2. Chapman Valley wireless 3. Community 3G service 4. 3G/4G 2 year roll out plan
	Hardware Network Resiliency	1. Technology review 2. Power network links
7. INCLUSION AND PARTICIPATION Empower effective communication technologies, as well as transformable digital technologies and participation for all levels of people	Digital Literacy	1. Digital literacy support 2. Community collaboration hubs
	Digital Access	1. Digital device bank 2. Low-cost broadband plans 3. Low-cost mobile plans
	Digital Participation	1. Co-Op program 2. Online education resources
8. MID WEST DIGITAL NARRATIVE Build a shared and collaborative narrative that will drive digital innovation and growth in the Mid West region, with the local system owner	Digital Leadership	1. Mid West digital creative lab 2. Creative production skills development
	Transformative digital experiences	1. WA Museum (partner) 2. Knowledge Centre - Events story 3. Mid West Digital 1 story 4. Square Connects ATC program
	Digital Services	1. Digital skills 2. Community online network 3. Mid West online equity website

Department of Western Australia and Western Development Commission

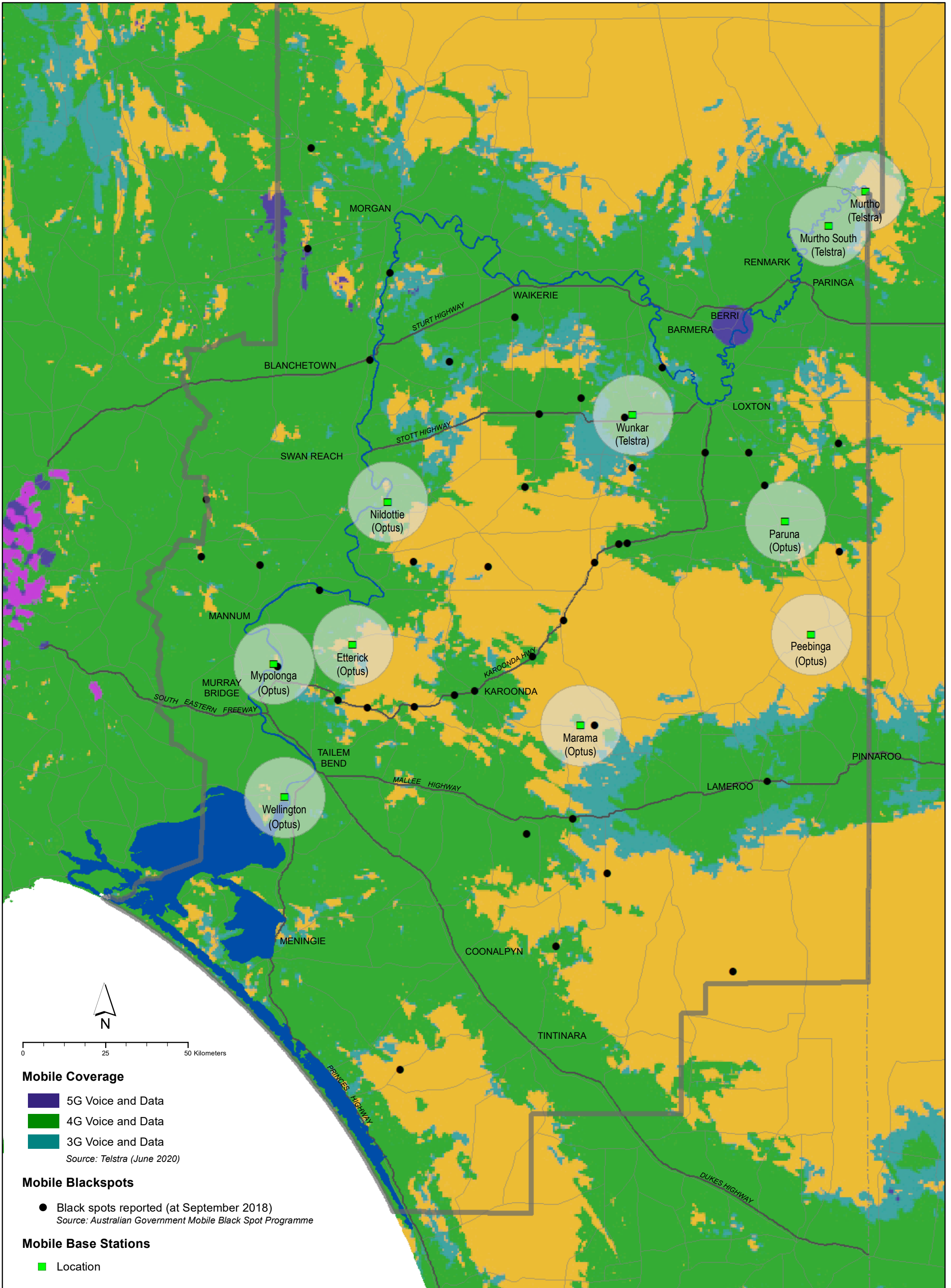
Thankyou



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0 25 50 Kilometers

Mobile Coverage

- 5G Voice and Data
- 4G Voice and Data
- 3G Voice and Data

Source: Telstra (June 2020)

Mobile Blackspots

- Black spots reported (at September 2018)
- Source: Australian Government Mobile Black Spot Programme

Mobile Base Stations

- Location