

1. **What telecommunications services are required in regional Australia to meet current and future needs? Are there any things regional communities and businesses need to do, but can't, on their existing services?**
  - Increasingly, agricultural enterprises require reliable internet access with sufficient bandwidth to manage:
    - o Cloud-based financial (and other) software systems
      - CBH and others are pushing services online/onto mobile platforms, increasing the need for both on-farm and broader regional connectivity to effectively conduct agricultural business
    - o IoT devices to support agricultural activities
      - These are anticipated to grow, and capacity and education are necessary to support this growth and the resultant positive impact on industry
  - Regional communities require reliable internet access generally to ensure:
    - o Provision of telehealth, as face-to-face doctor and specialist services are generally becoming rarer, or more expensive to maintain and to aid aging in place initiatives
    - o Access for education purposes, both at schools and for students learning via distance education
      - This need increases with COVID-19 forcing some schooling to take place in the home
    - o Competitiveness of local businesses
    - o Communication during and following an emergency e.g. Cyclone Seroja identified a specific gap in disaster response for telecommunications
    - o Working remotely
      - Need increased during COVID but trend is for remote working to continue as an option, which can support people living and staying regional/remote areas
  - For the businesses and government organisations in the space sector in Mingenew, current optical fibre limitations are forcing:
    - o Delivery of data via road on physical hard drives, as bandwidth on existing fibre lines are insufficient
    - o Inability to take on new contracts for existing clients
    - o Inability to take on new clients
  - More reliable options and/or back up provisions are needed for when current systems fail. With only one provider that has control over the majority of communication infrastructure in our region, there is limited motivation (such as competition) for investing in regional areas
2. **What changes in demand, barriers or challenges need to be addressed when it comes to telecommunications services in regional, rural and remote Australia?**
  - Demand is universally increasing for digital connectivity as more services move online
  - Landline phone services are still critical in areas where mobile telephone coverage is not available (which includes large portions of our Shire, and surrounding region)
  - Tourists have increasingly high expectations of mobile telecommunications availability
    - o This is especially problematic in areas where only Telstra coverage is available, and the visitors are with other providers
  - Recent telecommunications upgrades (e.g., the WA Government's Digital Farms fixed wireless program) have created opportunities for agricultural businesses to do more with IoT technology, but the education and support around that is very limited

- Future steps to help to operationalise that new capacity are required
- Support / advice fails to consider reliability of signal in a moving object i.e. tractor, vehicle or drone over a large area
- Natural disaster resilience is very low (as evidenced recently by the huge, lengthy outages caused by Tropical Cyclone Seroja)
  - Noting that this was also linked to the fragility of the power network and the lack of power backups within the telecommunications network
- There needs to be recognition that there are some bandwidth-intensive industries that exist in the regions, in our case, the space sector (primarily satellite tracking and ground control operations)
  - At its core, having access to that bandwidth provides communities with a broader range of options in terms of the industry they can attract and support
- Mobile data and satellite service are still very expensive for what is on offer and product packages are limited.
- Ability to access technical support services is limited and expensive for small rural communities
- Wi-fi mesh systems for use in regional areas are being promoted however effectiveness is not being appropriately measured and evidenced – further research on outcomes versus return on investment is required

### 3. How have the Government's policies and programs affected telecommunications service outcomes in regional, rural and remote Australia? How can these be improved?

- The mobile Black Spot Program has seen some additional mobile phone coverage introduced
  - Greater thought sometimes needs to go into locations and providers however, there could be increased local consultation on these matters
    - e.g., installing a single Optus tower in an area otherwise exclusively serviced by Telstra; whilst there are arguments that this fosters competition, there has been very little practical evidence of this
    - There have also been examples of towers being sited based upon convenience for provider as opposed to coverage outcome for consumer/community
- WA State Government Digital Farms Program
  - Has seen widespread fixed wireless coverage installed across the Mid West, including the Shire of Mingenew, which is of benefit
    - As noted above, needs to be greater education/support to assist agricultural businesses to make the most of this
- Removal of 3G services has some residents worried, as clear plans for switch to 4G, and associated impacts, have not been communicated
  - Serious concerns exist about the impact of the transition on coverage areas (i.e., those on the edge of 3G coverage now may end up out of 4G coverage (and therefore all mobile coverage))
- Policy generally appears to be generated by people who have no real understanding of the reality of living and working in regional Australia
  - This is probably exacerbated by the centralisation of State and Federal Government services, which sees less actual government presence in the regions and reliant upon these services
  - Consultation, like this process, is a welcome step

### 4. How do service reliability issues impact on regional communities and businesses? How do outages, including in natural disasters, impact on communities and businesses?

- Outages cause significant impacts
- As we have a single service provider for our mobile and landlines (Telstra), when they go down the entire town and surrounds lose telecommunications
  - o This includes basic things, like the ability for businesses to use EFTPOS
  - o This includes the ability for disaster-related public communications
    - Following TC Seroja in April this year we had to revert to doorknocking as we were without telecommunications for four days
    - The local Silver Chain (medical service) could not operate, and communications for emergency services such as St John Ambulance, RFDS were severely limited with no comms were coming in order going out (we were fortunate that no one was injured or suffered a medical episode as could have had catastrophic consequences)
- Current mobile system is not disaster resilient, as demonstrated recently by TC Seroja
  - o Townsite without phones for four days, rural areas for several weeks
  - o Resulting from both damage to infrastructure, but also loss of power and inability to deliver suitable back-up power supply
    - As a result, public messaging couldn't be shared, businesses couldn't operate effectively, families couldn't contact loved ones – almost all aspects of life were impacted

**5. How might such impacts be addressed to ensure greater reliability? How can the network resilience be addressed in regional areas?**

- Review lessons learned from TC Seroja and other disasters; invest in solutions
  - o Power resilience for the telecommunications system appears to be a key part of this puzzle
- Where satellite is being put forward as a back-up/resilience option, make it more cost-competitive so that there is greater uptake
- Introduce a USO, or minimum standard, for mobile services in the same way that one exists for landlines to force mobile service providers to deliver more for regional customers
- Model resilience systems on the impact it has on the full telecommunication system (from individual, service providers, ancillary services, government policy etc)
- Assess ownership and insurance structures to ensure they are adequate in being able to support recovery, repairs and replacement of infrastructure

**6. How did the use of digital services change for regional consumers and businesses during the response to the COVID-19 pandemic? What insights for future service delivery does this provide?**

- It increased, noting that our COVID-19 impacts here were relatively minor
  - o At the time, and since, we have had increased instances of staff working remotely
- It's indisputable that business is increasingly being conducted online, both in terms of transactions, cloud-based software as well as more meetings which may have been face-to-face previously
  - o The latter is particularly bandwidth intensive
    - Digital meetings require both upload and download bandwidth, and future services need to be able to cater for this

- The increasing online meeting space has been of benefit to the regions, as it has reduced the need for lengthy travel for meetings, however, it requires a certain standard of telecommunications infrastructure to be viable
  - o Failure to deliver this will result in a degree of inequity in terms of ability to participate between those with a good connection and those without

**7. What can be done to improve the access and affordability of telecommunications services in regional, rural and remote Indigenous communities?**

- Services are largely monopolised (with Telstra) at present which is unlikely to create any real price pressure on the service provider
- It's important that some of the older services (like 3G and landlines) are given appropriate consideration before turning them off, as many people still rely upon them
- Where new technologies are introduced, education and assistance in transition will be required for those who are not technologically proficient

**8. How can investment in telecommunications infrastructure work with other programs and policies to encourage economic development in regional Australia?**

- Given the criticality of the internet to almost all aspects of business and society, improved telecommunications are a key enabler for a whole host of business and social opportunities to improve regional economic development
  - o High quality internet is an attractant for potential tree changers, helping to foster regional economic growth
- For us, the space sector is an existing area that we are trying to grow, which our current telecommunication situation is holding back
- We would encourage the Federal Government:
  - o Work with proponents of industry in regional areas
  - o Co-invest with State Government on regional projects

**9. What role could innovation, including new models, alternative investors or new ways of doing business, play to encourage investment in regional telecommunications infrastructure? What are the barriers?**

- The current, largely monopolistic system, doesn't appear to be benefiting communities or encouraging investment in resilient assets
  - o Further, it doesn't promote innovation – as monopolies generally don't need to innovate
- The monopolies also serve as the current barriers; the telecommunications space does not appear to be an easy one to enter, and the large existing telcos protect their turf from new market entrants
- Support for smaller and emerging regional telecommunications companies may assist

**10. To what extent will new technologies enable significant change to the delivery of telecommunications services in regional Australia over the next 5-10 years? Are there any barriers to accessing these technologies?**

- Affordable and reliable connectivity is key, as much as satellite and other services are currently growing, nothing seems to be able to match fibre in terms of speed and reliability and (once installed) cost
- The main barrier in this space appears to be capital cost of installation

- Or, at the very least, a compelling business case examining the long-term socioeconomic upside of the infrastructure investment required to improve fibre access in the regions
- Testing of new infrastructure needs to occur on the ground in remote and rural areas, against typical situations and use, particularly for the agricultural industry

**11. How can Government better support the rapid rollout of and investment in new telecommunications solutions in regional areas?**

- By engaging with regional communities, listening to what they have to say, and taking action; the challenge in some areas will be commercial viability and government may need to provide subsidies to make things happen where existing markets are marginal
- There are blurred lines over State and Federal responsibility in the telecommunications space, with both tiers of government being seen to either claim, or avoid, responsibility as it suits them
  - Greater cooperation, reduced politicisation, and co-investment would be preferable
- By looking beyond the existing monopolies for innovative solutions to current problems and seeking to create more competition in the private sector
- Consider cost sharing initiatives for ground truthing of technologies and services in required industries

**12. How can different levels of Government, the telecommunications industry and regional communities better co-ordinate their efforts to improve telecommunications in regional Australia?**

- There needs to be greater clarity around the role and expectations on Local Government in telecommunications
  - It can be a good conduit into the community and allow providers/higher tiers of government high quality local information
  - It does not have the resources and expertise to take the lead on telecommunications projects, but failing to involve it for input can result in poor outcomes
- Like many things in the regions, even telecommunications matters are devolved to local government to become involved in; this is not a burden that the sector can easily carry given that many regional local governments are already financially reliant upon State and Federal grants

**13. What changes to Government investment programs are required to ensure they continue to be effective in delivering improved telecommunications?**

- There needs to be consideration of both the infrastructure being installed, as well as communication of its benefits/how to access it and how to effectively utilise it
- If the program is upgrading/replacing older technology, the impacts of those affected need to be considered
  - The impacted users need to be identified and communicated with
- There needs to be greater consultation generally with regional communities and consideration of their needs, rather than centralised decision-making out of Canberra/Perth
  - One size does not fit all
  - Ground truthing of information needs to occur
- Assess ownership of infrastructure and link funding criteria to meeting standards for maintaining and upgrading

14. **How can regional consumers be better supported to identify, choose and use the best connectivity options for their circumstances, as well as to understand and use their consumer rights?**
- Provision of greater options to choose between, rather than being locked in to single providers
  - Greater education
    - o In relation to both choosing telecommunications plans, but also understanding what those plans can enable them to do
      - E.g., on-farm IoT devices enabled by Digital Farms connectivity
      - E.g., telehealth or online educational services that are available
    - o In relation to the role of the Telecommunications Industry Ombudsman, and other regulatory mechanisms to assist consumers
15. **To what extent is public information on connectivity options, including predictive coverage data and speeds, sufficient to help regional customers make informed decisions? What other information is needed?**
- It's not. The reality is that even coverage maps are misleading, because there is a difference between network coverage and network access
    - o Where towers are overloaded it's possible to have several bars of reception, but no actual ability to access a signal
  - There is also a step before this, which is consumer education around what those data allowances/speed enable you to do (e.g., what speed is required to run a soil moisture probe vs what's required for a videoconference)
16. **What other matters should the Committee consider in its review and why are they important?**