

Connectivity and Digital Agriculture Policy Statement

NFF policy position

Connectivity is an essential service underpinning the economic, social, health and educational outcomes and opportunities of all Australians. This essential nature does not change with location, with all Australians entitled to accessible, reliable, quality and affordable connectivity services.

Advancements in connectivity play a central role in enabling the adoption of digital agricultural practices. Advancements in areas such as AgTech, digital intelligence and farm data must support positive outcomes for Australian producers.

Context

Connectivity

Regional, rural and remote Australians place the utmost importance on accessible, reliable, affordable and quality connectivity services. Such services are fundamental to their everyday economic, social, health and educational outcomes, the importance of which is often heightened for those living outside of metropolitan areas.

While significant advances have been made in recent years, many regional Australians continue to face connectivity challenges. Service quality, reliability and accessibility issues remain, presenting ongoing primary connectivity barriers for regional Australians, farm businesses and workers. As economic activity and service delivery continue to migrate online, such accessibility challenges must be addressed.

However improving connectivity in regional areas continues to present a fundamental opportunity to drive the competitiveness and productivity of the agricultural sector in the decades to come. Continued advancements in connectivity continue to be an essential requirement to support Australian agriculture's 2030 \$100 billion farm-gate revenue aspiration.

Recent years have seen an acceleration in the importance of connectivity services and changes to the connectivity landscape. The 2021 Regional Telecommunications Review identified a "step change in the demand for telecommunications" with a new paradigm in the essential nature of connectivity to everyday lives as well as being essential to underpinning the opportunities that exist in the ever-digitising economy now more than ever¹.

Furthermore, recent years have seen a number of material developments within the regional connectivity landscape. Publicly funded investment schemes have experienced a period of sustained bi-partisan support, with programs maturing and the co-investment incentives for mobile operators diminishing. Regional

¹ Regional Telecommunications Review, 2021, *2021 Regional Telecommunications Review - A step change in demand*, Pg 1.

telecommunication infrastructure markets have undergone significant ownership changes, with historical integrated models of ownership being replaced by third-party infrastructure owners. Finally, and perhaps most significantly, the ongoing advancement of technological solutions, such as satellite-delivered connectivity, has resulted in potential material changes to how connectivity services may be delivered, particularly to those in Australia in more rural and remote areas.

Digital agriculture

Connectivity and digital agriculture are intrinsically linked, with connectivity advancements underpinning the adoption of digital agricultural practices. As connectivity continues to advance, the growth of digital agriculture in areas such as automation, digital intelligence and farm data will present growing opportunities and risks for producers. Continually improving connectivity services are key to materialising the estimated \$20 billion AgTech opportunity.²

Digitising agriculture will be critical to unlocking key markets, increasing sustainability, efficiency and productivity. These opportunities are rapidly evolving and offer numerous potential benefits to producers and the sector more broadly.

However, as digital agriculture continues to ever grow in importance, the associated risks are also heightened. Issues of access, privacy and safety surrounding the use of personal and farm data are increasing in risk for producers. Moreover, the increased automation of farming practices and digital-intelligence services will require additional policy considerations.

Given these emerging issues surrounding producers' data, the NFF's 2030 roadmap identified the need to ensure farmers have appropriate control of their data and the value derived from it. In 2020, the NFF developed the Australian Farm Data Code to address fairness and privacy in the collection, use, and sharing of producers' data.

Going forward, it is imperative that further considerations are given to the risks and opportunities associated with the digitisation of agriculture that will increasingly arise in the coming decade to ensure they support positive outcomes for Australian producers.

² Department of Agriculture and Water Resources, 2017. Accelerating precision agriculture to decision agriculture: Enabling digital agriculture in Australia. Cotton Research and Development Corporation, Australia.

Principles

The NFF endorses the following principles regarding connectivity:

1. All Australians must have **accessible, reliable, cost-effective, resilient and quality** connectivity outcomes.
2. Policy and regulatory settings should support a **pro-competitive regional connectivity market** that fosters continual service competition and innovation in order to deliver connectivity outcomes.
3. **Appropriate regulatory intervention and public investment remains required** to ensure the delivery of connectivity outcomes to all Australians in the absence of any market-led solutions.
4. Connectivity services are an essential requirement to **support Australian agriculture to achieve its 2030 \$100 billion farm-gate revenue target**, in particular the ongoing adoption and uptake of AgTech solutions.
5. Connectivity services are critical to the safety of all Australians during and after **periods of natural disasters**.
6. **Connectivity literacy** is an integral element of ensuring all Australians can effectivity access and utilise connectivity services, and fully participate in the digital economy, including AgTech adoption.
7. **Farm data** must be subject to best practices surrounding its collection, use, control, and sharing.
8. **Connectivity, digital, and other technology advancements** should lead to positive production, privacy and safety outcomes for producers.
9. The rapidly and ever-changing nature of the regional connectivity environment necessitates **ongoing review of contemporary policy, market and technology settings**.

Priority initiatives to deliver on the principles

- **Ongoing investment programs in connectivity infrastructure (Principle 1, 2, 3 & 5):** The NFF supports ongoing public funding of investment programs to ensure the delivery of connectivity service expansion and quality improvements. Program design must consider the ongoing advancement of technological solutions, such as satellite-delivered connectivity and in-field connectivity solutions.

- **Universal Service Obligation (USO) reform (Principle 1 & 3):** The NFF in principle supports reform of the USO to address ageing infrastructure, with consideration of a technology-agnostic approach to USO delivery, providing it exceeds existing reliability standards. Recognition however must remain of the role of USO elements such as the Copper Continuity Obligation in delivering USO services to some consumers.
- **Universal Service Guarantee (Principle 1 & 3):** The NFF supports updated telecommunication service guarantees, with adequate service performance reflecting the needs of consumers and businesses.
- **Investment in network resilience (Principle 1 & 5):** Ongoing investment must be made in network resilience programs in order to better support service continuity during periods of natural disaster.
- **Roaming during natural disasters (Principle 5):** The NFF supports mobile roaming during times of natural disaster.
- **Infrastructure sharing (Principle 1 & 3):** The NFF supports efforts by government to further facilitate connectivity infrastructure sharing in regional areas to promote competition, efficient asset use and ongoing network expansion.
- **Network sharing (Principle 1 & 3):** The NFF supports market-led network-sharing arrangements that support competitive market outcomes. Where such arrangements do not materialise, consideration should be given to requiring network sharing by Mobile Network Operators on commercial terms in a manner that does not hinder ongoing investment.
- **Connectivity research, development, and extension (Principle 1, 2 & 5).** Government and industry, including the Rural Research and Development Corporation network, should continue to research and invest in connectivity advancements and adoption.
- **Regional Telecommunications Review (Principle 9):** The NFF strongly supports the triennial Regional Telecommunications Review process. This process should be well-resourced and led by an independent review panel which includes agricultural and on-farm connectivity expertise.
- **Audit of regional mobile coverage & performance (Principle 1):** Funding should be provided to undertake an investigation and audit of mobile coverage & performance across regional Australia. This should include the reporting of experienced congestion levels.

- **3G shutdown and 5G transition (Principle 1, 4 & 8):** The NFF should work with government, members, partners and industry participants to ensure the shutdown of 3G, ongoing role of 4G and rollout of 5G networks lead to positive connectivity outcomes.
- **Equitable and efficient spectrum allocation (Principle 2, 4 & 9):** The NFF supports the equitable and efficient distribution of spectrum to foster a competitive environment that fosters investment in network expansion and improvement.
- **Addressing non-infrastructure related challenges (Principle 1, 3 & 9):** Non-infrastructure related connectivity challenges, such as congestion, backhaul capacity and spectrum allocation, must be overcome to ensure positive connectivity outcomes.
- **Regional, Rural and Remote Communications Coalition engagement (Principle 1-6 & 9):** The NFF should engage with the Regional, Rural and Remote Communications Coalition to advocate for improved connectivity outcomes for all regional Australians.
- **Sustained resourcing of the Regional Tech Hub (Principle 4 & 6):** The NFF supports the ongoing funding of the Regional Tech Hub to provide Australians with independent connectivity advice and as a key means to improve connectivity literacy.
- **Farm Data Code (Principle 7):** The NFF supports the periodic review of the Farm Data Code and its certification framework to ensure it remains contemporary. Support must be given to facilitate its adoption by providers operating in the Australian market.
- **Active assessment of risks and opportunities associated with digital agriculture (Principle 8):** The NFF to work with government, partners, and industry participants to assess the impacts of new technologies on producers, formulate new policies where appropriate, and lead initiatives to address issues.
- **AgTech adoption initiatives (Principle 4 & 6):** The NFF to work with government, partners, industry participants and research networks (including AgriFutures) to continue work expanding Agtech adoption by producers.

Related policy areas

This policy should be considered in conjunction with other NFF policies and papers which include references to regional connectivity matters. These include:

- NFF 2030 Road Map
- NFF Competition Policy
- NFF Indigenous Engagement – Principles and Focus Areas Paper
- NFF Workforce Policy
- NFF Regionalisation Agenda
- Farmsafe - Safer Farms Report

Date of approval: 25th November 2023 NFF Members Council