

AUSTRALIAN TELECOMMUNICATIONS ALLIANCE SUBMISSION

To: The Senate Environment and Communications
References Committee

Re: Artificial intelligence and data centres

1 September 2026



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1. AUSTRALIAN TELECOMMUNICATIONS ALLIANCE

The Australian Telecommunications Alliance (ATA) is the peak body of the Australian telecommunications industry. We are the trusted voice at the intersection of industry, government, regulators, and consumers. Through collaboration and leadership, we shape initiatives that grow the Australian telecommunications industry, enhance connectivity for all Australians, and foster the highest standards of business behaviour. For more details, visit www.austelco.org.au.

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2. EXECUTIVE SUMMARY

The Australian Telecommunications Alliance (ATA) welcomes the opportunity to contribute to the Senate Environment and Communications References Committee inquiry into artificial intelligence and data centres. The inquiry is examining the effectiveness of regulatory frameworks governing data centre growth, and the impacts of AI and data centres on communities, industries, the environment, water, and energy.

AI will have transformative potential for Australia. However, its pervasiveness and power of transformation is dependent on the availability and quality of underlying networks, both from a connectivity and energy perspective.

Australia's AI future depends on telecommunications infrastructure as much as it depends on compute infrastructure.

Data centres provide computing and storage capability. Telecommunications networks provide the secure, high-capacity, and low-latency connections through which data reaches those facilities, models are accessed, services are delivered, and the benefits of AI are distributed across businesses, governments, and communities. All of Australia's connectivity is enabled by digital infrastructure, such as fixed-line and mobile networks, various types of satellite networks, data centres, cloud infrastructure, etc. Compute capacity without adequate connectivity risks becoming concentrated infrastructure rather than an economy-wide productivity platform.

Unlike previous waves of digital transformation, AI will drive demand for both centralised computing and distributed connectivity. AI systems rely on the continuous movement of data between users, devices, cloud platforms, edge-computing facilities, and data centres. As AI adoption accelerates across the economy, demand for secure, high-capacity, and low-latency telecommunications networks will grow alongside demand for data centre capacity. Australia's AI ambitions therefore require a coordinated approach to both compute infrastructure and connectivity infrastructure.

The ATA's submission argues that telecommunications infrastructure is a fundamental pre-requisite alongside compute infrastructure for Australia's AI future, demonstrated by how it:

- Connects data centres to each other, cloud platforms, businesses, and users
- Extends AI participation to regional and remote communities
- Provides redundancy and resilience when infrastructure is disrupted
- Carries data used to train, test, and operate AI systems
- Enables real-time and latency-sensitive applications, and
- Supports distributed and edge-computing architectures.

To support Australia's AI ambitions, the ATA recommends six priority reforms: (1) recognising telecommunications as foundational AI infrastructure; (2) modernising telecommunications deployment frameworks; (3) supporting sustainable network investment through spectrum and regulatory settings; (4) establishing a National Digital Infrastructure Framework; (5) promoting regional participation in the AI economy; and (6) strengthening resilience, security and strategic digital capability across Australia's AI ecosystem.

3. AI INFRASTRUCTURE IS A CONNECTED SYSTEM

The Committee's inquiry provides an opportunity to consider AI infrastructure as an integrated ecosystem rather than a collection of discrete assets. While data centres provide the compute capacity required to develop and operate AI systems, telecommunications networks provide the connectivity through which data is transported, services are delivered, and the benefits of AI are distributed and realised across the economy. Australia's AI future will depend not only on investment in data centres, but also on the telecommunications infrastructure that connects businesses, government, and communities to those capabilities.

3.1 TELECOMMUNICATIONS IS THE CONNECTIVE AND DISTRIBUTION LAYER FOR AI

- 3.1.1 While data centres provide the compute capacity required to develop and operate AI systems, telecommunications infrastructure is the essential connective and distribution layer that enables those systems to deliver value across the economy. Telecommunications networks connect users, devices, cloud platforms, edge-computing facilities, and data centres, allowing data, services, and AI applications to be accessed wherever they are needed.¹
- 3.1.2 Telecommunications infrastructure performs a unique role within the AI ecosystem by linking all digital infrastructure assets together. Data centres, cloud services, AI models and end users are all dependent on secure, high-capacity and resilient communications networks. As a result, the value of investments in data centres and AI can only be fully realised where sufficient connectivity exists.²
- 3.1.3 Telecommunications networks also enable the productivity benefits of AI to be distributed throughout the economy.³ They support AI-enabled applications in healthcare, agriculture, manufacturing, transport, emergency management, and government services, while connecting regional and remote communities to the same digital capabilities available in metropolitan areas.⁴
- 3.1.4 As AI adoption accelerates, demand for cloud services, intelligent devices, machine-to-machine communications, and edge computing will further increase the importance of high-capacity, low-latency, and resilient networks.⁵ Australia's AI future will therefore depend not only on investment in compute infrastructure, but also on investment in the telecommunications infrastructure that connects people, businesses, and communities to it.
- 3.1.5 Consistent with the central proposition of this submission, data centres create AI capability, but telecommunications networks enable that capability to be connected, distributed, and transformed into economic and societal value.

¹ AMTA, [2025-26 Pre-Budget Submission](#) (2025); AMTA, [Submission to the Economic Reform Roundtable](#) (2025); and, Ericsson, [Ericsson Mobility Report 2025](#).

² Department of Industry, Science and Resources, [National AI Plan](#) (2025); Bureau of Communications, Arts and Regional Research (BCARR), [Telecommunications Services and Productivity](#) (2023)

³ BCARR, [Telecommunications Services and Productivity](#) (2023); Accenture, [The Economic and Social Impact of Investment in the nbn Network](#) (2024)

⁴ AMTA, [2025-26 Pre-Budget Submission](#) (2025); AMTA, [Submission 188 to the Senate Select Committee on Productivity in Australia](#) (2026)

⁵ AMTA, [2025-26 Pre-Budget Submission](#) (2025); AMTA, [Submission to the Economic Reform Roundtable](#) (2025); and, Ericsson, [Ericsson Mobility Report 2025](#).

3.2 CONNECTIVITY UNDERPINS THE PRODUCTIVITY CASE

- 3.2.1 Telecommunications infrastructure is not simply an input to the digital economy; it is a significant contributor to productivity growth across the broader economy. Australian Government analysis estimates telecommunications services contributed an estimated 14.7 per cent of economy-wide multifactor productivity growth between 2009-10 and 2019-20, demonstrating the enabling role of connectivity across industries and sectors.⁶
- 3.2.2 The productivity benefits generated by telecommunications infrastructure extend beyond the telecommunications sector itself. An Accenture study commissioned by nbn estimated that investment in the nbn contributed approximately \$122 billion to Australia's GDP between 2012 and 2022, representing around 4 per cent of GDP growth during the period and supporting productivity improvements across the economy.⁷
- 3.2.3 AI will increase demand not only for data centre capacity but also for the telecommunications networks that connect users to AI-enabled services. Australian Communications and Media Authority (ACMA) data shows that Australians downloaded 14.4 million terabytes of data during the December 2024 quarter, an increase of 4 per cent over the previous year. Of this, 80 per cent was carried over NBN services, 16 per cent over mobile networks and 4 per cent over other fixed network services. Importantly, traffic carried on mobile networks increased by 15 per cent over the preceding six-month period.
- 3.2.4 Recent consumer research conducted by Deloitte Access Economics, which will be featured in an upcoming report of mobile impact on AI commissioned by the ATA, found that almost two thirds of Australians are utilising AI tools from their mobile devices today. The research also found productivity gains in that 59 per cent of those were saving on average one hour forty-five minutes of time per week using these mobile AI tools.
- 3.2.5 These trends highlight the growing dependence of the digital economy on both fixed and mobile communications infrastructure and reinforce the importance of ensuring sufficient network capacity, resilience and investment settings to support the continued growth of AI-enabled services.⁸
- 3.2.6 These findings demonstrate that investment in connectivity delivers economy-wide benefits by enabling digital adoption, innovation, and new ways of working. The same principle applies to AI. While data centres provide the compute capacity required to develop and operate AI systems, telecommunications networks enable businesses, governments, and communities to access and utilise those capabilities. Maintaining investment in high-capacity, secure, and resilient telecommunications infrastructure will therefore be essential to ensuring Australia captures the productivity benefits of AI and data centre investment.
- 3.2.7 These productivity benefits will only be realised if telecommunications infrastructure is planned and deployed alongside data centre infrastructure. Accordingly, connectivity and data distribution considerations should be integrated into data centre planning and approval processes from the outset.

4. INTEGRATE CONNECTIVITY INTO DATA CENTRE PLANNING

Data centres and telecommunications infrastructure are complementary components of the same AI ecosystem. While data centres provide compute capacity, telecommunications infrastructure enables data, services, and AI applications to move between facilities, businesses, governments and users. Planning frameworks should consider connectivity requirements at the same time as compute, energy, water, and land use requirements.

⁶ BCARR, [Telecommunications Services and Productivity](#) (2023)

⁷ Accenture, [The Economic and Social Impact of Investment in the nbn Network](#) (2024)

⁸ ACMA, [Communications in Australia: Trends and Developments in Telecommunications 2023-24](#), December 2024, p.4

4.1 ASSESS NETWORK REQUIREMENTS EARLY

- 4.1.1 Major data centre developments create significant telecommunications infrastructure requirements. In addition to compute, energy, and water considerations, data centres depend on high-capacity and resilient connectivity to support data movement, cloud services, interconnection, cybersecurity, disaster recovery, and user access. Planning and approval processes should therefore assess telecommunications infrastructure requirements early in the project lifecycle.
- 4.1.2 Planning and approval processes should assess the following types of connectivity requirements before a project is approved or publicly supported:
- Availability and diversity of high-capacity fibre,
 - Ability of surrounding networks to accommodate forecast traffic,
 - Mobile and wireless requirements,
 - Redundancy and disaster-recovery arrangements,
 - International and inter-capital transmission requirements,
 - Cybersecurity and physical security dependencies,
 - New infrastructure and land access needs along connecting routes, and
 - Implications for surrounding communities and regional connectivity.
- 4.1.3 Telecommunications connectivity should be treated as a core planning consideration for major data centre developments. Failure to assess connectivity requirements early may result in delays, increased costs, reduced resilience, and constraints on the ability of businesses and communities to access AI-enabled services.
- 4.1.4 The ATA suggests the Committee recommend that telecommunications connectivity requirements be assessed as part of planning, approval, and government support processes for major data centre developments.

4.2 FIBRE ROUTES ARE CRITICAL AI INFRASTRUCTURE

- 4.2.1 Fibre connectivity is a critical enabler of Australia's AI future. While data centres provide the computing power required to develop and operate AI systems, fibre networks provide the high-capacity, low-latency, and reliable connections that allow data to move between users, businesses, devices and data centres. Fibre supports AI model training, cloud-based AI services, real-time analytics, data replication and disaster recovery, while underpinning Australia's sovereign digital capability through domestic and international connectivity pathways.
- 4.2.2 Without robust fibre connectivity and distribution of data to users across Australia, the benefits of AI cannot be delivered at scale, regardless of the amount of computing capacity available. Investment in fibre infrastructure, beyond the connection of the data centre to telecommunications infrastructure itself, is therefore essential to ensuring AI-driven productivity gains can be realised across the economy, including in regional and remote Australia.
- 4.2.3 The importance of fibre infrastructure is recognised in the Australian Government's *National AI Plan*, which identifies both telecommunications networks and data centres as the foundational infrastructure required to support AI adoption, innovation, and investment across the economy.⁹ Additionally, government and industry analysis consistently demonstrates that high-speed, reliable connectivity is a prerequisite for the adoption of advanced digital technologies, with telecommunications infrastructure playing a critical role in

⁹ Department of Industry, Science and Resources, [National AI Plan](#) (2025)

enabling productivity gains across all sectors of the economy.¹⁰

- 4.2.4 Despite the critical role fibre plays in supporting AI and data centre infrastructure, its deployment remains subject to complex and fragmented approval processes across multiple jurisdictions. Fibre routes often traverse numerous land tenures and regulatory boundaries, requiring compliance with a wide range of planning, environmental, heritage and access requirements that can significantly increase cost, complexity and deployment timeframes.
- 4.2.5 ATA member evidence records major approval burdens on inter-capital fibre. For example:
- One route involved:
 - over 3,000 land access notices,
 - 1,128 construction certificates,
 - 1,723 land access surveys, and
 - 171 cultural heritage and environmental assessments.
 - A separate 2,000 kilometre Pilbara project experienced delays of up to 12 to 18 months due to onerous planning requirements, including engagement with more than 200 entities.
- 4.2.6 These examples demonstrate that delays affecting telecommunications infrastructure can also delay the benefits expected from data centre and AI investment. Telecommunications deployment challenges are not abstract regulatory concerns. They represent practical constraints on Australia's ability to connect data centres, scale AI services, and realise the broader economic benefits of digital infrastructure investment. Streamlining deployment pathways for critical connectivity infrastructure should be regarded as part of Australia's broader AI infrastructure agenda.
- 4.2.7 The ATA encourages the Committee to recommend that planning and regulatory frameworks for major data centre developments incorporate telecommunications connectivity requirements, and support streamlined deployment of fibre and related telecommunications infrastructure necessary to connect, secure, and operate AI infrastructure, and to distribute its benefits to all Australians.

4.3 EDGE AI REINFORCES THE IMPORTANCE OF MOBILE NETWORKS

- 4.3.1 While data centres will continue to provide the large-scale compute capacity required for AI model training and centralised processing, Edge AI distributes computing closer to where data is generated and consumed. As AI applications become more pervasive, this will increase the importance of telecommunications networks in delivering AI services and supporting real-time decision-making.
- 4.3.2 Advanced mobile networks enable AI applications to operate in environments where low latency, reliability, and real-time responsiveness are critical. By connecting users, devices, and edge-computing facilities with data centres, mobile networks extend the reach of AI beyond data centre precincts and into homes, communities, workplaces, and critical infrastructure.
- 4.3.3 Ensuring Australia's advanced mobile networks can distribute the benefits of AI requires efficient deployment of both above-ground and below-ground telecommunications infrastructure. While mobile towers and radio access networks are highly visible, mobile services also depend on extensive fibre infrastructure to transport data between users, networks and data centres. This interdependence between mobile and fibre infrastructure is often overlooked, despite both being critical to supporting AI adoption and digital connectivity.
- 4.3.4 Many of the highest-value AI use cases, including remote healthcare, industrial automation, smart agriculture, logistics and emergency management, will depend on advanced mobile connectivity. These use

¹⁰ BCARR, [Telecommunications Services and Productivity](#) (2023); and, ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026)

cases highlight that AI outcomes will increasingly depend not just on the availability of compute infrastructure, but also on the quality, reach and resilience of telecommunications networks.

- 4.3.5 The ATA suggests the Committee recognise advanced mobile networks and edge-computing infrastructure as important components of Australia's AI ecosystem and ensure future AI and data centre policies support the continued expansion of network capacity, coverage, and resilience.

5. SUGGESTED REFORMS

The Committee has an opportunity to ensure that regulatory, investment, and planning settings support both the growth of AI and the telecommunications infrastructure required to realise its benefits. The ATA recommends a series of reforms aimed at strengthening Australia's digital infrastructure foundations, and supporting long-term AI-enabled productivity growth.

5.1 SUPPORTING TELECOMMUNICATIONS INFRASTRUCTURE DEPLOYMENT

- 5.1.1 Telecommunications infrastructure is a foundational component of Australia's AI ecosystem. While data centres provide the computing power required to develop and operate AI systems, fixed, mobile and fibre networks provide the connectivity required to transport data, connect users to AI-enabled services, support cloud and edge computing, and distribute the benefits of AI throughout the economy. Realising Australia's AI ambitions will therefore require telecommunications infrastructure deployment to keep pace with the growth of data centres and AI adoption.
- 5.1.2 Despite being recognised as critical infrastructure, telecommunications networks continue to face significant deployment barriers. Network infrastructure is not consistently treated in planning and access frameworks in the same manner as other critical infrastructure, including utilities, resulting in delays that can constrain investment, network expansion, and service delivery. Industry analysis reports an average development approval (DA) timeframe of approximately 211 days for new telecommunications facilities and estimates that a 25 per cent reduction in approval timeframes could facilitate an additional 150 to 200 mobile site deployments annually.¹¹ At scale, these delays affect not only network coverage and capacity but the speed at which the digital infrastructure needed to support widespread adoption of AI-enabled services can be extended across Australia.
- 5.1.3 The telecommunications planning framework remains fragmented across Commonwealth, state, territory, and local government jurisdictions. Different approval pathways, documentation requirements, definitions, and assessment criteria create uncertainty and inefficiency for infrastructure providers. Industry examples demonstrate significant variation between jurisdictions, with some deployments requiring more than 200 days to obtain approvals, compared with streamlined pathways, such as those in New South Wales, that can provide a complying development pathway in as little as 60 days where objective development standards are satisfied.
- 5.1.4 These delays have implications beyond the telecommunications sector. As demand for AI services grows, telecommunications networks will be required to carry increasing volumes of data between users, businesses, devices, cloud platforms, and data centres. Delays in deploying fibre, mobile, and other supporting network infrastructure risk slowing the adoption of AI-enabled services and reducing the productivity, innovation, and resilience benefits that data centre investment is intended to deliver.
- 5.1.5 Schedule 3 of the *Telecommunications Act 1997* (Tel Act) establishes a nationally consistent framework enabling carriers to install specified low-impact facilities and undertake certain other activities without

¹¹ AMTA, [Submission 188 to the Senate Select Committee on Productivity in Australia](#) (2026); Deloitte Access Economics, [Future of Mobile: Reforms to Modernise Australia's Telecommunications](#) (2026)

obtaining approvals that would otherwise be required under State and Territory laws. However, key elements of the framework have remained largely unchanged despite substantial developments in telecommunications technology, network architecture and infrastructure requirements. The limited scope of facilities that can use the Commonwealth pathway means that a significant proportion of contemporary network deployment remains subject to fragmented State, Territory and local planning processes. The ATA welcomed the Government's commitment in the 2026-27 Budget to review these provisions in the Tel Act and looks forward to working closely with Government on proposed reforms. The ATA's objective is to ensure the regulatory framework reflects the increasingly essential role telecommunications networks play in supporting data centres, AI-enabled services, and Australia's broader digital economy.

5.1.6 The ATA supports reforms that maintain appropriate environmental, heritage, community, and public safety protections while ensuring deployment processes are proportionate, coordinated, predictable and timely. In particular, the ATA supports reforms that provide:

- risk-based definitions of low-impact facilities,
- clear maintenance and replacement powers,
- streamlined pathways for equipment and infrastructure upgrades,
- appropriate treatment of rural and industrial facilities,
- clear emergency and restoration powers,
- standardised land-access arrangements,
- defined assessment and decision-making timeframes, and
- periodic legislative review to ensure the framework keeps pace with evolving technology and infrastructure requirements.

Reforming telecommunications deployment frameworks should not be viewed solely as telecommunications policy. It is a necessary component of Australia's AI, data centre and productivity agenda.

5.1.7 Telecommunications deployment reform should form part of the Government's AI infrastructure agenda. Ensuring telecommunications infrastructure can be deployed efficiently and at scale will help maximise the economic and societal benefits of investment in AI and data centres, while enabling those benefits to be distributed more broadly across Australian businesses, communities and regions.

5.2 SUPPORTING SUSTAINABLE NETWORK INVESTMENT

5.2.1 AI will increase demand not only for data centre capacity, but also for the telecommunications networks that connect users, devices, and businesses to AI-enabled services. AI adoption will drive growth in machine-to-machine communications, video and sensor traffic, cloud and edge-computing workloads, model queries, data replication, and other forms of network-intensive activity. As a result, fixed, mobile, and satellite networks will require ongoing investment in capacity, coverage, security, and resilience.

5.2.2 While mobile traffic continues to grow rapidly, fixed networks remain the primary means by which data is transported across Australia's digital economy. ACMA reports approximately 80 per cent of all data downloaded in the December 2024 quarter was carried over NBN services, compared with 16 per cent over mobile networks, underscoring the critical role that fixed network infrastructure plays in supporting data-intensive applications, cloud computing, and future AI workloads.¹² Mobile data traffic has already

¹² ACMA, [Communications in Australia: Trends and Developments in Telecommunications 2023-24](#), December 2024

increased substantially, with Ericsson reporting growth of almost 400 per cent since 2020.¹³

- 5.2.3 At the same time, telecommunications services have become more affordable, with prices falling by around 23 per cent between 2011 and 2024, despite sustained industry investment in network infrastructure.¹⁴
- 5.2.4 This trend highlights a key challenge for policymakers. The productivity and economic benefits expected from data centres and AI are dependent on continued investment in the telecommunications networks that connect users, devices, businesses, and cloud platforms to those computing resources. Policy settings that constrain investment in network infrastructure ultimately risk constraining the adoption and benefits of AI itself.
- 5.2.5 The importance of maintaining investment in telecommunications infrastructure is reinforced by Australian Government analysis estimating that telecommunications services contributed approximately 14.7 per cent of economy-wide multifactor productivity growth between 2009-10 and 2019-20.¹⁵ As AI adoption accelerates and demand for digital connectivity continues to grow, maintaining the sector's capacity to invest in network infrastructure will become increasingly important to Australia's broader productivity performance and economic competitiveness.
- 5.2.6 AI will increase demand not only for data centre capacity but also for the telecommunications networks that connect users to AI-enabled services. Consequently, policies affecting telecommunications investment should increasingly be considered through the lens of Australia's AI strategy and digital infrastructure objectives.
- 5.2.7 Spectrum is a critical input for mobile, fixed wireless, and satellite communications and should therefore be recognised as a key component of Australia's AI infrastructure ecosystem. Advanced AI applications, including Edge AI, autonomous systems, industrial automation, remote monitoring, and smart energy networks, will increasingly rely on high-capacity wireless connectivity enabled through access to sufficient quality spectrum.
- 5.2.8 The ATA has previously noted that approximately 85 per cent of spectrum licences used by mobile network operators are due to expire between 2028 and 2030, representing a significant future cost for the sector.¹⁶ The ATA recognises that spectrum is a valuable public resource and that Government has an important role in ensuring spectrum is allocated efficiently. However, spectrum pricing should be considered in the context of the broader public benefits generated by telecommunications investment, including improved connectivity, productivity, resilience, and digital adoption.
- 5.2.9 Spectrum policy should therefore seek to maximise long-term public value through network investment, coverage, capacity, innovation, competition, and resilience, rather than focusing predominantly on short-term fiscal outcomes. Every dollar directed towards spectrum acquisition or renewal is a dollar unavailable for network deployment, upgrades, resilience initiatives, and future technologies that support AI-enabled services.
- 5.2.10 International evidence supports this approach. Analysis by the GSMA found that higher spectrum costs are associated with lower network coverage and reduced download speeds.¹⁷ The same analysis found that, between 2014 and 2023, the value generated per licensed megahertz (MHz) of spectrum declined by 67 per cent globally, while the ratio of spectrum costs to operator revenue increased by 63 per cent.¹⁸ These findings suggest that operators are paying more for access to spectrum while experiencing declining economic returns, placing greater pressure on future investment capacity.
- 5.2.11 Reduced investment capacity has direct implications for Australia's digital future. Lower investment in telecommunications infrastructure can result in slower network deployment, reduced network resilience,

¹³ Ericsson, [Ericsson Mobility Report 2025](#)

¹⁴ Australian Bureau of Statistics (ABS), [Consumer Price Index, Australia](#), Telecommunications series (accessed 2026)

¹⁵ BCARR, [Telecommunications Services and Productivity](#) (2023)

¹⁶ ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026)

¹⁷ GSMA, [Global Spectrum Pricing](#), (2025)

¹⁸ GSMA, [Global Spectrum Pricing](#), (2025)

delayed technology upgrades, and constrained service innovation. These outcomes would undermine Australia's ability to maximise the benefits of data centre investment and AI adoption across the economy.

- 5.2.12 The investment environment for telecommunications infrastructure is further affected by the cumulative impact of regulatory obligations. ATA has identified more than 200 sector-specific legislative and regulatory requirements applying to telecommunications providers, with approximately 20 additional obligations introduced or under development in recent years.¹⁹ While each individual measure may have merit, their cumulative effect can divert capital and resources away from investment in network infrastructure.
- 5.2.13 The ATA seeks a recommendation from this Committee that Government assess spectrum pricing, spectrum renewal arrangements, and telecommunications regulatory settings through the lens of Australia's long-term AI, digital infrastructure, and productivity objectives, ensuring that policy settings support sustainable investment in the telecommunications networks that underpin data centres, AI deployment, and digital economic growth.

5.3 A COORDINATED NATIONAL DIGITAL INFRASTRUCTURE FRAMEWORK

- 5.3.1 The ATA considers the establishment of a National Digital Infrastructure Framework to be the most important structural reform arising from this inquiry. Such a framework would ensure that decisions affecting telecommunications, data centres, energy infrastructure, spectrum policy and AI development are considered in an integrated manner rather than through separate policy processes.
- 5.3.2 Such a framework could comprise a National Spectrum Strategy, a National Digital Infrastructure Plan, establishing a Digital Infrastructure Coordinator-General, and a Digital Infrastructure Regulatory Initiatives Grid. This approach would ensure coordinated infrastructure planning, regulatory settings, and investment decisions that align to support AI adoption, productivity growth, and economic resilience.
- 5.3.3 The proposed framework builds on recommendations previously advanced by the ATA and AMTA through submissions to the Productivity Commission, the Senate Select Committee on Productivity in Australia, and the Government's Economic Reform Roundtable. Collectively, these recommendations seek to address fragmentation across infrastructure planning, spectrum policy, regulation, and investment settings that increasingly affect Australia's ability to deploy the digital infrastructure required to support AI and data centres.²⁰

National Spectrum Strategy

- 5.3.4 A key component of this framework should be a National Spectrum Strategy that supports long-term investment in world-class telecommunications infrastructure. Spectrum is a critical input for mobile, fixed wireless, and satellite networks and is increasingly important to AI-enabled services, edge computing and emerging technologies such as Low Earth Orbit (LEO) direct-to-device services. The ATA has previously supported the development of a strategic, long-term approach to spectrum policy. Similar national spectrum strategies have been adopted in the United States and the United Kingdom to support investment certainty, innovation, and future wireless technologies.²¹
- 5.3.5 Australia's approach to spectrum allocation, renewal, and pricing should encourage efficient investment and recognise that network operators make long-term investment decisions across entire spectrum portfolios and network technologies. Spectrum policy should maximise long-term public value through

¹⁹ ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026); and ATA, [Creating a More Dynamic and Resilient Economy Interim Report Submission](#) (2025).

²⁰ AMTA, [Submission 188 to the Senate Select Committee on Productivity in Australia](#) (2026); ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026); and, AMTA, [Submission to the Economic Reform Roundtable](#) (2025)

²¹ AMTA, [2025-26 Pre-Budget Submission](#) (2025); ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026); National Telecommunications and Information Administration (NTIA), [National Spectrum Strategy](#), US Government (2023); Department for Science, Innovation and Technology, [Spectrum Statement](#), UK Government (2023).

improved connectivity, network performance, resilience, innovation, and productivity outcomes rather than focusing solely on short-term revenue generation.

- 5.3.6 Spectrum policy should also remain broadly aligned with international approaches to spectrum management and technology deployment. Divergence from major international markets can increase costs by requiring customised equipment, delaying access to new technologies and reducing economies of scale, ultimately increasing costs for Australian businesses and consumers.
- 5.3.7 Initial trials of 6G are expected to occur in 2029, with commercial launches of 6G networks in 2030. AI will be deeply embedded into 6G systems, transforming networks into intelligent, adaptive, and resilient platforms.²² 6G will also be a key enabler of AI within the economy, with the growth of sensors and wearable technology driving a greater need for more upstream data capability within mobile networks. To ensure that Australia can maximise the economic productivity outcomes of AI, the early availability of 6G will be vital.
- 5.3.8 Most advanced economies are planning to make available three blocks of 200 MHz contiguous mid-band spectrum to support the launch of 6G. The ATA believes that the Government should also set similar requirements to make available this quantum of spectrum. Further, this spectrum should be brought to market in a manner that promotes the early launch of 6G so that Australia can maximise the productivity potential afforded by 6G. While the mid-band spectrum advocated for above will serve those in the cities, additional spectrum will be required to bring 6G to regional and rural Australians. The Government needs to advance their plans around the future of broadcast television, freeing up spectrum in the 600 MHz band, so that Australians in regional and remote areas will have access to the productivity gains afforded by 6G and AI-enabled services.

National Digital Infrastructure Plan

- 5.3.9 The framework should also include a National Digital Infrastructure Plan that provides a coordinated approach to the development of telecommunications infrastructure, data centres and supporting energy systems. The Plan should also support a coordinated approach to environmental and water-resource planning associated with digital infrastructure. As demand for AI and data centre capacity grows, governments will increasingly need to balance energy, water, land use, connectivity, and community considerations. Such an approach would assist governments in assessing the cumulative environmental and resource impacts of AI infrastructure development, while ensuring digital infrastructure investments continue to support broader productivity and sustainability objectives. A whole-of-system planning approach would help ensure infrastructure development is efficient, sustainable, and aligned with broader economic, environmental, and regional development objectives.
- 5.3.10 The Plan could:
- Map existing and forecast data centre capacity,
 - Map fixed, mobile, fibre, satellite, and submarine-cable infrastructure,
 - identify connectivity gaps, resilience risks, and single points of failure,
 - forecast network demand arising from AI and digital technologies,
 - Identify suitable locations for data centres, edge-computing facilities, and supporting telecommunications infrastructure,
 - coordinate investment in energy, water, and telecommunications infrastructure,
 - establish resilience, security, and redundancy expectations,
 - support regional and remote participation in the AI economy,
 - identify pathways for nationally significant digital infrastructure projects,

²² 3GPP, [6G Use Cases and Service Requirements](#), 2026

- promote competitive access, interoperability, and efficient infrastructure sharing across digital infrastructure, including fibre corridors, ducts, cable landing facilities, and public assets, and
- clearly allocate responsibilities across governments, regulators and infrastructure operators.

5.3.11 The National Digital Infrastructure Plan should also promote competitive access, interoperability, and efficient infrastructure sharing where appropriate. Facilitating access to shared infrastructure, including fibre corridors, ducts, cable landing facilities, transmission routes, and public assets, can reduce costs, improve infrastructure utilisation, accelerate deployment, and support competition. As demand for AI and data centre capacity grows, encouraging the efficient use of existing infrastructure will help maximise investment outcomes while avoiding unnecessary duplication of assets.

5.3.12 The case for a coordinated national approach is reinforced by the increasing interdependence between data centres, telecommunications networks, energy infrastructure, and AI-enabled services. The ATA has previously recommended the development of a National Digital Infrastructure Strategy, while the National AI Plan identified investment in enabling infrastructure as a prerequisite for Australia's AI ambitions.²³

Digital Infrastructure Coordinator-General

5.3.13 To support implementation, the Government should establish a Digital Infrastructure Coordinator-General responsible for improving coordination across infrastructure projects and regulatory frameworks. The role could:

- facilitate approvals for nationally significant digital infrastructure,
- identify complementary telecommunications, data centre, and energy requirements,
- support early engagement with communities and stakeholders,
- maintain a national pipeline of major digital infrastructure projects,
- coordinate sequencing across government approvals and regulatory processes,
- improve access arrangements for Crown land and public assets,
- resolve inter-jurisdictional infrastructure barriers, and
- monitor and report publicly on systemic deployment constraints.

5.3.14 A Digital Infrastructure Coordinator-General would align with recommendations made by Deloitte Access Economics and AMTA to improve coordination across infrastructure planning, approvals, and deployment. Similar models have been used internationally to streamline approvals for nationally significant digital and infrastructure projects and reduce deployment delays.²⁴

Digital Infrastructure Regulatory Initiatives Grid

5.3.15 The framework should also include a rolling 24-month Digital Infrastructure Regulatory Initiatives Grid. Like arrangements used in the financial services sector, the Grid would improve transparency and coordination across regulatory reforms affecting telecommunications, data centres, cloud services, cyber security, privacy, online safety, AI and digital platforms. It should identify lead agencies, implementation timeframes, interactions between reforms and expected compliance obligations.

5.3.16 Together, these measures would provide a more coordinated approach to digital infrastructure planning, improve investment certainty and help ensure that telecommunications networks, data centres and supporting infrastructure can develop in a complementary manner. This will be critical to maximising the economic, productivity and societal benefits of AI for Australia.

²³ ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026); Department of Industry, Science and Resources, [National AI Plan](#) (2025); Australian Strategic Policy Institute (ASPI), [Recognising the Economic Potential of Digital Infrastructure Resilience](#) (2025).

²⁴ Deloitte Access Economics, [Future of Mobile: Reforms to Modernise Australia's Telecommunications](#) (2026); AMTA, [Submission 188 to the Senate Select Committee on Productivity in Australia](#) (2026); US Federal Permitting Improvement Steering Council, [Permitting Council](#).

- 5.3.17 The ATA has previously proposed a Regulatory Initiatives Grid modelled on Treasury's existing Regulatory Initiatives Grid for the financial services sector. The approach would improve transparency, reduce duplication and provide industry with greater visibility of upcoming regulatory reforms affecting telecommunications infrastructure, AI, data centres, privacy, cyber security and digital platforms.²⁵

5.4 REGIONAL PARTICIPATION IN THE AI ECONOMY

- 5.4.1 The ATA suggests the Committee recommend that Government ensure regional Australia shares in the economic, social, and connectivity benefits arising from investment in data centres and AI infrastructure. While policy discussions often focus on the location, energy, and water requirements of data centres, consideration should also be given to how regional communities, businesses, and industries can benefit from the enhanced digital capabilities these investments support. This would be consistent with the Australian Government's objective of improving regional data connectivity and economic participation through investment in telecommunications infrastructure and digital technologies.²⁶
- 5.4.2 This is particularly important given the inquiry's focus on the impacts of AI and data centres on Australian communities. Ensuring regional communities can access and adopt AI-enabled services will be essential to maximising the national benefit arising from investment in AI infrastructure.
- 5.4.3 Government support for significant data centre developments should include a Connectivity and Regional Benefit Plan. The Plan could demonstrate how associated investments in telecommunications infrastructure will improve digital capability and support AI adoption in regional and remote Australia. Such Plans could consider:
- new and upgraded fibre routes,
 - mobile network coverage and capacity improvements,
 - opportunities for shared digital infrastructure,
 - network resilience and redundancy outcomes,
 - regional workforce, training, and skills development opportunities,
 - access to AI-enabled services and applications,
 - support for regional industries such as agriculture, mining, manufacturing, and tourism, and
 - responsibility for funding and delivery of associated infrastructure.

²⁵ ATA, [Creating a More Dynamic and Resilient Economy Interim Report Submission](#) (2025); ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026); Australian Treasury, [Regulatory Initiatives Grid](#), Edition 3 (2026).

²⁶ Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCA), [Better Connectivity Plan for Regional and Rural Australia](#) (2022); DITRDCA, [Regional Investment Framework](#) (2023)

- 5.4.4 The cost of delivering high-performance telecommunications services in many regional and remote areas can be significant due to low population density, distance, and challenging geography. Infrastructure sharing arrangements, including shared towers, fibre routes, backhaul infrastructure, ducts, facilities and other passive infrastructure, can play an important role in reducing deployment costs and improving service affordability. Government policies supporting efficient infrastructure sharing can therefore help extend the benefits of AI and advanced connectivity to communities that may not otherwise be commercially viable to serve through duplicative network investment.
- 5.4.5 Reliable telecommunications connectivity is a prerequisite for regional participation in the AI economy. The 2024 Regional Telecommunications Review recognised the increasing importance of high-quality communications infrastructure for economic development, resilience, and access to essential services in regional Australia.²⁷ Similarly, the Australian Government's National AI Plan identifies the need for enabling digital infrastructure and investment settings that support AI adoption across the economy.²⁸
- 5.4.6 Access alone will not be sufficient to ensure regional participation in the AI economy. Communities, businesses, and households must also be able to access connectivity services at price points that support the adoption of AI-enabled tools and services. This is particularly important in rural, remote, and First Nations communities, where telecommunications connectivity will be essential to accessing the productivity, education, training, healthcare, agricultural, and public service benefits that AI can deliver. Ensuring affordable access to appropriate-performance connectivity should therefore be a key objective of future digital infrastructure and regional connectivity programs.
- 5.4.7 While the direct-to-device serviced offered by Low Earth Orbit satellite (LEOsat) networks will improve coverage for regional, rural and remote communities, it is unlikely to provide the capacity that AI-enabled services will need. This is why both terrestrial (fibre, mobile) networks and non-terrestrial (satellite) networks are recognised as complementary technologies.
- 5.4.8 AI-enabled services in healthcare, education, agriculture, emergency management, transport, and government services depend on access to high-capacity and resilient communications networks. Without appropriate investment in supporting telecommunications infrastructure, there is a risk that the economic benefits of AI become concentrated around major metropolitan data centre locations rather than being distributed across regional and remote communities.²⁹
- 5.4.9 The ATA notes the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCA) has recently undertaken stakeholder engagement on the design of future regional connectivity programs. While these discussions did not specifically address data centres or AI infrastructure, ATA considers there is an important and growing intersection between these policy areas. Future regional communications policies and programs should explicitly consider the telecommunications infrastructure required to support AI adoption, regional access to AI-enabled services, and the broader economic opportunities arising from Australia's investment in data centres and digital infrastructure.³⁰

5.5 RESILIENCE, ENERGY AND SECURITY

- 5.5.1 The resilience of Australia's AI ecosystem depends not only on data centre capacity, but also on the resilience of the telecommunications infrastructure that connects data centres to users, businesses, governments, and critical services. As AI adoption increases, data centres and telecommunications networks should be considered as interdependent elements of a single digital infrastructure ecosystem

²⁷ Regional Telecommunications Independent Review Committee, [2024 Regional Telecommunications Review](#) (2024)

²⁸ Department of Industry, Science and Resources, [National AI Plan](#) (2025)

²⁹ ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026), particularly section 2.4 Productivity in Regional Australia; and AMTA, [Submission 188 to the Senate Select Committee on Productivity in Australia](#) (2026), discussion of mobile connectivity, productivity, and regional deployment barriers

³⁰ Regional Telecommunications Independent Review Committee, [2024 Regional Telecommunications Review](#) (2024); Department of Industry, Science and Resources, [National AI Plan](#) (2025)

rather than as separate infrastructure assets.

- 5.5.2 A key component of this resilience is network diversity. Geographically diverse fibre routes, domestic carrier and international cable diversity, backup satellite and wireless capabilities, prioritised restoration arrangements, and the management of shared infrastructure all contribute to reducing systemic risk. Concentrating compute capacity without corresponding diversity in telecommunications connectivity can create vulnerabilities that undermine the reliability and resilience of AI-enabled services.
- 5.5.3 International connectivity also plays a critical role in Australia's AI ecosystem. Australia remains heavily reliant on international data flows, cloud services, and global platforms, making subsea cable infrastructure a strategic national asset. The capacity, diversity, and security of subsea cable systems, including landing stations and associated terrestrial backhaul routes, will become increasingly important as AI adoption grows and Australia seeks to strengthen its position as a regional digital and data centre hub. Policy settings should support investment in diverse international connectivity pathways and the resilience of cable landing stations, domestic transmission infrastructure, and inter-capital fibre routes that connect Australia to global international markets.
- 5.5.4 Telecommunications infrastructure also forms a critical component of Australia's strategic digital capability. Diverse, secure, and resilient communications networks enable access to cloud services, AI systems, data centres, and critical services, while reducing reliance on a limited number of infrastructure pathways. As Australia seeks to strengthen its sovereign AI capability, consideration should be given not only to the location of compute infrastructure, but to the resilience, security, and diversity of the telecommunications networks that connect AI services to businesses, governments, and communities.
- 5.5.5 AI and data centre policy should also recognise shared energy dependencies across digital infrastructure. Similarly, consideration of AI infrastructure should extend beyond individual facilities to encompass broader environmental and resource management outcomes. While data centres can increase demand for energy, water, and land resources, telecommunications networks and AI-enabled technologies can also deliver environmental benefits through smarter energy management, more efficient transport systems, improved infrastructure utilisation, and precision agriculture. Policy frameworks should consider both the impacts of AI infrastructure, and the environmental benefits that digital technologies can enable.
- 5.5.6 While much attention is rightly given to energy requirements of data centres, the broader AI ecosystem relies on fibre transmission infrastructure, mobile network sites, edge-computing facilities, telecommunications exchanges, cable landing stations, and backup communications systems. ATA members have reported power-connection delays for telecommunications infrastructure of up to 2.5 years, highlighting the need for a more coordinated approach to digital infrastructure planning and delivery.³¹
- 5.5.7 The ATA suggests the Committee should recognise that telecommunications networks are not merely consumers of energy, but essential enabling infrastructure for the operation of data centres and AI services. Planning and investment decisions relating to electricity, telecommunications, and data centres should therefore be considered holistically to ensure that growth in AI capability is supported by both sufficient electricity and telecommunications connectivity, resilience, and supporting infrastructure.
- 5.5.8 The security of Australia's AI ecosystem extends beyond traditional cybersecurity controls. Data centres, telecommunications networks, cloud platforms, subsea cables and associated infrastructure are strategic digital assets that underpin Australia's economic resilience, national security, and AI capability. Security frameworks should therefore consider not only cybersecurity risks, but also the provenance, trustworthiness, resilience, and integrity of the technologies, infrastructure, and supply chains that support compute and connectivity.
- 5.5.9 Cybersecurity requirements should extend across the AI delivery chain, including telecommunications networks, data centres, cloud environments, data in transit, identity and access management systems, supply chains, operational technology, interconnection points, incident response arrangements, and

³¹ ATA, [Submission 190 to the Senate Select Committee on Productivity in Australia](#), (2026); ATA, [Creating a More Dynamic and Resilient Economy Interim Report Submission](#) (2025).

recovery capabilities.

- 5.5.10 Security, resilience and AI obligations should remain risk-based, technology-neutral and proportionate. Regulatory attention should focus on managing identifiable risks and harms rather than regulating specific technologies in isolation. Where possible, risks should be addressed at the most appropriate point in the value chain, and aligned with existing telecommunications, cybersecurity, and critical infrastructure frameworks. This approach will reduce duplication, provide regulatory certainty, and ensure investment is directed towards improving resilience and security outcomes rather than navigating overlapping regulatory obligations.
- 5.5.11 The ATA recommends that Government require major AI and data centre developments to assess telecommunications connectivity, network diversity, international connectivity, energy dependencies, and security risks as part of planning, approval, and investment frameworks.

6. RECOMMENDATIONS

The ATA's recommendations are founded on a single principle: while data centres create AI capability, telecommunications infrastructure enables that capability to be delivered throughout the economy.

Australia's ability to realise the productivity, innovation, and societal benefits of AI will depend on the policy settings that support both compute infrastructure and the fixed, mobile, fibre, satellite, and energy infrastructure that underpins it. The Committee therefore has an opportunity to adopt a whole-of-system approach to AI infrastructure that recognises the interdependence between data centres, telecommunications networks, spectrum, energy systems, cybersecurity, and regional connectivity.

	Recommendation	Key Outcome	Terms of Reference (ToR)
1	Recognise telecommunications as AI infrastructure. - Formally recognise telecommunications networks as a core component of Australia's AI ecosystem, and - Require telecommunications connectivity, capacity, and resilience considerations to be incorporated into major AI and data centre planning processes.	Ensures data centre investment is supported by the connectivity needed to deliver AI services.	ToR (a): Regulatory frameworks managing growth of data centres ToR (b): Impacts on industries and communities ToR (c): Recognises the broader digital infrastructure ecosystem required to support AI adoption
2	Reform telecommunications deployment frameworks. Modernise Schedule 3 of the Tel Act and establish nationally consistent, risk-based planning, approval, and land-access arrangements for telecommunications infrastructure.	Accelerates deployment of fibre, mobile, and other critical connectivity infrastructure.	ToR (a): Regulatory frameworks managing growth of data centres ToR (b): Impacts on industries and communities
3	Support sustainable network investment. Assess spectrum pricing, spectrum renewals, and telecommunications regulatory settings through the lens of Australia's long-term AI,	Maintains investment capacity needed to support growing AI-related demand.	ToR (a): Regulatory frameworks managing growth of data centres

	Recommendation	Key Outcome	Terms of Reference (ToR)
	digital infrastructure, and productivity objectives.		ToR (b): Impacts on industries and communities ToR (c): Recognises the broader digital infrastructure ecosystem required to support AI adoption
4	Establish a National Digital Infrastructure Framework. Develop a coordinated framework comprising a National Spectrum Strategy, National Digital Infrastructure Plan, Digital Infrastructure Coordinator-General, and Digital Infrastructure Regulatory Initiatives Grid.	Aligns infrastructure planning, investment, and regulation across telecommunications, data centres, energy, and AI.	ToR (a): Regulatory frameworks managing growth of data centres ToR (b): Impacts on industries and communities ToR (c): Recognises the broader digital infrastructure ecosystem required to support AI adoption
5	Promote regional participation in the AI economy. Require major AI and data centre developments receiving government support to demonstrate how associated investments will improve regional connectivity, support affordable access to digital services, and expand access to AI-enabled services and digital capability in regional, remote, and First Nations communities.	Ensures the benefits of AI and data centre investment are distributed throughout regional and remote Australia.	ToR (b): Impacts on industries and communities ToR (c): Recognises the broader digital infrastructure ecosystem required to support AI adoption
6	Strengthen resilience, security, and strategic capability Require major AI and data centre developments to assess telecommunications connectivity, network diversity, international connectivity, energy dependencies, and security risks as part of planning, approval, and investment frameworks.	Ensures Australia's AI ecosystem is resilient, secure, and supported by trusted digital infrastructure.	ToR (a): Regulatory frameworks managing growth of data centres ToR (b): Impacts on industries and communities ToR (c): Recognises the broader digital infrastructure ecosystem required to support AI adoption

Collectively, these recommendations seek to ensure that Australia approaches AI infrastructure as an integrated ecosystem, recognising that the benefits of data centre investment will only be fully realised where supported by world-class telecommunications infrastructure, sustainable investment settings, coordinated planning, and resilient digital networks.

Australia's ability to realise the full economic, productivity, and societal benefits of AI will depend on a coordinated national approach to digital infrastructure. This requires a clear strategic framework that integrates telecommunications, data centres, spectrum, energy, cyber security, and regulatory policy, recognising that these elements are increasingly interdependent. Government should prioritise the development and implementation of a National Digital Infrastructure Framework, supported by cross-government coordination and adequate resourcing, to ensure infrastructure planning, investment settings and regulatory reforms are aligned with Australia's long-term AI and digital economy objectives.

Given the critical role telecommunications infrastructure plays in enabling AI adoption, economic growth, resilience and national security, ongoing engagement between Government, regulators, and industry will be essential. The central message of this submission is that Australia cannot build a successful AI future through data centre investment alone. Telecommunications infrastructure must be recognised, planned, and regulated as foundational AI infrastructure if Australia is to maximise the productivity, resilience, and economic benefits of AI.

Telecommunications networks, like data centres, form part of Australia's sovereign digital capability. Ensuring Australia maintains secure, resilient, and diverse connectivity infrastructure will be essential to supporting national security, economic resilience, and the trusted adoption of AI technologies. For this reason, telecommunications infrastructure should be recognised, planned, and regulated as a strategic component of Australia's AI future rather than simply as a supporting service to data centres.

The ATA and its members stand ready to work with Government and stakeholders to support a coordinated reform agenda that strengthens Australia's digital infrastructure foundations and ensures the benefits of AI and data centre investment are realised across the entire economy.

Ends

