

# Five-year spectrum outlook 2025–30 and 2025–26 work program Draft for consultation

MARCH 2025

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# Foreword

The use of spectrum in Australia continues to evolve and rapidly change. As Australia's spectrum regulator, the Australian Communications and Media Authority (the ACMA) is responsible for carefully managing use of radiofrequency spectrum to maximise the overall long-term public benefit derived from its use. The five-year spectrum outlook (FYSO) is our opportunity to annually consult about our spectrum management priorities and annual work program.

The ACMA supports the Australian Government's policies and priorities, including by promoting access to emergency call services, enhancing regional connectivity and advancing investment in new and emerging technologies through our regulation of spectrum. We contribute to the government's key policy priorities, including closing the digital inclusion gap for First Nations Australians and the 'Net Zero by 2050' commitment. We also undertake activities to deepen people-to-people links and communications between Australia and Pacific Island nations.

As many spectrum licences across different bands are due to expire between 2028 and 2032, our expiring spectrum licences (ESL) project is a key priority. It is our role to consider potential options for the expiring licences and underlying spectrum, consistent with our responsibilities and objectives.

In this FYSO, we are progressing the upper 6 GHz (6425–7125 MHz) band to the implementation stage of planning. Following our work to make the frequency range 5925–6585 MHz<sup>1</sup> available for use by radio local area networks (RLANs), we have turned our attention to future arrangements that would permit higher-power RLAN devices than those currently permitted by our regulatory regime. This work will continue across 2025–26.

We continue to support technology and service innovation in the satellite sector, particularly those with the potential to enhance regional development and connectivity. This includes ensuring that regulatory arrangements and spectrum access for satellite communications will enable Australia to fully benefit from new developments in emerging low Earth orbit satellite (LEOsat) technologies, including through the Universal Outdoor Mobile Obligation, which the government announced on 25 February 2025. We are also progressing our work on the mobile satellite service (MSS) allocation, with a focus on the allocation of licences for MSS in the 1980–2005 MHz and 2170–2195 MHz bands.

Our work program includes involvement in studies related to World Radiocommunication Conferences (WRCs) and ongoing International Telecommunication Union (ITU) and Asia-Pacific Telecommunity (APT) radiocommunication forums.

We continue to work on implementing outcomes from WRC-23, including some new frequency allocations, service identifications, and regulatory and procedural matters across a range of services and applications where appropriate. We are well into the process of engaging in studies relevant to the WRC-27 agenda.

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<sup>1</sup> The range 6425–6585 MHz is intended to be released for RLAN use before October 2025 as an outcome of our [planning decision for the upper 6 GHz band](#).

We are also committed to engaging with other spectrum and communications regulatory counterparts, particularly in Pacific Island nations. We are looking at ways to build on our successes, seen, for example, in the November 2024 Telecommunications and Radiocommunications Training Program (TRTP), which we hosted and was attended by spectrum regulators from the Pacific Islands and Timor-Leste. We will continue to strengthen our relationships with the Pacific Islands through these forums and share information and ideas for better spectrum management.

We are continuing our significant program of radio planning and allocation activities, informed by our radio broadcast planning priorities, outlined in our [Future delivery of radio](#) report. These include AM to FM conversions in a number of regional markets and improving the coverage of existing services. We are also actively supporting trials of new broadcasting technology, including small-scale Digital Audio Broadcasting (DAB). We note the [government's announcement](#) about exploring pathways for the future of television including the more efficient use of spectrum and infrastructure for television transmission, and will provide input, if requested.

We are always working to improve our regulatory processes and frameworks to optimise outcomes for licensees and the public. This includes our work to review a number of radiocommunications instruments due to sunset in this FYSO period, along with our ongoing review of the administrative and legislative technical planning instruments that guide how radiocommunications services are planned and deployed.

The pace of technological and market change places high demands on the ACMA and industry. As we work through complex and interconnected spectrum issues, we may need to adjust timeframes to ensure that we remain responsive and deliver the long-term public interest derived from the use of the spectrum. We will communicate any changes through our 6-month and 12-month FYSO updates and as necessary to affected stakeholders.

# Using the FYSO

The FYSO covers the 5 financial years 2025–26 to 2029–30. It comprises:

- [Part 1](#): an outlook of the drivers likely to shape the demand for spectrum over the next 5 years
- [Part 2](#): our detailed annual work program for the 2025–26 financial year.

For ease of interpretation, references to quarters are calendar year quarters:

- quarter 1 (Q1): 1 January to 31 March
- quarter 2 (Q2): 1 April to 30 June
- quarter 3 (Q3): 1 July to 30 September
- quarter 4 (Q4): 1 October to 31 December

# Acronyms and shortened forms

AFC	automatic frequency coordination
AWL	area-wide licence (type of transmitter licence)
BLoS	beyond line-of-sight
CNPC	command and non-payload communication
ESL	expiring spectrum licence
ETSI	European Telecommunications Standards Institute
FCC	United States Federal Communications Commission
FSS	fixed-satellite service
IEEE	Institute of Electrical and Electronics Engineers
IMT	international mobile telecommunication
IoT	Internet of Things
ITU	International Telecommunication Union
ITU-R	Radiocommunication Sector of the ITU
LEOsat	low Earth orbit satellites
LoS	line-of-sight
MPS	Ministerial policy statement
MSS	mobile-satellite service
Ofcom	United Kingdom spectrum regulator
PTP	point-to-point
RALI	radiocommunications assignment and licensing instruction
RPAS	remotely piloted aircraft systems
RRs	Radio Regulations
the Department	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
TLG	technical liaison group
WBB	wireless broadband
WRC	World Radiocommunication Conference
3GPP	Third Generation Partnership Project, Standards organisation for mobile telecommunications

# Part 1: Five-year spectrum outlook 2025–30

**Part 1 provides an outlook of the trends in markets, technology and spectrum uses that inform the ACMA's medium-term planning, allocation and re-allocation activities. It also provides a description of our approach to spectrum management.**

# Overview

The public appetite for advanced connectivity is continuing to transform the way spectrum is managed in Australia. As new technologies emerge, Australian's economic and social activities involve the use of radiocommunications devices at an increasing rate. Given this, there is a need to invest in network resilience and keep our critical data, systems and infrastructure safe.

The focus of our spectrum management approach and our work program is on promoting long-term public interest derived from the spectrum and includes activities to support government objectives and policy priorities. The FYSO and spectrum management priorities are informed by domestic and international views about the timing of technology developments and progress in international harmonisation activities.

Spectrum holdings are a significant determinant of an operators' network capacity and directly influence service quality and its potential for entry into new geographic markets. As a finite resource, the careful management and allocation of spectrum, including the timing of major allocations and expiration of spectrum licences, can have a significant impact on the nature of competition in downstream markets.

In developing the FYSO, we consider existing spectrum use as well as the demand for spectrum-dependant connectivity in both the Australian and international context. The demand for spectrum is driven by Australia's appetite for advanced connectivity, with Internet of Things (IoT) functionalities such as cloud and edge computing, clean-energy solutions and enhanced network capabilities being key technology trends. The desire for higher speed, expanded coverage, lower-latency connections in particular is driving innovations, including in 5G/6G,<sup>2</sup> Wi-Fi 6/6e/7 and through the use of LEOsats to provide satellite direct-to-mobile services. Our work program enables us to help realise the benefits of these technological developments that enhance existing, or create new, use-cases and have the potential to improve spectrum use and efficiency.

The ACMA, the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the Department), other government stakeholders and the Australian communications industry participate in international radiocommunications forums to promote and protect Australian interests in spectrum management.

The peak international radiocommunications regulatory forum is the ITU's World Radiocommunication Conference (WRC), which reviews and revises the Radio Regulations (RRs) – the international treaty-level set of texts regarding use of the spectrum and satellite orbits. WRC-23 was held in late 2023 and considered possible new frequency allocations, service identifications, regulatory and procedural matters across a range of services and applications. Following WRC-23, in 2025 we intend to update the Australian Radiofrequency Spectrum Plan 2021 (ARSP) to reflect changes to Article 5 of the RRs, and we will be implementing WRC-23 outcomes where necessary and appropriate.

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<sup>2</sup> Department of Industry, Science and Resources, [Critical Technologies Statement](#), Department of Industry, Science and Resources website, 2023, accessed 14 January 2025.

# Our approach to spectrum management

Our responsibilities to manage the radiofrequency spectrum are set out in the Radiocommunications Act and in the *Australian Communications and Media Authority Act 2005* (the ACMA Act).

The object of the Radiocommunications Act is to promote the long-term public interest derived from the use of the spectrum by providing for the management of the spectrum in a manner that:

- facilitates the efficient planning, allocation and use of the spectrum
- facilitates the use of the spectrum for:
  - commercial purposes
  - defence purposes, national security purposes and other non-commercial purposes (including public safety and community purposes)
- supports the communications policy objectives of the government.

The object of promoting the long-term public interest derived from the use of spectrum underpins our balance of the many uses of spectrum as well as broader public policy objectives.

Consistent with the object of the Radiocommunications Act, we aim to facilitate efficient spectrum planning, allocation and licensing arrangements in each band for the use or uses<sup>3</sup> that best promote the long-term public interest derived from the use of that spectrum. We promote the object of the Radiocommunications Act and relevant government policy through a balanced application of market and regulatory mechanisms.

In assessing the impact that a regulatory proposal has on the public interest, we consider the overall effects on individuals, businesses, government users of spectrum and community organisations, as well as the broader economic, social and competition impacts. This approach aligns with the government's [Policy Impact Analysis Framework](#) that ensures that policy options are well designed, well targeted and fit-for-purpose. We consider the following matters drawn from the Policy Impact Analysis Framework:

- what is the issue we are trying to solve and what data is available?
- what are the objectives, why is government intervention needed to achieve them, and how will success be measured?
- what policy options are we considering?
- what is the likely net benefit of each option?
- who should we consult, and how?
- what is the best option of those considered and how will we implement it?
- how will we evaluate our chosen option against the success metrics?

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<sup>3</sup> 'Uses' refer both to the general types of use such as a service (for example, the mobile service) and more specific applications within a service (for example, WBB within the mobile service).

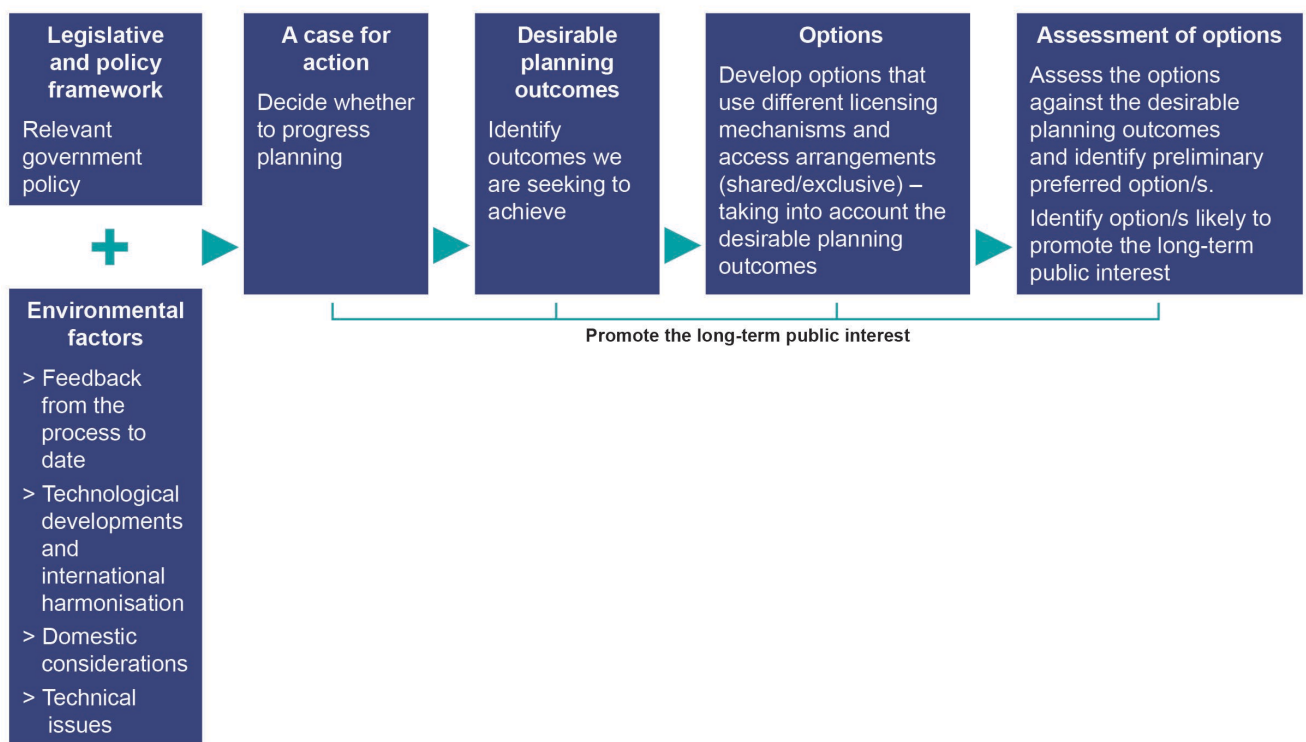
In responding to these questions, we draw on a variety of evidence, including technical studies, stakeholder views and quantitative data, where available.

Through the FYSO and other consultation processes, we consult on our work-program priorities, as well as issues and options relating to specific planning, licensing and allocation processes. We seek input through a range of mechanisms and provide outcome statements that explain the basis for our decisions. These are often iterative processes, reflecting multiple rounds of consultation.

## Planning and replanning

Figure 1 describes the approach the ACMA takes in developing and assessing planning and replanning options.

**Figure 1: The spectrum planning options framework**



Spectrum planning comprises the investigations and decisions that determine general service and application-level uses of the spectrum. This includes developing the technical frameworks that establish co-existence arrangements between different uses and users, and heavily influences the ‘licensing product’ that will authorise access to the band. It also includes determining the most appropriate licensing mechanisms to apply in each situation.

To the extent possible, planning arrangements are intended to allow the allocation (or movement) of spectrum with no, or minimal, further regulatory intervention. Planning arrangements may remain stable over long periods. However, where there is evidence of changing optimal use, it may be necessary to amend the arrangements to enable a new use or better support an existing use. Reviewing spectrum planning arrangements in any band is a key step to ensuring they continue to support optimal use.

The band-planning process is made up of 4 stages: monitoring, initial investigation, preliminary replanning and implementation. This approach has proven to be a flexible and responsive way of addressing changes in spectrum demand and ensuring the timely delivery of spectrum to market.

Planning outcomes have implications for decisions on licensing and future allocations. For example, planning outcomes will determine which uses are permitted, which in turn will determine the type of user likely to be interested in an allocation. To achieve the most efficient use of the spectrum, the interference management framework is often optimised for an expected use, even if such use is not mandatory. As an example, while spectrum licences may be 'technology flexible' in that they do not explicitly preclude any use, they are designed and optimised with a likely technology in mind to maximise the efficiency of these licences for their expected use, consistent with co-existence requirements of other spectrum uses/users.

The spectrum management framework we use does not identify specific quantitative metrics or targets for spectrum required for a particular use or group of users. The models used to estimate such spectrum targets are highly sensitive to inputs and variables, which are difficult to predict beyond the short- to medium-term. While long-term estimates are useful as a guide for trend analysis, they are less so for determining specific spectrum targets.

## Allocations and licensing

The choice of approach to allocating spectrum depends on a range of factors, such as the characteristics of the spectrum to be allocated, the expected type(s) of use and the anticipated demand for the spectrum.

If significant excess demand is likely, auctions are usually preferred. While we have flexibility to use a variety of auction formats as appropriate, our most recent spectrum auctions have been conducted using an 'enhanced multi-round ascending auction'.<sup>4</sup>

Administrative allocation approaches are used when that approach will best meet spectrum management objectives. While most of our apparatus licences are offered via a simple 'over the counter' approach (that is, administratively), where appropriate, we use an 'allocation window' approach to allocating specific licence-types. An allocation window allows a staged approach to considering applications, depending on whether there are competing applications and sufficient spectrum to fulfil all applications.

The other key licensing mechanism used is class licensing. This approach is used in Australia to implement less-closely-managed spectrum arrangements,<sup>5</sup> including 'spectrum commons'.<sup>6</sup> It allows spectrum users to use spectrum under specified rules outlined in class licences. They make available spectrum for use by services that operate on a limited set of common frequencies under a common set of conditions and often must comply with industry or legislative standards. Class licences do not involve licence taxes or charges, and there is minimal regulatory overhead for spectrum users. While most class licences offer ubiquitous access, exceptions exist for access to certain classes of use/user

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<sup>4</sup> Further information about spectrum auctions can be found here: <https://www.acma.gov.au/about-spectrum-auctions>. The ESMRA is a two-stage auction format that provides a simultaneous multiple-round clock stage for generic lots to determine the quantity of lots won of each product, followed by an assignment stage to determine the specific assignment.

<sup>5</sup> M Cave and W Webb, *Spectrum Management*, Cambridge University Press, Cambridge, 2015.

<sup>6</sup> Spectrum commons refer to the idea that anyone can use spectrum in the spectrum commons, as long as they follow the set rules. In Australia, those rules are set out in class licences.

(for example, the Radiocommunications (Public Safety and Emergency) Class Licence 2023 (PSEER class licence) authorising public safety agencies access to the 4.9 GHz band).

Lastly, we also implement technology flexible frameworks where practicable to promote innovation and the adoption of new and emerging technologies. This includes our [innovation and industry exemption framework](#), and the ability to potentially authorise use of a wider range of complementary radionavigation-satellite service (RNSS) technologies.

# The policy environment and regulatory reform

The object of the Radiocommunications Act includes managing spectrum in a manner that supports the communications policy objectives of the government. Our work program is informed by the policy environment in which we operate and expectations from government.

We are committed to meeting our objectives in the context of the government's broader media and communications policy framework. In our [Statement of Intent](#), we responded to the minister's [Statement of Expectations](#). We showed that we will address these priorities through:

- providing timely and comprehensive advice on a range of matters relating to ESLs, having regard to relevant Ministerial policy statements
- promoting the long-term public interest derived from spectrum, including the benefits of technological developments that improve spectrum utilisation and efficiency
- supporting government policies related to regional, rural and remote Australia including by having regard to relevant Ministerial policy statements in the planning and allocation of spectrum to support innovation and competition in these areas
- promoting technology neutral, simple and pragmatic frameworks that facilitate early adoption of new and emerging technologies, such as LEOsat enabled direct-to-device technologies, while providing safeguards for consumers and small businesses.

We also consider and contribute to, where possible, the government's policy priorities regarding:

- First Nations Australians and meeting the Closing the Gap targets
- the commitment to Net Zero by 2050 and the role that digital infrastructure and services can contribute to this objective
- deepening people-to-people links and cooperation between Australia and the Indo-Pacific.

Section 28C of the Radiocommunications Act requires us to have regard to Ministerial policy statements (MPS) in performing our spectrum management functions and exercising our spectrum management powers. There are 2 MPS in place:

- The 2022 [3.4 GHz MPS](#) specifies 4 objectives to which we must have regard for decisions related to the 3.4–4.0 GHz band, including:
  - supporting the deployment of new and innovative technology including 5G,
  - supporting a range of use-cases and users
  - supporting digital connectivity and investment in regional Australia,
  - the promotion of competitive markets.
- The 2024 [Radiocommunications \(Ministerial Policy Statement – Expiring Spectrum Licences\) Instrument 2024](#) (the ESL MPS) sets out 5 key communications policy objectives to which we must have regard as we design and implement our process to manage the future use of expiring spectrum licences (ESLs). We have incorporated the communications policy objectives in the ESL MPS into our ESL framework.

We are committed to meeting our objectives in the context of the government's broader media and communications policy framework.

We committed to fulfilling the government's priorities through:

- publishing the FYSO each year, to provide a roadmap for spectrum releases and support new spectrum uses
- supporting technology trials and innovation, including through innovation and industry development opportunities in Australia for manufacturing banned equipment, where publicly beneficial; as well as innovation through the greater use of digital technologies targeted at reducing the regulatory burden for industry
- supporting opportunities for better telecommunications services in regional and remote Australia through our spectrum and licensing allocation processes and supporting innovations to improve service delivery, including by the rapidly emerging satellite sector
- participating in WRC and associated preparatory meetings, including ITU-R Study Groups and Working Parties to realise the benefits of wireless and satellite technology developments for Australia
- contributing our expertise to the government's work on modernising the media's regulatory environment for a contemporary Australia.

In the sections below we outline government initiatives that support these objectives. We then detail the ways that ACMA, as spectrum regulator, works to achieve the government policy priorities.

## Regional connectivity

Digital connectivity is of primary importance to Australia's regional communities and businesses. The [State of Australia's Regions 2024](#) report highlighted that reliable and affordable access to digital communications can help regional Australians overcome the 'tyranny of distance'. However, the 2024 [Regional Telecommunications Independent review](#) found that regional Australians can face access, awareness, affordability and reliability challenges when using telecommunications services.

Under the [Better Connectivity Plan for Regional and Rural Australia](#), the government is providing more than \$1.1 billion to regional and rural communities. The plan includes \$656 million provided in the 2022–23 October Budget over 5 years to improve mobile and broadband connectivity and resilience in rural and regional Australia. It is funding connectivity initiatives such as new rounds of the [Mobile Black Spot Program](#) and the [Regional Connectivity Program](#), the new [On Farm Connectivity Program](#) and the new [Regional Roads Australia Mobile Program](#) to boost multi-carrier mobile coverage on regional highways and major roads.

The [On Farm Connectivity Program](#) (OFCP) has provided opportunities for primary producers in agriculture, forestry and fisheries to take advantage of connected machinery and sensor technology. [Round 3 of the OFCP](#) opens in 2025 and will bring total investment by the government to \$53 million. The Better Connectivity Plan also includes \$480 million to NBN Co through the [Fixed Wireless and Satellite Upgrade Program](#) and has moved more than 122,000 homes and businesses in regional and peri-urban areas on to fixed wireless. The Upgrade Program also delivered improvements to NBN Co's [Fixed Wireless plus](#)

[wholesale plan](#), which has allowed more than 800,000 regional premises to access download speeds up to 100 Mbps on NBN fixed wireless.

As spectrum manager, we support regional connectivity in multiple ways. For example, we provided opportunities to secure spectrum and supply innovative 5G services in remote and regional Australia by offering geographically disaggregated spectrum and apparatus licences through 4 mid-band allocation processes in the [3.4–4.0 GHz frequency band](#) range. When planning and allocating spectrum we also consider the growing uptake of private networks in agribusinesses and other farming use-cases.

Under the ESL MPS, we must have regard to a range of regional policy issues. In addition to considering connectivity and investment in regional and remote areas to deliver improved services to end users, we must also have regard to facilitating opportunities for new entrants and use-cases, including for LEOsats.

Having considered advice that we provided on alternative licensing conditions in the ESL context, the minister asked that we work with the Department on exploring the merits of a secondary licensing framework. Such a framework has the potential to promote a range of connectivity outcomes in regional, rural, and remote Australia.

## **Resilient communications**

Every 3 years, the [Regional Telecommunications Review](#) examines existing and future telecommunications needs in regional, rural and remote communities across Australia. Its 2024 report [Connecting communities, reaching every region](#), described reliable communication during emergencies as ‘lifesaving’. The review supported efforts to expand community connectivity hubs and mandate minimum backup power duration for critical infrastructure during emergencies.

A number of government programs emphasise the importance of ensuring that communications infrastructure remain resilient during and after natural disasters. The Better Connectivity Plan is providing funding to improve the resilience of the telecommunications system, including through the [Telecommunications Disaster Resilience Innovation](#) (TDRI) program, [Broadcasting Resilience Program](#) and additional rounds of the [Mobile Network Hardening Program](#).

The [TDRI](#) program promotes the development of new technologies to provide resiliency, redundancy and availability of telecommunications during and following a natural disaster. Funding was awarded to 33 projects to improve the preparedness of Australia’s telecommunications networks against natural disasters.

The [Broadcasting Resilience Program](#) has completed 124 projects over 98 sites to upgrade standby emergency power facilities and complete satellite program upgrades. The sites that have been upgraded are used for priority ABC radio emergency broadcasting during natural disasters and were chosen as they are at greater risk of failure because they are in a bushfire or other natural disaster area.

## **Universal service arrangements and new Universal Outdoor Mobile Obligation**

In February 2025, the government [announced](#) that it would implement a new Universal Outdoor Mobile Obligation (UOMO). The UOMO would require mobile network operators to

provide access to mobile voice and SMS services on an Australia-wide basis. The government has stated its objectives for the policy are to expand Triple Zero access for Australians across the nation, expand outdoor voice and SMS coverage into existing mobile black spots, and improve the availability of mobile signals during disasters and power outages.

This new obligation is possible due to LEOsats, including the arrival of direct-to-device (D2D) technology, which relies on spectrum regulatory arrangements, including licences.

Ensuring that the regulatory environment for LEOsat D2D services is fit for purpose has been a priority over our recent FYSO work programs. Following a public consultation process, in 2024 we published regulatory guidance for operation of LEOsat D2D services using spectrum licensed to mobile network operators. We also note the government identified facilitating early adoption of LEOsat D2D technologies in its December 2024 [Statement of Expectations](#) for the ACMA. A number of the spectrum licences conducive to facilitating deployments of LEOsat D2D services are subject to our ESL process. Facilitating opportunities for new entrants and use cases, including for LEOsats, is a policy priority specified in the ESL MPS, and forms part of the criteria in our ESL public interest criteria framework. We will, among other things, consider the interactions between the ESL process and the UOMO.

The government intends to consult on and introduce legislation for the UOMO in 2025, with implementation to take place in late 2027. We will continue to collaborate with government on spectrum management aspects of the UOMO, including examining how the provision of D2D services covered by the UOMO might work in the external territories that are not subject to spectrum licensing. The government has indicated that further reforms to the longstanding universal services framework will be announced as it considers recommendations from the 2024 Regional Telecommunications Review.

## Closing the Gap

A considerable digital gap exists between First Nations people and other Australians, which can have a significant impact on First Nations peoples and communities to engage in business opportunities, access health or government services and participate in society and culture.<sup>7</sup> Target 17 of the [National Agreement on Closing the Gap](#) aims to achieve equal levels of digital inclusion for Aboriginal and Torres Strait Islander people as compared with other Australians, by 2026. It underpins Outcome 17, which is focused on First Nations Australians having access to information and services to make informed decisions regarding their lives.

The [First Nations Digital Inclusion Advisory Group](#) was established to advise on options to support progress towards the target and outcome. In its [First Nations Digital Inclusion Roadmap – 2026 and beyond](#) (the Roadmap), the group made 30 recommendations to achieve Target 17, including investment in infrastructure to increase equitable access, ensure that First Nations people are able to afford reliable internet services and support all First Nations people to gain skills to access the internet safely and effectively. It recommended support for digital mentor programs and First Nations radio services where they are not present.

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<sup>7</sup> National Indigenous Australians Agency, [First Nations Digital Inclusion Plan, 2023-26](#).

The [First Nations Community Wi-Fi Program](#) now provides communities in the Northern Territory, South Australia, Queensland and Western Australia free broadband access across community spaces, by either wi-fi access points or meshed wi-fi solutions.<sup>8</sup> The government has also committed funding for initiatives including First Nations digital support hubs, a network of digital mentors and improved First Nations digital inclusion data collection.

We continue to work at increasing digital inclusion of First Nations people, communities and businesses, through our role as spectrum regulator. The Roadmap recommended that the ACMA consider how spectrum allocation can be reprioritised to ensure allocation to First Nations services in large population centres where there is currently no First Nations radio presence. Community broadcasting licences allow licensees to provide broadcasting services on a not-for-profit basis for services that represent a community interest. Community broadcasting services aim to promote a diverse range of broadcasting for the Australian public, develop and reflect Australian identity, character and cultural diversity and provide local content. As of 2 January 2025, there are 155 community broadcasting radio licences that represent First Nations community interests. We continue to work with the Productivity Commission to provide data on First Nations community broadcasting to support the Closing the Gap dashboard, and we provide advice to the National Indigenous Australians Agency on the licensing of First Nations broadcasting services.

As noted in our ESL finalised framework and response to submissions paper (December 2023), spectrum, along with communications technologies, is an enabler of digital inclusion. By considering how incumbent or alternative uses for and users of the spectrum can facilitate opportunities for regional, rural and remote connectivity, we can contribute to connectivity outcomes for First Nations Australians in our role as the spectrum manager. A secondary licensing framework, which the minister has asked us to explore with the Department, could facilitate connectivity outcomes in regional, remote and rural First Nations communities. Additionally, we continue to monitor and consider our international counterparts' new spectrum management activities to support First Nations communities. We invite comment from First Nations organisations, businesses, people and communities on how we can work together to improve our spectrum management approaches to help close the gap.

## Net zero emissions

The Australian Government has committed to achieving net zero emissions by 2050, and efficient spectrum management can help to reduce emissions. For example, better monitoring of spectrum use and trends can help to optimise network topologies and therefore minimise infrastructure or material builds. Spectrum management outcomes that directly enable critical technologies will further help us achieve this commitment.<sup>9</sup>

6G (the sixth generation of mobile networks<sup>10</sup>), which analysts expect to be operational by 2030, could also help to reduce emissions from telecommunications infrastructure. The International Telecommunication Union Radiocommunication Sector (ITU-R) is developing 6G standards specified under the International mobile telecommunications 'IMT-2030 Framework', which has outlined that 6G is 'built on energy efficiency, low power

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<sup>8</sup> Backhaul connectivity will be provided by satellite in areas where terrestrial backhaul is not available or commercially unviable.

<sup>9</sup> Department of Industry, Science and Resources, [Critical Technologies Statement](#).

<sup>10</sup> All mobile broadband systems are based on the ITU's IMT standards.

consumption, reducing greenhouse gases and the appropriate use of resources'.<sup>11</sup> 6G technology is unique in that it is the first generation of radiocommunications technology that has had artificial intelligence (AI) embedded into its design from the start. AI and machine learning can be used to conserve power use and more carefully use communications infrastructure.

Spectrum is also an enabler of Cooperative Intelligent Transport Systems (C-ITS), which can reduce carbon emissions from road transport. C-ITS are interconnected systems of technologies that allow road vehicles to communicate with other vehicles, their drivers, road infrastructure and vulnerable road users such as pedestrians and cyclists. C-ITS enhances decision making based on shared information. Commonwealth, state and territory infrastructure and transport ministers continue to work together to progress C-ITS, including in line with the [Principles for a National approach to Co-operative Intelligent Transport Systems \(C-ITS\) in Australia](#), and the National Road Transport Technology Strategy and 2024-27 National Connected and Automated Vehicle Action Plan. A report provided to and commissioned by the Department estimated that by 2050 connected or automated vehicles could result in fuel reductions worth \$6 billion and greenhouse gas emissions reductions worth \$1 billion.<sup>12</sup>

We continue to assist in the development of new standards for the transport sector, including the emerging aviation sector to improve regulatory efficiency, provide for future technologies and increase safety. We work with the Department and other government agencies in this evolving sector.

Weather monitoring services, earth observation and climate change modelling are also important users of spectrum. Government agencies, such as the [Bureau of Meteorology and CSIRO](#), use spectrum when monitoring, analysing, predicting and communicating changes in Australia's climate.

Technology in this area is advancing at a rapid rate and we are continuing to look at how spectrum can be used to support more efficient communications energy use<sup>13</sup> and climate initiatives. This includes monitoring international regulatory counterparts' innovative uses of spectrum to reduce emissions,<sup>14</sup> and evaluating their suitability in an Australian context.

## Broadcast spectrum developments

The government has outlined a [range of objectives for broadcasting and media reform](#), which aim to strengthen Australian media outlets and provide equitable access to media services and content to all Australians. We contribute to a range of government broadcasting initiatives to support these objectives, including as an associate member of the Future of Broadcasting Working Group, which was established in early 2022 to provide a forum for industry and government to consider future broadcasting technologies and related reforms.

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<sup>11</sup> ITU-R, [Framework and overall objectives of the future development of IMT for 2030 and beyond](#), 16 November 2023, accessed 13 August 2024, pp. 5-6.

<sup>12</sup> The Centre for International Economics (CIE), [The Economic Impacts of Connected and Automated Vehicles](#), CIE website, 2021, accessed 10 December 2023.

<sup>13</sup> For example, Nokia's [Digital Design for Energy Efficiency](#) aims to reduce energy waste caused by unnecessarily high radio power levels. The approach is centred on considering a network's individual cells in terms of interference, load, and beam-set configuration to produce an optimised configuration, resulting in lower transmit power that reduces the carbon footprint without impacting the network performance.

<sup>14</sup> For example, [Ofcom](#), has taken steps to support the UK Government's Net Zero targets, including adopting a new environmental policy, obtaining [ISO14001:2015](#) accreditation (Environmental Management System), and creating a Green Champions Network.

At the [ACMA's Radcomms 2024](#) event, the minister announced that the Australian Government would 'work closely with industry on a plan to secure the future of free-to-air television, to position it to continue to inform, educate and entertain Australians'. This may eventually include exploring the possibility of realising a (second) digital dividend. The Department is planning to release a discussion paper to support engagement with interested parties in early 2025.

In December 2024, the *Communications Legislation Amendment (Regional Broadcasting Continuity) Act 2024* amended the Radiocommunications Act to enable the ACMA to authorise the consolidation of transmission arrangements for certain broadcasting services. It also amended the *Broadcasting Services Act 1992* to allow the ACMA to declare an area 'service deficient' when a commercial television broadcaster ceases to provide services terrestrially in that area, enabling viewers to access the Viewer Access Satellite Television (VAST) service.

## International influences

As a smaller country with a limited manufacturing base, the international environment is an important input to our domestic planning and regulatory considerations. International spectrum harmonisation, equipment standardisation and markets heavily influence domestic decisions on how spectrum is used and how coexistence between different spectrum uses and users is achieved.

Harmonising how we use spectrum with other countries and making use of international standards allows individuals and business to benefit from infrastructure/device economies of scale, global roaming and seamless interoperability. The Radio Regulations, a treaty-level document published by the ITU, details how cross-border interference is managed, how satellite spectrum/orbital resources are coordinated and which frequencies are used internationally by specific services and applications.

For this reason, we monitor international developments and engage in relevant international forums to inform, promote and protect our domestic interests. This includes:

- Keeping informed of developments in other countries and regions, to identify opportunities and pressure points for change in the use of spectrum as well as learning from arrangements that have been implemented elsewhere.
- Leveraging technical specifications and standards for radiocommunications technologies developed by international bodies for use domestically. Examples of these bodies include the Third Generation Partnership Project, Standards organisation for mobile telecommunications (3GPP), Institute of Electrical and Electronics Engineers (IEEE) and European Telecommunications Standards Institute (ETSI).
- Participating in international forums such as the APT and the ITU-R, which are influential in identifying opportunities for spectrum harmonisation both regionally and globally. The [International Engagement](#) section below provides details on our engagement in these forums.

## Spectrum management system

The ACMA commenced the spectrum management system (SMS) Project in April 2024 to support and replace our existing spectrum management software.

The ACMA has entered into a contract with Spectrum Center Inc to develop and integrate the SMS based on its product, Spectrum-E. This will allow the ACMA to continue to effectively manage more than 170,000 licences held across Australia.

## **Ongoing regulatory improvements**

We are also continuing to progress our sunseting work program, working on legislative instruments scheduled to sunset over 2025–26. See [Appendix A – Sunseting instruments](#) for more details.

# Market and technology drivers of change in spectrum demand

## Wireless (mobile and fixed) broadband

Along with traditional wide-area WBB use-cases, the emergence of non-traditional use-cases has also become a key input to our planning and allocation processes. In planning for future spectrum demand, we generally consider 3 broad categories of WBB use-cases, noting that network deployments may reflect combinations of these categories:

1. Wide-area subscriber networks, served by ubiquitous base stations operated by one or more service providers – this category could be considered ‘conventional’ telecommunications carrier fixed or mobile broadband operations.
2. More limited market subscriber networks over smaller, localised areas, including, but not limited to, fixed WBB and fleet-oriented services. Services provided by wireless internet service providers are an example of this type of use.
3. Business, government or non-commercial enterprise services operated or controlled by an entity within the confines of their own premises or land estate – for example, hospitals, education precincts, industrial, mining or transport facilities. These private networks are usually best enabled through either class licensing or local area apparatus-licensing approaches, and can use the same bands identified above in the context of fixed wireless access.

We anticipate that growing need for data will drive spectrum demand for 5G use. Reviewing arrangements for access to categories of bands already licensed for WBB is also important to ensure existing allocations are being used efficiently and provide a pathway for new technology developments. This needs to be balanced with the need to manage coexistence with other licensed services. Our work program continues to include projects to optimise existing planning frameworks. Such programs have resulted in mobile network operators deploying, or preparing to deploy 5G in their existing spectrum holdings.

Our planning, allocation and licensing activities seek to support a range of regional communications use-cases and users. This is particularly relevant for WBB services, where there are multiple types of service offerings, users and deployment models, resulting in a diverse range of spectrum needs in regional Australia.

We are progressing the review of arrangements for the 1800 MHz and 2 GHz bands in remote areas for fixed and mobile WBB services, replanning of the 1.5 GHz band and implementation of the 1.9 GHz band arrangements. Following our [planning decision for the upper 6 GHz band](#), we will also continue to monitor international developments in the upper 6 GHz band to inform our future implementation of WBB arrangements in parts of the band.

A number of frequency bands used for WBB are subject to the [ESL process](#), outlined below.

To progress considerations on WRC-27 agenda item 1.7, we will also undertake relevant studies towards possible IMT identifications in the 4400–4800 MHz frequency band, parts of the 7125–8400 MHz and the 14.8–15.35 GHz frequency bands.

## **5G/6G**

We expect to see increased refarming of existing WBB spectrum holdings to support future 5G deployments across a wide range of bands. This is likely to increase 5G accessibility and capacity to support data demand.

The capabilities of 5G have resulted in increased use and interest in deploying 5G for fixed or nomadic wireless access (FWA) applications by existing mobile network operators, dedicated FWA operators and private network operators.

Standardisation work for 6G, and parallel development of the IMT-2030 framework within the ITU, is well underway. We will continue to monitor developments in 6G technologies, with a focus on implications for spectrum management.

## **Wi-Fi 6/6e/7**

RLAN technologies, in particular wi-fi, have become an integral part of modern life and wi-fi use continues to expand, with a more diverse range of devices accessing these networks.

A growing number of countries have already made, or are in the process of making, arrangements to facilitate operation of RLANs in the 6 GHz band, mainly to enable the use of next generation wi-fi equipment, known as 'Wi-Fi 6e and Wi-Fi 7'. We have previously taken steps to support uptake of Wi-Fi 6e by making changes to the Radiocommunications (Low Interference Potential Devices) Class Licence 2015 (LIPD class licence) to allow RLAN equipment in the lower part of the 6 GHz band (5925–6425 MHz) in Australia. Following our [planning decision for the upper 6 GHz band](#), we are working towards expanding the frequency ranges for RLANs in the LIPD class licence to include 6425–6585 MHz, see '[Low Interference potential devices \(LIPD\)](#)'.

Some countries have permitted 6 GHz band RLAN operation at higher power levels than currently permitted in Australia. Higher-power operation can enable RLAN devices to provide coverage over a larger area and we are aware of growing interest in introducing similar arrangements in Australia, however there are interference management issues that require further consideration. For further details on our work for this issue, see '[Higher-power 6 GHz band RLAN](#)'.

## **Private networks**

Private networks are one potential means for enterprises to access spectrum that is better suited to their business needs than that available on public wireless networks. Following the early uptake of private networks by the construction and mining sectors, we are beginning to see uptake in a range of other sectors in Australia, including agribusiness, transport, logistics, and utilities. These applications are sometimes referred to as 'P5G' when enabled by 5G technologies or 'pLTE' when long-term evolution (LTE) is used.

We anticipate there will be increasing industry interest in deploying private networks using 5G technology to take advantage of new market opportunities and potential applications. In general, bands that support WBB use can also be used for private networks, however our allocations of millimetre wave (mmWave) spectrum in the 26 and 28 GHz bands and mid-band spectrum categories in the 3.4–4.0 GHz band are especially well suited for these purposes.

## Spectrum bands supporting WBB use

WBB (including 5G) uses spectrum that is commonly broken down into 3 broad categories:

- 'low-band' spectrum below 1 GHz, specifically, bands traditionally used to provide wide area-coverage for WBB networks
- 'mid-band' spectrum between 1 GHz and 6 GHz, which is used to provide a combination of coverage and capacity for WBB networks
- 'high-band' spectrum, above 6 GHz, which includes the mmWave bands previously used for FWA and high-capacity hot spot coverage.<sup>15</sup>

Each of these categories requires different planning considerations, due to their differing characteristics (for example, propagation characteristics), as well as international regulations and standards, domestic policy, legacy planning and allocation arrangements, and other incumbency factors.

We are aware of continued interest in the use of sub-1 GHz bands, due to their propagation characteristics and equipment availability. These categories of bands are particularly attractive for deploying WBB networks, including by regionally focused WBB providers and sector-specific providers. But mid-and-high categories of bands are becoming more and more important for the delivery of WBB services where population density and/or requirements for rich data necessitate higher capacity that can't entirely be met through network densification.

The [band planning](#) section in Part 2 provides a detailed breakdown of low-band (the 600 MHz band), mid-band (1.5 GHz, 1.8 GHz, 1.9 GHz, 2 GHz, 3.4 GHz, and 4 GHz bands) and high-band (6 GHz, 13 GHz, 40 GHz, 46 GHz and 47 GHz bands) spectrum categories under various stages of consideration – many being at the 'monitoring' stage only – for the potential delivery of WBB services. A number of these and other categories of bands are also subject to the ESL process, which is outlined below.

## Emerging uses – immersive technology and use of terahertz frequencies

Over the next 5 years we expect increasing clarity around emerging areas of spectrum use for the connectivity requirements for immersive technology applications. This may leverage capacity from networks supported by current and/or future spectrum allocations – potentially including terahertz frequencies (those above 100 GHz), which may serve a range of new and emerging use-cases.

Immersive technologies allow for a virtual world of endless, interconnected communities where people (as their true-life self or avatar) can meet, work and play using virtual reality headsets, augmented reality glasses, smartphone apps or other devices. It is anticipated that this technology will drive additional demand for connectivity, data and reduced latency.<sup>16</sup>

We also note that reconfigurable intelligent surfaces, beamforming and massive multiple input multiple output (mMIMO) technologies are being explored with terahertz frequencies.<sup>17</sup>

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<sup>15</sup> mmWave bands span 30 GHz to 300 GHz (that is, a wavelength of 1 cm to 1 mm). However, in the current 5G context, mmWave bands span from around 24 GHz up to 86 GHz.

<sup>16</sup> For example, to deliver the future of the immersive technology and the kinds of applications and services currently predicted, as per [Ofcom's](#) research, it is envisaged that networks will need to be able to deliver latencies as low as 100µsec and require a variety of technologies, including 'fibre-networks, cellular-networks, wi-fi access points and satellites as well as a mixture of public and private networks and cloud-edge computing' (p. 27).

<sup>17</sup> See for example, M. Ahmed, S. Raza, A. Amin Soofi, F. Khan, W. Ullah Khan, F. Xu, S. Chatzinotas, O. A. Dobre, Z. Han, 'A Survey on RIS Advances in Terahertz Communications: Emerging Paradigms and Research Frontiers', *Computer Science Review*, Volume 54, November 2024.

These technologies are being developed to address some of the limitations relating to the propagation characteristics of terahertz frequencies.

As outlined in our [March 2023 information paper](#), terahertz frequencies also have the potential to enable localised high-speed transfer of massive data volumes, including high resolution images. Emerging and potential use-cases for spectrum in the terahertz range include applications for communications, sensing, positioning and imaging. However, device development and commercial use-cases for terahertz spectrum are still in their infancy.

We will continue to monitor use-cases and regulatory developments overseas for these emerging areas of spectrum use.

## Satellites

On the satellite front, much of the focus continues to be on emerging LEOsat and/or mobile-satellite service offerings. We also continue to maintain our ongoing support for more traditional satellite services – for example, we will shortly complete an [update to our satellite filing procedures](#) to improve how we file satellite networks through the ITU in the Australian interest.

We continue to closely monitor developments that enable consumer mobile smartphones to communicate directly with satellite systems (direct-to-mobile services), as well as their supporting regulatory frameworks. In our FYSO 2024–29, we reported on the outcome of our consultation suitability of Australian regulatory arrangements and spectrum access for satellite direct-to-mobile services. We confirmed our view that [IMT-based satellite direct-to-mobile services](#) can be operated under Australia-wide spectrum licences without the need for further approval from the ACMA and released guidance on the applicability of our existing regulatory frameworks to direct-to-mobile operation. We will also continue to investigate radio astronomy concerns and encourage ongoing discussion between relevant parties.<sup>18</sup>

We will also assist the government and stakeholders on LEOsat and related spectrum management aspects relevant to the UOMO reform and note the recommendation of the recent [Senate Standing Committee on Rural and Regional Affairs and Transport Senate committee’s report on its inquiry into the shutdown of 3G](#) to prioritise the rollout of satellite direct-to-mobile services.

On 2 GHz MSS, consultation on technical matters was completed in February 2024 – see discussion under [“Implementation stage”](#) in Part 2 for details. Consultation on allocation is planned for Q2 2025, and subject to feedback, we expect to start an allocation process in the first half of 2026.

## Open RAN/Neutral hosts

Industry restructures are paving the way for operators to adopt different models for network deployment and management, including network sharing and passive infrastructure asset sales. Open RAN (Open Radio Access Network, also known as ORAN) is an emerging approach to network and infrastructure sharing. Standardisation of RAN elements allow for compatibility between a range of hardware and software elements, enabling telecommunications providers to integrate operating technologies from a variety of original equipment manufacturers. Using Open RAN technology can decrease rollout costs, open the

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<sup>18</sup> See our consultation on [Satellite direct-to-mobile services: regulatory issues](#) and Regulatory guide: [Operation of an IMT satellite direct-to-mobile service](#).

market to other companies, help with rollouts to remote and regional areas, increase resilience of telecommunications networks and allow greater sharing arrangements during natural disasters.

We are monitoring recent industry developments around the implementation of AI as the next stage of Open RAN.

The Australian Government continues to engage with international counterparts, including through the [Quad](#), a diplomatic partnership between Australia, India, Japan, and the US. The Quad will advance interoperability and security through a Memorandum of Cooperation on 5G Supplier Diversification and Open RAN. In September 2022, the government released a [joint statement](#) with the US Department of Commerce on resilience and security for 5G and Open RAN, reaffirming the commitment of these government agencies to develop and strengthen practical cooperation in open, interoperable, and disaggregated telecommunications approaches, including for testing-related activities for Open RAN. In February 2024, the governments of the US, Australia, Canada, the Czech Republic, Finland, France, Japan, the Republic of Korea, Sweden and the United Kingdom endorsed shared principles for the research and development of 6G wireless communication systems to support open, free, global, interoperable, reliable, resilient and secure connectivity. Australia also joined with the US, United Kingdom, Canada and Japan in January 2025 under the Global Coalition on Telecommunications (GCOT) to agree Open RAN certification principles, which provides a voluntary framework for stakeholders, including telecommunications carriers and vendors, to develop a certification program for Open RAN equipment.

While we are monitoring these developments closely – particularly relevant industry standards in terms of how they relate to use of the spectrum (such as those based on 3GPP specifications) – we have not yet identified any specific implications for spectrum management.

## **Spectrum sharing**

Spectrum sharing in its traditional form is a core component of managing access to spectrum – all users ‘share’ the spectrum through coordinated access (by working around other users on a time, frequency and/or spatial separation basis) or by uncoordinated access, where interference potential is understood and accepted and/or mitigated by technology (for example, under the LIPD class licence). ‘Non-traditional’ sharing arrangements, most notably dynamic spectrum access regimes, are also being considered, or implemented, internationally.

Some non-traditional sharing concepts that are currently being studied internationally take advantage of the ‘typical’ use-cases of RLAN and IMT in the upper 6 GHz band, combined with additional mitigation measures, to enable co-channel and same-area sharing. Under a non-traditional model, the dynamic application of mitigation measures, for example, those that consider specific deployment scenarios and/or signal propagation conditions, could be used to facilitate more efficient spectrum access through sharing.

Another example of spectrum sharing is the use of databases that contain relevant data – such as station location and protection requirements – to provide a sharing arrangement. Under these arrangements, a device would interrogate the database to determine if operation at a particular location would not impact existing stations.

Examples of databases currently in operation include Automated Frequency Coordination (AFC) used to manage interference between RLAN devices and fixed links, and the Spectrum Access System (SAS) to enable sharing spectrum between mobile WBB services and incumbent services in the 3550–3700 MHz band (also known as the Citizens' band Radio Service (CBRS)). These database systems can operate under a tiered-model, where details of the primary-tiered users are included in the database, and the second-tier user cannot operate until granted permission by the database.

Other international initiatives focused on spectrum sharing include the US regulator, the Federal Communications Commission, [Enhanced Competition Incentive Program \(ECIP\)](#); and ongoing work in the US as outlined in the [National Spectrum Strategy](#) to pursue expanded opportunities for shared access to government-held spectrum through the exploration of a common spectrum management platform.

Spectrum sharing through careful planning and use of appropriate regulatory tools presents a unique opportunity to allow a diverse range of licensees to access spectrum and help foster greater levels of industry partnerships through different spectrum-sharing arrangements. These can have beneficial effects on the economies of some areas, such as regional and remote Australia.

We are currently exploring the utility and feasibility of AFC to permit the operation of higher-power RLAN devices in the 6 GHz band – see '[Consideration of higher-power 6 GHz band RLAN](#)' in Part 2 for details. We will continue to monitor other innovations and advances in spectrum-sharing arrangements domestically and internationally. We also continue to encourage industry-led proposals of new approaches to spectrum sharing and remain open to discussing how spectrum-sharing arrangements could be best facilitated to meet the needs of different spectrum users.

## Radio and television services

Broadcasting services may be delivered using spectrum, including AM and FM frequencies (for radio), VHF, UHF and satellite frequencies. Evolving digital transmission technology and changes in viewer and listener behaviour are altering the modes of delivery and, consequently, changing the broadcasting demand for spectrum. For example, we are aware that some television broadcasters have been changing the video compression standard of some of their services from MPEG2 to MPEG4. In some areas, all the television services are now delivered using the MPEG4 compression standard. The future of delivery of television services will also be examined more broadly under a department-led initiative, as flagged in the '[Broadcasting](#)' section below.

We continue with a significant program of radio planning and allocation activities, informed and prioritised by our radio broadcast planning priorities, outlined in our [Future delivery of radio](#) report. These include AM to FM conversions in regional areas and improving the coverage of existing services. We are also supporting trials of new broadcasting technology – in 2023, we licensed multiple trials of small-scale DAB+ technology and past trials have included DAB+, DRM for AM (DRM30) and DRM for FM (DRM+) technologies for radio.

We have expanded the AM–FM conversion program for commercial radio broadcasting services in regional areas to include competitive markets. FM conversion of AM services in regional areas has the potential to improve listener experience and support industry by delivering improved audio quality, reduced signal interference and lower costs for broadcasters. We are continuing to work with commercial AM licensees in solus and

competitive regional radio markets to progress their requests for AM–FM conversions. In November 2024, we commenced a Broadcasting Technical Liaison Group (BTLG) to discuss the conversion program with broadcasters and to provide regular updates to the industry.

## **Spectrum for government requirements**

Many public service entities require the use of spectrum, including federal and state agencies responsible for defence, national security, law enforcement, safety and emergency services. Scientific, meteorological and transport services also have unique spectrum needs.

For example, the Bureau of Meteorology is the third-largest spectrum holder, by frequency, in Australia. It uses many licences between 2 MHz and 100 GHz to support a range of observing systems including active and passive sensors, fixed and mobile systems, and terrestrial to satellite services. Spectrum enables observations, forecasts, warnings, analyses and advice about Australia’s atmosphere, water, ocean and space environments, which assists Australians to manage and live safely and productively within their natural environment.

Government spectrum users usually operate within the same spectrum management framework as other users, although some government spectrum needs warrant additional considerations and regulatory arrangements. For example, a significant portion of Defence spectrum access is authorised under Defence apparatus licences, which can be issued in bands with certain footnotes ascribed in the Table of Allocations in the ARSP. These are commonly termed ‘Defence bands’. Similarly, bands accessed by Airservices Australia used for internationally harmonised aeronautical communications, navigation and surveillance services are set aside through ARSP footnotes.

We will continue working closely with Defence’s Joint Capability Group on ongoing access to spectrum to support a range of key capabilities, including Defence Strategic Review 2023 outcomes to ensure that Defence remains connected to securely communicate, collaborate and co-ordinate where and when it is required, including in the deployed, degraded and disconnected environment.

Defence is investing heavily into capability acquisition programs involving the delivery of new technologies. Many of these new projects<sup>19</sup> will deliver spectrum dependant capabilities requiring spectrum access across various bands allocated to mobile, radiolocation, radionavigation, fixed and aeronautical.

Defence requires global connectivity through beyond-line-of sight HF and satellite communication. It is important that Defence has access to adequate spectrum to support these systems including orbital resources. Along with increased demand for access to traditionally used spectrum bands, Defence is increasingly looking to higher bands to enable these new capabilities.

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<sup>19</sup> Defence, [Projects](#), Defence website, n.d., accessed December 2024.

# Part 2: 2025–26 annual work program

**Part 2 provides information about the spectrum management work program that will be the ACMA's focus over 2025–26.**

# Overview

When we set our spectrum management priorities, we consider a range of relevant matters, including:

- domestic and international trends in spectrum uses
- developments in international spectrum harmonisation and technology standardisation
- evolution of communications technology
- the most cost effective and least restrictive approach to achieve policy objectives
- feedback received through consultation with stakeholders.

In response to these influences, we develop our detailed annual work program, which is outlined in Part 2. Work program activities are grouped under the following headings in accordance with the ACMA's spectrum management functions and powers:

- band planning
- forward allocation program
- optimising established planning frameworks
- licensing and regulatory development
- pricing
- compliance and enforcement
- international engagement.

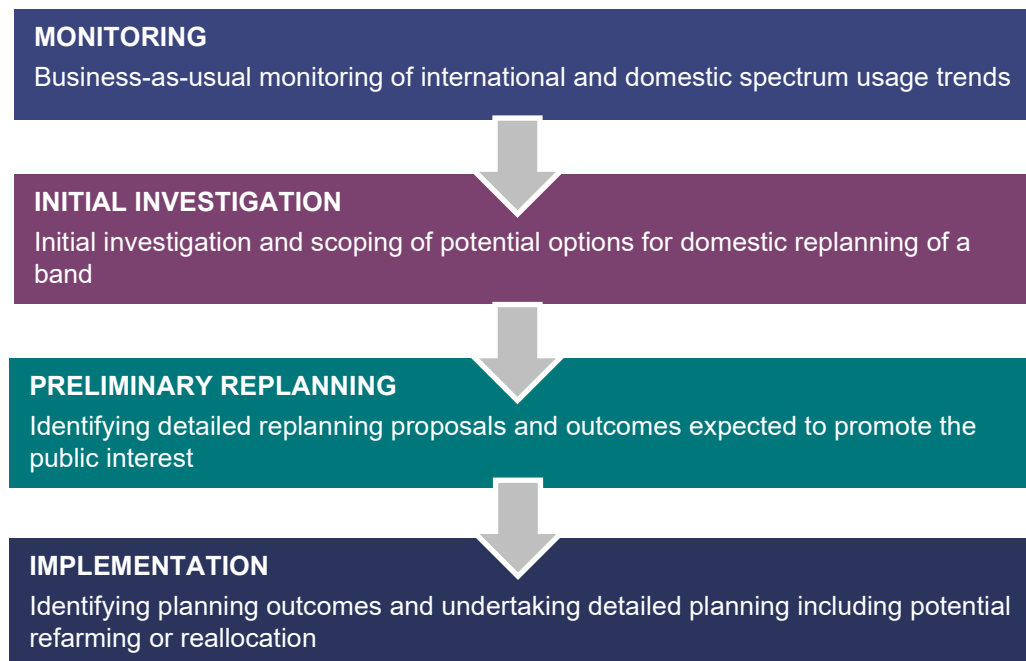
There is also a significant body of work underway on consulting on the remaking or revoking of a number of sunseting legislative instruments that pertain to the various regulatory arrangements discussed in this part of the FYSO. [Appendix A](#) outlines the consultations we plan to undertake in 2025–26 on various instruments scheduled to sunset in 2026.

# Band-planning

Band-planning activities support the establishment of new spectrum uses.

In establishing new planning frameworks, we consider bands at 4 distinct stages as shown in Figure 2.

**Figure 2: Stages in spectrum management band planning**



A band's possible progression through each stage will depend on a range of factors and, in some cases, may move back to an earlier stage if consultation processes, information gathering, or work-program prioritisation suggest this is appropriate. Similarly, bands may 'jump' stages if circumstances warrant doing so. There is no set period a band must remain at a particular stage, or an expectation that a band must proceed between stages. Timing of any progression is based on the circumstances at hand and not on any predetermined cadence.

In addition, only a relatively small number of bands are considered beyond the monitoring stage at any one time – most spectrum is subject to a relatively stable environment that does not necessitate replanning considerations.

When considering replanning options, we seek to identify alternative bands or alternative arrangements within the same band for incumbents to mitigate some costs.

The 4 stages of band planning provide for thorough consultation regime. This enables stakeholders to keep us apprised of developments and issues in various bands and inform us of their views and the effects of different options on incumbent and potential new services. The consultation process at each stage allows us to be transparent about our approach to planning arrangements in each band and understand the costs and benefits of a particular planning proposal.

**Table 1: Band-planning activities**

<b>Planning stage</b>	<b>Frequency band/s</b>	<b>Priorities and proposed timelines</b>
<b>Monitoring</b>	600 MHz (617–698 MHz) 3.3 GHz (3300–3400 MHz) 4 GHz (4400–4990 MHz) 13 GHz (12.75–13.25 GHz) 40 GHz (37–43.5 GHz) 46 GHz (45.5–47 GHz) 47 GHz (47.2–48.2 GHz)  Bands being studied for a possible IMT identification under WRC-27 agenda item 1.7: <ul style="list-style-type: none"> <li>• 4400–4800 MHz</li> <li>• 7125–8400 MHz</li> <li>• 14.8–15.35 GHz</li> </ul>	Continue to monitor domestic and international developments to identify usage trends.
	5030–5091 MHz band for drone command and non-payload communications (CNPC)	Continue to monitor development of the relevant draft ITU recommendation that specifies the characteristics of terrestrial air-ground links operating in the aeronautical mobile radiocommunication service  Further work depends on global developments and domestic needs
<b>Initial investigation</b>	2300–2302 MHz	Not scheduled for 2025–26
<b>Preliminary replanning</b>	1.5 GHz (1427–1535 MHz)	Q3 2025: release outcomes paper and begin implementation
	1800 MHz and 2 GHz bands outside of spectrum-licensed areas	Q3 2025 release outcomes paper and implement changes (to RALIs etc) as required
<b>Implementation</b>	1.9 GHz (1880–1920 MHz)	Q3 2025: Formalise arrangements for rail services in the 1.9 GHz band
	2 GHz MSS (1980–2010 MHz and 2170–2200 MHz) 1.9 GHz (1880–1920 MHz)	Q4 2025: consult on allocation instrument (subject to the outcomes of the planned Q2 2025 further consultation of allocation, licensing and technical matters)  Q2 2026: commence allocation process (subject to timing of outcomes of technical frameworks

Planning stage	Frequency band/s	Priorities and proposed timelines
	Upper 6 GHz (6425–7100 MHz)	<p>and allocation instrument consultations)</p> <p>Q3 2025: finalise changes to the LIPD class licence to include arrangements for RLANs in 6425–6585 MHz</p> <p>Q3 2025: consult on apparatus-licensed WBB arrangements in 6585–7100 MHz outside defined population areas</p> <p>Continue to monitor international developments that would support the establishment of a WBB equipment in the range 6585–7100 MHz</p>

## Monitoring stage

In the monitoring stage, we maintain an awareness of international and domestic spectrum-related developments and interest in potential changes to the use of the band that may require substantial planning activities.

There is no direct action required by stakeholders, but there is an open invitation for stakeholders to engage with us on relevant developments and issues.

In general, bands and issues included at the monitoring stage represent potential work items beyond our immediate, detailed, annual work program. Importantly, not every band being monitored will subsequently be considered in detail.

### 600 MHz (617–698 MHz)<sup>20</sup>

#### Recent developments

As mentioned in the [Broadcast spectrum developments](#) section, the government proposes to explore options for the future of television broadcasting, which may include considering its future spectrum needs.

There is a sixth television channel allocated in each area, which is currently available in most areas for trials of more advanced digital television technology. Previous industry trials of DVB-T2 technologies were conducted in 2018 and 2019 and we will continue to support industry-driven initiatives for trials of new television transmission technologies in the future. We note that some television broadcasters have been changing the video compression standard of some of their services from MPEG-2 to MPEG-4. In some areas, all the television services are now delivered using MPEG-4.

The *Broadcasting Services Amendment (Community Television) Act 2024* extended the use of the sixth channel by incumbent community television broadcasters, which will be allowed to use the sixth channel until an alternative use of the spectrum is identified.

#### Next steps

We will monitor the progress of the government's consideration of the future of television broadcasting.

### 3.3 GHz (3300–3400 MHz)

The 3.3 GHz band is currently allocated in the ITU RRs on a primary basis to the radiolocation service worldwide. In Australia, this band is designated to be used principally for defence and national security, as described in footnote AUS101A to the sole-primary radiolocation service allocation in the ARSP. The Department of Defence is normally consulted in considering non-defence use of this service. At WRC-15, the 3.3 GHz band was identified for IMT in numerous countries. Recommendation ITU-R M.1036 includes frequency arrangements for the implementation of the terrestrial component of IMT in the 3.3 GHz band with some implementation aspects included. Numerous countries have identified the band for IMT.

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<sup>20</sup> This lower boundary (617 MHz) is based on the bottom edge of the 2 × 35 MHz plan identified for the US 600 MHz band. The size of any guard band between the bottom of possible 600 MHz arrangements and the upper edge of ongoing broadcasting would need to be considered as part of any review of the band. The upper boundary aligns with the top edge of the US 600 MHz band plan, noting that the top edge of the highest channel used for broadcasting in Australia ceases at 694 MHz.

The 3.3 GHz band is part of 3GPP profile bands n77 (3300–4200 MHz) and n78 (3300–3800 MHz) for 5G.

### **Recent developments**

As an outcome of WRC-23 agenda item 1.2, this band was identified for IMT in Region 2. Several African countries also added their name to existing footnotes in the ITU-R RRs identifying the band for IMT.

There has been increasing interest in using this band for IMT. Various countries in Asia, Africa, South America and the Middle East plan to or have assigned spectrum in the band for WBB.<sup>21</sup>

### **Next steps**

We will continue to monitor developments in this band.

## **4 GHz (4400–4990 MHz)**

The 4400–4500 MHz band is currently allocated in the ITU RRs on a co-primary basis to fixed and mobile services worldwide, while the 4500–4800 MHz band also includes an allocation for the fixed-satellite service (FSS). In Australia, these bands are designated to be used principally for defence and national security, as described in footnote AUS101 of the ARSP. The Department of Defence is normally consulted in considering non-defence use of spectrum in the 4400–4800 MHz band.

The 4800–4990 MHz band is currently allocated on a primary basis for fixed and mobile services in Australia. In Australia, the fixed and mobile services in this band are designated to be used for defence and national security purposes via the application of footnote AUS101A to these service allocations in the ARSP. The Department of Defence is normally consulted in considering non-defence use of these services. The 4950–4990 MHz part of the band is also allocated to the radio astronomy service on a primary basis under Footnote 443 of the ARSP.

The 4 GHz band is standardised for 5G under the 3GPP profile band number n79 (covering 4400–5000 MHz). As of September 2024, there were 1,039 devices announced for this band.<sup>22</sup>

There is some interest domestically from mobile network operators, wireless internet service providers and other fixed wireless access operators in pursuing this band for WBB in Australia, however, we are not aware of support for using this band for WBB by regional bodies such as the APT.

Several countries, including Australia, have implemented arrangements in the 4940–4990 MHz band for public safety, defence and national security purposes. This was originally intended to support high-speed localised coverage for an incident or event, however, the inclusion of the band in 3GPP standards for 5G technologies means that it may be suitable for wider-area high-speed broadband public safety applications. The PSER class licence sets out arrangements for the use of this band by those entities.

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<sup>21</sup> Global mobile Suppliers Association, [Mid-band Spectrum. Member Report May 2023](#), GSA website, 2023, accessed 11 January 2024.

<sup>22</sup> Global mobile Suppliers Association, [5G Device Ecosystem September 2024 – Member report](#), GSA website, 2024, accessed 14 January 2025.

The band is also within the scope of WRC-27 agenda item 1.7, under which studies are being carried out to support consideration of an IMT identification.

### **Recent developments**

Over the past few years, there has been increasing interest in this band from other countries. Japan has made the 4500–4900 MHz band available for WBB. Part or all the band has been identified for IMT in over 40 countries, but to date, only a few countries have allocated spectrum for that purpose.

China, Nigeria, Korea, Russia and Taiwan plan to assign, or have assigned, spectrum in the 4800–5000 MHz band for WBB use. Brazil, China, Myanmar, Nigeria, Paraguay, Russia, Singapore, Uruguay and Vietnam are also considering all or part of the broader 4400–5000 MHz band for WBB use.<sup>23</sup> There is some interest from domestic WBB users in pursuing this band for that use in Australia.

### **Next steps**

We will continue to monitor developments in this band, including engaging in the relevant ITU-R studies under WRC-27 agenda item 1.7.

## **40 GHz (37–43.5 GHz), 46 GHz (45.5–47 GHz) and 47 GHz (47.2–48.2 GHz)**

The 40 GHz and 47 GHz bands are of significant interest for both terrestrial 5G and satellite broadband services. We will consider global trends and local circumstances, including domestic and international take-up of mmWave 5G services, to determine whether replanning for possible 5G in the 40 GHz and 47 GHz bands is appropriate.

We note that optimal spectrum management outcomes are likely to be achieved when both bands are considered simultaneously.

### **Recent developments**

Ofcom plans to auction mmWave spectrum (which includes the 40.5–43.5 GHz band) in October 2025.<sup>24</sup>

### **Next steps**

We continue to invite comments on the likely demand for this spectrum in the near term in the Australian market.

We will also continue to monitor the 40 GHz, 46 GHz (mainly in Region 1 countries) and 47 GHz bands identified for IMT use at WRC-19 following the allocation of mmWave spectrum in the 26 and 28 GHz bands.

## **Bands being studied under WRC-27 agenda item 1.7**

WRC-27 agenda item 1.7 will consider studies on sharing and compatibility and develop technical conditions for the possible use of IMT in the frequency bands 4400–4800 MHz, 7125–8400 MHz (or parts thereof) and 14.8–15.35 GHz, taking into account existing primary services operating in these and adjacent frequency bands.

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<sup>23</sup> Global mobile Suppliers Association, [Spectrum – 4400MHz-5000MHz January 2022. National Spectrum Positions](#), GSA website, 2022, accessed 23 March 2022.

<sup>24</sup> Telecoms.com, [Ofcom sets the date for mmWave sale](#), telecoms.com website, 2024, accessed 17 February 2025.

In Australia, those bands, either in part or in full, are used for defence purposes. There are also other uses such as satellite services, point-to-point (PTP) links and television outside broadcasting systems that operate in some of these bands.

### **Recent developments**

ITU-R Working Party 5D (WP 5D) has been identified as the responsible group for conducting work under agenda item 1.7. Work on this issue commenced in 2024 and WP 5D is in the process of conducting sharing and compatibility studies.

### **Next steps**

We will continue to engage with stakeholders via the [DITRDCA](#) and [ACMA's](#) preparatory processes for international meetings to develop Australian positions on WRC27 agenda item 1.7 and contribute to studies. Developments in other regions and countries will also be monitored.

## **5030–5091 MHz**

At WRC-12, the 5030–5091 MHz band was identified for use by line-of-sight (LoS) and beyond line-of-sight (BLoS) remotely piloted aircraft systems (RPAS) command and control radio links (CNPC) in the RRs. LoS and BLoS CNPC relate to terrestrially and satellite-based control of RPAS, respectively.

Excluding Defence use, RPAS operating in non-controlled airspace currently use technologies predominantly authorised under the LIPD class licence for both CNPC and payload communications. In controlled airspace, however, operation of remotely piloted aircraft is far more heavily regulated, and systems authorised under the LIPD class licence may not have the level of protection from interference required for safety critical control links.

The 5030–5091 MHz band is being examined internationally as a potential candidate for CNPC in controlled airspace, although consideration of LoS arrangements is more advanced than for BLoS.

### **Recent developments**

The ITU-R has been drafting a new recommendation that specifies the characteristics and protection of terrestrial and satellite CNPC links operating in the aeronautical mobile (route) service and aeronautical mobile satellite (route) service in the band for some time. Work progressed at the November 2024 meeting of ITU-R Working Party 5B (WP 5B), however more work is required, and the status of this recommendation remains at 'preliminary draft'.

The US has established initial regulatory arrangements that provide RPAS operators with the ability to obtain direct frequency assignments for non-network operations.<sup>25</sup> Meanwhile, some countries in Europe and the Asia-Pacific are considering implementation of the WRC-12 outcomes.

Acknowledging domestic and international momentum in this space, we started a consultation process in 2021 on international trends in the 5030–5091 MHz band. In 2022, we published arrangements to allow temporary access to part of the band (5055–5065 MHz) for LoS RPAS CNPC links. These interim arrangements are will be in place while we await finalisation of relevant work within the ITU-R on band planning.

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<sup>25</sup> See [FCC Adopts Initial Rules for Uncrewed Aircraft Use in the 5 GHz Band](#).

## **Next steps**

We will continue to monitor the progress of the draft ITU-R recommendation through our participation in ITU-R WP 5B meetings. An options paper outlining proposals for more permanent arrangements will be released when international arrangements are sufficiently mature. The timeframe for elevation of this frequency band to preliminary replanning status depends on the completion timeframe of relevant ITU-R studies and other international developments.

BLoS CNPC is currently not within the scope of the interim arrangements put in place in the band, given that, when these interim arrangements were implemented, BLoS developments were only at the early stages of consideration internationally. We will continue to monitor developments and may consider consulting on arrangements for BLoS CNCP if international momentum warrants us doing so.

It should be noted that our role in enabling CNPC operation in the band is confined to making licensing arrangements to access this spectrum. Specific technologies and procedures for safe operation of RPAS are matters for other regulatory agencies, such as the Civil Aviation Safety Authority (CASA) and Airservices Australia, and any arrangements in the band will be developed in consultation with those agencies.

## Initial investigation stage

In the initial investigation stage, we scope potential options for domestic replanning of a band. Factors that may influence moving a band from monitoring to initial investigation include developments in international spectrum harmonisation, technology standardisation, arrangements in other countries, the existing domestic spectrum environment and domestic demand drivers.

This stage normally includes initial consideration of whether the new spectrum use/s would contribute to promoting the long-term public interest derived from the use of the spectrum, along with preliminary assessments on co-existence and other technical considerations.

We may undertake public consultation through mechanisms including public and industry meetings (such as spectrum ‘tune-ups’) and/or discussion papers.

### 2300–2302 MHz

The 2300–2302 MHz band is allocated in the ARSP to fixed and mobile services on a primary basis and amateur services on a secondary basis. It is currently used by amateur services, including for earth-moon-earth operations. The adjacent 2302–2400 MHz (2.3 GHz) frequency range has been subject to spectrum licensing since 2000.

The 2300–2400 MHz band was identified globally for IMT at WRC-07. The 2.3 GHz band is currently used to provide WBB services across Australia. The most spectrally efficient profile bandwidths for internationally standardised WBB equipment are in multiples of 5 MHz.

### Recent developments

Carrier aggregation and emerging 5G technologies will allow operators to deploy services in bandwidths of up to 100 MHz. The current 98 MHz of spectrum available in the 2.3 GHz band is not optimised for this use. Consequently, there is interest from spectrum licensees in the 2.3 GHz band in making the 2300–2302 MHz band available for WBB use.

### Next steps

While recognising that there are competing interests for use of the 2300–2302 MHz band for incumbent and possible new services, we have maintained this band in the initial investigation stage and will reassess its timing and priority in FYSO 2026–31.

## Preliminary replanning stage

In the preliminary replanning stage, we identify detailed replanning options, based on feedback received at the initial investigation stage, along with a thorough consideration of the spectrum uses/s that would promote the long-term public interest.

Considerations are informed by detailed technical co-existence studies and include identification of draft, high-level technical planning frameworks. We also analyse ongoing incumbent spectrum needs and identify available mitigations to address any adverse impacts that potential changes in the planning environment may have on incumbent users.

Formal public consultation may occur through mechanisms such as public industry meetings (such as spectrum ‘tune-ups’) and/or options papers.

### 1.5 GHz (1427–1535 MHz)

At WRC-15, the entire 1.5 GHz band was identified for IMT within Regions 2 and 3, while 1427–1452 MHz and 1492–1518 MHz were identified in Region 1 by footnotes. Region 1 identification of the 1452–1492 MHz range was limited to African and Arab administrations – the band was not identified in Europe due to disagreement over the protection of aeronautical mobile telemetry services.

There is support domestically from WBB representatives to progress the re-farming of this band. There is interest in using the band for WBB from both mobile network operators and private operators, subject to equipment availability.

Domestically, the impact on aeronautical telemetry services and fixed services, including the digital radio concentrator system, will need to be considered as part of any replanning process. Compatibility with MSS operating above 1518 MHz will also need to be considered.

#### Recent developments

In Q1 2025, we began consultation on options for use of the broader 1427–1535 MHz frequency range. This follows our decision to consider and make arrangements for MSS use in the bands 1518-1625 MHz and 1668-1675 MHz in a separate process.<sup>26</sup>

#### Next steps

In Q3 2025, we aim to release an outcomes paper on the Q1 2025 consultation and to start implementing the outcomes.

### 1800 MHz (1710–1785 MHz and 1805–1880 MHz) and 2 GHz (1920–1980 MHz and 2110–2170 MHz) outside of spectrum-licensed areas

The 1800 MHz and 2 GHz bands, outside of spectrum-licensed areas, are used for mobile and fixed services via Public Telecommunications Service (PTS) and PTP licensing. Our policy on the assignment and use of PTS licences is described in radiocommunication assignment and licensing instructions (RALIs) MS33 and MS34.

#### Recent developments

Between June and October 2024, we [consulted](#) on options for future arrangements for how the band would best serve the best public interest.

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<sup>26</sup> We published the [outcomes of that process](#) on 20 December 2023.

**Next steps**

We are considering submissions to the options paper and plan to release an outcomes paper in Q3 2025.

## Implementation stage

The implementation stage concludes an ACMA band-planning activity and identifies planning outcomes expected to promote the long-term public interest derived from use of the spectrum. This stage includes further development of detailed technical planning frameworks (and additional consultation if necessary), and licensing and allocation frameworks, as required. Depending on the nature of the existing use of the band and the outcome of the planning process, this stage could potentially lead to re-farming or re-allocation activities.

Conclusions from our planning process are communicated in outcomes papers and/or identify preliminary views on future activities.

When reviewing or developing technical frameworks that describe technical arrangements for the use of a frequency band, we may establish a technical liaison group (TLG) to assist in the development of those frameworks. Further information on [TLGs](#) is available from the ACMA website.

### 1.9 GHz (1880–1920 MHz)

The 1.9 GHz band is allocated in the ARSP to fixed and mobile services on a primary basis. There are arrangements in place for Digitally Enhanced Cordless Telecommunications (DECT) technology under the Radiocommunications (Cordless Communications Devices) Class Licence 2014 in the 1880–1900 MHz range and PTP and point-to-multipoint licensing in the 1900–1920 MHz range in regional and remote areas. We are also aware of wireless microphone use in the 1880–1900 MHz band (using DECT).

We have previously [reviewed the 1.9 GHz](#) band by way of an initial consultation in 2021, followed by an options paper in 2022. This review was undertaken to ensure that our arrangements can accommodate international developments in technology standardisation, spectrum harmonisation and equipment manufacturing, including (respectively) the standardisation of DECT-2020 new radio (DECT-2020 NR), its inclusion as a recognised radio technology in the ITU-R IMT 2020 framework and the development of the future railway mobile communication system.<sup>27</sup> Outcomes of this review were published in 2023 and we are in the process of implementing those outcomes.

#### Recent developments

Following our Q3 2024 consultation, we amended the [Radiocommunications \(Cordless Communications Devices\) Class Licence 2024](#) and published it in September 2024. Changes included the addition of provisions for the operation of Digitally Enhanced Cordless Telecommunications (DECT) 2020 in the 1880–1900 MHz frequency range, on an Australia-wide basis, and the removal of redundant provisions for Personal Handy-phone Systems operation.

In Q2 2025, we will consult on the following proposed outcomes of our [review](#) of the 1.9 GHz band :

- creating a framework to support rail services in the 1900–1910 MHz frequency range
- updating RALI FX 19 to include provisions for indoor short-range WBB in the 1900–1920 MHz frequency range
- updating RALI FX 3 to reflect planning decisions related to fixed link operation.

## Next steps

We anticipate formalising arrangements for rail services in the 1.9 GHz band in Q3 2025.

## 2 GHz MSS (1980–2010 MHz and 2170–2200 MHz)

The 1980–2010 MHz and 2170–2200 MHz bands are currently used for television outside broadcast (TOB) services on a shared and non-exclusive basis for short-term applications, such as covering special events. TOB was introduced in the 2 GHz band in 2012 on an interim basis. In January 2021, we released the [Replanning the 2 GHz band \(1980–2010 and 2170–2200 MHz\)](#) outcomes paper after considering submissions to the 2019 [Planning of the 2 GHz band](#) discussion paper.

In the outcomes paper, we outlined our decision to replan the 2 GHz band for MSS, with:

- 2 × 25 MHz (1980–2005 MHz paired with 2170–2195 MHz) replanned for MSS Australia-wide under apparatus-licensing arrangements, with:
  - a price-based allocation via auction – we expressed the preliminary view that an auction was the most appropriate mechanism to resolve competing demand, given demand appeared likely to exceed supply (as expressed in responses to the options paper)
  - arrangements to provide support for terrestrial applications if a mobile-satellite licensee wishes to supplement/extend its service. For example, extending coverage of a satellite network with terrestrial-based complementary ground component infrastructure or direct air-to-ground communications services (involving ground-based WBB links to aircraft) to provide inflight communication services.
- 2 × 5 MHz (2005–2010 MHz paired with 2195–2200 MHz) dedicated for satellite IoT and similar narrowband services to be used on a shared basis between operators. This arrangement will provide spectrum access with a low barrier to entry for innovative satellite applications and will assist in growing the Australian space industry.

To support the introduction of MSS in the band, existing TOB services will be required to cease operation in the band. Under the Radiocommunications (Mobile-Satellite Service) (1980–2010 MHz and 2170–2200 MHz) Frequency Band Plan 2022, TOB services are to cease operations by 1 March 2026 in metropolitan and designated areas (as defined in the band plan), and by 1 March 2024 elsewhere.

In Q3 2022, we updated our licence assessment procedures for space and space receive licences to include the new arrangements for 2 GHz narrowband MSS.

## Recent developments

In Q4 2023, we started preliminary consultation with industry on draft technical design principles (technical parameters and coordination requirements with adjacent band services) to support MSS use in 1980–2005/2170–2195 MHz (including the use of complementary ground components) and preliminary views on certain allocation design issues. We also sought updated information on the level of demand for 2 GHz MSS spectrum to assess whether demand for the spectrum is likely to exceed the available supply. We also sought stakeholder views on the availability of suitable equipment for deployment of MSS in the 2 GHz band.

## Next steps

We are currently considering submissions on the draft technical framework and working through allocation design matters such as lot configuration and auction format. We plan to undertake further consultation on allocation, licensing and technical design matters in Q2 2025.

Subject to the findings of that consultation, we anticipate consulting in Q4 2025 on draft allocation instruments, with the intention of starting an allocation process in Q2 2026.

## 3.4–4 GHz band

Optimising arrangements for spectrum in the 3.4–4 GHz band continues to be an important priority. Synergies between the 3400–3700 MHz band decisions and the 3700–4200 MHz band outcomes mean we have aligned the implementation stages for segments of these bands in some geographies. In addition to defined areas being allocated by spectrum licensing, we are making additional mid-band spectrum categories available for local area WBB use-cases.

The 3.4–4 GHz frequency range is being allocated in 4 distinct processes:

1. 3.4–4.0 GHz area-wide licences (AWLs) in remote areas
2. 3.4/3.7 GHz bands spectrum licence auction in metropolitan and regional areas
3. 3.8 GHz band AWLs in metropolitan, regional and rural areas
4. highly localised WBB allocation.

Previous FYSOs contain details of work in this band since 2019.

## Recent developments

There is currently an open over-the-counter allocation process for AWLs for the remaining spectrum in remote areas of the 3.4–4.0 GHz band. As of 31 December 2024, 66 licences had been issued as part of this process.

In November 2024, 47 AWLs in the 3.8 GHz band in metro, regional and rural areas were allocated to entities such as resource companies, public and private radiocommunications providers, organisations providing services to airports and ports, local councils and government agencies. AWLs in the 3.8 GHz spectrum in metro, regional and rural areas are also still available on an over-the-counter basis, and will continue to be allocated as applications are received.

In September 2024, we concluded a TLG that provided advice on the development of arrangements to support the introduction of highly localised WBB services in the 3400–3475 MHz (in defined urban areas) and 3950–4000 MHz (in metro and regional areas) frequency ranges. Following the TLG, we [consulted](#) on proposed arrangements for these applications, closing 15 November 2024.

## Next steps

We are considering feedback from the consultation on the highly localised WBB arrangements. We plan on making decisions and opening the band for over-the-counter licence applications in Q2 2025.

## Upper 6 GHz (6425–7125 MHz)

There has been significant ongoing interest in the upper 6 GHz band (6425–7125 MHz) for both radio local area networks (RLANs, most notably wi-fi) and IMT use in the upper 6 GHz band (6425–7125 MHz).

Several countries (including the US, Canada and South Korea) have already allocated the entire upper 6 GHz band for RLAN use, and there is an established international market for suitable equipment.

In late 2023, WRC-23 identified the 7025–7125 MHz band for IMT use in Region 1 (Europe, Africa, and the Middle East) and Region 3 (Asia-pacific) as well as in some Region 2 (Americas) countries. The frequency range 6425–7025 MHz was also identified for IMT in Region 1 as well as in some Region 2 and Region 3 countries.

### Recent developments

In June 2024, we released a public [consultation paper](#) on potential options for the upper 6 GHz band.<sup>28</sup> This paper also provided additional consideration of the potential for the use of higher powered RLAN devices in the broader 6 GHz band.

In December 2024, we released our [planning decisions for the band](#), which includes introducing arrangements for RLAN and wide-area wireless broadband (WA WBB) use in the ranges 6425–6585 MHz and 6585–7100<sup>29</sup>.

### Next steps

We are in the process of introducing the new RLAN arrangements in 6425–6585 MHz via a forthcoming [update to the LIPD class licence](#). Arrangements to support the use of higher-power RLAN devices (otherwise known as ‘standard-power’) over the broader frequency range for RLAN devices in the 6 GHz band will be considered in a separate process, see ‘Consideration of higher-power 6 GHz band RLAN’.

As detailed in the [Outcomes paper: Future use of the upper 6 GHz band](#), the reservation of the frequency range 6585–7100 MHz (in defined population areas) for WA WBB use is subject to us being satisfied that international markets will be established for the manufacture of suitable equipment. We will continue to monitor international developments (particularly in Europe and India) and will commence implementation of WA WBB arrangements once the uncertainty surrounding equipment availability has been resolved.

Outside of defined population areas, we will introduce arrangements for apparatus-licensed WBB services (supporting wi-fi and IMT technologies) in the range 6585–7100 MHz, on a coordinated basis with incumbent users. We will consult on these proposed arrangements in Q3 2025. This process will also seek feedback on the scope and coverage of the defined population areas.

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<sup>28</sup> Our *Options paper: Future use of the upper 6 GHz band*, is available on the [ACMA website](#).

<sup>29</sup> Our *Outcomes paper: Future use of the upper 6 GHz band*, is available on the [ACMA website](#).

# Forward allocation workplan

Our approach to designing spectrum allocations reflects outcomes from the ACMA's planning processes, guided by the object of the Radiocommunications Act and relevant government policy considerations. Information from incumbent and prospective spectrum users about the demand for access to specific bands, and the timing of any possible allocation, also provides important feedback to guide the development of technical frameworks, licensing and allocation decisions.

The Radiocommunications Act enables us to allocate spectrum licences via auction, tender, by a predetermined or negotiated price, or by 'direct allocation'. We tailor allocation processes to the particular circumstances and objectives of each allocation.

Access to apparatus-licensed spectrum is typically enabled through an 'over-the-counter' process, also known as administrative allocation. This process can provide timely spectrum access to support specific and diverse kinds of radiocommunications services and -use-cases. More recently, when making a band available to a new set of users, we have employed an 'allocation window' approach, which enables a staged consideration of applications for apparatus licences.<sup>30</sup> We can also set allocation limits for administrative allocation of apparatus licences,<sup>31</sup> as well as allocating transmitter licences using a price-based process such as an auction.

The Radiocommunications Act establishes a set of mandatory processes for allocating spectrum licences. This can take at least 16 to 18 months, from confirmation of the planning decision to the start of an auction for a price-based allocation of licences. This process will take longer where there is uncertainty – for example, if there are options for how spectrum can be configured, the process will take longer because further consultation and engagement with potential bidders will be necessary and important.

We recognise the regulatory, consultation and financial burden of running multiple allocations concurrently, and so we seek to plan appropriately to minimise encumbrance on applicants and interested bidders.

Table 2 summarises our indicative timing expectations for future allocations.

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<sup>30</sup> This approach was used for the allocation of AWLs in the 3.4-4 GHz bands.

<sup>31</sup> Under section 102G of the Radiocommunications Act.

**Table 2: Forward allocation indicative timing**

Band	Stage	Proposed allocation timing	Notes	Allocation method
2 GHz MSS (1980–2005/ 2170–2195 MHz)	Further consultation on allocation and licensing design and technical framework matters	Q2 2026 (subject to further consultation)	Allocation of apparatus licences	Our preliminary view is that a price-based allocation mechanism may be required to resolve competing demand for the spectrum, subject to further consideration.

## 2 GHz MSS

In 2025–26, we are focused on progressing the allocation of licences for MSS in the 1980–2005 MHz and 2170–2195 MHz bands.

In the 2 GHz consultation paper released in Q4 2023, we indicated that we had not formed a final view on the approach to allocation of this band. An important consideration to inform any decision on the design of a preferred allocation method is the level of expected demand for the spectrum. If demand is likely to exceed supply, we will generally look to design a mechanism to resolve competing demand, which is transparent and results in an efficient allocation of the spectrum.

In our Q4 2023 consultation paper, we sought updated information on the likely level of demand for 2 GHz MSS spectrum to assess whether the demand for the spectrum is likely to exceed the available supply. We also sought views on the availability of suitable equipment for the deployment of MSS in the 2 GHz band, on lot configurations for the spectrum, and on the most appropriate amount of spectrum for desired use-cases. We are considering submissions received to inform our approach to the allocation.

As described in the [‘Band planning’](#) section of this paper, we intend to undertake a public consultation on the allocation design and technical framework matters in Q2 2025.

Subject to the findings of the Q2 2025 consultation, further consultation on the draft allocation instruments will follow. We anticipate that the allocation process will start in the first half of 2026.

# Optimising established planning frameworks

Optimising existing spectrum planning arrangements is a priority for the ACMA. This is typically achieved through updates to elements of the spectrum planning technical framework, such as band plans (either administrative or legislative) and RALIs.

These changes are intended to address band- and service-specific issues identified within existing frameworks, for example, by addressing technology developments and enabling sharing opportunities and other changes to improve the efficient use of the spectrum.

We have an ongoing review program for the spectrum planning technical framework to ensure its currency and consistency with current technologies and operational practices. This work is primarily focused on frequency coordination requirements for apparatus-licensed services, which are predominately recorded in RALIs.

Considering spectrum licence technical frameworks and ensuring spectrum embargoes continue to be appropriate are additional elements of this work program.

Table 3 shows our proposed optimisation work across a range of different spectrum uses.

**Table 3: Optimising established planning frameworks**

Planning area	Project priorities	Proposed timelines and actions
Broadcasting	Vary several solus licence areas in NSW and VIC <sup>32</sup> to enable AM to FM conversions	Ongoing: consultations
	Vary several competitive licence areas in NSW, VIC and ACT <sup>33</sup> to enable AM to FM conversions	Ongoing: consultations
	Consult on digital radio channel plans for the licence areas where broadcasters have committed to rollout digital radio	Timing is driven by demand from broadcasters
Satellite	Consider applications for test and demonstration purposes in the 2 GHz band	Ongoing
	Manage filing and coordination of Australian satellite systems	Ongoing
LIPD	Monitor developments	Ongoing

<sup>32</sup> This may include a subset of the following commercial licence areas: Lismore, Lithgow, Inverell, Moree, Gunnedah, Young and Parkes. We are consulting with the licensees to determine indicative timelines and relative priorities. Proceeding with these variations may depend on the relevant licensees making timely strategic business decisions on available implementation options.

<sup>33</sup> This may include a subset of the following commercial licence areas: Albury, Atherton, Bunbury, Canberra, Coffs Harbour, Dubbo, Kempsey, Maryborough (Bendigo), Maryborough (QLD), Murwillumbah, Muswellbrook, Newcastle, Orange, Sale Toowoomba and Warragul. We are consulting with the licensees to determine indicative timelines and relative priorities. Proceeding with these variations may depend on the relevant licensees making timely strategic business decisions on available implementation options.

Planning area	Project priorities	Proposed timelines and actions
	Remake instrument before sunseting, including new arrangements	Q3 2025: release outcomes paper and remake instrument
Intelligent Transport Systems	Monitor developments in cooperative intelligent transport systems (C-ITS)	Ongoing
Spectrum planning, assignment and coordination requirements	Review our apparatus licence assignment and coordination requirements to ensure their currency and consistency with current technologies and operational practices.	Ongoing
Higher-power 6 GHz band RLAN	Consideration of approaches to permit standard power RLANs in the 6 GHz band	Q3 2025: release consultation paper

## Broadcasting

We continue to provide spectrum planning and licensing assistance for ad-hoc requests for optimising existing television transmission infrastructure, as well as facilitating trials of new television transmission technologies.

We provide information about television reception and interference on our website and manage the [mySwitch](#) website, a public television coverage data portal with address specific information about television coverage and access to Viewer Access Satellite Television (VAST). We also provide interference diagnostic services where external interference is the cause.

For radio spectrum planning, we are progressing with the priorities outlined in the [Future delivery of radio](#) report.

Our current radio broadcasting planning priorities are:

- converting commercial, national and community broadcasting services from AM to FM where FM spectrum is available
- enhancing coverage of national, commercial and community broadcasting services where spectrum is readily available
- making digital radio channel plans for regional DAB+ if a commercial licensee or national broadcaster has committed to a rollout
- supporting trials of new broadcasting technology.

These broad categories of activity inform our prioritisation of individual requests for planning and allocation.

## Recent developments

We have:

- continued our engagement with commercial radio AM licensees in regional radio markets that had expressed interest in converting their AM services to FM
- established BTLG to undertake regular stakeholder engagement on the AM to FM conversion process to discuss ways to progress applications
- reallocated resourcing to AM to FM conversion tasks
- finalised a variation to the Longreach LAP to improve coverage of broadcasting services
- made the Radiocommunications (Allocation of Transmitter Licences – High Power Open Narrowcasting Licences) Determination 2024 that replaced the Radiocommunications (Allocation of Transmitter Licences – High Power Open Narrowcasting Licences) Determination 2014, which was due to sunset on 1 October 2024
- consulted on making the service deficiency declaration for Mildura, allowing viewers to access VAST satellite services following the closure of the local commercial television station.

## Activities planned for 2025–26

- Providing guidance notes and data for AM to FM conversions in regional competitive markets.
- Starting engineering assessments for AM to FM conversions in regional competitive markets; engineering reports received from the broadcasters will be prioritised in accordance with the planning principles.
- Progressing engineering assessments for AM to FM conversions in regional solus markets, as required.
- Making LAP variations to enable the conversions of the commercial AM services to FM in various licence areas, as engineering work is finalised.
- Making LAP variations to improve the coverage of broadcasting services in various licence areas, as engineering work is finalised.
- Finalising the variations to the Perth and Remote Western Australia LAPs to give effect to ABC AM to FM conversions and other requests.
- Finalising remaking the Radiocommunications (Allocation of Transmitter Licences – Low Power Open Narrowcasting Licences) Determination 2015, which is due to sunset on 1 October 2025.
- Engaging with the broadcasting industry on requests for trials of digital radio and potentially issuing further scientific licences for trials.
- Engaging with the broadcasting industry following requests for making or varying digital radio channel plans and potentially consulting on these proposals.

Table 4 summarises the status of AM to FM conversions in competitive markets. Planning work will be progressed in 2025–26. We are consulting with the licensees on the required inputs to determine relative priorities.

**Table 4: Status of requests for AM to FM conversions in competitive markets**

Licence area	Expressed interest	Submitted request for LAP variation	In-market licensee agreement
Albury	Yes	Yes	Yes
Atherton	Yes	Yes	Yes
Bunbury <sup>34</sup>	Yes	Yes	
Canberra	Yes	Yes	Yes
Coffs Harbour	Yes		
Dubbo	Yes	Yes	
Kempsey	Yes		
Maryborough (Bendigo)	Yes	Yes	Yes
Maryborough (Qld)	Yes		
Murwillumbah	Yes	Yes	Yes
Muswellbrook	Yes	Yes	Yes
Newcastle	Yes	Yes	
Orange	Yes		
Sale	Yes	Yes	Yes
Toowoomba	Yes	Yes	Yes
Warragul	Yes	Yes	Yes

## Satellite planning

We continue to engage internationally to coordinate, develop and implement measures to enhance spectrum use for satellite communications and space research services.

### Recent developments

In Q1 2025 we will complete our review of the Australian procedures for the coordination and notification of satellite systems, which we use to assess requests to submit technical details of new satellite systems to the ITU.<sup>35</sup>

In February 2025, we made the Radiocommunications (Australian Space Objects) Determination 2025, Radiocommunications (Foreign Space Objects) Determination 2025 and the Radiocommunications (Communication with Space Object) Class Licence 2025.

We continue to examine arrangements to support E-band (71–76/81–86 GHz) satellite services on a coordinated basis with PTP links operating under RALI FX20.

<sup>34</sup> Only one AM station applied.

<sup>35</sup> ACMA, [Review of Australian satellite filing procedures](#), ACMA website, 2023, accessed 17 March 2024.

## Activities planned for 2025–26

Our key satellite spectrum planning priorities over the next year are:

- providing ongoing operational support for Australian-filed satellite networks, including:
  - assisting Australian satellite operators with ongoing satellite coordination negotiations with other administrations
  - assessing new notices related to the progress of existing Australian satellite networks
  - filing of new networks
  - supporting international administration-level satellite coordination meetings with other administrations
- continuing to monitor trends in the spectrum needs of space-based communications systems and developments in emerging space-based technologies and applications, with a view to:
  - decide whether changes are required to licensing procedures for space-based communications to reflect outcomes of WRC-23 and support new developments
  - encourage organisations planning new satellite communication systems or intending to change existing systems to contact us to discuss if updates are required and, if so, their timing, as any future work will depend on its priority in the detailed annual work program
- supporting the development of the Australian space industry by participating in forums such as the Australian Space Agency Space Coordination Committee
- assessing new licence applications for space-based communications systems for consistency with Australian and ITU requirements
- providing support and information to assist organisations wanting to develop experimental satellite systems with short-duration missions
- continuing to monitor the demand for spectrum and emerging regulatory arrangements for NGSO constellations.

## Low interference potential devices (LIPD)

The LIPD class licence authorises a wide range of applications including wi-fi, Bluetooth technologies and IoT services along with other uses, including certain spread spectrum and ultra-wideband transmitters.

### Recent developments

We plan to consult on a draft new LIPD class licence in March 2025 before the current LIPD class licence sunsets on 1 October 2025. The update considered several modifications, including proposed new arrangements to facilitate wireless multi-channel audio system technologies for wireless microphones and the introduction of arrangements for frequency-hopping spread spectrum devices in the lower 6 GHz band.

We also communicated our intent to expand the frequency range for RLAN devices to include the range 6425–6585 MHz, which was an outcome of our [review of the upper 6 GHz band](#).

## **Activities planned for 2025–26**

We intend to finalise the draft new LIPD class licence before 1 October 2025. We will continue to monitor international and domestic developments that may prompt variations to the LIPD class licence.

## **Intelligent transport systems**

Intelligent transport systems (ITS) are a range of wireless technologies designed to enable vehicle-to-vehicle, vehicle-to-person or vehicle-to-infrastructure (collectively known as V2X) communications.

The Radiocommunications (Intelligent Transport Systems) Class Licence 2017 (ITS class licence) supports the use of wireless technologies and devices in the frequency range 5855–5925 MHz (the 5.9 GHz band). Compliance with the current European standard for cooperative ITS (C-ITS) is a condition of the ITS class licence, following advice from industry.

## **Recent developments**

Current arrangements for C-ITS remain fit for purpose. The Australian approach has been to follow European standards. Discussions continue in Europe regarding a review of ECC Decision (08)01 (the harmonised use of Safety-Related ITS in the 5875–5935 MHz frequency band) and revision of ETSI Standard EN 302 571.<sup>36</sup> As the ITS class licence directly references ETSI Standard EN 302 571, any changes in the European arrangements will be incorporated into our arrangements and consequential updates will not be required.

## **Activities planned for 2025–26**

We will continue to monitor developments in C-ITS.

## **Ongoing review of spectrum planning, assignment, and coordination requirements**

The spectrum planning framework is complex, made up of an array of interlinking technical and policy documents. The content and interrelationships can be difficult to understand and interpret, even for experienced practitioners, with information on any one service or part of the spectrum contained in multiple documents.

In Q3 2022, we released an information paper on the role of the spectrum planning framework to improve transparency and explain the planning framework to assist stakeholders.<sup>37</sup>

We also regularly review the spectrum planning technical frameworks to ensure they remain current and consistent with current technologies and operational practices. This includes routinely reviewing the frequency coordination requirements detailed in RALIs. This is captured in our rolling frequency coordination requirements review work program for the coming 12 to 18 months.

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<sup>36</sup> ETSI Standard EN 302 571 - Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 5 855 MHz to 5 925 MHz frequency band; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU.

<sup>37</sup> See our webpage on [our role to manage spectrum](#).

## **Recent developments**

In February 2025, we consulted on the frequency coordination requirements review work program for 2025–26, which sets out our work program for further reform of RALIs and associated documents. We are aiming to release the finalised work program in Q2 2025.

## **Activities planned for 2025–26**

We will continue to consider where improvements can be made to our assignment and coordination requirements and continue to update RALIs identified for review in the frequency coordination requirements review work program for 2025–26.

## **Review of spectrum licence technical frameworks**

Following a 2019 consultation process, interest was expressed in reviewing all spectrum licence technical frameworks below 4 GHz.

We remade legislative instruments associated with the spectrum licence technical frameworks for the 700 MHz, 1800 MHz, 2.5 GHz and 2.5 GHz mid-band gap frequency band categories. Reviews of the 850/900 MHz, 1800 MHz, 2 GHz, 2.3 GHz and 3.4 GHz band technical frameworks have been completed.

## **Recent developments**

In Q4 2024, we consulted on updates to the 700 MHz band spectrum licence technical framework. Consultation was completed in Q1 2025 and the implementation of outcomes is due to be completed in Q2 2025. The review of the 2.5 GHz band will commence in Q2 2025 as work on the 700 MHz review nears completion.

## **Activities planned for 2025–26**

The review of the 2.5 GHz band spectrum licence technical framework, which will begin in Q2 2025, will continue during this FYSO.

## **Consideration of higher-power 6 GHz band RLAN**

The latest generations of RLAN technologies (such as Wi-Fi 6e and 7) are specified for use of spectrum in the broader 6 GHz band (5925–7125 MHz). In Australia, the LIPD class licence permits RLANs devices in the range 5925–6585 MHz.

As the range 5925–6585 MHz is also used by apparatus-licensed services, notably fixed PTP links, the existing and planned RLAN arrangements in the LIPD class licence includes a relatively low power limit compared to RLAN arrangements in other bands. This reduced power limit allows 6 GHz band RLAN devices to coexist with fixed links on an uncoordinated basis.

There is growing interest in permitting higher power RLAN devices that would support expanded coverage, however additional arrangements would be required to manage coexistence with other spectrum users. In some international jurisdictions, a dynamic-access system called Automated Frequency Coordination (AFC) is used to manage interference between RLAN devices and fixed links.

## **Recent developments**

We have provided some initial discussion on the topic of higher-power RLAN and AFC in previous consultation papers related to broader 6 GHz band planning issues.<sup>38</sup> We noted interest from industry and outlined that there may be different options for permitting higher-power RLAN devices, ranging from traditional site-based coordination to the use of dynamic-access systems such as AFC. We also stated that there are a range of factors that need further consideration before AFC could be implemented in Australia.

## **Activities planned for 2025–26**

We will continue to monitor developments internationally and continue to welcome proposals for potential trials of AFC technologies, or other potential approaches that may facilitate spectrum-sharing between higher-power RLAN devices and other uses of the range 5925–6585 MHz.

Additionally, we intend to release a consultation paper in Q3 2025 to continue the discussion around the potential utility and feasibility of AFC in Australia in the 5925–6585 MHz band and other frequency bands where AFC may be useful in improving the efficient use of spectrum. The paper will explore new international developments, further investigate possible coexistence inter-service arrangements and look deeper at how AFC systems might be used in Australia.

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<sup>38</sup> For example, see our [October 2021](#) consultation and our [June 2024](#) consultation processes.

# Licensing and regulatory development

The ACMA issues 3 broad categories of licences:

- Spectrum licences can only be issued in specified areas and frequency ranges and have a high degree of exclusivity.
- Apparatus licences generally relate to specific radiocommunications services and use cases, such as land mobile, fixed, satellite and maritime.
- Class licences allow shared use of the spectrum, with no application process and no associated regulatory fees for users.

In addition, to promote efficient use of the spectrum, the interference management framework is often optimised for an expected use, even if such use is not prescribed within the planning or licensing arrangement. For example, while spectrum licences may be ‘technology flexible’ in that they do not explicitly preclude any use, they are designed and optimised with a likely technology in mind. This maximises the efficiency of these licences for their expected use alongside the co-existence requirements of other spectrum uses/users.

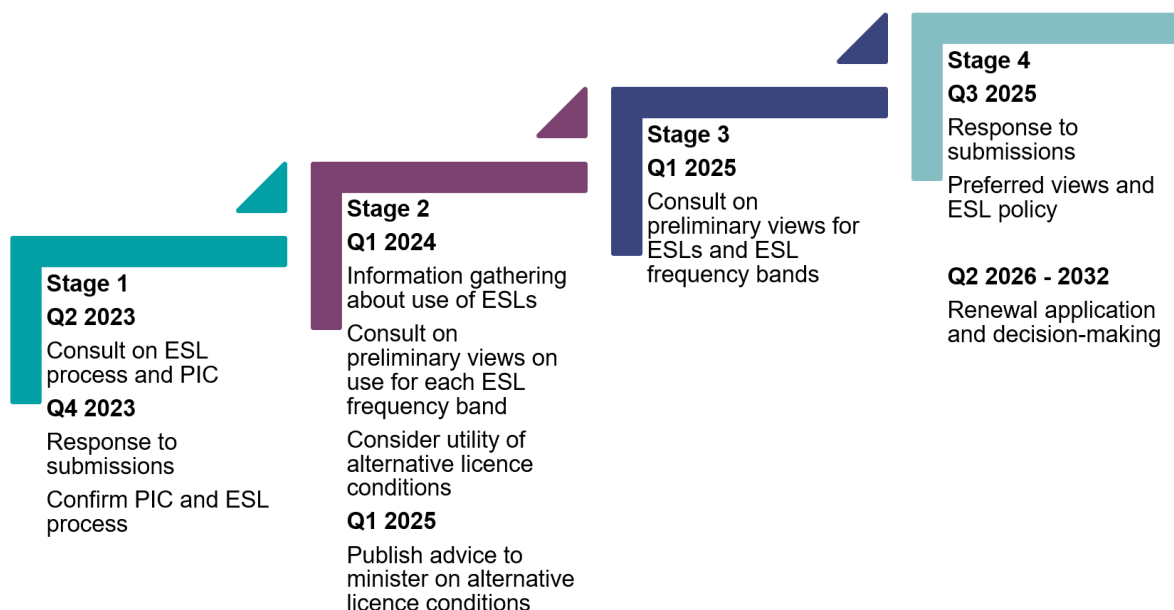
Table 5 summarises our proposed licensing and regulatory development activities for 2025–26.

**Table 5: Licensing and regulatory development**

Work area	Project priorities	Proposed timelines
<i>Expiring spectrum licences (ESLs)</i>	<i>Views on alternative licensing conditions</i>	Published Q1 2025
Maritime regulatory arrangements – portable and mobile land mobile radio (LMR)	Consult on arrangements to facilitate specified LMR portable and mobile terminal use on maritime VHF channels for emergency services organisations	Q4 2025

## Expiring spectrum licences (ESLs)

Figure 3: ESL 4-step process



### Activities planned for 2025–26

In Q4 2024, we provided the minister with our advice on a range of alternative licensing conditions, and how effective they might be in delivering a range of spectrum and broader policy objectives.

One of the conclusions reached in our advice was that place-based secondary licensing frameworks have the potential to promote competition and consumer choice in regional, rural and remote Australia. A secondary licensing framework, enabled by legislative change, would allow us to facilitate place-based services to use parts of the spectrum that incumbent licensees are either not using or do not plan to use over the short- to medium-term.

The minister asked that we work with the Department to further explore the merits of a secondary licensing framework, including how it could be established in the context of the current ESL process.

The report setting out our advice was published on 6 March 2025.

At the end of Q1 2025, we will begin Stage 3 of the ESL process. Stage 3 will be a consultation on a set of preliminary views about proposed future arrangements for spectrum covered by ESLs. This will comprise our preliminary views on which options (renewal, partial renewal, non-renewal) for ESL spectrum are likely to promote the long-term public interest. We will consider the public benefit associated with different options for licences, as well as licence conditions, duration and pricing. Our views will be informed by information provided by incumbent licensees and other stakeholders in Stage 2 of the ESL process, along with a range of other inputs.

Stage 4 will start in the second half of 2025. As set out in our [ESL framework](#), Stage 4 will involve a response to submissions on our preliminary views, and set out our preferred views on options for ESL spectrum. These preferred views will comprise our policy and

decision-making framework. We will consider applications for renewed licences within the context of this framework, along with information specific to that application.

We will also start work to provide incumbents with the necessary materials to apply for renewal of their ESLs. This will include application forms and, if needed, consultation on a legislative instrument specifying information and documents that must accompany a renewal application.

## **Merger reform**

The *Treasury Laws Amendment (Mergers and Acquisitions Reform) Act 2024* made changes to Australia's merger regime. It brings in a new notification process for mergers and acquisitions across the economy, which the Australian Competition and Consumer Commission (ACCC) will administer. It will become mandatory to notify the ACCC of some acquisitions if they meet specified thresholds.

The issue of either an apparatus or spectrum licence will not be required to be notified to the ACCC. However, from 1 January 2026, licensees may need to notify the ACCC of trading, transfers and third-party authorisations of apparatus or spectrum licences. Licensees can also voluntarily notify the ACCC of such transactions from 1 July 2025.<sup>39</sup> This notification process may have ramifications for the ACMA's licence transfer processes.

### **Activities planned for 2025–26**

We are considering how best to implement the new arrangements as they apply to the ACMA's roles and functions.

## **Maritime regulatory arrangements – portable and mobile LMR**

We are exploring emergency service use of LMR portable and mobile terminals on maritime VHF channels. Emergency service operators can currently use LMR on VHF maritime frequencies in emergency situations.<sup>40</sup> However, licensing and standards arrangements mean they are not routinely allowed to possess or use these terminals outside of emergency situations, including for routine training purposes.

Ongoing use would allow emergency services operators to, for example, test deployment in emergency situations, allow personnel to carry less equipment, reduce costs and make routine operation easier. However, there are various considerations that need to be evaluated, including any impact on maritime radio channels and users.

Trials in Tasmania and Victoria, under a permit issued in accordance with the General Equipment Rules and a scientific licence, provide useful data to inform considerations of ongoing use and quantify any impact on maritime channels and users.

### **Activities planned for 2025–26**

We plan to consult in Q4 2025 on arrangements to facilitate certain specified LMR portable and mobile terminal use on maritime VHF channels and finalise arrangements in Q3 2026.

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<sup>39</sup> Please refer to the [ACCC website](#) for general information on the new merger regime including proposed notification thresholds and transitional arrangements. Section 50 of the *Competition and Consumer Act 2010* will continue to apply to the issue of apparatus and spectrum licences as well as trading, transfer and third-party authorisations of apparatus or spectrum license that are not notified under the new regime, in the same way that it does now.

<sup>40</sup> Sections 49 and 196 of the Radiocommunications Act provide for defences relating to operation and possession of unlicensed devices and causing interference to radiocommunications to deal with emergencies.

## Emerging aviation technologies spectrum regulation

Uncrewed aircraft systems, also known as remotely piloted aircraft systems (RPAS) or drones, have become increasingly popular with hobbyists and commercial users. Advanced Air Mobility (AAM) aircraft, or air taxi concepts that are crewed and uncrewed are rapidly maturing and progressing through certification processes, with a planned market introduction around 2027–28. These emerging aviation technologies rely on radiocommunications for command and control functions (such as telemetry, radar and navigation) and payload communications (such as video and sensing). In December 2024, CASA published a review of its [Remotely Piloted Aircraft Systems \(RPAS\) and Advanced Air Mobility \(AAM\) Strategic Regulatory Roadmap](#). This provides CASA’s long-term plan for safely integrating RPAS and AAM into Australia’s airspace and future regulatory system, alongside traditional aviation. A key component of this integration is the Uncrewed Traffic Management system (UTM). UTM will support the safe and efficient integration of emerging aviation technologies and conventional, crewed aircraft.

We have spectrum and licensing solutions in place to support commercial and consumer uses of drones. Most current drone use-cases can be supported by the [LIPD class licence](#),<sup>41</sup> and users can access the spectrum the class licence makes available at no cost. We have also implemented interim arrangements to allow larger drones – potentially those that operate in controlled airspace – to use spectrum in the [5055–5065 MHz frequency range](#). While we expect drones to transfer more and more to mobile (including 5G) networks over time, larger drones used for commercial or military purposes are increasingly requiring access to dedicated aeronautical spectrum such as the 5030–5091 MHz band.

As drone use becomes more widespread, so too do concerns about their unlawful use, which has given rise to a market for drone jamming equipment. There is a permanent ban in place for drone jamming equipment, meaning that people are not allowed to operate, supply, offer to supply, or have a drone jammer. These arrangements are also designed to help prevent drone jamming equipment from entering into Australian supply chains.

To ensure that legitimate uses for drone jammers can be facilitated, exemption arrangements have been in place since 2020 to allow law enforcement access to counter-drone equipment. This helped to facilitate the national rollout of counter-drone capability by all Australian law enforcement agencies. We will continue to monitor international approaches to detecting and responding to incidents where drones could pose a risk to safety and security.

We are also supporting local industry through the [innovation and industry development exemption framework](#), which can facilitate research, development and manufacturing of a range of otherwise potentially banned devices, including counter-drone equipment.

### Activities planned for 2025–26

During 2025–26, we will continue to collaborate with the Department on drone management and contribute to relevant government initiatives on emerging aviation technologies. This includes monitoring the current and future implications of spectrum and licensing requirements for drones and AAM alongside international developments in spectrum management.

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<sup>41</sup> The LIPD class licence authorises the widest range of class-licensed devices, including wi-fi and Bluetooth technologies and a range of IoT services, along with a range of other uses including certain spread spectrum and ultra-wideband transmitters. The LIPD class licence is reviewed regularly.

We will continue working with the emerging aviation technologies sector to monitor spectrum and licensing requirements internationally and domestically.

## **Review of arrangements for body scanners at airports**

We recognise that body scanners play an important role in aviation security. When we made class-licensing arrangements for body scanners used for aviation security screening in 2018, we considered a range of technical, operational and policy issues, as well as the views of radiocommunications stakeholders.

Any future need to amend the class licence arrangements for the use of body scanners would be primarily informed by views from and priorities set by the government and relevant government agencies with policy responsibility for security matters.

Trials of new body equipment under scientific licences are also ongoing and we remain open to discussions with industry about further trials of new technologies.

### **Activities planned for 2025–26**

We do not plan to review arrangements for body scanners at airports in 2025–26.

While we indicated in the response to submissions to the draft FYSO 2024–29 that we may review the existing arrangements under the body scanning class licence in our 2025–26 work plan, there are numerous suitable body scanner technologies available for use under current body scanner class-licensing arrangements and trials underway for new technologies.

We will update timing for any review of the body scanner arrangements in a future FYSO.

## **Amateur radio**

The amateur service is a longstanding use of the radiofrequency spectrum, with a range of bands available for qualified amateur operators. It is designed primarily to facilitate hobby radiocommunications and technical experimentation.

On 19 February 2024, after extensive consultation, we changed licensing arrangements for amateur radio operation. Amateur radio operators can operate their amateur station without having to pay licence fees as long as they meet the conditions in the [Radiocommunications \(Amateur Stations\) Class Licence 2023](#) (amateur radio class licence).

Since February 2024, the ACMA has also been managing and delivering amateur radio qualification and call sign services (rather than a third-party providing these services under a deed).

We have addressed minor issues with the new arrangements and made improvements where possible through changes to our website, policies, guidelines and/or processes. Other potential changes, such as recognising Harmonised Amateur Radio Examination Certificate (HAREC) licensees<sup>42</sup> so that they can operate in Australia for over 365 days without needing to gain an Australian qualification, will require future amendments to the amateur radio class

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<sup>42</sup> Amateurs with a qualification issued in accordance with European Conference of Postal and Telecommunications Administrations (CEPT) Recommendation T/R 61-02 – Harmonised Amateur Radio Examination Certificate.

licence. In the interim, HAREC licensees can choose to become qualified for operation in Australia by obtaining an Australian qualification.<sup>43</sup>

We will continue to adjust our amateur radio service delivery where practicable, and aim to review and consult on a proposal to make minor amendments to the amateur radio class licence in the future.

Some amateur operators are interested in increasing the power level at which they can operate their radios above their current transmission power limits. Since 1 July 2023, amateur operators can apply for scientific licences for certain experimentation uses that may involve using high-power, including for activities such as reflecting signals from a celestial body, and inter-continental ionospheric and trans-equatorial propagation experiments. Consideration of the establishment of a mechanism by which high-power use-cases, not enabled under scientific licensing, can be authorised is also on our long-term amateur radio work agenda.

### **Activities planned for 2025–26**

We will continue to work on amateur radio reforms, but their complexity and potential to impact a broad number of stakeholders mean we will not be consulting on any amateur radio reforms in 2025–26. Our focus remains on embedding the amateur radio arrangements that commenced in 2024 and on considering remaking the *Radiocommunications Licence Conditions (Amateur Licence) Determination 2015* before it sunsets on 1 October 2025. Alternative arrangements remain in place for amateurs while we conduct further work. Updates on the timing for consultation on amateur reforms will be provided in future FYSOs.

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<sup>43</sup> The Australian qualification issued under the amateur radio class licence are ACMA recognition certificates. A person can apply for an ACMA recognition certificate if they pass an amateur radio examination with an [accredited assessor](#), or if the ACMA has recognised their previous experience through a recognition of prior learning process.

# Pricing

We are responsible for implementing pricing arrangements to facilitate the effective and efficient allocation of spectrum. We administer ongoing taxes (such as the apparatus licence tax, spectrum licence tax and commercial broadcasting tax), as well as conducting valuations to inform prices for expiring spectrum licences. Our pricing work is informed by recommendations from the Spectrum Pricing Review, and ongoing engagement with stakeholders.

Our priorities for 2025–26 include:

- contributing to the [ESL 4-stage process](#) through the release of preliminary and preferred views on pricing
- maintaining the tax regimes for apparatus licences, including the annual updates to transmitter and receiver licence tax determinations
- maintaining the tax regime for spectrum licences, by updating the annual electromagnetic energy (EME) Component
- assessing commercial broadcasting tax and implementing the 12-month rebate of commercial broadcasting tax.

## Maintaining the tax regimes

The ACMA maintains tax arrangements to ensure consistency with its licensing and planning arrangements.

### Activities planned for 2025–26

Our work to maintain the tax regimes is ongoing and will be a focus of our pricing work for 2025–26, as shown in Table 6.

**Table 6: Tax regime activities, 2025–26**

Project priorities	Proposed timelines
Implement the annual update of taxes using the population-based <a href="#">methodology</a>	Q1 2026
Update the total annual <a href="#">EME component</a> amount for 2025–26	Q3 2025

## Spectrum Pricing Review implementation

The ACMA has substantively implemented [recommendations from the Spectrum Pricing Review](#). However, we are yet to implement some related pricing work detailed below.

### Activities planned for 2025–26

The ACMA plans to conduct future pricing work stemming from the implementation of the Spectrum Pricing Review, including the following:

- Preparing for expansion of the boundaries of the Perth and Adelaide medium-density areas to allow affected licensees time to prepare for the changes to their apparatus licence tax amounts. In our August 2024 consultation paper about remaking sunseting apparatus licence tax determinations, we proposed to move timing of the

changes from mid-2025 to a later date that aligns with the introduction of our new spectrum management system.

- Band reviews to update apparatus licence taxes in certain frequency ranges. Following the implementation of the second tranche of Spectrum Pricing Review reforms, we flagged pricing reviews in specific bands to ensure the appropriateness of price settings. The first of these reviews is for the 2690 MHz to 5000 MHz frequency range. We anticipate commencing consultation on the review in Q2 2025, which may extend into 2025–26.

We also anticipate reviewing the frequency range 520 MHz to 2690 MHz in the following financial year.

## **Commercial broadcasting tax**

The commercial broadcasting tax (CBT) is imposed annually on transmitter licences associated with a commercial broadcasting licence. An overview of CBT arrangements can be found in the [Commercial broadcasting transmitter licence fee schedule](#), including information about the responsibility to pay commercial broadcasting taxes by the due date, the need to contact the ACMA should a licensee anticipate that payment may not be made by the due date and the penalties that can apply for making late payments.

### **Activities planned for 2025–26**

In the 2024–25 Mid-Year Economic and Fiscal Outlook, the government announced a suspension of the commercial broadcasting tax for one year, from 9 June 2025 to 8 June 2026, to provide temporary relief for commercial television and radio broadcasters.

The one-year suspension of the CBT has been implemented by the Commercial Broadcasting (Tax) Amendment (Transmitter Licence Tax Rebate) Rules 2025, which amend the Commercial Broadcasting (Tax) (Transmitter Licence Tax Rebate) Rules 2024 to provide a 100% rebate for all CBT imposed by the *Commercial Broadcasting (Tax) Act 2017* from 9 June 2025 to 8 June 2026. The rebate is to be applied as an offset against CBT imposed, which will be implemented and administered by the ACMA.

# Compliance priorities

The utility of spectrum is also affected by the interference protection environment. The risk of causing harmful interference to the radiocommunications spectrum is managed through both our planning and allocations work, and our compliance programs.

Each year, as part of these compliance programs, we set whole-of-agency compliance priorities that aim to systematically identify and address high-risk compliance issues or issues of significant concern to the community or industry by maximising our regulatory reach in a strategic and resource-efficient manner.

## **Compliance activities in 2024–25**

Compliance activities planned for 2024–25 were announced on 1 July 2024.

The ACMA has once again made ‘dodgy devices’ a compliance priority. We continue to see complaints about non-compliant radiocommunications devices advertised or bought online. Our dodgy devices compliance program focuses on radiocommunications devices that do not comply with Australian rules and safety standards that may cause interference to communications, GPS and emergency services, and can put Australians at risk. Building on last year’s work, we are taking a 3-pronged approach to tackle online supply of dodgy devices:

1. continuing our work with online platforms to proactively remove ads for non-compliant devices, with planned audits in Q1 2025
2. developing a voluntary pledge with eCommerce platforms to better protect Australian consumers buying online
3. educating Australians about the risks of buying these devices online through advertising campaigns and updated information on our website.

## **Compliance activities for 2025–26**

Compliance activities planned for 2025–26 are under consideration following stakeholder consultation and will be outlined in the final FYSO 2025–30.

# International engagement

The ACMA, the Department, Australian industry and government stakeholders participate in international radiocommunications forums to promote and protect Australian interests in spectrum management, including spectrum harmonisation and international frequency coordination.

The highest level international radiocommunications forum is the ITU's WRC, which reviews and revises the Radio Regulations, the international treaty level document regarding use of the spectrum and satellite orbits.

The next WRC will be held in late 2027 (WRC-27) and will consider a large agenda concerning new frequency allocation and procedural matters across a range of services. The Department will lead the Australian preparatory processes and the Australian delegation to this meeting in preparation for WRC-27, with the ACMA providing technical, regulatory and subject matter expertise.

Other forums within the ITU, and regionally within the APT, consider issues with a technical focus that are also of significance to Australian spectrum management. These forums include ITU-R study groups and working parties and the APT Wireless Group (AWG). We manage Australian input and participation in these forums in consultation with the Department and industry. ITU-R study groups and working parties also undertake studies relevant to WRC agenda items. We work in consultation with the Department to manage engagement in these processes.

We also undertake informal bilateral and multilateral engagement with peer regulators from around the world. This engagement is invaluable in coordinating international activities and sharing information from other spectrum managers on issues of common interest. In particular, we are focused on strengthening the relationship and cooperation between Australia and the Indo-Pacific to support broader government policies and activities.

In November 2024, in conjunction with the APT, the ACMA also hosted the TRTP in Melbourne, with support from the Department of Foreign Affairs and Trade (DFAT) as well as the Department. The TRTP was tailored for Pacific Island nations and their specific needs.

## Activities planned for 2025–26

Table 7 summarises the anticipated international engagement activities for the coming year. Meetings are subject to confirmation and may change.

**Table 7: International engagement in 2025–26**

Meeting	Date
ITU-R Working Party 5D	7 – 16 October 2025
ITU-R Working Party 4A, 4B and 4C and Study Group 4	8 – 31 October 2025
ITU-R Working Party 5A, 5B, 5C and Study Group 5	17 November – 2 December 2025

Meeting	Date
APT Wireless Group Meeting 35 (AWG-35)	Second half of 2025
APT Conference Preparatory Group for WRC-27 (APG27-2)	Mid 2025
APT Wireless Group Meeting 36 (AWG-35)	First half of 2026
ITU-R Working Party 5D	First half of 2026
ITU-R Working Party 4A, 4B and 4C	First half of 2026
ITU-R Working Party 5A, 5B and 5C	First half of 2026

Note: Exact dates for these meetings are still to be finalised.

In addition to these meetings, for which the ACMA leads Australia's participation (with the exception of APG), we also manage Australian participation for the following meetings: Study Group 1, Study Group 3 and Working Parties 3J, 3K, 3L, 3M, Study Group 6, and Working Parties 6A, 6B, 6C, Study Group 7 and Working Parties 7A, 7B, 7C and 7D.

We will continue to manage and provide technical, regulatory and subject matter expertise for Australian engagement in international spectrum management forums through consultative frameworks.

At a domestic level, the [Australian Radiocommunications Study Groups](#) and the Preparatory Group for the APT Wireless Group, which contain representatives from industry, academia, and other government agencies, provide expert advice to the ACMA on international radiocommunications matters.

We consider input from these groups to help develop Australian contributions to international forums and form Australia's positions on international radiocommunications and spectrum management issues.

# Invitation to comment

## **Making a submission**

We invite comments on the draft FYSO 2025–30, including factors affecting the 5-year outlook and future demand for spectrum, as well as the priorities outlined in our annual work program.

- [Online submissions](#) can be made by uploading a document. Submissions in PDF, Microsoft Word or Rich Text Format are preferred.
- Submissions by post can be sent to:  
The Manager  
Spectrum Licensing Policy Section  
Australian Communications and Media Authority  
PO Box 78  
Belconnen ACT 2616

The closing date for submissions is **5 pm (AEST), Thursday 17 April 2025**.

Consultation enquiries can be emailed to [spectrumworkprogram@acma.gov.au](mailto:spectrumworkprogram@acma.gov.au).

## ***Publication of submissions***

We publish submissions on our website, including personal information (such as names and contact details), except for information that you have claimed (and we have accepted) is confidential.

Confidential information will not be published or otherwise released unless required or authorised by law.

## ***Privacy***

View information about our policy on the [publication of submissions](#), including collection of personal information during consultation and how we handle that information.

Information on the *Privacy Act 1988*, how to access or correct personal information, how to make a privacy complaint and how we will deal with any complaints, is available in our [privacy policy](#).

# Appendix A: Sunsetting instruments 2025–26

Table 8 lists the consultations we plan to undertake in 2025–26 for radiocommunications instruments scheduled to sunset in 2026.

**Table 8: Select radiocommunications instruments due to sunset in 2026**

Sunsetting instrument	Consultation timing
Radiocommunications (Qualified Operators) Determination 2016	Q3 2025
Radiocommunications (Aircraft and Aeronautical Mobile Stations) Class Licence 2016	Q1 2026
Radiocommunications (Emergency Locating Devices) Class Licence 2016	Q1 2026