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AMTA Submission

Australian Communications & Media  
Authority

Five-year spectrum outlook 2024-29  
and 2024-25 work program  
Draft for consultation



## About AMTA

The Australian Mobile Telecommunications Association (AMTA) is the peak industry body representing Australia's mobile telecommunications industry. Its mission is to promote an environmentally, socially and economically responsible, successful and sustainable mobile telecommunications industry in Australia, with members including the mobile network operators and service providers, handset manufacturers, network equipment suppliers, retail outlets and other suppliers to the industry. For more details about AMTA, see <http://www.amta.org.au>.



## Introduction

AMTA welcomes the opportunity to provide comments on the draft Five Year Spectrum Outlook (FYSO) for 2024-29, noting with appreciation, the ACMA's well-established practice of publishing a FYSO and detailed work program. AMTA welcomes the detail provided in the FYSO on how the ACMA intends to deliver on its spectrum management responsibilities.

Notably, AMTA values and supports the ACMA's focus on the facilitation of 5G throughout the document, not least through the inclusion of a number of frequency bands either intended to be, or in the process of being, re-planned for 5G.

That said, compared to previous editions, we note a reduced focus on satisfying spectrum demands to address continuing growth in mobile broadband data—a critical economic enabler. Specifically, AMTA notes that the Government's Statement of Expectations and the ACMA's Statement of Intent<sup>1</sup> do not specifically identify the economic and productivity benefits of 5G to the broader economy as a policy priority, and neither does this year's draft FYSO.

The ACMA has principal responsibility for spectrum management and is tasked with managing the spectrum in a manner that promotes the long-term public interest. In 2022, Deloitte Access Economics estimated 5G would contribute \$67 billion in 2022 dollars to Australia's Gross Domestic Product (GDP) by 2030. Mobile services are essential to Australian businesses and consumers and underpin Australia's digital future and economic prosperity. Spectrum management decisions affecting mobile services should always reflect the vast public benefits they deliver to Australia.

The ACMA's work on Expiring Spectrum Licences (ESL) will be crucial to the future success and structure of the sector and to ensure sufficient investment certainty for critical national network infrastructure over the longer term. AMTA consider that the ESL process is the **ACMA's number one spectrum management priority** for 2024-25 and beyond. In our view all forward allocation priorities, other than the mandated RALI instrument updates, should remain secondary to the ESL process, and considered in the broader context of the market with a view to ensuring that supply of spectrum meets market demand.

We note that a key risk in the ESL process remains the lack of certainty surrounding the ACMA's preferred view. AMTA appreciates the ACMA's ongoing efforts to expedite the process with a view to providing sufficient certainty, sufficiently early, as to the ACMA's preferred approach to future use of these bands.

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<sup>1</sup> ACMA, February 2023, *ACMA Statement of Intent*, available at: <https://www.acma.gov.au/publications/2023-03/plan/acma-statement-intent>

The FYSO identifies the increasing take-up of 5G and the likely acceleration of this trend with the closure of 3G networks<sup>2</sup>. The re-farming of 3G spectrum will support 5G deployment, however, we caution against adopting the view that existing spectrum holdings will satisfy future demand, neither for 5G-Advanced nor for 6G, in the longer term<sup>3</sup>. Demand for data will only increase and it is important that the ACMA continue to assess the need to re-allocate spectrum, particularly in mid-band, for mobile services given the long duration of spectrum planning processes and the timeframes for network investment decision-making.

AMTA considers that the Government should do more to factor mobile demand into long-term planning processes (such as the FYSO) to ensure a sufficient pipeline of spectrum to meet consumer and business demand for mobile networks into the future. The international and domestic spectrum policy development framework means that the mobile telecommunications industry and regulators must consider and plan for spectrum requirements at least a decade out from when it is likely to be needed. Anticipating future demands and technologies such as 5G-Advanced and 6G will ensure that Australia will be able to support next-generation technologies, maintaining our position as a global leader in mobile-enabled innovation.

While growing demand for data will drive spectrum demand for 5G uses, the ACMA and the Government can play a role in raising awareness of the positive potential of 5G, including through adopting 5G services for public service delivery and programs, thereby supporting take up and ultimately economic growth.

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<sup>2</sup> Draft FYSO, p.18

<sup>3</sup> ACMA, November 2022, *Multi-carrier regional mobile infrastructure – ACMA Submission to House of Representatives Standing Committee on Communications and the Arts November 2022*; p.4. Available at [https://www.aph.gov.au/Parliamentary\\_Business/Committees/House/Communications/Mobileco-investment/Submissions](https://www.aph.gov.au/Parliamentary_Business/Committees/House/Communications/Mobileco-investment/Submissions)

## Part 1: Overview

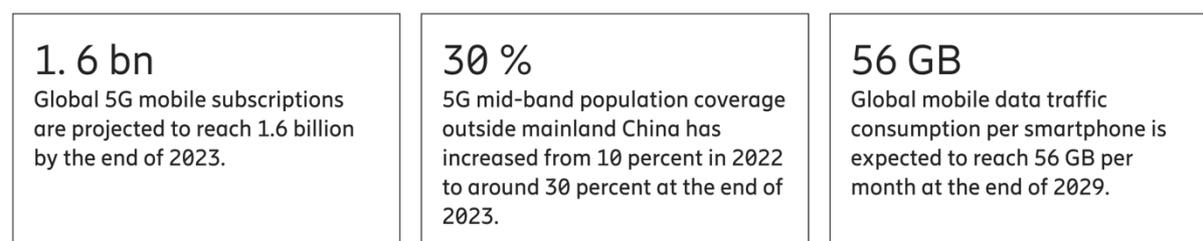
### Demand for mobile broadband will continue to grow

The demand for mobile broadband continues to grow, with mobile network data traffic having grown globally by 28% between Q4 2022 and Q4 2023<sup>4</sup>. Globally 5G reached 1 billion subscriptions at the end of 2022—achieving 30% population coverage—further increasing to 1.6 billion by end of 2023<sup>4</sup>.

As at January 2024, the GSA noted over 300 operators in 113 countries have launched commercial 3GPP-compatible 5G services<sup>5</sup>. There are at least 1964 commercially available devices, including an increase of 39% from Dec 2022 in phones alone<sup>6</sup>.

In the previous FYSO, the ACMA acknowledged that 5G is doing the heavy lifting, and the latest Ericsson Mobility Report updates that by 2029, 5G networks will carry 76% of the world's mobile data traffic and cover 85% of the world's population<sup>4</sup>.

**Figure 1—Ericsson snapshot of the latest 5G market statistics**



Australia is currently a world leader in the deployment of 5G with economic modelling by Deloitte Access Economics showing that 5G will increase Australia's Gross Domestic Product (GDP) by \$67 billion in 2022 dollars by 2030. Further, accelerating 5G adoption could add an uplift of \$27 billion to the current forecast<sup>7</sup>.

<sup>4</sup> Ericsson Mobility Report November 2023. <https://www.ericsson.com/en/reports-and-papers/mobility-report>

<sup>5</sup> GSA, January 2024, *Public Networks and Operators*, available here: <https://gsacom.com/paper/public-networks-and-operators-january-2024/>

<sup>6</sup> GSA, January 2024, *5G Ecosystem January 2024 Summary*, available here: <https://gsacom.com/paper/5g-ecosystem-january-2024-summary/>

<sup>7</sup> Deloitte Access Economics, March 2022, *5G Unleashed*, available here: [https://amta.org.au/wp-content/uploads/2022/03/5G-Unleashed-Final-Report\\_combined-v2.pdf](https://amta.org.au/wp-content/uploads/2022/03/5G-Unleashed-Final-Report_combined-v2.pdf)

## Mid-band spectrum and the need to plan ahead

AMTA is of the view that the Australian market will need approximately 8 GHz in total spectrum assignments for International Mobile Telecommunication (IMT) by 2030, as outlined in our AMTA Policy Position Paper 2021—*Spectrum for 5G and Beyond*<sup>8</sup>. In doing so, AMTA is not suggesting that the ACMA adopt a target-setting approach to the FYSO work program.

In fact, we support the current band-planning process in the FYSO and agree that it has been a flexible and responsive way of addressing changes in spectrum demand and ensuring the delivery of spectrum to market. Through this process, which has been in the FYSO for over half a decade, the ACMA has kept mobile broadband (MBB)—and now more broadly wireless broadband (WBB)—at the forefront of its work activities, and progressed the pioneer 5G bands in C-band and mmWave, along with the 850/900 MHz auction and the optimization of the 2.3 GHz, 800 MHz, 1800 MHz and 2 GHz bands.

Spectrum global harmonisation processes are lengthy, with study cycles of four years to decide whether a band should be reassigned within the ITU. The implementation period of then making the band available can take several more years depending on the current occupancy of those bands. AMTA’s spectrum demand forecasts were commissioned to provide a substantive and rigorous analysis of this complex area and support AMTA’s high-level position that Australia needs to remain vigilant and proactive with respect to spectrum for 5G and beyond, and that we cannot be complacent.

As such, AMTA considers it is critical for (a) the Government to adopt a long-term perspective on spectrum demand, including to support the transition to 6G, and (b) for the ACMA to continue to maintain a “spectrum pipeline” (including through the FYSO) to ensure sufficient spectrum is available in a timely manner for the continued enhancement of Australia’s 5G mobile networks.

In terms of the next “cab off the rank” in the spectrum pipeline, AMTA sees mid-band spectrum as the next immediate priority for allocation to achieve this. In the section on spectrum priorities below, we explain that this entails fixing a number of issues in the 3.4-4.0 GHz band, along with progressing the Upper 6 GHz band, followed by the 7 GHz spectrum immediately above it. We also support the ACMA’s planned optimisation of the 2.5 GHz band for 5G.

An Australian analysis by Coleago<sup>9</sup> showed that in Sydney there is a need for 1,230 to 1,440 MHz of mid-band spectrum compared to 703 MHz that are either currently licensed to operators, and which has increased to 803 MHz following the 3.7 GHz auction of 2023. Therefore, to deliver the city-wide 5G user experience in an economical and technically feasible manner in the 2025-2030 timeframe, an additional 427 to 657 MHz of mid-band

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<sup>8</sup> AMTA Nov 2021. AMTA Policy Position Paper, Spectrum for 5G and Beyond. Available at <https://amta.org.au/amta-calls-on-government-to-set-spectrum-targets/>

<sup>9</sup> Coleago, Nov 2021, *Demand for mid-band spectrum in Australia*, available here: <https://amta.org.au/wp-content/uploads/2021/12/Coleago-Report-Demand-for-mid-bands-spectrum-in-Australia.pdf>

spectrum is required. For Melbourne an additional 487 to 727 MHz is needed and for Brisbane it is an additional 279 to 469 MHz. In this regard, the Upper 6 GHz band fits the bill perfectly.

As per the GSMA's report on *The Socio-Economic Benefits of Mid-Band 5G Services*<sup>10</sup>, mid-band spectrum will drive an increase of more than \$610 billion in global GDP in 2030, **producing almost 65% of the overall socio-economic value generated by 5G**, which adds further weight to the view that mid-band is the “heavy-lifter” of 5G spectrum. However, this estimate depends on adequate mid-band spectrum being available—an average of 2 GHz per country by 2030 according to GSMA. AMTA submits that the Australian Government must start now to formulate a forward-looking policy position for mobile spectrum requirements into the next decade and beyond to ensure we can meet growing demand for mobile broadband and retain and build on our 5G leadership as the new measure of global competitiveness.

## Determining the Optimal use of spectrum

The *Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020* (“the Modernisation Act”) has introduced an increased level of regulatory discretion for the ACMA in terms of both its role in spectrum management activities as well as in its ability to determine the appropriate spectrum licensing arrangements for different spectrum bands. While we understand the need for this increased flexibility and its potential to lead to increased efficiency in how spectrum is managed, we are conscious of the need to match this with increased transparency around decision-making so that the wider discretion afforded under the legislation does not undermine the certainty required for long term network investment.

In particular, AMTA suggest that the ACMA could be more transparent with regard to how it determines the optimal use of any spectrum band. We understand that such a calculation will always involve both qualitative and quantitative analysis (including factors that are difficult to quantify such as community interest, public safety/national interest and public policy considerations), however, we consider that the ACMA should provide more information to stakeholders about how it determines what the optimal use of a band is. This would, in turn, enable the spectrum community to better understand, at a more granular level, exactly what evidence we need to provide to the ACMA to demonstrate demand for additional spectrum as well as justification for one use over another competing use for the same spectrum.

Our view is that the ACMA's determination of the optimal use of the band should place the economic value derived from the use of spectrum as a key consideration—even if this economic value is not revealed in an explicit manner by the prospective user, e.g. via a market-based allocation. We also do not support the determination of optimal use being based on qualitative characteristics such as “diversity of use cases” alone. There is still a role for understanding the higher economic value that can be derived from the optimal use of spectrum. Furthermore, AMTA suggests that clear evidence of the failure of existing market

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<sup>10</sup> GSMA, *The Socio-Economic Benefits of Mid-Band 5G Services*, available here: <https://www.gsma.com/spectrum/resources/mid-band-5g-spectrum-benefits/>

mechanisms to cater to new demand, such as via spectrum trading or subleasing, should be established prior to introducing new licensing arrangements.

Regardless of the factors the ACMA takes into account and the methodology used to weigh these factors up in an assessment to determine the optimal use of a spectrum band, these need to be clearly articulated by the ACMA—transparency is key. We believe that one place for the ACMA to publish this is in the update to the March 2021 document *Our approach to radiocommunications licensing and allocation—Implementing the Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020* (“the licensing and allocation guidance document”), which is flagged to be updated in Q2 2024<sup>11</sup>.

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<sup>11</sup> Draft FYSO, p.18

## Part 2: The 2024-25 annual work program

### **Expiring spectrum licences—AMTA’s top spectrum priority**

AMTA welcomes the transparency provided in the FYSO relating to the ACMA’s 2024-25 annual work program, and remains of the view that the most efficient and effective allocation of the expiring spectrum will continue to be mobile communications. In any event, AMTA considers that mobile services are—and are highly likely to continue to be—the highest value or “optimal” use of the spectrum, both from a technical and economic perspective.

In addition, AMTA supports the ACMA workstreams related to (i) harmonisation/optimisation of existing spectrum bands for 5G and (ii) identification and allocation of new spectrum for 5G. However, while we support maintaining a balance between planning (“new allocations”) and optimisation (“band harmonisation”) activities, ESL related activities must take precedence over all other spectrum-related activities.

We wish to confirm that the renewal of the expiring spectrum licences for mobile services is the **mobile sector’s top priority**. Spectrum licence renewal—in terms of investment certainty, industry sustainability, and reasonable and efficient pricing—are of critical importance to the mobile services provided by MNOs and the associated data rates, costs and continuity of the services provided to consumers.

We welcome the ACMA’s publication of its Outcomes Paper to its Stage One consultation and the clarity provided around the ACMA’s decision-making framework. We also note our support for key principles set out in the Ministerial Policy Statement (MPS), particularly in relation the need to promote continuity of services and sustained investment.

A key risk in the ESL process remains the lack of certainty. A lack of sufficient certainty around spectrum access undermines the investment environment and jeopardises long-term network planning and investment in critical infrastructure. To the greatest extent practicable, AMTA urge the ACMA to provide certainty as to its preferred view as to the future use of each spectrum band at its earliest opportunity.

## Industry priorities—new and optimised bands

AMTA supports the detailed work program, and we have outlined below industry’s relative priorities in relation to making further spectrum available for 5G.

We note that the ACMA has already indicated that it plans to complete the forward allocations in relation to the 3.4-4.0 GHz range (item 1 below) by the end of 2024, noting that there are some additional work items in support of the optimisation of this range that we believe can be done this year in parallel with the sunseting of 3.4 GHz instruments. Items 2 through 6 focus on “future bands” for 5G and beyond, on which work should continue, with the highest-priority future band being the 6 GHz band.

In our response to the Draft FYSO 2023-28, we noted that the “year of harmonisation” (i.e. 2022) was over and from 2024 onwards, we would need to start working on the industry priorities that follow (i.e. 600 MHz and 6 GHz). We have now reached that point and these items need to start progressing, although we note that some extant projects will continue in the background, including some band optimisation activities.

We express our support for the optimisation activities that are imminent or already in the work plan for 2024: 1800 MHz and 2 GHz bands outside of spectrum-licensed areas, 700 MHz spectrum licence technical framework (SLTF), the 2.5 GHz SLTF. These bands have been omitted from the below list of band priorities for clarity, noting that they are mostly well underway and expected to be completed in FY2024-25. The bands subject to ESL have also been omitted from the list of band priorities below for clarity; noting that we’ve explained in the previous section that the major ESL process is the mobile industry’s number one priority and takes priority over both band optimisation and new spectrum activities.

As such, the order of the industry’s list of band priorities acknowledges there are pragmatic considerations for the sequence in which work may be completed, rather than an order of ‘importance’ or value of the bands per se. However, multiple bands can be progressed in parallel.

1. **3.4-4.2 GHz<sup>12</sup>**: We agree with the ACMA’s plans to complete the allocation work on this frequency range by the end of the calendar year. The overall outcome of the entire planning process has not been satisfactory for the mobile industry, with just over 300 MHz able to be used for 5G mobile broadband over wide-area carrier networks within the 900 MHz of 3GPP Band n77. We understand (although not necessarily agree with) this being due to the ACMA needing to balance various competing interests including smaller market and local area WBB models, NBN Co, Defence and also having to address the consequences of poorly-performing radio altimeter equipment operating above 4.2 GHz. As such, it’s even more crucial to ensure that these 325 MHz for 5G MNO wide-area networks are fit-for-purpose, which in turn requires defragmentation of the broader 3.4-3.8 GHz range.

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<sup>12</sup> Pivotal has some different views on this frequency range.

Some changes that need to be made to support defragmentation, such as alignment of geographical areas across the band, would be complex and might need to be introduced as part of the renewal of 3.4 GHz ESL, expiring 13 December 2030. Full defragmentation will take several years.

However, there are some initial changes that can be made in 2024 to remove discrepancies in the spectrum licence (SL) product among different parts of the band, which will in turn facilitate (and are crucial for) said defragmentation. These are as follows.

- A. For the 3.4 GHz SL unwanted emission limits, the frequency edge above which spurious emission limits apply (i.e. the “spurious domain edge”) needs to move from 3840 MHz to 4040 MHz<sup>13</sup>.
- B. Also for the 3.4 GHz SL unwanted emission limits, the SLs need to define some allowance to be able to exceed these, for example, by agreement. If the same-area, adjacent-frequency licensee (SL or AWL) agrees, then there should be no reason for the spectrum licensee to have to comply with the unwanted emission limit within the licensed frequency range of the licensee(s) with which the agreement was made.
- C. Highly localised WBB (HL WBB) apparatus licences within the “Urban Excise” areas in 3400-3475 MHz are to expire no later than 13 December 2030, and include a renewal statement—made under section 103A of the *Radiocommunications Act 1992* (“the Act”)—that renewal will *not* be offered beyond this date<sup>14</sup>.
- D. The EIRP limit of 72 dBm/5MHz currently imposed on SLs in the range 3700-3800 MHz must be removed<sup>15</sup>.

Both changes A and B above are required to support *inter alia*, the use of shared network infrastructure (such as Open RAN/Neutral hosts), and also to support scenarios in which a SL licensee holds an immediately adjacent-frequency licence in the same area (be it SL or AWL).

Changes C and D above are required to ensure that the value of the spectrum product in one part of the band is more or less the same as that in other parts of the spectrum, thereby facilitating and encouraging spectrum trading with a view to achieving defragmentation. Undue restrictions in a particular part of the band undermine this.

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<sup>13</sup> AMTA wrote to the Executive Manager of the ACMA’s Spectrum Planning & Engineering Branch (SPEB) on this matter on 22 December 2023.

<sup>14</sup> AMTA has submitted this view to the ACMA in its response to the TLG Paper V1 on the Arrangements for highly localised WBB in the 3400-3475 MHz and 3950-4000 MHz bands, dated 16 February 2024.

<sup>15</sup> AMTA wrote to the Executive Manager of the ACMA’s SPEB on this matter on 23 October 2023.

2. **6 GHz Band:** Noting AMTA’s earlier comments in the AMTA Policy Position Paper on Spectrum for 5G and Beyond (Nov 2021), additional mid-band spectrum may need to be brought to market to meet increasing demand. This could be in the order of half of the total 800 MHz additional mid-band spectrum forecast by 2030. We note that the main mid-band spectrum target moving forward (both domestically and internationally) is in the 6 GHz band, which was very successful at WRC-23: 6425-7125 MHz was identified for IMT in all of Region 1, as well as Brazil, Mexico, Cambodia, Laos and Maldives, while the top 100 MHz of the band was identified for IMT in all of Region 3.

As explained above, the demand for additional mid-band spectrum was clearly not satisfied by the allocations in the range 3.4-4.0 GHz. Therefore, there will need to be progression on the 6 GHz Band, which has emerged as the main option for the expansion of 5G mid-band spectrum. In this regard, we appreciate the ACMA’s advancement of domestic planning with the release of an Options Paper planned for this quarter. In the meantime, we support the outcomes WRC-23 Agenda item 1.2, i.e. the IMT identifications within the upper 6 GHz band described above.

Noting that in Australia there are incumbency and coexistence issues—primarily with fixed links—that need to be resolved, we would urge the ACMA to (a) make the decision to allocate the band for licensed mobile broadband, to provide the mobile industry with investment certainty, and (b) then proceed to carefully manage and resolve the incumbency issues (understanding that this may take some time).

3. **7/8 GHz Band:** The frequency band 7125-8400 MHz will be studied under WRC-27 Agenda item 1.7 for a possible IMT identification in the band. The lower part of the band 7125-7250 MHz could potentially allow a 100+ MHz expansion upwards of the Upper 6 GHz band—providing an important future potential “release valve”—while higher up the compatibility with the X-band military satellite communications (“MilSatCom”) bands—7250-7750 MHz and 7900-8400 MHz—will need further consideration and discussion as part of the Australian preparatory process for WRC-27.
4. **600 MHz Band:** AMTA notes that the 600 MHz band is likely to be the most promising source of further low-band spectrum for 5G. We recommend progressing 600 MHz in the band-planning process to the Initial Investigation stage to complement the related higher-level government processes<sup>16</sup> and the ACMA’s work under the Television Research and Policy Development Program<sup>17</sup>, which we strongly support. The developments in North America and the development of the APT 600 MHz band plan warrant the next step in consideration of this band.

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<sup>16</sup> Following on from the Government’s broadcasting reform agenda (the Media Reform Green Paper) concluding two years ago.

<sup>17</sup> Draft FYSO, p. 54-55

Under WRC-23 Agenda item 1.5, the band was identified for IMT in certain Middle Eastern countries, and a new (albeit secondary) mobile service allocation was created for 44 European countries and 8 African countries. Furthermore, Laos, Vietnam and El Salvador added their name to existing IMT identifications in the 600 MHz band, which already include New Zealand, US and Mexico (among others).

- 5. Additional mid-band spectrum currently designated for Defence use:** As per the dot point above on the 6 GHz band, access to additional mid-band spectrum is very important for the mobile industry. While the 6 GHz band is the next highest mid-band spectrum priority (after 3.4-4.2 GHz), it is unclear how much of it will become available, noting competing demands and incumbency issues that vary in severity across the different geographical areas of Australia. As such, it is crucial to maintain 3.3-3.4 and 4.4-5.0 GHz (“3.3 GHz” and “4.0 GHz” as denoted by the ACMA, respectively) in the work program as potential fall-back options<sup>18</sup>. Beyond these options, it may be necessary to venture higher in frequency, so the preparation of harmonised spectrum options in the “cm-wave” region of 14.8-15.35 GHz via WRC-27 Agenda item 1.7 will be an important part of the 5G and beyond spectrum toolkit (see also comments below under the heading “*Compliance and international engagement*”)—although it should be clarified that this and mm-wave spectrum is not a suitable substitute for good mid-band spectrum.

What these three fall-back bands have in common is that in Australia, the bands (or at least some services within the band) are designated for defence purposes in Australia, and so defence incumbency is a major obstacle. As mentioned in footnote 29 of the Draft FYSO, the US has outlined in its National Spectrum Strategy<sup>19</sup> that it will pursue expanded opportunities for shared access to government-held spectrum through the exploration of a common spectrum management platform. Defence spectrum is particularly well suited to sharing with other uses and services since Defence does not use its spectrum everywhere, all of the time. That said, wide area WBB is not an opportunistic services and needs to guarantee users with a high quality of service and experience. Opportunistic uses like Radio Local Area Networks (e.g. Wi-Fi) may be better suited to such spectrum sharing scenarios.

- 6. mmWave spectrum ~40 GHz:** AMTA considers that further investigation of additional mmWave spectrum, such as the 40 GHz band, is not a short-term priority for industry, and agree that no further work needs to be carried out in the 2024-25 work program. That said, we note that there is significant interest from the satellite

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<sup>18</sup> AMTA’s comments in this regard align with GSMA views in *New Spectrum for 5G: Adding Up the Mid-Band Maths*, see: <https://www.gsma.com/spectrum/new-spectrum-for-5g-adding-up-the-mid-band-maths/>

<sup>19</sup> The White House, November 2023, *The National Spectrum Strategy*, specifically with respect to 3.1-3.45 GHz: “the Department of Defense (DoD) has studied the possibility of sharing this 350 megahertz of spectrum with the private sector. DoD’s studies helped to determine whether this band should be reallocated for shared Federal and non-Federal use and licensed through auction. DoD determined that sharing is feasible if certain advanced interference-mitigation features and a coordination framework to facilitate spectrum sharing are put in place”; and more generally: “NTIA, working with Federal agencies, will continue to pursue development of an enduring, scalable mechanism to manage shared spectrum access, including through the development of a common spectrum management platform”.

industry in the spectrum between 40 and 50 GHz. If ACMA is planning to progress these bands, they should be considered in the context of coexistence between FSS and IMT services, because the mobile industry is indeed very interested in these bands for supporting long-term future growth. In this regard, we again refer to AMTA's Spectrum Policy Position Paper, which identifies a potential future requirement for an additional 3.6 GHz of mmWave IMT spectrum by 2030.

## **Technical Liaison Groups – working together effectively**

AMTA believes that the continued preparation of spectrum to be ready for 5G and subsequent technology generations will require industry and the ACMA to finalise the optimisation work in relation to several bands via further Technical Liaison Groups (TLGs).

AMTA members agree on the following priorities for the TLG work program over FY2024-25:

- HL WBB in “Urban Excise” areas in 3400-3475 MHz and in Metro & Regional areas in 3950-4000 MHz (largely complete)
- 700 MHz optimisation (largely complete)
- 1.8 and 2 GHz outside of spectrum licensed areas
- 2.5 GHz optimisation

We also assume that there would likely be TLGs formed for another two bands: 1.9 GHz and 2 GHz mobile-satellite service (MSS). While we do not have a direct interest in these bands themselves, we are concerned about protection of base station receivers in the 2 GHz Lower Band (1920-1980 MHz). That said, we do understand the need for ACMA to address demands from other industries requiring TLGs not directly focused on establishing technical frameworks for WBB (e.g. Extended L-band and 2 GHz MSS).

While AMTA is generally supportive of the ACMA’s approach to conducting TLGs, there are some issues that should be addressed to ensure that the outcomes of the TLGs are appropriate and serve the needs of stakeholders.

Firstly, there is a concerning trend whereby some TLGs are conducted at arm's length with correspondence and liaison only in writing and with no ACMA-convened face-to-face or on-line sessions. AMTA members have found these face-to-face meetings extremely useful in the past as they assist in contextualizing various parties’ positions and allow for a healthy exchange of ideas. AMTA encourages the ACMA to adopt this approach wherever possible.

A second, and more worrying, development observed recently is the approach taken by some stakeholders whereby zero technical contribution is made to the discussion and their needs are given equal standing as those proposing and presenting highly technical information to advance discussions. In effect, the Technical Liaison Group degenerates into a “Liaison Group”, leaving little or no scope for technical exchange or discussion.

Following on directly from the second issue are circumstances where TLG participants are unable to present cogent or convincing technical arguments in support of their case and resort to political advocacy and lobbying to achieve their desired outcomes. AMTA suggests that this undermines the technical integrity of the TLG process and strips it of its effectiveness, leading to adverse outcomes to spectrum licensees. If a TLG is called for a band, all branches of the ACMA should abide by its findings and support the technical community in ensuring efficient and technically reasonable approaches to using spectrum.

## **Approaches to consultation**

We support the ACMA's adoption of a "reply comment" period (e.g. another 30 days) following the initial consultation period, in which industry reviews the responses from the rest of industry.

## **Licensing and licensing systems**

As mentioned earlier in this response, AMTA observes the ACMA's intention to issue an update to the licensing and allocation guidance document<sup>20</sup>, and we welcome the opportunity to comment on the guidance document.

AMTA notes the work being undertaken in relation to licensing activities for 2024-29, partly as a result of the implementation of the Modernisation Act. We will continue to engage with the appropriate ACMA teams in relation to most of the project priorities outlined in the table at page 63 of the draft FYSO. As noted, we have particular interest in the expiring spectrum licences project, as well as drone regulation and the RNSS repeater trials.

In relation to the banned equipment and exemptions framework, we note the impending expiry of the Radiocommunications (Exemption) Determination 2021 and look forward to the ACMA's Q2 2024 consultation on a possible replacement instrument.

## **Compliance and international engagement**

As per previous AMTA responses to draft FYSOs, we wish to express our support for the ACMA to remain heavily involved in, and leading on, compliance and international regulatory activities. It is of utmost importance for the ACMA to be adequately resourced to carry out these duties.

Further to our concerns about the impact on spectrum licence rights, AMTA urges the ACMA to support compliance with licence conditions and relevant technical frameworks to minimise the risk of interference to spectrum-licensed services in an increasingly complex interference context.

On the international front, we urge the ACMA to maintain its extensive and highly developed expertise in this area to support the Department in its leadership of the Australian preparatory processes for WRC. We seek the ACMA's support of the mobile industry through additional IMT identification(s) via WRC-27 Agenda item 1.7—in particular in 7125-8400 MHz as presented in the spectrum priorities list above. This preparation of suitable IMT spectrum options to add to the spectrum toolkit is important to prevent any future "spectrum crunch" in the face of ever-increasing traffic demands. There is growing recognition that this

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<sup>20</sup> Draft FYSO, p.2 and p.10.

is where the next tranche of mid-band spectrum options for IMT (6G by this stage) is most likely to emerge from<sup>21,22,23</sup>.

## **Sunseting Instruments (Appendix A)**

We support the re-making of many of the instruments listed in Appendix A. We have a more direct and focused interest in, and therefore strongly support, the re-making of the 3.4 GHz SLTF instruments—noting that the framework and licence conditions were updated very recently, and that further work needs to be done on this band to facilitate defragmentation of the band thereby increasing the efficiency of this allocation. We will also take a keen interest in the consideration of the 1.5 GHz Frequency Band Plan, which will be connected to the review of the arrangements in the 1.5 GHz band (1427-1518 MHz).

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<sup>21</sup> April 2023, Remarks of Chairwoman Jessica Rosenworcel to the National Science Foundation "6G: Open and Resilient by Design", available here: <https://docs.fcc.gov/public/attachments/DOC-392792A1.pdf>

<sup>22</sup> Nokia's vision for the 6G era, available here: <https://www.nokia.com/about-us/newsroom/articles/nokias-vision-for-the-6g-era/>

<sup>23</sup> GSA, Nov 2022, Mid-band spectrum and the 5G opportunity, available here: <https://gsacom.com/webinar/gsa-insight-mid-band-spectrum-and-the-long-term-5g-opportunity/>

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