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**Pivotel Response to ACMA - 'Approach to expiring
spectrum licences'**

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Pivotal welcomes the opportunity to comment on the ACMA's consultation paper 'Approach to expiring spectrum licences'.

CONTEXTUAL STATEMENT

- Spectrum in low, mid, and high bands is crucially important for the delivery of 4G/5G/6G services which enable safety and emergency, mobile handheld, mobile wireless broadband (WBB), Fixed Wireless Access (FWA) and IoT use cases.
- Providers such as Pivotal are well placed to play a unique and relevant role in improving coverage and bringing innovation to parts of regional and remote Australia. This is however predicated on access to suitable spectrum at a cost that enables a reasonable return on investment.
- A flexible spectrum management approach consisting of Spectrum Licences covering large geographic and even national regions combined with Area Wide Licences that enable place based networks will encourage a larger and more diverse range of network operators.
- Licence fees require careful consideration with place-based networks typically targeting very specific populations, often with very low density and high natural operating costs that reduce the potential for operators to receive a commercial return on investment.
- Pivotal has consistently advocated for a combination of spectrum licence for more populous and high traffic areas, combined with Area Wide Licences (AWLs) or Apparatus Licences (ALs), for regional and remote parts of Australia, as opposed to a blanket national spectrum licence approach. Additionally, the creation of a competitive, innovative marketplace for the delivery of 5G services in metropolitan areas also requires that AWLs be available in metro areas, sitting beside wide area spectrum licences.
- As a mobile operator already delivering 4G/5G services to regional and remote parts of Australia, and with plans to deliver 5G place based services to campuses, ports, utilities, and manufacturing facilities in metro areas, Pivotal is pleased to see that the ACMA is consulting with the industry on the optimal approach to expiring spectrum licences.

Pivotal Response

1. What are your views on the proposed public interest criteria? Are there other criteria we should consider?

In Pivotal's view, consideration of public interest should be a critical parameter when considering allocation and renewal of spectrum. ACMA's proposed 5-Criteria guide on 'public interest' is in line with Pivotal's expectation i.e.,:

- facilitates efficiency
- promotes investment and innovation
- enhances competition
- balances public benefits and impacts
- supports relevant policy objectives.

In our view, encouraging competition will promote innovative products and services creating a conducive environment for Australia to become a global leader in the provision of mobile network coverage and solutions.

2. What are your views on the proposed 4-stage approach to undertaking the ESL process?

Pivotal supports the proposed 4-stage approach outlined by ACMA and is in favour of AMTA's response to this consultation regarding the timing of the stages.

3. Are there any band-specific issues that we should consider as part of this ESL process?

If the **digital divide** is to be reduced, then careful consideration of geographic boundaries and allocation quantum principles must be applied to ensure that spectrum is available to new entrants who can offer targeted, effective, and affordable solutions. As an example, low-band spectrum is essential to deploy cost-effective solutions in regional and remote Australia due to its propagation characteristics, however it is not available via Area Wide Licence (AWL) mechanism. For three decades, the national MNOs have held national low band spectrum licences, and yet there remains a vast gap in fulfilling the communication needs of regional and remote Australia.

Whilst LEO satellite solutions are evolving and will assist in alleviating the digital divide between regional and metro, there are still limitations of this technology in enabling the Industrial 4.0 revolution at scale and capability, resulting in a clear ongoing need for terrestrial public and private networks. Furthermore, long-term sustainability of the new LEO constellation providers is yet to be proven. Therefore, access to low-band IMT spectrum for new entrants in rural, regional, and remote Australia should be a key consideration of the ESL process.

Pivotal proposes that a portion of low-band spectrum should be set-aside in regional/remote areas and be allocated similar to C-Band and mmWave spectrum AWLs. New targeted place based public and private networks could make use of the low-band Dynamic Shared Access (DSA) spectrum to offer (low bandwidth) critical wide-area services such as voice and emergency calling, and augment eMBB/FWA like services using mid-band and / or high-band spectrum. This approach will result in a

variety of affordable and innovative new use cases to help solve the digital connectivity gap in regional, rural, and remote Australia.

Network sharing is becoming increasingly popular via **neutral hosting** or active radio sharing, often realised through government co-funding. However, neutral host services still require access to spectrum which can be problematic when the neutral host does not 'own' spectrum. As a part of future band reviews, the ACMA should also establish a framework that supports setting aside of low-band spectrum for neutral host applications. This approach is likely to encourage investment towards reducing designated Black Spots e.g., national parks and tourist spots having weak or no coverage.

Certain areas in outer metro and regional Australia have **wide-area private mining and agricultural lands** covered with dense vegetation where low-band spectrum is the only cost-viable alternative. To drive competition and innovation for such private use cases, new entrants must be granted access to low-band spectrum via AWL mechanism. The ESL process should develop rules around granting such AWL specific access.

PSMB FDD 850 MHz spectrum has been set aside for safety and emergency services, however, due to lack of device support, the spectrum remains unutilised. If the spectrum is made available, then due to demand, the device suppliers would become interested in supporting the band. Base stations could be shared through neutral hosting, for instance, using Multi Operator Core Network (MOCN) capability, emergency traffic could be prioritised over regular traffic thus safe-guarding the prime objective of the band. As part of allocating spectrum, the ACMA should consider the broader device eco-system and put in place support mechanisms to assist in the development of fit-for-purpose radio equipment to utilise that spectrum. This could be through the provision of financial incentives to radio equipment suppliers to invest in and develop suitable products for less popular spectrum bands. This would have the added benefit of promoting local (Australian made) engineering, design, and manufacturing in the radio electronics sector.

Regarding 3.4 spectrum, Pivotal has provided the detailed response on 3.8 GHz AWLs consultation where the ACMA has proposed licence expiry in 2030 with a view to defragment the spectrum to improve spectral efficiency. In summary, the risk of not being able to renew spectrum beyond year 2030 (as proposed by ACMA) will act as a barrier to new entrants discouraging investment, innovation, and competition in the market. Therefore, spectrum certainty should be an important consideration which impacts both AWL and SL licensees.

4. Are there any other matters that we should consider in connection with the ESL process?

Spectrum certainty should be an important consideration which impacts both AWL and SL licensees.

To promote competition and encourage new market entrants, especially across regional, rural, and remote parts of Australia, spectrum allocation should be conditional on the provision of an 'open access' methodology such as **national roaming** for wide area mobility. This will reduce the digital divide as it would encourage further network infrastructure investment enabling end customers to be offered seamless connectivity across Apparatus Licence (AL), AWL and SL borders. This would also encourage AL and AWL operators to become Access Providers under neutral hosting/active sharing arrangements even when there is no interest from a national MNO.

With the understanding that underground mines are well isolated from overground spectrum licenced footprint, these should be allowed to use spectrum licensed bands and coordinated under Apparatus Licensing mechanism.

5. What are your views on the proposed approaches to valuing the spectrum and payment arrangements?

Auction-based allocation makes sense when demand is more than supply, however, based on Pivotel's experience during the 850/900 MHz auction, it was observed that incumbent MNOs left no room for new entrants to secure regional and remote spectrum. Low-band is crucial to provide cost-effective solutions in regional and remote Australia. Leaving no room for competition is stifling opportunity for others, and as a result, deployment of communication infrastructure in regional and remote is discouraged and spectrum is inefficiently utilised (i.e. low productive efficiency).

Pivotel's recommendation is to **allow administrative renewal of spectrum licences but also introduce reform** (new conditions) based on 'public interest'. For example:

- Change licenced spectrum boundaries to exclude geographic areas where the spectrum is not actively used and introduce AWL licences for areas outside of the renewed spectrum licence boundaries.
- Classification of Dynamic Shared Access (DSA) regions based on population density.
- Classification of Neutral Host regions based on designated Black Spots.
- Allowance of Low-band LA-WBB regions for private large area enterprises based on morphology classification.
- Mandating open access as a condition of spectrum licence renewal.

6. What are your views on the proposed approach to examining use under existing spectrum licences?

Pivotel considers the ACMA proposed parameters in examining use are fair and reasonable i.e.,

- service coverage mapping
- current and planned spectrum utilisation, including both spectral and geographic considerations
- levels of investment in use of the spectrum, as well as planned investment and deployments
- how the spectrum is used for different use-cases
- details of subscribers and end-users

For any questions in relation to this response please contact:

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