Australian Government | acma Australian Communications and Media Authority

Proposal to make the mobile coverage mapping standard

Outcomes paper

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Executive summary

The Australian Communications and Media Authority (ACMA) has made the Telecommunications (Mobile Network Coverage Maps) Industry Standard 2026 which, for the first time in Australia, requires mobile providers to provide standardised mobile network coverage maps.

The standard was developed following public consultation undertaken between 28 January and 1 March 2026, during which 22 submissions were received from industry, government agencies and departments, consumer advocacy groups and community organisations. The Standard establishes a consistent approach to modelling and presenting mobile network coverage and responds to feedback received during consultation.

Coverage categories and user experience

The standard introduces four harmonised coverage categories – good, moderate, basic and no coverage – supported by plain-language descriptions and indicative user-experience statements.

These descriptions were refined following feedback that consumers require clear guidance about how services perform in each category.

Signal strength thresholds

We considered a range of views on the appropriate Reference Signal Received Power (RSRP) thresholds for defining the edge of mobile coverage. Stakeholders generally supported the proposed thresholds, although some submissions included proposals for either higher or lower values.

The ACMA has determined, as proposed in consultation, that an RSRP threshold of -115 dBm is appropriate for representing basic mobile coverage. This decision is informed by findings from the National Audit of Mobile Coverage, which shows a material reduction in service quality below -115 dBm, and draws on international regulatory approaches.

One submission proposed lowering the threshold to -122 dBm. The ACMA acknowledges that the audit found that service may occur below -115 dBm and down to -122 dBm, however, this level of service was characterised in the audit as ‘modest’. At these signal strengths, the audit noted that users experience below average performance with interruptions and dropped calls. The audit findings reflect that mobile network coverage does not end at a single signal strength contour, but instead degrades progressively as signal levels decrease.

The central consideration for the ACMA was the level of expected user experience – particularly service reliability – that should be represented on a standardised coverage map. We consider that the reliability of call connection and service continuity at signal levels between -115 dBm and -122 dBm, is materially different to that expected at higher signal level. As such, the ACMA does not consider it appropriate to represent this range on the standardised coverage maps.

This approach to setting coverage boundaries best ensures that mobile coverage maps show reliable service and enables consumers to more accurately compare coverage across providers.

Modelling assumptions and methodology
Submissions raised suggestions to increase the specificity of modelling assumptions, including defining propagation models, reducing map resolution below 100 x 100 m, and adjusting body-loss assumptions.

The ACMA determined that further evidence and analysis are needed before making any potential changes and therefore retained the proposed assumptions in this iteration of the standard.

Publication and accessibility requirements
Stakeholders generally supported strong publication requirements and emphasised the importance of accessibility. The standard has been updated to require Level AA compliance with WCAG 2.2 for all published coverage maps.

While suggestions for more prescriptive requirements on publication were noted, a degree of flexibility was retained to support implementation.

Map update frequency
Most submissions supported quarterly updates, with some suggesting event-based updates.

The standard clarifies that maps must be updated following known changes in coverage, with a quarterly update cycle otherwise.

Data access arrangements
Stakeholders highlighted the importance of data access for emergency services organisations and government agencies.

The standard has been amended to extend access to government departments and agencies, while broader public access is outside the scope of the direction.

Other matters raised
Additional issues raised included:

- **Multiple maps:** The standard now clarifies that any map purporting to show 4G or 5G coverage must comply with the standard.
- **Seaward coverage**: While supportive of the underlying intent, the ACMA determined that a mandatory requirement would be difficult to implement consistently; operators are encouraged to reflect offshore coverage where predicted.
- **Application of the standard**: Entities that do not provide services to the public – such as the NSW Telco Authority – do not fall within the definition of a Relevant Mobile Telecommunications Service (RMTS) and therefore are not required to prepare coverage maps.

Next steps
Following implementation in June 2026, the ACMA will monitor the operation of the standard and consider opportunities for future refinement as further evidence, stakeholder feedback and resourcing become available. Matters identified during consultation – such as validation measures, modelling assumptions and potential improvements to consumer information – may be examined in a later review.

Introduction

On 26 March 2026, the ACMA, being satisfied that all requirements for consultation had been met, made the Telecommunications (Mobile Network Coverage Maps) Industry Standard 2026 (the standard).

The standard requires mobile network operators (MNOs) to adopt a harmonised approach to modelling and presenting coverage. The standard sets:

1. **A consistent set of coverage categories** (good, moderate, basic and no coverage) with accompanying consumer-facing descriptions that explain the level of service that can generally be expected.
2. **Defined signal-strength thresholds** for 4G and 5G outdoor handheld coverage, based on RSRP and Secondary Synchronisation Signal Reference Signal Received Power (SS-RSRP) values. The proposed values are informed by international practice and findings from the National Audit of Mobile Coverage.
3. **Standardised modelling assumptions**, including parameters relating to receiver characteristics, propagation environment and minimum mapping resolution, to improve comparability across operators.
4. **Mandatory caveats** explaining key factors that influence mobile connectivity and the limitations of predictive coverage modelling.
5. **Requirements for publication**, including accessibility considerations aligned with Web Content Accessibility Guidelines (WCAG) 2.2 level AA.

The standard requires MNOs to provide maps to Mobile Virtual Network Operators (MVNOs) and for MVNOs to publish those maps on their websites. The standard also requires that the geospatial data underpinning the published coverage maps is able to be extracted for analysis.

In this paper, we respond to the matters raised in submissions received during the consultation and outline where changes were made to the standard in response to those submissions. We also identify matters raised in the submissions that may warrant consideration in a future review of the standard after it takes effect in June 2026.

Consultation

On 28 January 2026, we commenced consultation on the draft Telecommunications (Mobile Network Coverage Maps) Industry Standard 2026 (the draft standard). The draft standard was prepared as required by the Telecommunications (Mobile Network Coverage Maps) Direction 2025 (the direction). You can access the consultation paper in the key documents section of the consult web page.

The draft standard and accompanying consultation paper were prepared with consideration to:

- the direction
- the available outcomes of the National Audit of Mobile Coverage
- desktop research on international and wider industry approaches
- stakeholder engagement, including through targeted meetings.

Consultation closed on 1 March 2026. We received 22 submissions from the public, consumer representative groups, industry, Governments, agencies, associations and radiocommunications enterprises. All non-confidential submissions received have been published on our website.

During the consultation period, we met with stakeholders representing industry, government and consumers.

Matters raised in submissions include:

- coverage levels, including the number of levels, names and descriptions
- predictive modelling versus on the ground data
- proposed metrics and threshold RSRP values
- mapping methodology
- data extraction and access for emergency services organisations

Stakeholders generally welcomed the proposed standard, noting strong consumer demand for access to consistent and comparable coverage maps.

Consumer groups, government departments and agencies, and community associations highlighted that current maps provided by MNOs are frequently inaccurate – particularly in rural and regional areas, where coverage is indicated but not experienced. The views of these groups diverged from those expressed by industry on key matters such as the number and nature of coverage levels.

These matters are expanded below.

Stakeholder feedback on the approach and mapping requirements

Predictive modelling versus on the ground data

Stakeholder feedback

Many submitters viewed predictive maps as an appropriate starting point given time and scalability constraints, but emphasised the need for safeguards to strengthen comparability

and accuracy. Several also called for validation measures – such as independent audits, drive testing, in-field measurements, and a consumer challenge mechanism – to ensure that predicted coverage aligns with real-world experience.

ACMA response and decision

Given current timing and resourcing constraints, implementing validation measures in the initial version of the standard is not feasible. However, this is an area that could be explored in future iterations of the standard should appropriate resourcing become available.

Coverage levels and descriptions

Stakeholder feedback

There was no consensus on the number of levels proposed in the draft standard. Generally, consumer groups appreciated the level of granularity provided by having multiple coverage levels. Many called for additional layers that denoted known black spots, indoor coverage and in-vehicle coverage.

MNOs expressed a preference for only two coverage levels, arguing that consumers primarily want to know whether they will have coverage or not, and that additional categories may create unnecessary complexity.

Consumer groups, government departments and agencies, community associations and some MNOs agreed that the proposed descriptions should be in plain language and include some details about the user experience that might be expected at each coverage level.

ACMA response and decision

Feedback from submissions indicated strong support for retaining multiple coverage levels. The ACMA has therefore retained the 4 coverage levels proposed in the draft standard and updated the descriptive language to be clearer and include an indication of the user experience to be expected at each level.

The coverage levels and descriptions prescribed by the Standard are set out in Table 1 below.

Table 1: Revised coverage level descriptions

Predicted coverage level	Description	Indicative user experience
Good	You can expect a high-quality user experience with seamless connectivity and performance.*	**Voice**: Very reliable connection with clear call quality. **SMS**: Messages send and arrive quickly with a high success rate. **Data**: Fast and stable data suitable for HD video (streaming and calls) and online games.
Moderate	You can expect a stable and consistent user experience with minimal disruptions to connectivity and performance.*	**Voice**: Reliable connection with clear call quality. **SMS**: Messages generally send and receive reliably. **Data**: Suitable for everyday activities like browsing and email. Supports higher-bandwidth applications such as video (streaming and calls) and online games.
Basic	You can expect an adequate user experience with occasional disruptions to connectivity and performance.*	**Voice**: Generally reliable but some calls may fail or drop. **SMS**: Messages generally send and receive, but delivery may occasionally be delayed. **Data**: Basic browsing and email usually work, but speeds may be slow. Higher-bandwidth applications like video (streaming and calls) and online games may not perform as well as at other coverage levels.
No coverage	There is no, or only very limited, predicted coverage in these areas, so you should not expect or rely on any service. Any connection you may receive would be incidental, highly inconsistent and temporary, with very poor performance.**	**Voice**: Most call attempts are likely to fail. **SMS**: Messages unlikely to be delivered. **Data**: Unreliable or unavailable.

** Other factors can affect your ability to connect to the network.*

***If you are near the edge of a 'basic' coverage area, your device may still connect to a network. Such connections are incidental and not indicative of reliable mobile service.*

Publication requirements

Stakeholder feedback

Stakeholders generally supported the requirement that coverage maps be displayed prominently on MNO and MVNO websites. However, some submitters suggested that this requirement should be more prescriptive.

Submitters were of the view that there should be no flexibility around the publication of the relevant descriptions and caveats.

Some submissions noted that level AA WCAG compliance represents best practice. These submitters were concerned that, if not explicitly required in the standard, published maps may fall short of this accessibility level.

ACMA response and decision

The standard has been updated to require that published maps achieve a level AA WCAG compliance. The ACMA notes that level AA is consistent with Australian Government accessibility standards.

The ACMA acknowledges the suggestions to make the publication requirements more prescriptive. However, we consider that the intention of the provisions is sufficiently clear and that retaining a small degree of flexibility is important. This flexibility will help ensure that MNOs and MVNOs can comply with the standard when it commences in June 2026.

If the ACMA receives complaints about this matter after implementation, it will consider strengthening these provisions as part of a future review.

Stakeholder feedback on technical requirements

Service metrics

Stakeholder feedback

There was considerable interest in the use of service metrics directly linked to user experience rather than a signal strength proxy, such as RSRP, as proposed by the ACMA. However, submitters did not present any alternative signal-strength metrics that could feasibly serve as substitutes for RSRP if a signal-strength-based methodology were retained.

ACMA response and decision

We acknowledge that a signal strength metric such as RSRP is a proxy for user experience, rather than a direct representation. However, as outlined in the consultation paper, the ACMA notes other potential metrics require more complex modelling assumptions and process, as they rely on knowledge of network conditions that vary over time, such as network loading. These metrics are also more difficult to verify using field measurements because of this dependence on network conditions and may be dependent on the user's device.

We have not identified a case for change in the use of RSRP/SS-RSRP as the most suitable metric for use in the predictive modelling of mobile networks informing the deployment of coverage maps and have decided to make no change in this regard in the final standard.

Threshold signal levels

Stakeholder feedback

Stakeholders expressed divergent views on the appropriate RSRP signal strength thresholds for coverage modelling and mapping, particularly in relation to the RSRP threshold used to define the edge of coverage – that is, the lowest signal level at which coverage is depicted as present on the map. In the consultation paper, the ACMA proposed an edge of coverage threshold of -115 dBm. Submissions expressed the following views:

- Some submitters proposed a higher, more conservative value (up to -90 dBm) for a variety of reasons, in part due to lived experience concerns with existing mobile coverage maps being perceived as representing an overly optimistic estimate of coverage.

- Some submitters supported the -115 dBm threshold and strongly opposed adopting a lower threshold, largely citing concerns that existing mobile coverage maps are perceived by consumers as overly optimistic and do not reflect lived experience.
- One submitter proposed a lower threshold of -122 dBm, arguing that coverage does not cease abruptly at -115 dBm. This submitter provided network statistics indicating that customer services are delivered between -115 and -122 dBm. The submitter contended that showing no coverage below -115 dBm would misrepresent actual network performance, potentially mislead consumers, disincentivise investment in coverage extensions, and create challenges when direct to device services are integrated into the Standard and associated maps in future.

The consultation paper also explored whether MNOs should have limited flexibility to apply a different edge of coverage threshold value and invited feedback on the merits of this option, as well as on the circumstances in which such flexibility would be appropriate. Feedback on this issue was mixed. Some submitters opposed any flexibility in principle, others suggested that any flexibility should only permit an increase in the threshold (resulting in reduced depicted coverage), and one submitter argued that flexibility should also allow a lower threshold to be applied in specified circumstances.

ACMA response and decision

In determining an appropriate edge of coverage threshold for the standard, we have considered not only whether service is *technically possible* at a given signal level, but also the *nature and reliability* of the service that consumers can reasonably expect at that level. This requires a judgment as to what constitutes a reasonable and acceptable level of service, rather than the mere presence of any service.

In proposing a threshold of -115 dBm, the ACMA had regard to the National Audit of Mobile Coverage, which characterised RSRP values above -115 dBm as providing 'Acceptable' coverage. The audit also identified that service may occur below -115 dBm, extending to approximately -122 dBm; however, it described service in this range as 'Modest'.

The relevant audit definitions[1] are:

- Acceptable coverage (above -115 dBm): Consistent and reliable user experience for voice and data services, with minimal service interruptions or dropped calls.
- Modest overage (between -122 and -115 dBm for 4G/LTE): Below average user experience for voice and data services, with frequent service interruptions and dropped calls.

Evidence provided by the submitter seeking a value of -122 dBm showed that objectively service quality does decrease in the region between -115 and -122 dBm. In material received from the audit provider the term 'modest decline' was used to describe this region.

We acknowledge that mobile network coverage does not cease abruptly at a single signal strength contour and that user experience degrades progressively as signal levels decrease. The central issue for the ACMA is what level of expected user experience – particularly in terms of reliability – should be represented on a standardised coverage map.

[1] See the National Audit of Mobile Coverage—Audit Methodology Fact Sheet—October 2025 | Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts.

The ACMA notes that the expected user experience between -115 and -122 dBm is materially different to that above -115 dBm, especially in terms of expected reliability of call connection and service continuity. The National Audit of Mobile Coverage describes coverage in this range as involving *frequent service interruptions and dropped calls.* On this basis, we consider that it is not appropriate to represent coverage within this range as 'Basic' coverage for the purposes of the standard.

A key distinction between the National Audit of Mobile Coverage and the standard's predictive mapping approach is in their underlying purpose. The National Audit documents where mobile coverage was observed during measurement activities, including instances of fortuitous or incidental connectivity at lower signal levels.

In contrast, the purpose of a predictive coverage map is to estimate where reliable mobile service is likely to be available, taking into account expected user experience and service continuity. While the audit identifies service down to the 'modest' range (approximately -122 dBm), the standard aims to show only those areas where consistent and reliable service can reasonably be expected (at signal levels above -115 dBm). As a result, the 2 approaches cannot be aligned exactly.

This difference in purpose is why the standard aligns with the audit's 'Acceptable' level of coverage at the higher signal strength threshold of -115 dBm, rather than with the lower 'Modest' coverage category identified in the audit. It also underpins the ACMA's decision not to reduce the 'Basic' coverage threshold below -115 dBm, including to the -122 dBm level proposed by one submitter.

We also considered an alternative option of introducing an additional coverage category below 'Basic', with distinct visual representation and explanatory caveats to reflect the significantly reduced user experience at these signal levels. The ACMA has decided not to adopt this approach. It considers that depicting potential coverage below what we consider to be an acceptable level of service would not be in the interests of map users, including consumers and emergency service organisations, even with extensive qualification.

The ACMA considered whether allowing some flexibility in the edge of coverage threshold would be desirable, including the potential effects of adopting a higher threshold (which would reduce depicted coverage) or a lower threshold (which would expand it).

Overall, and as acknowledged in the consultation paper, we recognise that any change would need to be carefully assessed in terms of its impact on comparability and transparency, compared to the potential benefits such flexibility might deliver. The ACMA considers that a strong and demonstrable case would be required before any change could be contemplated.

While allowing an MNO to reduce its depicted coverage may, on its face, appear unproblematic – given that it would tend to understate rather than overstate coverage, thereby reducing the risk of consumer disappointment – it would have consequences for comparability. For example, a consumer may perceive another provider's map as showing more extensive coverage simply because that provider has not applied a reduction. In such cases, the apparent difference may not reflect a genuine variation in network performance, but instead the result of differing approaches to how coverage is depicted.

The ACMA also considered whether mobile network operators should be permitted limited flexibility to expand depicted coverage using alternative technical criteria that do not involve

increasing the RSRP threshold. While we acknowledge that network performance and user experience may, in some circumstances, be influenced by factors other than signal strength alone, the criteria proposed by the submitter advocating the change were not sufficient to support incorporating such an approach at this time.

The approach proposed by the submitter introduced the concept of a 'minimum service contour', which was suggested to be set at -130 dBm. The submitter further proposed that coverage thresholds could be adjusted by a mobile network operator by the same dBm value as the difference between this reference contour and the operator's own minimum service value.

We note that this approach is based on the assumption that the edge of coverage threshold should be derived from an underlying minimum service contour. This differs from the basis for the -115 dBm threshold value proposed in the consultation paper, which is informed by the National Audit of Mobile Coverage and its empirically derived classification of signal strength ranges grounded in observed user experience and service reliability.

While alternative approaches – such as those based on minimum service contours – may have potential merit, adopting such a framework would represent a significant shift in how threshold values are determined. In particular, the proposed reference contour of -130 dBm has not undergone industry-wide validation, nor was it tested through consultation during the development of this standard. Introducing such an approach at this stage would therefore materially undermine the established basis of the standard.

The ACMA considers that the use of a common, fixed RSRP threshold is the most appropriate mechanism for ensuring comparable coverage information at this time.

Modelling methodology and assumptions

Stakeholder feedback

A small number of submitters engaged with the proposed methodology to be used in modelling the signal strength. This feedback included:

- general recommendations to increase the specificity in modelling parameters and assumptions, especially by defining propagation and clutter models
- a specific proposal that the resolution for the coverage maps should be better than the 100 m x 100 m proposed (i.e. reduced to 30 m x 30 m)
- a specific proposal the value of body loss to be used in modelling coverage being reduced from 4 dB to 0 dB in some circumstances (that appears to assume the user actively seeks optimal handset orientation to improve their experience).

ACMA response and decision

The ACMA recognises the general arguments for further specificity in the modelling parameters and assumptions included in the standard as a means of improving comparability. However, it also recognises that making an informed decision requires detailed information that is currently lacking and sufficient time to properly consider the implications of any changes.

We are not able to decide on any changes at this time but will consider this issue in a future review of the standard.

In response to the specific proposals made:

- We have decided not to change the map resolution at this time but may consider the matter further in a future revision of the standard.
- We have decided to retain the existing body loss assumption in the standard. The proposal to base the standard on an assumption that users in outer-coverage areas would actively adjust their posture or device position to minimise body loss was not supported by the evidence provided. Even if a user were to orient themselves optimally and hold their device away from their body, no evidence was offered to suggest that a 0 dB body loss assumption would be realistic.

Stakeholder feedback on other considerations

Frequency of map updates

Stakeholder feedback

Most submitters agreed with the proposal that maps be required to be updated on a quarterly basis. However, some suggested that maps updates should be 'events based' to respond to known changes in coverage, some even suggested maps should show 'real-time' coverage.

ACMA response and decision

It has always been the intention of the standard that MNOs update their maps when a known change in coverage occurs, such as when network deployment or upgrades to existing transmitters sites affect coverage. In the absence of such events, the standard requires MNOs to review and update their maps quarterly.

The standard has been redrafted to clarify this intention.

Data access by emergency services organisations

Stakeholder feedback

Submitters who addressed this issue agreed that the underlying data used to produce the coverage maps should be made available for extraction by emergency services organisations. Additionally, government departments and agencies requested broader access to this mapping data to support their operational needs, including emergency management activities.

Several submitters noted that expanding access to the underlying data could deliver broader analytical benefits, including potential value for the general public.

ACMA response and decision

The provision has been amended to allow government departments and agencies to access this information. However, we do not consider that the direction envisaged broader access to the general public, given its emphasis on making the data extractable for *organisations*, rather than individuals.

Other matters raised in submissions

Potential for multiple maps to be produced under the standard

Stakeholder feedback

Some submitters expressed concern that the draft standard may unintentionally allow MNOs to produce a map that complies with the standard for comparative purposes, while also producing a separate map for marketing purposes that does not comply with the standard.

ACMA response and decision
The standard permits MNOs to develop multiple maps that comply with its requirements. However, it now makes clear the policy intent that any map that purports to show 4G or 5G coverage must be produced in compliance with the standard. The accompanying Explanatory Statement reiterates the policy intent.

Suggestion to include seaward coverage in mapping

Stakeholder feedback
The Australian Maritime Safety Authority (AMSA) requested that the standard be amended to require the maps provided under the standard to project seaward. AMSA says that this view will assist them to understand coverage available off the coast when planning rescue operations.

ACMA response and decision
While the ACMA agrees with the sentiment underlying AMSA's response, it is difficult to draft a provision that is both effective and enforceable. Because the maps prepared for the standard are predictive, the extent to which coverage reaches out to sea will vary depending on the location of the transmitter. The ACMA encourages licensees to indicate coverage as far as the predictive modelling shows it extends, whether over land or beyond the land edge. Where predicted coverage extends offshore, MNOs are encouraged to reflect this on their coverage maps.

Application of the standard

Stakeholder feedback
NSW Telco Authority was concerned that under the definitions proposed by the draft standard, it may be required to prepare coverage maps.

ACMA response and decision
The standard applies to MNOs that provide a Relevant Mobile Telecommunications Service (RMTS), which – as defined in the direction – must be a service provided to the public. Based on this requirement, and on the ACMA's understanding of the services provided by NSW Telco Authority, we consider that the NSW Telco Authority is not providing an RMTS and therefore would not be required to prepare and publish mobile network coverage maps under the standard.

Next steps

Following the commencement of the standard in June 2026, we will continue to monitor the implementation of the standard to assess its effectiveness and identify any emerging issues. Several matters raised during consultation – including validation measures, greater specificity in modelling assumptions, refinements to map resolution, and potential enhancements to consumer-facing information – were not adopted at this stage due to timing, resourcing and evidentiary constraints.

These issues may form part of a future review once the standard has been in operation and sufficient data and experience have been accumulated. The ACMA will also monitor feedback from consumers, government agencies and industry, including any concerns related to publication practices, accessibility, and the comparability of coverage information. Insights arising from these processes will help inform whether amendments to the standard, or further guidance, are warranted in subsequent iterations.