Mobile Black Spot Program—Round 5A proposed guidelines

Feedback response

Queensland Department of Housing and Public Works

June 2020

Question 1

Are there any comments on the coverage areas proposed to be targeted?

The proposed target areas for the next round of the program are supported.

It is suggested that the program also still support the priority solution types identified in previous rounds – i.e. still allow submissions relating to specific coverage issues and coverage of public interest premises.

Question 2

Are there any comments on the types of proposals that would be eligible for funding, including the required coverage outcomes?

(a) High priority natural disaster prone areas including those affected or prone to bushfire

It is suggested that cyclone prone areas are included in the list of Eligible Areas (page 6) to make it explicit these areas are also prioritised.

It is agreed that funding macro cell base stations in these areas, where there are coverage gaps, should be the primary focus. However, other options that could be considered include:

- co-funding improved resiliency of <u>existing</u> towers (e.g. increased battery/generator backup, redundant backhaul)

- co-funding a second MNO in areas which currently only have a single provider (to increase chance of at least one network staying up)

- an increased stockpile/pool of SatCOW type solutions (possibly based on a RAN over satellite type model) in regions to enable temporary communications to be established more quickly in event of outage of macro towers.

The concept of allowing a cluster of towers (as opposed to a single tower) to achieve a coverage outcome is mentioned above in relation to 1(c) solutions. It is suggested that this type of allowance should also exist for disaster prone areas.

(b) New technology solutions in areas where low population densities have discouraged applications under earlier rounds

The option of encouraging shared RAN type solutions (or other multi-provider outcomes) for low population density areas (and other areas) is generally supported.

It is suggested that the program provide better support for funding traditional MNO macro/small cell outcomes in these areas as well – The point about *'low population densities have discouraged*

applications under previous rounds' is not necessarily due to an unwillingness of States (and other parties) to consider co-funding solutions in such areas. The MBSP scoring model has traditionally placed a heavy weighting on *"the number of premises to receive new coverage"*. This has meant that States have had to often pay more than the standard proportion to make a macro cell in a low population area competitive in the MBSP scoring model. Modifying the scoring model to more equally share the co-funding costs for low population areas would potentially increase submissions, with or without shared RAN type solutions.

(c) Major regional and remote transport corridors

The proposed approach of reserving a level of funding to target coverage along major regional and remote transport corridors is generally supported, however:

- the intention to narrow the definition of major transport routes to those defined in the *Roads of Strategic Importance* initiative and *National Land Transport Network* would appear to exclude many routes of significance in Queensland. For example, it appears that a number of highways and all developmental roads (precursors to highways in remote areas) are not included in these classifications. These roads can often be many hundreds of kilometres in length and connect many towns across multiple councils/electorates – These roads are critically important and should be eligible for funding.

- Encouraging shared RAN type solutions should not be limited to type (b) scenarios. Encouraging these solutions for transport corridors could also be considered.

Question 3

Is the RAN model an effective sharing model for Australia?

A shared RAN model could certainly be an effective approach in Australia in terms of making the economics of deploying multi-carrier solutions more viable in remote areas. However, it has been observed that certain MNOs (when asked about this type of approach in the past) claim that such a model can lead to compromises in terms of coverage and performance, and can supposedly lead to higher costs in some circumstances. It would be important that the Australian Government ensures that any proposed RAN model effectively balances these concerns, and also ensures that rules and obligations are established to ensure equitable access to all MNOs who wish to provide services at a given site.

In addition to considering shared RAN models for the purpose of making remote solutions more commercially viable, this type of model may also be viable for 5G mm-wave small cell deployments in future (subject to technical standards, viable products, etc). The prospect of having to install small cells from each MNO every few hundred metres, or in buildings, would introduce a range of practical and operational impacts, especially given the current leeway afforded to carriers by the 'low-impact facility' designation in the telecommunications legislation. The *Queensland Department of Transport and Main Roads* noted their concerns in this regard as part of their submission to the Parliamentary Inquiry into 5G in 2019 (refer to submission 334 on the Inquiry website).

Question 4

What other design options could be considered that provide multi-provider outcomes?

A further extension of the program that could be considered is the prioritisation of sharing solutions that expand the accessibility options to digital enablement – such as Low Power Wide Area Network transceivers (i.e. LoRaWan). Such solutions would ensure that physical infrastructure is used to maximum benefit for the wider business and general community, enabling smart and innovative solutions platforms to be developed within the relevant context of each locality, i.e. tourism, disaster

management, transport and freight logistics, supply chain interactions, health monitoring and responses, agribusiness, mining and resource, education. Access to such infrastructure supports digital capability development and digital literacy, supporting Australia's innovative and resilient communities.

Question 5

Are there any comments on the funding cap for Round 5A and eligible costs?

It is suggested that funding caps provide appropriately flexibility to encourage innovative approaches and efficiencies where possible, particularly for multi-tower solutions.

Question 6

Are there any comments that you wish to make in relation to eligibility to apply for funding?

Consideration needs to be given within the model to ensure that the criteria of *giving priority to solutions offering services from at least two mobile network operators* does not rule out valid single MNO solutions from being submitted, or being competitive in certain circumstances - There can be valid technical or regional based reasons for a single MNO solution to be funded particularly in the Queensland context which offers significant decentralisation over a very large geographical area.

Examples:

- *Satellite small cell at public interest premise* – The nature of these point solutions, and limited satellite backhaul will typically mean that these are MNO specific implementations and are not suitable for sharing.

- *Remote areas* – Some remote regions have sparse mobile coverage (mainly at townships. hundreds of kilometres of road without coverage), with 95% of the towers in the region provided by a single MNO. Other MNOs may not wish to invest in a solution which provides an 'island' of coverage along the highway in a region that it doesn't otherwise service. It is suggested that the opportunity for improving coverage of an existing MNO in a remote region such as this should not be ruled out (or less competitive) if other MNOs do not wish to participate.

Question 7

Are there any comments that you wish to make regarding ways the program could assist potential state government and third party co-contributors?

Timing of rounds – Historically (and with Round 5) the Commonwealth has announced new funding rounds and also launched and closed the applications for these rounds within the same financial year. It must be recognised that some jurisdictions may need to undertake budget funding allocation processes to participate in the program. Timing and periods for rounds should acknowledge the differing jurisdictional circumstances, and ensure opportunities for states to participate are maximised – for example, announcing rounds well in advance of the application period, scheduling a single round per year that aligns with budget planning and cycles.

Application period & Multi-MNO complexity – The timeframe between launch and submission dates of each round is tight. Identifying sites, modelling coverage/costs, negotiating with MNOs and securing funds takes considerable time. This process may be complicated further with the proposed focus of round 5A on *giving priority to solutions offering services from at least two mobile network operators* and encouraging shared RAN models. Based on experience, it would be expected to take considerable time for the MNOs/MIPs to negotiate among themselves and for jurisdictions to engage. The capacity

to arrange multi-MNO solutions will significantly impact on the ability to include such proposals in a bid. The application period needs to be extended to accommodate this additional complexity. It is suggested that a two-phased approach could also be considered and accommodated, where the various MNOs and MIPs do some initial work together in identifying the model(s) they will support and candidate sites they will consider (with some preliminary guidance from States/third parties on priority areas) before engaging in more detailed discussion with potential co-contributors.

Question 8

Are there any comments regarding the need for a shorter minimum operational period, particularly in remote and very remote areas?

It is considered that the 10 year minimum operation period should be maintained.

Question 9

Are there any comments on the proposed equivalency requirement and 4G reference power levels for handheld and external antenna coverage?

The proposed coverage equivalency requirement appears appropriate.

Question 10

What criteria should be used to identify key sites where independent power systems or redundant backhaul could be funded?

Suggested criteria:

- Areas prone to natural disasters, including cyclones and flooding

- Areas which are very remote and/or difficult to access. Some towers can be in locations that are difficult to reach, for example:

    — roads can be cut for many days in wet season in Cape York

    — extremely remote and difficult to access

    — islands, particularly remote islands such as in the Torres Strait

    — towers on hills where only possible access is via helicopter, including, for example where this is difficult for extended periods due to low clouds and strong winds in the wet season.

Question 11

Are there any comments regarding the requirement for at least 12 hours of auxiliary backup power for small cells?

Significant auxiliary backup is desirable, however it is suggested that it may not be suitable as a blanket requirement. For example, there may be circumstances where this requirement could substantially increase the cost of the base solution to render it unattractive and/or result in unnecessary infrastructure, and, particularly with PIPs, where alternative back up power is more readily available for example, from the facility it is connected to.

Question 12

Do you have any comments on the proposed assessment criteria?

- Generally, assessment criteria should be adjusted in accordance with the suggestions made in questions 1 to 11 above.

- Some consideration could be given to areas facing significant economic and/or social impact from COVID-19.

- Criteria 3 will consider the *"degree to which proposal provides service from more than two providers"*. It is suggested that this should be changed to *"at least two"* to align with Key Design Principle (KDP) 4.

- It is suggested that the network resilience principles outlined in KDP7 be incorporated in the assessment criteria.

- It is not clear how cluster solutions of multiple towers (KDP1c) will be assessed against single tower solutions.

- Early MBSP rounds provided respondents and co-contributors with a clear idea of the weighting of assessment criteria. This information was valuable in guiding selection of candidate sites for submission. It is suggested that more information be provided on the relative priority/weighting particularly for the value-for-money criteria so that respondents have a better idea of the types of solutions that are more likely to be competitive.

- It is noted in KDP1 that *"It is proposed Round 5A will reserve a portion of the available funding for each target type"* . It is not clear how that concept aligns with the assessment criteria above i.e. will funding be split across each target type and proposals assessed/competing within those streams, or if all proposals will be assessed against the full funding available, how will the target types will be considered and prioritised?

- KDP1(b) and KDP3 outline the intention to explore shared RAN models however this does not appear to be reflected or incentivised in the assessment criteria .

- The *public interest premise* concept introduced in R4/5 is still a valid solution type and should be included in the assessment criteria.

- It is suggested that MNOs be required to ensure that the terrestrial backhaul solutions (fibre or microwave) offered in support of their 4G mobile base stations have sufficient capacity to provide genuine 4G mobile performance (in terms of data speeds) to connected users in the region.