

Mobile Coverage Programme Discussion Paper

Submission Cover Sheet

Submission Information

This cover sheet should be attached to submissions made to the Department of Communications in relation to the Mobile Coverage Programme Discussion Paper.

Contact Details

Name of respondent: [REDACTED]
Name of organisation: Queensland Government
Phone: [REDACTED]
Email: [REDACTED]
Website (if applicable):
Date: 14th February 2014

Confidentiality and privacy

All submissions and comments, or parts thereof, will be treated as non-confidential information unless specifically requested, and acceptable reasons should accompany each request. Email disclaimers will not be considered sufficient confidentiality requests.

Respondents lodging a submission should be aware that submissions (excluding any information agreed to be treated as confidential information) will be made publicly available, including on the Department of Communications' website. Submissions and comments will be subject to freedom of information provisions. Despite a submission being identified as confidential or sensitive, submissions may be disclosed where authorised or required by law, or for the purpose of parliamentary processes.

Do you want all or parts of the submission to be treated as confidential? Yes No

If yes, identify below which parts of the submission are to be treated as confidential (and provide a reason):

If the submission contains personal information of any third party individual, indicate on this Submission Cover Sheet if that third party individual has not consented to the publication of his or her personal information:

Submission Instructions

Submissions are to be made by **5:00pm (AEST) Friday 28 February 2014**.

Where possible, submissions should be lodged electronically, preferably in Microsoft Word or other text-based formats via the email address mobilecoverage@communications.gov.au

Alternatively, submissions can be sent to the postal address below (to arrive by the due date):

The Manager
Mobile Coverage Programme
Department of Communications
GPO Box 2154
CANBERRA ACT 2615

All submissions lodged will be acknowledged by the Department of Communications by email (or by letter if no email is provided). Respondents lodging a submission who do not receive acknowledgement of their submission should contact the Department. Submissions which are not acknowledged by the Department as being received may not be considered. Respondents should be aware that emails greater than 10Mb may not be successfully delivered.

Queensland Government Response

General Comments and preferred approach

As Queensland is the most decentralised state with over 10 percent of our citizens living in communities of less than 200 premises, where commercial investment in mobile services is unlikely to be viable, we are keen to explore ways to address the critical communications needs of these smaller communities with the Australian Government.

Whilst we acknowledge the importance of maintaining competition (amongst mobile network operators), Queensland's primary focus is on improved coverage. All three of the programme options presented in the paper have merit. Further details regarding Mobile Network Operator (MNO) costs and delivery models would need to be understood before the Queensland Government can properly assess which of the programme options is the best fit for delivering optimal coverage outcomes, in a sustainable manner, for our state. The Queensland Government supports a process involving broad market engagement with industry, and ongoing consultation with the states, to finalise the structure of the programme.

Other areas to consider:

- The Mobile Coverage Programme will no doubt improve the coverage of many Queenslanders, however we anticipate that there may still be a number of areas that are not able to be fully serviced. We suggest that the programme examine ways to improve education to the community regarding the practices/approaches (for example, extended aerials and linked mobile/satellite services) that they can adopt to maximise their mobile connectivity.
- The discussion paper does not address the issue of coverage performance and subsequent reliability issues between carriers. The variance of the quality of service limits carrier choice to some extent therefore the program needs to give consideration to bridging the gap in terms of capacity of carriers to utilise all available infrastructure and then be measured on their respective costs and service performance.
- Consideration will need to be given to the programme governance model and the level of state representation.
- Some of the investments could perhaps be directed to portable mobile base stations so that they can be relocated based on demand and not to sit idle and unused in areas with seasonal demand.
- The level of information that is publicly available from MNO's regarding coverage maps is typically high-level and may not be an accurate reflection of actual coverage. There may be opportunity to address this at a national level by developing (or sourcing) a capability to produce integrated coverage maps. All MNO's could be required to provide GIS datasets regarding coverage, black spots, planned expansion etc. Datasets from other stakeholders (e.g. Councils, Public Safety Authorities etc.) could potentially also be integrated to increase the richness of reporting information available.

Response to Questions

1. **Would an appropriate minimum quality standard be that base stations must provide high-speed 4G LTE mobile broadband data communication services and also high quality 3G mobile voice and broadband data services? If this is not an appropriate minimum quality standard, what is?**

Response:

The Queensland Government agrees with specifying high-speed 4G LTE mobile broadband data and 3G mobile voice and broadband data, but further detailed standards are probably required to be specified such as the 3GPP Release required to be supported (e.g. Release 10: LTE-Advanced).

The minimum quality standard should:

- be very specific to remove any contractual confusion
- stipulate the minimum broadband speeds that can be expected when the cell is loaded as well as the normal loading
- stipulate the minimum coverage.

2. **What are the most appropriate indicators that could be used to specify the minimum quality standards that should apply to the mobile services being provided through the programme? For instance, should it be a minimum received service signal indication (RSSI) in decibel-milliwatts (dBm)? A similar approach was adopted recently in the UK where a comparable programme specified a minimum RSSI for 3G voice and basic data service of -85dBm on roads and -75dBm in community areas (outside premises).**

Response:

The Queensland Department of Education, Training and Employment (DETE) currently use the RSSI in decibel-milliwatts (dBm) to measure coverage at a school, it is also used to gauge the need to connect an aerial to improve coverage.

In general however, The Queensland Government has no firm position on this issue and believe that it should be determined by the industry once the user based performance measures are agreed. Advice from independent engineers/consultants should be sought.

3. **Does delivery option 2 for the \$80 million Mobile Network Expansion component raise any additional issues that need to be considered?**

Response:

The Queensland Government recognises the importance of competition however this requirement needs to be effectively balanced with economies of scale, and the need to deliver optimal coverage for the state. Option 2 has potential merit but so do the other options. Further details regarding Mobile Network Operator (MNO) costs and delivery models would need to be understood before the Queensland Government can properly assess which of the programme options is the best fit for delivering optimal coverage outcomes, in a sustainable manner, for our state. The Queensland Government supports a process involving broad market engagement with industry, and ongoing consultation with the states, to finalise the structure of the programme.

Issues to consider:

- The \$80 million funding amount is unlikely to substantially increase the population or land area covered if not allocated carefully. Diluting the economies of scale could be expected to diminish the likely benefits and could result in cherry picking.

- Backhaul cost/availability may play a larger part in this option than competitive tension and could dilute the number of overall sites/areas covered.
- Spot filling coverage may not provide continuity of service or seamless base station handovers to mobile users, as Australia does not currently have affordable mobile roaming arrangements between MNOs. Addressing this roaming issue could however be a focus of the programme.

4. Could options 3(a) or 3(b) for the \$80 million Mobile Network Expansion Project be delivered in conjunction with options 1 or 2 to enable network infrastructure providers to compete with MNOs?

Response:

The Queensland Government agrees that establishing an infrastructure wholesaler has merit as this entity would be motivated to maximise its returns through collocation and asset reuse. Further market engagement with Industry would however be required to determine whether it would be cost effective to deliver options 3(a) or 3(b) in conjunction with options 1 or 2.

5. Should bidders be able to propose to incorporate the use of base stations owned by NBN Co as part of their bid?

Response:

Bidders should be permitted to leverage Australia's investment in the NBN to extend mobile coverage and should be permitted for Options 1 and 2 as well.

However, the use of NBN Co infrastructure should be permitted to be incorporated into vendor bids on the proviso that the NBN infrastructure deployed is able to sustain any increase in load or usage without any decrease in performance (e.g. latency, dropped packets, throughput).

6. Should a joint bid (between a specialist network infrastructure provider and a MNO) be permitted? Should it be encouraged?

Response:

Permitted, so long as it does not result in a monopoly and all MNOs have access on substantially similar terms and conditions.

7. Is it realistic to expect specialist network infrastructure providers to provide backhaul (recognising that they would presumably need to contract with a third party to provide this)?

Response:

Though specialist network infrastructure providers may be well placed to provide backhaul, responses from industry to this discussion paper should provide this input as the Queensland Government is not privy to the commercial operations of tower providers.

8. Is option 3(b) suitable for Australia's regional mobile market?

Response:

It is uncertain whether there is sufficient maturity in relation to roaming to provide a robust operating model, a commercial return and an effective service. This should however be explored further. Consideration needs to be given to whether the government can address potential issues/impediments through measures such as policy/regulatory changes, contractual measures, changing carrier license conditions.

9. What are the appropriate specifications for a base station to be able to accommodate at least two other MNOs?

Response:

Responses from industry to this discussion paper should provide this input as the Queensland Government does not have the technical expertise.

10. Will the proposed open access provisions be sufficient to encourage other MNOs to use the base stations to provide mobile services?

Response:

The provisions appear to be reasonable, however responses from industry to this discussion paper should provide guidance in this area.

One point to note - There is a risk that colocation may be restricted to profitable areas and as such coverage may be fragmented. For many locations only one MNO may choose to bid. Careful consideration needs to be given to the "Open Access" requirement that is proposed for MNO's under the programme. There is a risk that the cost associated with engineering in this extra capacity may dilute the overall amount of coverage that can be provided and that this capacity may not even be utilised by other carriers.

11. Should MNOs be required to pre-commit to/co-invest in the base stations for which they wish to share infrastructure?

Response:

This is a commercial consideration for MNO's. Responses from Industry should provide guidance in this area.

12. What is the estimated additional cost of requiring all new base stations to meet the open access requirements?

Response:

This is a commercial consideration for MNO's. Responses from Industry should provide guidance in this area.

13. Should the proposed open access provisions be applicable to base stations funded under the \$20 million component, or should there be scope to exclude some base stations from these requirements?

Response:

Ideally the open access provisions should hold for all base stations funded under the \$20 million component (except perhaps for upgraded existing base stations).

It is possible however that in the more remote parts of Queensland there may be only one MNO who will provide the service and it might not be appropriate to insist on the additional costs to provide open access.

A concern is that these additional costs may result in the business case for the base station being unviable. It is suggested that the Australian Government permit MNO's to argue a case for the reduction of open access provisions.

14. What are the most appropriate models/benchmarks for establishing access and backhaul pricing, and for reflecting in that pricing the value of the public funding received by the owner of the

facilities (such that access seekers receive an appropriate discount from the market price for access to the facility)?

Response:

No comment.

15. Do the proposed assessment criteria achieve the right balance to deliver the best value for money outcomes?

Response:

Queensland is the most decentralised state with over 10 percent of our citizens living in communities of less than 200 premises. Current rural and remote mobile service issues for Queensland are:

- Poor or no in-home/property mobile coverage
- Non-contiguous mobile coverage on main highways
- Poor service at short term – high population density sites such as tourist, recreation and some entertainment locations.

For many rural and remote Queenslanders this affects their ability to use on-line services such as government, banking, retail etc, as well as limiting the quality of health, education and safety services government (s) can provide. It is critical that the programme assessment criteria take into account Queensland's unique coverage challenges and have a strong focus on social outcomes.

Following are Queensland Government's views on the assessment criteria:

1. Match with the priority programme locations

- Agreed

2. New coverage

- Agreed

3. Extent of coverage benefit

- The number of new premises could bias infill in more populous states.
- Queensland's demographics may place it at a disadvantage as it has smaller more dispersed populations
- The coverage size (i.e. criteria 2c) is not a good measure unless it is combined with other parameters such as signal strength and bit error rate
- Another measure should be the number of sites (e.g. schools, hospitals, police/fire/ambulance stations, public counters and offices) that would be covered along with the length of transport routes used by staff/officers/students/patients/general public travelling to these sites.
- Further consideration may need to be given to looking at locations where essential services are currently limited in their ability to deliver to the community. Social outcomes should be a key measure, not just extent of coverage.

4. Co-contributions

- We are prepared to consider co-investment with the Federal government, councils and other stakeholders in expanding and improving mobile coverage in Queensland. We welcome the opportunity to discuss the nature of this co-investment in future as the programme structure is finalised and progressed.

5. Value for money to the Commonwealth

- Cost to cover premises or square kilometres may unduly provide a bias to more populous

states.

6. Open access

- It is possible that in the more remote parts of Queensland there may be only one MNO who will provide the service and it might not be appropriate to insist on the additional costs to provide open access. A concern is that these additional costs may result in the business case for the base station being unviable. It is suggested that the Australian Government permit MNO's to argue a case for the reduction of open access provisions.

7. Commitment from more than one MNO

- Agree in general, however there will be exceptions to as noted above in (6). There may be certain locations where the social/economic/community benefit achieved by getting coverage from even a single MNO will be more important than getting multiple MNO's in other locations.

16. Should the proposed assessment criteria be weighted, and if so, how?

Response:

The Queensland Governments preference is that higher priority be given to the first three assessment criteria, however as noted above we believe that the dimensions associated with criteria 3 in particular need to be adjusted to ensure Queensland is not at a disadvantage compared to other states.

17. Is there a more effective means of assessing seasonal demand than proposed in criterion 3(c)?

Response:

We agree with the measures outlined in 3(c).

Tourism Industry representatives may identify other measures worth considering.

Transport statistics such as road, air and rail usage could also provide a means of recognising seasonal demand.

18. To what extent would the use of the NBN fixed wireless network result in improved mobile coverage outcomes in regional Australia?

Response:

The Queensland Government supports the NBN where this can be demonstrated to improve coverage outcomes.

NBN fixed wireless network may provide more cost-effective backhaul than new fibre backhaul, however MNO's or infrastructure providers would be better positioned to comment.

Use of the NBN fixed wireless network could possibly result in more coverage for the same level of investment. However, the question is whether there are NBN fixed wireless network services available in the remote locations where new base stations may be implemented.

Queensland due to its demographic dispersion is currently in a position whereby the NBN will provide satellite services (rather than fixed wireless) to a large proportion of its more remote premises (approximately 13%). This reduces the potential benefit from using the NBN infrastructure for mobile backhaul. Albeit it should be leveraged where it is available.

19. How best can a greater role for NBN Co improve competition and choice for consumers in regional Australia?

Response:

No comment

20. In addition to base station location, design and backhaul access, what other considerations would NBN Co need to take into account if it were to also support mobile coverage and competition benefits as part of its mandate?

Response:

Considerations

- Options for mobile extensions from satellite receivers (both private and public) and integrated 3G/satellite options could also be considered in situations where fixed wireless is not cost-effective.
- In areas that are not fully covered (even after the programme implementation), educating and realigning customer expectations as to how they can improve their coverage situation by additional solutions (extended aerials, 3G/satellite handsets etc.) will need to be considered. This may not be an NBN responsibility but will need to be considered as part of the programme.
- Delivery of voice services over contended networks (that are shared with data traffic) requires voice calls to be given priority to ensure suitable conversation quality for end users. Technical controls such as Quality-of-Service (QoS) are typically required to achieve this outcome. It is our understanding that these controls may not currently be provided on NBN fixed wireless services. This will need to be taken into account.

21. How can early engagement between NBN Co and MNOs be facilitated in the design of each base station? Is there a role here for the Australian Mobile Telecommunications Association (AMTA)?

Response:

The Queensland Government does not have a view on this issue.

22. How can the Mobile Coverage Programme best complement any role that the NBN fixed wireless service plays in improving mobile coverage and competition?

Response:

NBN Co should be required to consider the Mobile Coverage Programme as part of their planning and design. One possibility may be for NBN Co to incorporate as many towers as possible on the backhaul network it has established, to minimise costs and to provide a wholesale mobile connectivity service, if at lower cost than MNO provided.