# Measures to address regional mobile issues

October 2017

# Contents

# 1. Key issues for regional mobiles consumers

The Australian Competition and Consumer Commission (ACCC) has recently concluded an inquiry into whether to declare a wholesale domestic mobile roaming service (mobile roaming service). The ACCC is not satisfied that declaration would promote the long-term interests of end-users and has therefore decided not to declare a mobile roaming service.

During the inquiry, the ACCC heard from many regional Australians concerned about inadequate mobile coverage where they live and work. Many individuals, businesses, industry associations and consumer groups were concerned that a decision to declare would result in less future investment in mobile networks, particularly in regional areas where there may not be a direct return from investment. Over time, this could degrade the quality of existing networks. They pointed to the productivity potential of further investment in regional areas and expansion of mobile networks.

On this particular question, after assessing the evidence, the ACCC found that declaration is more likely to distort the competitive dynamics in the mobiles market by reducing mobile networks operators' incentives to improve network coverage or differentiate their products.

However, given the concerns raised by many submitters, the ACCC considered there is scope to improve the outcomes for regional Australians' mobile services using policy and regulatory measures. Consequently, in the inquiry's draft decision we explored whether regional mobile services could be improved through measures designed to:

- increase the transparency of network quality and coverage information so that consumers can make informed decisions,

- reduce the costs of deploying and improving mobile networks, and

- ensure that competition issues are taken into account in the radiocommunications regulatory framework.

The ACCC received a considerable number of submissions on these issues from industry participants, Commonwealth, local and state governments, regional and industry associations, consumer representatives, businesses and consumers. The public versions of these submissions, as well as the ACCC's reports on this inquiry, are available on the [ACCC's website](#). Based on these submissions, the ACCC has identified a number of issues that impact regional areas and proposed actions to improve outcomes for regional mobile consumers.

The ACCC thanks industry and representative groups, and individual submitters, for their assistance and cooperation throughout the inquiry.

## 1.1. Issues and proposed actions

This paper makes observations on issues raised during the declaration inquiry and proposes a number of actions to improve outcomes for regional mobile users. These are as follows:

1. There is a need for better transparency about network coverage, quality, expansions and improvements.

    - There is a lack of transparency and consistency regarding network coverage information (including technology and quality) for consumers and businesses that impacts upon their ability to choose a suitable mobile service and service provider.

We will approach industry directly asking that they develop more transparent and consistent information about mobile networks and services.

- Consistent, transparent and publicly available data on mobile networks would also benefit policy and regulatory decisions and programs. We propose a coordinated government response to consider how to achieve this objective.

- A lack of transparency around future network deployments and investment particularly affects consumers and businesses in regional Australia. There is scope to use the ACCC's existing Record Keeping Rules to improve the accountability of MNOs with regard to network investment. We will shortly commence a review of the ACCC's Infrastructure RKR to improve the information we collect about mobile network infrastructure.

2. Measures to reduce the costs of deploying and improving mobile networks can be improved.

- While government subsidies such as those provided through the Mobile Black Spots Program can promote investment in areas without mobile coverage, the design of this particular program means that the government is subsidising individual commercial entities without requiring the broader benefits to be shared by consumers. We will write to federal and state governments asking that competition considerations be adequately dealt with when designing subsidy programs to expand coverage of, or improve telecommunications networks, particularly by requiring open access.

- A review of the Facilities Access Code, which is administered by the ACCC, will identify and remove any barriers to the timely deployment of infrastructure. This could also examine whether changes are required to facilitate the rollout of 5G. The ACCC will shortly commence a public review of the Code.

- There is scope for mobile network operators to continue to use NBN infrastructure to extend their network footprints. This may be particularly helpful for the new entrant, TPG. The ACCC will write to NBN Co and MNOs to encourage more active discussions about opportunities to use NBN Co.'s fixed wireless networks and other infrastructure to complement or assist mobile network rollouts.

3. Spectrum allocation and management is an essential input for communications markets. The effect of spectrum allocations on consumers and on competition outcomes in relevant markets should be taken into account when making decisions about significant spectrum allocations. We consider that there is an opportunity for the proposed reforms to the *radiocommunications regime* to do more to promote competition in relevant markets.

## 1.2. Next steps and interaction with the Communications Market Study

The ACCC will act on those issues and actions proposed in this paper, and actively encourages industry and governments to do the same.

The ACCC is currently undertaking a market study into the communications sector. The ACCC is doing this to ensure that the implications of developments in the communications sector are well understood, to identify issues that prevent relevant markets from delivering economically efficient and competitive outcomes in the interests of consumers, and to identify options, if required, to address these issues.

Many of the measures proposed in this paper have also been identified in the preliminary findings of the forthcoming draft report of the communications market study.

We will continue to work, and advocate for action on other measures proposed in this paper and will do so primarily through the communications market study. We therefore encourage interested stakeholders to engage with this process. More information on the communications market study can be found on the ACCC's website at https://www.accc.gov.au/about-us/market-studies/communications-sector-market-study.

## 2. There is a need for better transparency about network coverage, quality, expansions and improvements

A fundamental requirement for markets to work effectively is that consumers are informed about what products and services are available and how services differ from each other in functionality and quality. In the absence of such information, consumers will rely on brand names, company reputation and marketing to choose services. While these factors are important in the market, they may not reflect the service-quality-price packages that are on offer.

During the domestic mobile roaming declaration inquiry (the inquiry), the ACCC found that:

- coverage claims made by operators do not always reflect actual experience or the quality of the coverage offered,

- while operators have made general announcements of intended investments, these announcements lack specificity or sufficient granularity to allow consumers to assess whether network changes or improvements would influence their choice of network,

- while state and federal policy departments and regulators collect a range of information from network operators to inform regulatory and policy decisions this information is often not consistent or comparable, and

- in general, there is a lack of transparency around the reporting of network coverage and future network rollout or upgrade plans.[1]

The inquiry's preliminary findings suggested that more transparency of information regarding network extensions or improvements would promote competition by enabling consumers to use the information to make more informed decisions. We also considered that more transparency around service functionality and quality would encourage efficient investment decisions as operators respond to consumer demand. This would also assist policy departments with decisions regarding subsidy programs to ensure subsidies target areas with inadequate coverage. We received a significant number of submissions on these issues.

Evidence provided by submitters supports our view that the current consumer information about mobile network coverage and quality lacks transparency.

### 2.1. Transparent and accurate coverage maps will inform consumer choice

#### 2.1.1. Network coverage and quality information is inaccurate and lacks transparency

The Australian Communications Consumer Action Network (ACCAN) submitted that there would be merit in the ACCC monitoring mobile virtual network operator (MVNO) coverage and quality of service claims relative to mobile network operators (MNO), and that a comparison tool that enabled consumers to compare MVNO and MNO coverage would enable informed consumer choices.[2] It notes that this would enable consumers to assess Boost coverage, for example, against Telstra coverage.

Quality, or depth of coverage, is also difficult to gauge from the MNOs' coverage maps. As seen in section 5 of the inquiry's final report, maps do not indicate the number of towers

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1    ACCC, Mobile roaming draft decision, pp.76-78.

2    ACCAN, Submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, p. 1.

used to provide coverage which may lead to consumers assuming that quality of coverage is identical.[3] ACCAN noted that "coverage maps published by the mobile networks can lead consumers to believing that coverage is better than actually experienced." It further notes an example of independent testing showing that coverage maps have approximately 80 per cent accuracy compared with actual experience, and submits that technology is available to improve the accuracy of coverage maps, arguing that this should be used by the MNOs.[4]

The Victorian Farmers Federation (VFF) also recommended that network quality metrics should be established independently to provide benchmark data and parameters for quality. The VFF submitted that MNOs should be transparent and accountable with respect to quality of coverage. This recognises that coverage "is one part of a two part equation, the other being quality."[5]

AgForce Queensland submitted that network quality information is very important particularly in regional areas. It recommends that "a freely available application [app] to mobile subscribers that gives a clear report on coverage and options on data and voice" should be provided to consumers.[6] Cotton Australia noted the ACCC's observation in the draft decision regarding its record-keeping powers and submitted that the ACCC should collect information on both coverage and quality to inform consumer choice.[7] The National Farmers' Federation also supported greater transparency in reporting of network coverage. It noted that "increased transparency creates accountability on MNOs in regard to coverage claims and will ultimately inform communities and policymakers about areas that have poor coverage or no coverage at all."[8]

Telstra broadly agreed that customers should have more transparent information from their MNO about the availability, functionality and quality of its mobile services. It considered that "more could be done, including to promote the provision of information by MNOs on a consistent basis" and recommended that the industry work together to maximise consistency.[9] However, Telstra notes that the "inherent characteristics of radiocommunications limit the accuracy achievable in coverage maps, and the service quality actually received by customers."[10]

Optus submitted that it supports the use of accurate and timely coverage maps, while noting that coverage maps may not always reflect actual experience due to technical limitations. Optus noted that coverage information gained via the 'My Optus' app that collect real-time data about the coverage of the network from individual subscribers can often be "more accurate and reliable than engineering estimates of coverage based on technical data." Optus said it would support further work with other MNOs to examine on an industry basis how coverage maps usefulness can be improved.[11]

Vodafone Hutchison Australia (VHA) did not submit on this issue in response to the inquiry's draft decision.

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3   ACCC, Mobile roaming final report, pp. 43–44.
4   ACCAN, Submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, pp. 1-2.
5   Victorian Farmers Federation, Domestic Mobile Roaming Declaration Inquiry: Response to draft declaration, 22 May 2017, p. 5.
6   AgForce Queensland Industrial Union of Employers (AgForce Queensland), Domestic Mobile Roaming Declaration Inquiry 2016 – Draft Decision, 15 June 2017, pp. 2-3.
7   Cotton Australia, ACCC Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p. 3.
8   National Farmers' Federation, Submission to the Australian Competition and Consumer Commission's Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p. 2.
9   Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 46.
10  Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 47.
11  Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 11.

The ACCC considers that the maps provided by MNOs and MVNOs do not facilitate a meaningful comparison of network coverage and quality. Different providers use different measures to indicate coverage. For example, Telstra coverage maps currently show coverage under the following categories:

- 4GX device only (typical download speed 2 to 75Mbps)

- 4G device only (typical download speed 2 to 50Mbps)

- 3G device only, and

- 3G external antenna.[12]

Optus' website asks that a consumer specify the device type so that the most accurate information on coverage can be provided. Coverage is then specified as being either 4G outdoor, 3G outdoor or 3G with antenna.[13] Vodafone's coverage checker requires a consumer to specify a device and then requires them to select whether they wish to check calls and texts or data coverage. Calls and texts coverage is shown as good outdoor and indoor, good outdoor and limited indoor, outdoor only. Data speed coverage is categorised by Vodafone's coverage maps as 4G, 3G+ or 3G.[14]

Using these maps and coverage checks, the ACCC considers it would be difficult to compare technology and geographic coverage between providers with any degree of accuracy. Moreover, the assumptions made by operators about the performance of their towers means it can be difficult to assess and compare what coverage or quality of service can be received in certain areas.

Adding to this complexity is the transparency of MVNO coverage maps. The design and specified features of these maps is generally similar to the underlying MNO network used to provide the service. However, actual coverage between the MVNO and the MNO providing the network may differ, that is, an MVNO may not necessarily have the same geographic or technology coverage as its network provider. As far as the ACCC can tell, MVNOs using the Optus and VHA networks have access to the entire network footprint. It is less clear whether MVNOs using either of those networks have access to the same technology footprint. Telstra does not provide access to its entire network footprint for all of its MVNOs. For example, ALDImobile, which resells on the Telstra's network, notes that it uses "part of Telstra's 4G and 3G mobile network. The mobile product of ALDImobile provides a 4G coverage footprint of 95% and a combined 4G and 3G coverage footprint of 98.8% of the Australian population covering 1.59 million square kilometres."[15] The accompanying interactive coverage map categorises coverage by:

- 4G 700 MHz device only. Typical download speed 2 – 50Mbps

- 4G 1800 MHz device only. Typical download speed 2 – 50 Mbps

- 3G device only, and

- 3G external antenna.

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[12]     Telstra, Our Coverage, www.telstra.com.au/coverage-networks/our-coverage, Accessed 1 September 2017.

[13]     Optus, Mobile network coverage, www.optus.com.au/shop/mobile/network/coverage?sid=mobilecoverage:from:mobilenetworks:fy2018. Accessed on 1 September 2017.

[14]     Vodafone, Coverage Checker, www.vodafone.com.au/network/coverage-checker. Accessed on 1 September 2017.

[15]     Aldi Mobile, Coverage Map, www.aldimobile.com.au/faq/#collapse-three, Accessed on 1 September 2017.

### 2.1.2. More transparency and improved coverage and quality information is needed

A consumer using the coverage maps provided would find it difficult to assess where the actual geographic and technology differences between, for example, Telstra and ALDImobile's coverage are located. This is particularly an issue for consumers who live or travel in regional and rural areas and need coverage over large areas.

The ACCC notes the existence of third-party apps that claim to offer 'real-life' coverage experience by crowd-sourcing coverage information through an app that runs continuously while the phone is on and relays signal strength data back to the app's operator.[16] While this may be helpful for consumers in built-up or popular geographic locations to compare or assess network quality, it may be less useful for regional mobile users. Crowd-sourcing, for example, is unlikely to identify coverage in discrete locations, such as privately-owned land. For this reason, the ACCC considers that detailed and accurate operator-provided coverage maps are necessary to provide regional users with the information necessary to choose a suitable mobile service.

Regarding Telstra and Optus' comments about the technical limitations of providing accurate coverage maps, the ACCC acknowledges that this is a difficult issue. Degradation of service can arise from different factors, such as vegetation or specific building materials and this can potentially result in variances between projected and experienced coverage for consumers. Nevertheless, inadequate or inaccurate coverage maps raise risks for MNOs and MVNOs under the Australian Consumer Law.

In a recent review of on-farm telecommunications undertaken by the University of New England, it was suggested that MNOs could agree on (MNO-agnostic) metrics around tower performance (including the number of voice/data users) and receiver characteristics (such as antennas) to provide a more consistent and transparent 'map' of network coverage and performance.[17] By making this information available publicly, it would not only assist consumers, but could also be integrated with existing datasets about topography, ground cover (for obstructing vegetation) and land use to provide a more complete picture of the capability and performance of mobile infrastructure in regional areas. This would also assist regional businesses seeking coverage and connectivity and, as discussed in 2.2 below, policy departments in targeting solutions to improve coverage and performance issues in regional Australia.

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*Issue*

*There is a lack of transparency and consistency regarding network coverage information (including technology and quality) for consumers and businesses that impacts upon their ability to choose a suitable mobile service and service provider. This is likely to disproportionately affect regional consumers and businesses.*

*Proposed action 1*

*We will approach industry directly to develop more transparent and consistent information about networks and services. In particular, we will ask industry to identify metrics that could be used to provide a more accurate assessment of mobile tower performance.*

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[16] For example, OpenSignal https://opensignal.com/.

[17] 'Accelerating precision agriculture to decision agriculture – a review of on-farm challenges and opportunities in supporting a digital agriculture future for Australia', David W. Lamb, University of New England, September, 2017.

*We note that telecommunications providers often work together to standardise technologies and processes for the delivery of services. Because of the technical metrics used in assessing network coverage and quality of services, we propose to write to Communications Alliance and the Australian Mobile Telecommunications Association and ask that they facilitate a process for MNOs and MVNOs to develop a framework for improving transparency and consistency of network quality and coverage information for consumers.*

*We will also write to MNOs to encourage them to remove terms of access that restrict MVNOs from advertising either their coverage footprint or technology. This will assist consumers to be able to determine what coverage and technologies are available in areas they live, work or travel and facilitate more informed choice.*

*The ACCC will consider whether regulatory measures are required if timely action is not taken on the above matters to improve coverage information for consumers. This would include engaging with the Department of Communications and the Arts and the Australian Communications and Media Authority on appropriate measures to address this issue.*

## 2.2. Consistent, comparable and publicly available data is important for policy and regulatory measures

### 2.2.1. Lack of network coverage data impacts regulatory and policy decision making

Submissions also provided comments on how a lack of consistency on the format in which network coverage and associated data is provided affects policy makers and regulators.

In its preliminary findings, the ACCC noted that both regulators and state and federal policy departments collect a range of information from network operators to inform regulatory and policy decisions. However, this information is often not consistent or comparable.[18]

Submissions agreed that the availability of consistent, comparable and public data is an issue. Cotton Australia noted that communities have to gather their own information regarding mobile coverage to apply for a grant under the Mobile Black Spots Program (MBSP).[19] It would like to see publicly available information to better facilitate communities being able to make bids for MBSP subsidies.[20]

The Department of Communications and the Arts supported improved transparency about mobile coverage. It submitted that this would "enable better decision making by consumers in purchasing services and assist policy-makers and regulators in performing their roles." It argued that this information needs to be standardised across providers and be available on a common mapping platform, like the National Map, for comparison purposes.[21]

The Victorian Government considered that there is a "critical need for robust, clear and precise geospatial information on the quality and coverage of mobile networks; based on an industry standard." It further considered that this will "support individuals, businesses and governments telecommunications policy, planning and infrastructure investment decisions."[22] The Victorian Government argues that this lack of data needs to be addressed as a matter of priority and considers that the lack of geospatial coverage information "creates an

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[18]   ACCC, Mobile roaming draft decision, p.77.

[19]   Department of Communications and the Arts, Mobile Black Spots Program, www.communications.gov.au/what-we-do/phone/mobile-services-and-coverage/mobile-black-spot-program.

[20]   Cotton Australia, ACCC Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p. 3.

[21]   Department of Communications and the Arts, ACCC's draft decision on domestic mobile roaming, 26 June 2017, p. 2.

[22]   Victorian Government, Submission to the Australian Competition and Consumer Commission Draft Decision Report - Domestic Mobile Roaming Declaration Inquiry, July 2017, p. 3.

environment where 'blind auctions' occur for programs like the Commonwealth Government's Mobile Blackspot Program (MBSP) and inefficient allocation of scarce government resources."[23]

### 2.2.2.  Policy departments and regulators need access to more accurate and detailed network coverage and quality information

The ACCC agrees with the observations made in submissions. The lack of available information on mobile coverage has impacted the ability of governments to target subsidy programs to meet the needs of regional areas with black spots or inadequate coverage. The MBSP, for example, has relied on identifying coverage black spots using information nominated by communities, rather than relying on operators' coverage maps. While communities need investment in networks to improve their economic and social activities, they can be hampered in seeking access to funds or co-investment opportunities by lack of information or evidence to support their applications.

As discussed in 2.1.2 above, a single database which included tower locations and agreed metrics on tower performance will assist governments to target solutions that improve coverage and performance of mobile networks in regional areas.

The ACCC also notes the recommendations of the Productivity Commission (PC) in the final report of the Telecommunications Universal Service Obligation (TUSO) Inquiry. Among other things, the PC recommended that the Australian Communications and Media Authority (ACMA) work with MNOs to identify the number and location of premises in the NBN satellite footprint without adequate mobile coverage. It recommended that the ACMA develop metrics that determine which premises have an available outdoor mobile phone service and work with MNOs to map the extent of mobile service availability that meets these metrics. The government has not yet responded to the PC's report.

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*Issue*

*There is a lack of consistent, comparable and publicly available data on mobile networks that are available for policy and regulatory purposes (including assisting governments to design and administer subsidy programs). This impacts the ability to target such programs to meet community needs.*

*Proposed action 2*

*The ACCC notes that the Government is considering its response to the TUSO Inquiry. This provides an opportunity for a coordinated approach to gathering, analysing and sharing relevant information regarding mobile networks. We propose to write to the Department of Communications and the Arts, state government departments and the ACMA inviting them to identify the information required from MNOs to improve decisions directed at improving network coverage and ways that this information can be made publicly available.*

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## 2.3.  A lack of transparency regarding network investment particularly affects regional Australians

### 2.3.1.  MNOs' forward investment announcements and plans lack transparency and accountability

Mobile network operators regularly announce network investments both in terms of the overall amount of capital expenditure and in terms of improvements that consumers can

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23    Victorian Government, Submission to the Australian Competition and Consumer Commission Draft Decision Report - Domestic Mobile Roaming Declaration Inquiry, July 2017, p. 3.

expect in quality, technology and coverage either across the network or in particular geographic areas.

Submissions to the inquiry's draft decision noted that transparency about network quality, expansion and improvements are important.

Information about planned network deployments is likely to be particularly important for regional communities. Regional businesses are more likely to make investments aimed at improving or utilising mobile broadband to improve signal strength. AgForce Queensland notes that it regularly receives information from members who appear to be covered by mobile phone coverage but who need to personally invest in additional infrastructure such as high-gain antennas to boost coverage.[24]

ACCAN submitted that the absence of detailed geographic information in MNOs' announcements about network investment due to commercial sensitivities is problematic for communities. It argues that "greater disclosure about MNO forward plans is of great value because it would allow communities to better target resources to areas where need is greatest."[25]

The Department of Communications and the Arts noted that ongoing investment in network coverage and depth of coverage is a key community concern. It submitted that it sees benefit in carriers being required to provide investment information for the purposes of monitoring implementation progress.[26]

The VFF submitted that it supports any move to increase transparency and information to rural customers. It suggests that this is important to ensure that "Telstra is serving rural Australia well."[27]

There is divergence between Telstra and Optus' views on this matter.

Telstra noted the practical difficulties in identifying the effect of particular network investment in advance. Telstra noted that building new mobile sites is "contingent on third party approvals, lease arrangements and site power agreements that can change with very little advance warning, resulting in delays or a need to reconsider investment."[28] Telstra acknowledged that advance notice of intended investment can result in consumer detriment if the coverage is not achieved. It argued that "consistency in reporting by MNOs would be best achieved through industry agreement on guidelines about the type of investment information that should be published and the lead time on publication before deployment."[29]

Telstra advised that it is taking steps to address uncertainty by enhancing "its disclosure of mobile coverage expansion and upgrade plans, initially by publishing a monthly rolling list of locations that Telstra expects will receive new coverage or technology upgrades within the next three months and ultimately to provide this future coverage information on its online coverage map."[30]

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24   AgForce Queensland, Domestic Mobile Roaming Declaration Inquiry 2016 – Draft Decision, 15 June 2017, p.1.

25   ACCAN, Submission to the ACCC's Mobile Roaming draft decision, 16 June 2017, p.2.

26   Department of Communications and the Arts, ACCC's draft decision on domestic mobile roaming, 26 June 2017, p. 3.

27   Victorian Farmers Federation, ACCC Domestic Mobile Roaming Declaration Inquiry: Response to draft declaration, 22 May 2017, p. 2.

28   Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 46.

29   Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 46.

30   Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 47.

Optus argued that it undertakes a significant level of local engagement when investing in new or upgraded sites in regional Australia, noting that over the period of March to May 2017 it had 40 pieces of regional news items about network improvements. Optus submitted that it engages extensively in regional areas to "ensure communities are aware of our investment plans and improvements in coverage. It is not clear that regulated reporting would benefit regional consumers."[31]

### 2.3.2. More accountability is required to track network investment announcements in regional Australia

The ACCC notes that this issue is particularly relevant for regional communities which are more likely to require and benefit from expansion in geographic coverage and technology upgrades. Transparency of when investment is likely to occur depends upon when announcements are made and how far out from the actual rollout activity. We consider that MNOs have commercial incentives to announce new sites and engage with communities prior to their rollout. However, from an end-user's perspective, broad announcements about proposed investments in regional Australia are of little utility unless communities know where the investment is to be made, and how that investment will improve the network or coverage within a particular area. From the MNO's perspective, that level of detail cannot often be provided at the time of such an announcement as there are a number of contingencies, outside of the MNO's control, that will impact the planning and timing of specific improvements or network extensions.

Like some submitters, the ACCC has experienced difficulty during the inquiry in obtaining information from MNOs about how announced investments will manifest in specific improvements for network coverage and quality in particular areas. Given this and the concerns of regional communities, we consider that these commercial incentives can be strengthened through better transparency and more accountability. The ACCC currently obtains information from carriers and carriage service providers about infrastructure rollouts and investment under the *Infrastructure Record keeping Rule (RKR) 2013*. The Infrastructure RKR was made in 2007 to inform the ACCC's analysis of competition in relevant telecommunications markets. It requires record keepers to report on the location of their core network and customer access network infrastructure. Mobile network operators are required to report to the ACCC under the Infrastructure RKR.

Currently the following data is received from each MNO:

- Optus: detailed mobile network information including base station location, the coverage and type of technology used (2G, 3G or 4G) and the spectrum over which services are delivered.

- VHA: information relating to the coverage of each technology, but not the location of its base stations or the spectrum used.

- Telstra: general, consolidated coverage maps of its mobile network but not the location of its base stations or a breakdown of coverage by technology or spectrum used.

Reports are provided in a format that enables the ACCC to analyse the information using spatial software that can be provided in a visual or tabular format. The time series nature of the information allows the ACCC to assess the changes to, and extent of infrastructure investment in relevant markets. However, as can be seen, there are inconsistencies between MNOs in the data provided.

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[31] Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, pp. 10-11.

*Issue*

*There is a lack of transparency around future network deployments and investment that particularly affects consumers and businesses in regional Australia. While general announcements are made about planned network upgrades or extensions, regional consumers and businesses are often unable to monitor whether and when network improvements have been made in their regional area. This can be particularly frustrating for regional businesses that need to make decisions about additional investments in equipment to connect to networks.*

*Proposed action 3*

*We consider there is scope to use the existing Infrastructure RKR to improve the accountability of MNOs with regard to network investment. That is, to improve reporting on whether MNOs have undertaken planned investment.*

*The ACCC intends to commence public consultation on amending the Infrastructure RKR in October 2017. Among other things, this will include a proposal that the Infrastructure RKR be amended to ensure consistency of data received from MNOs. In particular, this would enable the ACCC to report on changes to MNOs networks over the previous year, noting that such reporting would be general in nature, given confidentiality requirements in respect of data collected under RKRs.*

*However, and importantly, the ACCC will compare this information to announcements made by MNOs on an annual basis and seek further information where there are discrepancies between MNOs' public investment announcements and network improvements or expansions. We will then give further consideration to the form in which this information could be disclosed following consultation on proposed changes to the Infrastructure RKR.*

# 3. Measures to reduce the costs of deploying and upgrading mobile networks can be improved

In its preliminary views on the inquiry, the ACCC recognised that no single existing government initiative or regulatory mechanism can reduce the costs of deploying mobile networks in certain areas of Australia.[32]

The ACCC expressed the view that opportunities exist to potentially make improvements in MNOs' ability to expand their coverage and consequently improve services available to regional Australians. In particular, we:

- considered that government funded programs, like the MBSP, have the potential to promote investment in areas where there is no mobile coverage and where commercial incentives to invest are low. However, we considered that open access requirements for such programs will deliver more benefits to regional consumers seeking improved coverage, and a better return for public money spent,

- considered that it is timely to review parts of the facilities access regime in the *Telecommunications Act 1997* including whether non-carrier facilities owners should be incorporated into the scheme, and

- noted there may be scope for the MNOs to leverage the NBN fixed wireless infrastructure to expand or improve mobile networks at a reduced cost.[33]

## 3.1. There is general support for the Mobile Black Spots Program (MBSP) and other government funded programs, with some submissions advocating for open access and further improvements

As outlined in the draft decision, the Australian Government commenced its MBSP in 2014 and has so far allocated $160 million in funds under two rounds of the program. It has also announced it will conduct a third round and allocate a further $60 million of funds, identifying 125 priority areas for coverage.[34] It is not clear how these sites were prioritised. The results of the program thus far are:

- Round 1 – Telstra: 429 base stations, VHA: 70 base stations

- Round 2 – Telstra: 148 base stations, Optus: 114 base stations, VHA: 4 base stations.

Similar outcomes have occurred in state-based funding programs to improve coverage.

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[32]  ACCC, Mobile roaming draft decision, p.78.

[33]  ACCC, Mobile roaming draft decision, pp. 79-81.

[34]  Department and Communications and the Arts, Mobile Black Spot Program – Government Priority Locations www.communications.gov.au/documents/mobile-black-spot-program-government-priority-locations, accessed on 19 September 2017

### 3.1.1. Government funded programs, such as the Mobile Black Spots Program, are important to improve coverage in areas where investment incentives are low, but must consider competition outcomes

Most submitters expressed broad support for government funded programs, like the MBSP, with many noting that there would be little to no investment in certain areas without government funding.[35]

Many submitters provided suggestions on how such programs could be enhanced. Cotton Australia argued that government funded programs could be improved by encouraging greater co-location and AgForce Queensland suggested that "infrastructure sharing and co-investment be made a stronger element of any program funding guideline".[36]

AgForce Queensland and NSW Farmers considered there should be a greater emphasis on community engagement and pre-investment discussions between MNOs.[37] AgForce Queensland also noted that publicly funded programs would benefit from a requirement to build infrastructure to certain standards, to make co-location easier.[38]

Telstra broadly outlined the need to promote more creative investment approaches, noting that "in determining the appropriate regulatory and policy settings for the mobile industry, it is important to recognise the effective and creative role of co-investment in dealing with the coverage challenges and to ensure MNOs have continued incentives to co-invest."[39] Telstra also noted that it is working to support continued investment in rural and regional areas by implementing more streamlined governance processes to enhance engagement and expedite approval outcomes.[40]

The Department of Communications and the Arts explained the need to "carefully balance coverage outcomes against possible longer term competition benefits", and highlighted the existing open access provisions and guidelines relating to the current MBSP.[41] ACCAN considered that there is a strong argument for regulatory oversight of access to towers for government-funded sites and it considered that the ACCC should have a role in approving guidelines for future government investment programs in mobile coverage, including ongoing monitoring of MBSP tower-to-exchange fibre pricing.[42] Cotton Australia and WA Farmers broadly supported the idea of open access requirements for such programs and Optus,

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[35]   ACCAN, Submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, p. 5; Broadband for the Bush Alliance, Response to ACCC Mobile Roaming Declaration Inquiry Draft decision, 15 June 2017, p.2; The Committee for Gippsland Inc., Response to the Draft Decision of Domestic Mobile Roaming Service Declaration Inquiry, 25 May 2017, p.2; Murrumbidgee Council, Response to the Draft Decision by the ACCC, 23 May 2017, p.1; National Farmers Federation, Australian Competition and Consumer Commission's (ACCC) Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p.2; NSW Farmers, draft decision to not declare a domestic mobile roaming service, 16 June 2017, p.2; Northern Territory Government, Response by the Northern Territory Government to the ACCC Draft Decision, May 2017, p.2; Regional Development Australia Central West, Submission to the ACCC draft decision for the domestic mobile roaming declaration inquiry, 5 June 2017, p.1; Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 48; Victorian Government, Submission to the Australian Competition and Consumer Commission Draft Decision Report - Domestic Mobile Roaming Declaration Inquiry, July 2017, p. 4.

[36]   Cotton Australia, ACCC Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p. 3; AgForce Queensland, Domestic Mobile Roaming Declaration Inquiry 2016 – Draft Decision, 15 June 2017, p.3.

[37]   AgForce Queensland, Domestic Mobile Roaming Declaration Inquiry 2016 – Draft Decision, 15 June 2017, p.3; NSW Farmers, draft decision to not declare a domestic mobile roaming service, 16 June 2017, p.2.

[38]   AgForce Queensland, Domestic Mobile Roaming Declaration Inquiry 2016 – Draft Decision, 15 June 2017, p.3.

[39]   Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 44.

[40]   Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 45.

[41]   The Department of Communications and the Arts, ACCC's draft decision on mobile roaming, p.3.

[42]   ACCAN, Submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, pp.5-6.

Telstra and the Victorian Government supported giving weight to competition considerations.[43]

The Victorian Government considered that infrastructure-sharing arrangements in non-commercially viable areas would ensure the most efficient and effective use of spectrum and infrastructure. Further, the Victorian Government considered it "important that public subsidies capture long term strategic public benefits rather than just providing narrow commercial benefits." Recognising the significant public goods delivered by mobile coverage, the Victorian Government also argued that improved mobile coverage in regional locations could improve public safety and reduce community vulnerability in natural disasters. It further asserted that national telecommunications policies (such as the Universal Service Obligation, Emergency Alert, the NBN and the MBSP) should be better coordinated to improve outcomes.[44]

Optus and Telstra disagreed with the ACCC's preliminary view that mandatory roaming should be a consideration for the MBSP. They submitted that if roaming should not be declared generally, then it was not an appropriate measure for the MBSP.[45] The ACCC disagrees with this view and considers it to be an unsophisticated assessment of its concerns.

Concerns have also been raised about the terms and conditions relating to backhaul access and pricing under the MBSP.[46] Transmission is an essential input for mobile services provided from funded mobile towers in 'black spot' regions. However, although mobile black spots are generally in regional or remote areas where the declared transmission service, the Domestic Transmission Capacity Service, is regulated, the MBSP guidelines only require that the regulated DTCS prices apply from the funded mobile tower to the nearest exchange (generally Telstra's exchange). Access seekers would need to acquire a second backhaul component from the Telstra exchange to their nearest point of presence (POP). This effectively requires an access seeker to purchase two backhaul links, rather than a point-to-point backhaul link, which it can acquire when seeking the regulated DTCS service. ACCAN notes that Telstra has developed a specific mobile black spot transmission product to offer access seekers who co-locate on funded towers to cover the second link to their POP.

### 3.1.2. Government-funded programs, such as the MBSP, should be regularly reviewed and improved

In the draft decision, the ACCC recognised the tension between promoting competition, which may take time to deliver benefits to consumers, and programs that may provide immediate benefits to consumers in the form of coverage and network quality but which may in fact hinder the development of competition.

We note that the co-subsidy nature of the MBSP (and similar state government-funded programs) result in sites that are of marginal commercial value becoming commercially viable once capital costs have been subsidised by government funding. This means that governments are subsidising individual commercial concerns, and may be limiting the

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[43] Cotton Australia, ACCC Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p. 3; Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 14; Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 48; Victorian Government, Submission to the draft decision, p.5; WA Farmers, Submission to the draft decision, p.2.

[44] Victorian Government, Submission to the Australian Competition and Consumer Commission Draft Decision Report - Domestic Mobile Roaming Declaration Inquiry, July 2017, pp.4-5.

[45] Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 14; Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 48.

[46] ACCAN submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, p.4

potential for these programs to promote competition for mobile services by instead providing a MNO with a competitive advantage in competing for customers in certain areas. Therefore, we consider that open access requirements will deliver more benefits to those regional consumers who are seeking improved coverage and a better return for the public money spent. However, we recognise that for these arrangements to work most effectively, the program must have clearly prioritised objectives.[47] As an example, we note that in the Victorian Government's $18 million Regional Rail Connectivity Project all three MNOs are working together to improve coverage along some of Victoria's busiest regional lines.[48] The Victorian Government considered that "having three mobile carriers work together on this project is a major win for commuters – this means that customers on all three networks will see improved mobile coverage rather than just one carrier's customer base."[49]

Optus outlined its involvement in the Victorian Regional Rail Connectivity Project, noting that the MNOs would co-build infrastructure for the project which includes "headframe sharing across MNOs, sub-leasing of towers, full sharing of designs, consideration of fibre builds at the same time and aligning rigging crews." Optus submitted that there are elements of these co-build arrangements which could be extended more widely, including: sharing design requirements upfront; inclusion in all parts of the lead carrier's site acquisition works (e.g. community consultation, development approvals, etc.); the lead carrier undertaking subleases for co-locating parties; power runs shared equally between co-locating parties; and co-locating parties contributing to incremental capital costs of a tower to support individual MNO requirements.[50]

While the ACCC supports the strengthening of the co-location arrangements in the MBSP, we consider that, overall, the program would benefit from clearer prioritisation of its objectives, evidence-based selection of sites and inclusion of open-access requirements. We note that the development of consistent and publicly-available data on mobile networks, as recommended in *Proposed Action 1* above, will assist governments when designing and administering programs such as the MBSP.

The ACCC recognises that backhaul is an essential input to, and a significant cost of providing services from mobile base station towers, including towers funded under government programs. The current terms and conditions relating to backhaul prices under the MBSP are inconsistent with the operation and objective of the regulated DTCS. Under the DTCS, the service that would be declared would be the link between the mobile tower and the nearest point of interconnect on the access seeker's network where mobile traffic could be handed over to the access seeker.

The DTCS is a point-to-point service which facilitates competition by allowing access to the transmission provider's network (usually Telstra) at regulated prices such that access seekers can provide competitive services. It also provides incentives to the access seeker to extend their existing network in areas where there is little or no competition in order to minimise the backhaul costs. Because distance is a key determinant of the cost of a transmission service, access seekers can reduce their costs by extending their network and by reducing the number of services acquired from transmission providers.

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47  We note that the Productivity Commission, in its Telecommunications Universal Service Obligation Inquiry report (No. 83, 28 April 2017), recommended that the Mobile Black Spot Program should be independently evaluated with measures to improve the program's operation including a clearer prioritisation of the program's objectives being considered. See, www.pc.gov.au/inquiries/completed/telecommunications/report/telecommunications.pdf

48  Victorian Government, Media Release Regional Rail Connectivity Project, 19 April 2017 www.vic.gov.au/news/regional-rail-connectivity-project.html , accessed on 5 September 2017.

49  Victorian Government, Media Release Regional Rail Connectivity Project, 19 April 2017 www.vic.gov.au/news/regional-rail-connectivity-project.html, accessed on 5 September 2017.

50  Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, pp. 13-14.

Backhaul access and pricing under government programs would better promote competition if they reflected the regulated service model. For instance, terms of access could be included which required that backhaul be provided at regulated prices from funded sites to the nearest point of aggregation on the access seeker's network.

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*Issue*

*Government subsidies, like the MBSP, can be important programs to promote investment in areas where there is either inadequate or no mobile coverage. However, the ACCC is concerned that the design of such programs, including the MBSP, means that governments are subsidising individual commercial entities without requiring broader benefits to be shared by consumers.*

*Consequently, the ACCC considers that implementing open access requirements for such programs will deliver more benefits for consumers and communities.*

*Backhaul services necessary for the delivery of mobile services from funded sites should be consistent with the regulated DTCS service so that an access seeker is able to obtain backhaul from the funded tower to the nearest point of aggregation on their network.*

*Proposed action 4*

*We will write to federal and state governments asking that competition considerations be adequately dealt with when designing subsidy programs to expand coverage of, or improve telecommunications networks.*

*We note that the third round of the MBSP is proceeding and we will write to the Department of Communications and the Arts advocating for clear prioritisation of objectives to be set for the program, evidence-based selection of sites and, importantly, that open-access requirements to be put in place. We will also seek changes to the terms and conditions for backhaul access and pricing under the program to be aligned to the declared DTCS.*

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## 3.2. A review of the Facilities Access Code is required

The facilities access regime (the regime), contained in the *Telecommunications Act 1997* (the Act), aims to encourage access to facilities and co-location of infrastructure. This includes any part of the infrastructure of a telecommunications network, including equipment, towers, masts, antennas and other structures that form part of a network. Relevantly, it also includes land, buildings and structures in which facilities are located.

The regime is set out in Parts 3 and 5 to Schedule 1 of the Act. It imposes obligations on owners and operators of telecommunications facilities to provide other carriers with access to those facilities. It also gives carriers certain powers and immunities regarding the installation and maintenance of certain telecommunications facilities. This is intended to ensure that owners of network infrastructure can access equipment or facilities when necessary.

Access to carrier-owned mobile towers and associated facilities is covered by the regime. Under the regime, an MNO can request access to another MNO's facilities, including a mobile tower, the site on which the tower is located and associated facilities. The MNO may then install its own equipment on the tower (often called passive network sharing).

Tower sharing, under the regime or otherwise, has the potential to allow an MNO to extend their mobile network at a lower cost than would be incurred if they were to acquire sites and build their own towers. We note that MNOs can share other aspects of their mobile network, for example, spectrum, backhaul and the radio access network, (active network sharing) but these are not covered by the current regulatory regime. In some regional areas, active

network sharing may further reduce the costs of rolling out a network and provide more choice for consumers in those regions.

Compliance with the regime is a carrier licence condition and may be enforced by the ACCC.[51] The ACCC may also arbitrate disputes over access to facilities where the parties fail to agree on the terms of access.[52]

The ACCC also has the power to make a code about non-price terms and conditions of access to telecommunications transmission towers, sites of towers and underground facilities designed to hold communication lines.[53] In 1999, the ACCC made a Code for Access to Telecommunications Transmission Towers, Sites of Towers and Underground Facilities (the Code).[54]

The Code only applies to specific facilities, including mobile towers. The Code is intended to encourage co-location on eligible facilities. Compliance with the Code is a carrier licence condition and carriers must comply with mandatory conditions of access set out in the Code.

The ACCC varied the Code in 2013 to, among other things, make timeframes for accessing facilities a mandatory provision of the Code. The Code has not been reviewed or amended since 2013.

### 3.2.1.    There is scope to improve the facilities access regime

In response to the discussion paper and the draft decision, MNOs submitted that the regime could be improved. Optus argued for greater upfront collaboration between MNOs before sites are constructed.[55] Optus also argued there is no need to change the co-location rules under the regime. However, it submitted that there is an opportunity to "enhance the procedures prior to building new greenfield sites."[56] Optus argues that there may be benefits from greater use of co-building for regional greenfield sites. It submitted that the co-build process may halve or reduce costs to one third. However, for this to work, Optus argues that there needs to be "…a robust process in place, one which currently doesn't exist."[57]

While Telstra considered that the regime is working effectively, it considered there is room for improvement. Telstra agreed that it is timely to review the regime and consider that this should be done through a collaborative industry process.[58] It suggested that MNOs be required to conduct pre-build discussions, particularly in areas where there is limited infrastructure based competition.[59] Telstra also outlined the general need to improve engagement with rural and regional stakeholders "to ensure that investment, and technology and business-model innovations, are informed by the needs of these stakeholders." To assist, in December 2016 Telstra established a Rural Affairs Directorate to oversee all engagement with regional and rural stakeholders.[60]

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[51]  Sections 61 and 69AA of the *Telecommunications Act 1997* (Cth).

[52]  Subclauses 18(1), 27(1), and 36(1) of Schedule 1 to the *Telecommunications Act 1997* (Cth)

[53]  Clause 37 of Schedule 1 to the *Telecommunications Act 1997* (Cth)

[54]  A copy of the Code is available on the [ACCC website](#).

[55]  ACCC, Mobile roaming draft decision, p.80.

[56]  Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 13.

[57]  Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 13.

[58]  Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version,16 June 2017, p. 49.

[59]  ACCC, Draft Decision, pp.80 and Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 49.

[60]  Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version,16 June 2017, p. 45.

Telstra also suggested that any review of the facilities access arrangements explore whether non-carrier infrastructure providers be subject to the regime but did not provide any evidence of specific problems with non-carrier infrastructure providers.[61]

Axicom responded to the ACCC's suggestion that non-carriers could be included in the regime, noting that "as an independent wireless infrastructure supplier with no operating network presence, [it] facilitates the maximum use of towers on a competitively neutral basis."[62] It notes that its incentives mean that it is effectively self-regulated to facilitate sharing and argues that this section of the market works efficiently without the need for regulation.[63] Broadcast Australia argues firstly, that "there is no market failure which would need to be addressed through increased regulation" and secondly, that "the inclusion of non-telco parties in the Facilities Access Code would lead to sub-optimal market outcomes."[64] It notes it is in its interests to maximise the number of customers utilising its sites. Furthermore, given Broadcast Australia serves a number of different sectors, it is impractical and may have significant unintended consequences if it is required to comply with the Code.[65]

VHA did not provide a submission on these issues as part of its response to the draft decision. However, in response to the discussion paper, VHA submitted that the regime is not as effective in enabling co-location in regional areas as it is in metropolitan areas.[66] VHA stated that Telstra has engaged in gaming in order to delay and frustrate sharing of its regional mobile towers. For the reasons outlined in the draft decision, the ACCC was not persuaded by VHA's assertions that the regime is not effective in allowing co-location at Telstra base stations. However, as outlined below, the ACCC considers that there is scope to review some aspects of the regime.[67]

Other submitters broadly supported the need to mandate pre-build discussions, and/or improve infrastructure sharing.[68] The Broadband for the Bush Alliance went one step further, suggesting a bespoke Remote Telecommunications Strategy is needed to address the needs of rural and remote Australia.[69]

ACCAN suggested that there is "scope to adjust existing regulatory settings around co-location, facilities access and transmission services to improve the likelihood of competition in mobile networks in non-metro areas." It considered there is a need for greater transparency and oversight of the current extent of co-location of mobiles infrastructure and the effectiveness of the Code in regional areas. ACCAN also expressed the view that many of the issues around co-location could be avoided if MNOs agreed to co-build sites.[70]

[61] Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 49.

[62] Axicom, Submission to the Domestic Mobile Roaming Inquiry, 16 June 2017, p. 1.

[63] Axicom, Submission to the Domestic Mobile Roaming Inquiry, 16 June 2017, p. 2.

[64] Broadcast Australia, Submission to the ACCC for the Domestic Mobile Roaming Declaration Inquiry, 16 June 2017, p. 1.

[65] Broadcast Australia, Submission to the ACCC for the Domestic Mobile Roaming Declaration Inquiry, 16 June 2017, pp. 2-4.

[66] In this context, co-location broadly refers mobile operators sharing the same facilities (such as passive infrastructure like mobile phone tower) to install their own network equipment such as antennas.

[67] ACCC, Mobile roaming draft decision, pp.80-81.

[68] ACCAN, Submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, p.3; Regional Development Australia Central West, Submission to the ACCC draft decision for the domestic mobile roaming declaration inquiry, 5 June 2017, p.1; National Farmers Federation, Australian Competition and Consumer Commission's (ACCC) Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p.2; Tasmanian Farmers and Graziers Association, domestic mobile roaming declaration inquiry – draft decision, 2 June 2017, p.2.

[69] Broadband for the Bush Alliance, Response to ACCC Mobile Roaming Declaration Inquiry Draft decision, 15 June 2017, p.2.

[70] ACCAN, Submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, pp.2,3&5

AgForce Queensland considered that pre-build discussions could improve competition and increase coverage in regional areas. In particular, AgForce Queensland submitted that "there needs to be more emphasis on community engagement as these discussions can lead to better on-ground solutions to network expansion."[71] Telstra and NSW Farmers supported the ACCC's suggestion of considering a 'use it or lose it' obligation on MNOs when nominating a position on a mobile base station.[72] This may encourage more effective infrastructure sharing and overcome the potential for one MNO to prevent others from being able to access a preferred position on the base station.

### 3.2.2. A review of the Facilities Access Code is required to ensure infrastructure sharing is facilitated and is benefiting communities

The ACCC considers there is sufficient evidence to suggest that a review of aspects of the Code is necessary. The Code was last reviewed in 2013. A review would examine whether the regime can be improved or changed to address emerging facilities access issues and to enhance existing provisions to ensure access to facilities is not a barrier to competition.[73] This could also examine whether changes are required to facilitate the rollout of 5G technologies. We propose to take account of submissions received in the mobile roaming inquiry to inform that review.

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*Issue*

*While the Facilities Access Code appears to be generally working well, a review is required to ensure that any barriers to timely deployment of infrastructure are removed. This includes exploring whether 'use or lose it' provisions should be introduced, a mandatory requirement for MNOs to conduct pre-build discussions and other changes are required to promote co-location or infrastructure sharing.*

*Proposed action 5*

*The ACCC will shortly commence a public review into the Code. Details of the review will be published on the [ACCC website]. As part of the review, the ACCC will invite submissions from interested parties, including government, industry and community groups.*

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## 3.3. Use of NBN infrastructure has limited potential in extending existing MNO networks

In its draft decision, the ACCC considered there may be scope for MNOs to leverage NBN fixed wireless infrastructure to expand or improve their mobile networks at a reduced cost. However, the ACCC acknowledged that NBN facilities are unlikely to assist existing MNOs to extend their networks into areas that are not currently served by any MNO.[74]

Optus submitted that industry is making extensive use of NBN wireless infrastructure and stated that there is no evidence of impediments to co-location on NBN infrastructure.[75]

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[71] AgForce Queensland, Domestic Mobile Roaming Declaration Inquiry 2016 – Draft Decision, 15 June 2017, p.3.

[72] NSW Farmers, draft decision to not declare a domestic mobile roaming service, 16 June 2017, p.2; Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 49.

[73] 'Accelerating precision agriculture to decision agriculture' David W. Lamb, University of New England at p.65.

[74] ACCC, Mobile roaming draft decision, p.79.

[75] Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 14.

Telstra considered it is possible that NBN infrastructure may enhance coverage or competition in areas within its footprint where it is "commercially preferable to MNOs making alternative investments, such as new or upgraded sites." However, Telstra agreed with the ACCC that use of NBN infrastructure is unlikely to address coverage and competition concerns in rural and regional Australia.[76]

Given this, we consider that NBN infrastructure is being used by MNOs to extend networks where possible. Further TPG should be able to use NBN infrastructure where required, to complement its own tower deployment.

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*Issue*

*MNOs are generally using NBN infrastructure to extend their networks where possible. However, the ACCC considers that there may be scope for MNOs to extend their network if there is NBN fixed wireless infrastructure outside their existing footprint. Further, the ACCC considers that NBN infrastructure may assist TPG in building out its mobile network as a new MNO entrant.*

*Proposed action 6*

*The ACCC will write to NBN Co and MNOs to encourage more active discussions about opportunities to use NBN Co's fixed wireless network and other infrastructure to complement existing, or assist mobile network rollouts. The ACCC will monitor the outcomes from such discussions.*

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[76]   Telstra, Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 49.

# 4. Ensuring competition issues are taken into account in the radiocommunications regulatory framework is essential

As discussed in the inquiry's final report, the retail mobile services market is a national market. While consumers have limited choice of providers in some regional areas, they still benefit from competition in the wider national market due to uniform national pricing. This means that the entry of a new MNO, even as a largely metropolitan network operator, benefits all consumers, including those in regional areas, as it will promote competition in the national mobile services market and put downward pressure on prices for mobile services.

Australia has a mature mobiles market with three operators who have all been in the market for more than twenty years. TPG's announcement that it will enter the mobile network operator market is reflective of significant shifts in the structure and content of communications markets'.[77] However, new entrants need access to radiofrequency spectrum, an essential input for wireless services, and must compete against incumbents.

### 4.1.1.  Complex issues are emerging in spectrum markets that have the potential to impact competition in retail mobile services markets

Spectrum is a very important asset for the community, particularly for the delivery of mobile services across Australia. The ACCC is starting to see complex issues arising in spectrum markets that have implications for efficiency and competition in downstream or retail communications markets.

Spectrum is increasingly representing a barrier to entry with the explosion in demand for data-intensive wireless communications likely to lead to spectrum allocations becoming more contested. Demand for spectrum suitable for high-value communications services is increasing to a point where supply constraints are being felt, particularly for new entrants. This is demonstrated by the prices paid in the 700 megahertz (MHz) spectrum auction in April 2017 where the new entrant TPG, paid $2.75 per MHz per head of population (MHz/pop) compared with Telstra paying half of that in the original digital dividend auction in 2013. The forthcoming 3.6 gigahertz (GHz) allocation is likely to be highly contested, as MNOs, including new entrants, second tier providers and wireless broadband operators compete for highly desirable spectrum suitable for 5G.

The value of spectrum lies in the economic and social benefits it supports, rather than in any revenue return to the Budget. The ACCC considers that the promotion of competition must be taken into account when allocating spectrum.

### 4.1.2.  An opportunity exists to promote good consumer outcomes under the new radiocommunications regime

The Australian Communications and Media Authority (ACMA) is Australia's spectrum regulator. However, the ACMA has no mandate with regard to promoting competition or preventing anti-competitive conduct. Under the current regime, the Minister can impose competition limits (generally understood to be imposed in order to prevent monopolisation of the spectrum resource) and may seek advice from the ACCC before doing so.[78]

As noted in the inquiry's draft decision, Australia's radiocommunications regulatory regime is currently under review. Following the 2015 Spectrum Review, the Department of Communications and the Arts released a Legislative Proposals Consultation Paper in 2016,

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[77]  These market developments are analysed in the ACCC's forthcoming Communications Market Study.

[78]  Section 60 of the *Radiocommunications Act 1992*.

outlining the approach to key provisions to be included in the new *Radiocommunications Bill 2017* (the Bill). The stated aim of the reforms is to "make Australia's spectrum framework simpler, more efficient and flexible to use and better support innovative communication technologies and services."[79] Under the new regime, the ACMA will be responsible for imposing competition limits and may seek advice from the ACCC in doing so. Further, where competition limits are imposed in an allocation, section 50 of the *Competition and Consumer Act 2010* is proposed to not apply.

While the ACCC strongly supports the intent of the regime to simplify licensing and allocation processes, establish a more flexible and efficient regime and to create the conditions to promote secondary trading, we consider more can be done to competition in relevant markets in the new regime.

The ACCC considers that the new radiocommunications regulatory framework needs to recognise the impact of spectrum allocation and assignment on competition and efficiency in retail mobile services markets to ensure good outcomes for end-users of mobile and wireless services. To that end, the ACCC recently recommended that section 50 of the *Competition and Consumer Act 2010* apply even when competition limits have been applied and that consultation with the ACCC on competition issues be made mandatory. The ACCC noted that a specific objective in the Bill promoting competition would also be desirable.[80]

In the inquiry's draft decision, we noted our concern over our limited ability to ensure that competition and efficiency in retail mobile markets is promoted by the proposed spectrum regulatory regime.

Optus submitted that it continues to be a strong supporter of the ACCC having a more formal role in advising the ACMA and Minister on spectrum-related competition issues.[81] In particular, Optus:

- strongly recommends that the new Bill contain an obligation for the ACMA to seek the advice of the ACCC when determining competition limits,

- notes that the ACMA has no role or responsibility with regard to competition issues in the telecommunications sector,

- recommends that the new Bill mandate that "the ACCC adopt a public inquiry process similar to that under Part XIC of the [Competition and Consumer Act 2010]. The ACCC should be required to consult on proposed competition limits; and to publish its recommendations", and

- submits that the new Bill should require the ACMA to adopt the recommendation of the ACCC.[82]

Other submitters provided in-principle support for ACCC oversight of spectrum to provide improved outcomes for end-users.[83] Telstra supported the need for the ACCC to be involved

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[79]   Department of Communications and the Arts, Spectrum reform legislative proposals consultation, www.communications.gov.au/have-your-say/spectrum-reform-legislative-proposals-consultation.

[80]   ACCC submission to the Department of Communications and the Arts on the 'Exposure draft – Radiocommunications Bill 2017', 31 July 2017. www.communications.gov.au/sites/g/files/net301/f/submissions/2017-07-31-staun-brendan-accc-submission-to-radiocommunications-bill-2017-chairman-to-dr-heather-smith-psm.pdf

[81]   Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 15.

[82]   Optus, Submission in response to ACCC Draft Decision: Domestic Mobile Roaming Declaration Inquiry, Public Version, June 2017, p. 15.

[83]   Cotton Australia, ACCC Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p. 3; National Farmers Federation, Australian Competition and Consumer Commission's (ACCC) Inquiry into a Domestic Mobile Roaming Declaration – Draft Decision, 16 June 2017, p.3;  NSW Farmers, draft decision to not declare a domestic mobile roaming service, 16 June 2017, p.2.

in spectrum allocation while noting that its view is that the ACCC's role is best considered as part of the current Spectrum Review process.[84]

ACCAN suggested that the ACCC should have a greater role in ensuring competition and efficiency in the spectrum regime and ensuring that the interests of end-users are considered. ACCAN noted that this is consistent with the recommendations of the Australian Government review of the ACMA, "of greater cooperation between the ACMA and ACCC and that a principle is included in the ACMA Act to ensure ACMA decisions take account of competition, innovation and efficient investment."[85] Some submitters suggested that proactive measures could be taken by regulators to promote competition in regional areas. AgForce Queensland proposed, among other things:

- setting aside spectrum in regional and remote areas at reduced or no cost, and

- having spectrum licence fees dependent upon the location of towers, with fees becoming less expensive the further the towers are from metropolitan areas.[86]

The ACCC considers that this submission illustrates that more clarity may be required in specifying what objective the ACCC is to achieve in providing advice to the ACMA. The ACCC has tools to promote competition (before or *ex ante* regulation) and to prevent anti-competitive conduct (after or *ex post* regulation). For example, the ACCC considers that the long-term interests of end-users test mandated in Part XIC of the *Competition and Consumer Act 2010* is difficult to apply to spectrum allocations. A test similar to the substantial lessening of competition test may be more suitable.

We note that regulatory tools such as spectrum set-asides and reduced fees are used by regulators internationally to promote competition in relevant wireless and mobiles markets by assisting new entrants and smaller incumbents. It is not clear that, if a need arose, they would be able to be used in Australia under the proposed regime.

The ACCC supports the proposed regime's focus on spectrum sharing and secondary trading, noting that it has the potential to improve efficiency. For example, secondary trading or spectrum sharing arrangements could enable smaller wireless and second tier operators to gain access to the spectrum they need on the secondary market rather than compete with larger players for more resources in spectrum allocations for large geographic licences. Secondary trading may be assisted by licences issued for fixed terms or with clear renewal terms, although we recommend that the ACMA consult with us if such measures were going to be put in place.

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*Issue*

*Spectrum allocation and management that promotes competition is essential for communications markets. The ACCC considers that potential exists for the new radiocommunications regime to promote competition in downstream markets for the benefit of the community and to ensure that the economic and social benefits from spectrum allocation can be delivered to consumers.*

*Proposed action 7*

*The ACCC strongly recommends that the radiocommunications regime explicitly recognise, and do more to promote, competition in relevant markets.*

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[84] Telstra Response to the ACCC's Draft Decision in the domestic mobile roaming declaration inquiry, Public Version, 16 June 2017, p. 50.

[85] ACCAN, Submission to the ACCC Mobile Roaming Inquiry, 16 June 2017, p.6

[86] AgForce Queensland, Domestic Mobile Roaming Declaration Inquiry 2016 – Draft Decision, 15 June 2017, p. 4.

# 5.    Conclusion and proposed actions

The ACCC considers that there are a number of policy and regulatory measures which may improve mobile service outcomes for regional Australians.

|  | **Proposed action** |
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| **1** | We will approach industry directly to develop more transparent and consistent information about networks and services. In particular, we will ask industry to identify metrics that could be used to provide a more accurate assessment of mobile tower performance. |
|  | We note that telecommunications providers often work together to standardise technologies and processes for the delivery of services. Because of the technical metrics used in assessing network coverage and quality of services, we propose to write to Communications Alliance and the Australian Mobile Telecommunications Association and ask that they facilitate a process for MNOs and MVNOs to develop a framework for improving transparency and consistency of network quality and coverage information for consumers. |
|  | We will also write to MNOs to encourage them to remove terms of access that restrict MVNOs from advertising either their coverage footprint or technology. This will assist consumers to be able to determine what coverage and technologies are available in areas they live, work or travel and facilitate more informed choice. |
|  | The ACCC will consider whether regulatory measures are required if timely action is not taken on the above matters to improve coverage information for consumers. This would include engaging with the Department of Communication and the Arts and the Australian Communications and Media Authority on appropriate measures to address this issue. |
| **2** | The ACCC notes that the Government is considering its response to the TUSO Inquiry. This provides an opportunity for a coordinated approach to gathering, analysing and sharing relevant information regarding mobile networks. We propose to write to the Department of Communications and the Arts, state government departments and the ACMA inviting them to identify the information required from MNOs to improve decisions directed at improving network coverage and ways that this information can be made publicly available. |
| **3** | We consider there is scope to use the existing Infrastructure RKR to improve the accountability of MNOs with regard to network investment. That is, to improve reporting on whether MNOs have undertaken planned investment. |
|  | The ACCC intends to commence public consultation on amending the Infrastructure RKR in October 2017. Among other things, this will include a proposal that the Infrastructure RKR be amended to ensure consistency of data received from MNOs. In particular, this would enable the ACCC to report on changes to MNOs networks over the previous year, noting that such reporting would be general in nature, given confidentiality requirements in respect of data collected under RKRs. |
|  | However, and importantly, the ACCC will compare this information to announcements made by MNOs on an annual basis and seek further information where there are discrepancies between MNOs' public investment announcements and network improvements or expansions. We will then give further consideration to the form in which this information could be disclosed following consultation on proposed changes to the Infrastructure RKR. |
| **4** | We will write to federal and state governments asking that competition considerations be adequately dealt with when designing subsidy programs to expand coverage of, or improve telecommunications networks. |
|  | We note that the third round of the MBSP is proceeding and we will write to the Department of Communications and the Arts advocating for clear prioritisation of objectives to be set for |

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| | the program, evidence-based selection of sites and, importantly, that open-access requirements to be put in place. We will also seek changes to the terms and conditions for backhaul access and pricing under the program to be aligned to the declared DTCS. |
| 5 | The ACCC will shortly commence a public review into the Code. Details of the review will be published on the ACCC website. As part of the review, the ACCC will invite submissions from interested parties, including government, industry and community groups. |
| 6 | The ACCC will write to NBN Co and MNOs to encourage more active discussions about opportunities to use NBN Co's fixed wireless network and other infrastructure to complement existing, or assist mobile network rollouts. The ACCC will monitor the outcomes from such discussions. |
| 7 | The ACCC strongly recommends that the radiocommunications regime explicitly recognise, and do more to promote, competition in relevant markets. |