

25<sup>th</sup> November 2016

[mobileroaminginquiry@accc.gov.au](mailto:mobileroaminginquiry@accc.gov.au)

Dear Sir/Madam

## **Introduction**

Pivotel Group Pty Limited (**Pivotel**) welcomes the opportunity to provide comments on the ACCC's discussion paper *Domestic mobile roaming declaration inquiry* of October, 2016.

## **Background**

Pivotel is a licenced telecommunications carrier and mobile network operator (**MNO**) that since January 2003 has been providing both terrestrial and satellite mobile network services in the Australian market.

Pivotel as a MNO has direct experience with domestic mobile roaming in the Australian market as both an access seeker and an access provider.

Since 2003, Pivotel as a MNO access provider has provided domestic mobile roaming services to Vodafone Hutchison Australia Ltd (**VHA**) (and its predecessors) on its mobile satellite networks, including the Globalstar network that Pivotel acquired from VHA in January 2003.

In 2005, Pivotel was the second MNO after Hutchison to launch domestic roaming services as a MNO access seeker on Telstra's CDMA network, and acquired domestic mobile roaming services from Telstra on its CDMA network until its subsequent closure.

Over the years, Pivotel has invested heavily in its mobile network infrastructure including establishing direct interconnect with all the major telecommunications carriers in Australia, acquiring digital mobile numbers and a carrier access code, and having these numbers and number ranges conditioned on all Australian carrier networks, fully supporting mobile number portability (**MNP**) as required by the MNP Code, and implementing all of the other infrastructure and to support network access for our wholesale and retail customers, and regulatory compliance.

## **Current situation**

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c-in-c, Pivotel has started building its own 4G LTE infrastructure in regional markets targeting specific industrial Internet of Things (IoT) use cases but also addressing remote worker safety and remote worker comfort by providing public mobile telecommunications network capabilities on sites where the three mass market MNOs currently do not provide coverage.

Pivotel's first 4G LTE network deployment is with a major international mining company with operations based in south west Western Australia. Pivotel is deploying an initial 6 radio base stations at this locality, with the expectation that more will follow. Over the next 5 years, Pivotel has plans to build thousands of terrestrial radio base station sites to address IoT and remote communications requirements in the agriculture, mining, resources and the remote tourism sectors.

Pivotel's ability to compete effectively in regional markets, and to some extent in very narrowly focussed national markets (for example national IoT mobile network services) hinges on the ACCC's decision to declare domestic mobile roaming.

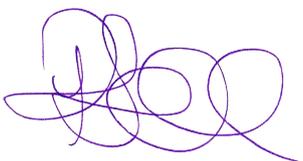
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Telstra has made it abundantly clear to Pivotel as a MNO that absent a declaration of mobile roaming services by the ACCC, it has no intention of providing roaming services to Pivotel or to any other MNO for that matter. Consequently, Pivotel cannot provide contiguous mobile coverage around its targeted mobile network deployments thus limiting its ability to compete for this business.

Attached at Appendix A are Pivotel's responses to the specific questions raised by the ACCC in its discussion paper. Should you have any further questions please feel free to contact me on email [robert.sakker@pivotel.com.au](mailto:robert.sakker@pivotel.com.au) or mobile 0414 207 050.

Yours sincerely

**Pivotel Group Pty Limited ABN 82 102 274 322**



**Robert Sakker**  
Executive Director

## Appendix A – Consolidated list of questions & responses

### 1. How relevant have government funding programs been in assisting the MNOs in establishing their competitive positions in the mobile services market in regional areas? Please provide reasons for your view.

Pivotel strongly believes that government funding programmes (at all levels of government) have further entrenched Telstra's monopoly mobile network coverage in regional and rural areas. Government funding has generally been used as an incentive to provide increased coverage, and in many cases Telstra is the only MNO that can effectively compete for such government funding due to the extent of its existing coverage, and its ability as a vertically integrated carrier to provide cost effective backhaul.

It is our view that these government funding programmes have reinforced a lessening of infrastructure competition in regional and rural areas, as Optus and VHA have not only had to compete with Telstra's dominance, but also compete against government funding. This has created a significant disincentive for the Optus and VHA (or any other MNO market entrant) to invest in regional and rural infrastructure.

It is even more apparent how competition in the regional and rural mobile market has been stifled when no government funding programme has required Telstra to wholesale the network access it has built with tax payers' money. Even MVNOs using parts of Telstra's network are prevented from providing service on this government funded infrastructure. This leaves Telstra Retail as the only carriage service provider able to supply service in these areas.

We note that the most recent blackspots funding programme was still dominated by Telstra, despite Vodafone winning a smaller percentage of that funding to fill blackspots in its outer-metro and regional network.

### 2. What is the extent of mobile network co-location of infrastructure (or infrastructure sharing) in:

#### a. regional Australia?

#### b. metropolitan Australia?

Pivotel has started to deploy 4G LTE network coverage in mainly regional Australia.  
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**3. How effective is the facilities access regime in promoting access to mobile network infrastructure, in both regional and metropolitan areas? Are there any limitations of the facilities access regime in facilitating the expansion of mobile networks in regional Australia?**

We understand that the facilities access regime only promotes sharing of towers, and that it does not promote sharing radio base station or backhaul transmission infrastructure, nor does it promote domestic roaming.

In our view the current facilities access regime has only a very minor role in promoting access to mobile network infrastructure, and this is evidenced by Telstra's coverage dominance in regional Australia.

**4. Would more extensive co-location requirements be an effective substitute for mobile roaming services?**

It is our very strong view that co-location requirements (more extensive or not) will never be an effective substitute for mobile roaming services. There is no evidence that Telstra's geographic dominance in regional Australia has reduced in any material way due to collocation. There are many other factors beyond simple collocation (well canvassed in the ACCC discussion paper) that make investment in infrastructure in regional areas uneconomic and inefficient.

Pivotel strongly believes that Telstra's network in these regional areas displays natural monopoly characteristics that are impossible to resolve commercially through collocation, whether more extensive or not.

**5. To what extent does regulation of the DTCS, including through regulated pricing, assist MNOs in extending their mobile networks in regional Australia? Please explain your views.**

Pivotel has not acquired any regulated transmission (DTCS) from Telstra or any other carrier, and therefore is not in a position to comment on its effectiveness, other than to point out the obvious geographic difference between Telstra's coverage footprint, and its nearest competitor.

This would seem to suggest that whilst regulated transmission pricing is helpful, it has not made a material difference in assisting the other two MNOs to close the coverage gap with Telstra.

**6. Are international arrangements for the regulation of mobile roaming relevant to the Australian market? Please provide reasons for your view.**

Pivotel does not have the resources to investigate and comment on the various international markets where domestic roaming has been regulated. That said, it seems self evident that in a market like Australia, where population densities are low, and the geographic size of the country is large, regulated domestic roaming is a sensible regulatory response when commercial roaming cannot be negotiated.

Telstra has refused GSM/3G domestic roaming access to Pivotel, despite Pivotel having negotiated and implemented a domestic CDMA mobile roaming agreement with Telstra in 2004. Since Telstra's CDMA network closed, Pivotel has been unable to acquire domestic mobile roaming services from Telstra.

Given Telstra's network clearly displays natural monopoly characteristics, and Telstra has steadfastly refused to commercially agree to provide domestic roaming services, regulated domestic roaming is a necessary requirement consistent with international practice.

**7. Where have international regulators made decisions not to regulate domestic mobile roaming services? Are such decisions relevant to the regulation of mobile roaming in Australia? Please provide reasons for your views.**

No comment.

**8. What has been the impact of regulation of mobile roaming on competition and investment internationally? If possible, please outline whether it has impacted investment in regional and metropolitan areas to different extents.**

No comment.

**9. What are the relevant markets for the declaration inquiry?**

It is Pivotel's view that a relevant market is the wholesale mobile service market, with respect to the wholesale services MNOs provide to each other. Pivotel believes the wholesale market with respect to the services MNOs provide to MVNOs is a downstream market. If domestic roaming services are regulated, it is Pivotel's view that there will be no incentive for Telstra to continue to prevent its own MVNOs accessing the coverage footprint to which it has an obligation to provide access to other MNOs.

Retail mobile service markets are also downstream markets for a domestic roaming service. The ACCC discussion paper identifies two different mobile services categorising them as 'mobile handset services', and 'non-handset mobile broadband services'. Whilst Pivotel does not disagree with these two services, we have a strong view that the market for Internet of Things (IoT) mobile services has been entirely overlooked in the discussion paper.

The 4G LTE networks Pivotel is deploying will primarily be for IoT services rather than consumer mobile handset services or non-handset mobile broadband services. IoT services can be used in an industrial use case (asset tracking, fleet management, sensor monitoring etc.), a government use case (smart cities, smart utilities, traffic management etc.), or in a consumer use case (connected car, connected home, etc.).

Retail competition in the Australian market for mobile IoT services is severely disrupted if there is a perceived need for coverage outside of the metro markets. In the case of industrial fleet management, Pivotel has direct experience in addressing the transport industry where the Telstra Retail mobile service is vastly preferred for vehicle fleets that may travel outside of the ubiquitous coverage of the metro centres. Coverage trumps functionality, content, services, support and pricing for these customers even if coverage is only required for a small percentage of the fleet.

Equally, when connected cars start to become more widely available in the Australian market from 2018 onwards, without domestic roaming there will be a strong incentive for the car manufacturers to take a solution from Telstra Retail for all of their connected cars, just so that coverage is maximised for their connected car customers, regardless of whether a car ultimately ever leaves a metro centre.

Pivotel's view is that IoT and mobility are already a very significant part of the retail mobile services market, and that connectivity for mobile things, or other things best connected with a wireless access medium such as 4G and eventually 5G mobile services, will only become more significant with time. Consumer choice, and access to different services, functions, applications and pricing models will be essential to underpin innovation and growth in this market.

Telstra's natural monopoly due to the geographic extent of its coverage, should not be allowed to distort the retail markets located within this coverage footprint, or the retail markets who rely to some extent on this coverage footprint (occasional travel to or through these locations).

**10. Is the relevant retail market a national market or are there separate regional markets for mobile services? If there are separate regional markets for mobile services, how would the boundaries of these markets be determined?**

In Pivotel's view there is a national market for mobile services, and a separate regional market for mobile services in locations only served by Telstra coverage. The boundary of the regional market for mobile services can be determined by identifying all of the geographic locations where only Telstra offers coverage.

**11. Please describe any mobile roaming arrangements currently in place and whether such arrangements have changed since the previous inquiry? Are current arrangements or agreements limited in terms of geographic scope or technology, and if so how?**

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**12. Are there any current negotiations for new roaming agreements? Has there been any request for mobile roaming service which has been refused in the past three years? If so, what were the reasons for any such refusal?**

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**13. Are roaming agreements for areas where there is limited infrastructure based competition likely to be reached in the future? Please provide reasons for your views.**

No. When Telstra won't even provide access to these areas to its own MVNOs, there is no prospect whatsoever that in the absence of a regulated domestic roaming service that Telstra will commercially agree to allow roaming.

Telstra is on the record vigorously defending its decision not to allow any others to access its infrastructure in areas where it has established a monopoly position with geographic coverage.

**14. Is competition effective in the mobile services market and how does it differ in metropolitan and regional areas of Australia? Please provide evidence and reasons for your views.**

Competition is generally effective in metropolitan markets. The IoT mobile services market is being distorted in metropolitan markets where end users perceive a need to occasionally travel to or through areas served solely by Telstra Retail coverage.

There is no competition whatsoever in the mobile service market in regional areas of Australia that are served only by Telstra Retail coverage, not even competition by Telstra's own MVNOs with Telstra Retail services.

**15. How does Telstra's coverage advantage in areas where it is the only MNO affect its ability to compete for customers in the national retail mobile services market? How does this compare to its ability to compete for consumers in regional areas? Please provide evidence and reasons for your views.**

Telstra Retail's coverage advantage in regional areas enables it to compete in the national mobile market for IoT mobile services where there is an end user perception that there may be a need to travel to or through areas served on by Telstra Retail. This means many end users who would otherwise choose another provider for functionality, services, support or pricing reasons will select Telstra Retail for coverage.

Telstra Retail is uncontested in regional areas where it has a coverage advantage, and even in areas where one or more MNOs may have coverage in town, its more extensive coverage and contiguous network means that many regional end users will always select Telstra Retail due to its coverage advantage.

**16. What are the key drivers of competition for mobile services in metropolitan and regional areas of Australia?**

Pivotel believes the key drivers of competition in metropolitan areas are data allowances, and price. The key driver in regional areas is coverage cementing Telstra Retail's grip on regional markets.

**17. Is there any regional variation (e.g. price, inclusions, terms and conditions) in retail mobile services offered in Australia? If yes, please provide evidence to support your views.**

Pivotel is unaware of any specific regional variation in pricing, however Telstra Retail is able to charge a premium and still attract customers, particularly in regional areas, due to its extensive coverage. In that respect, regional end users pay proportionally more for their services than metropolitan users who can acquire services from multiple MNOs and their competitive MVNOs.

**18. How does the price and range of Telstra’s retail offers compare to those of other mobile service providers? Do you consider that the higher prices charged by Telstra in comparison to other mobile services on the market constitute a premium? What factors do you think contribute to Telstra’s ability to charge a higher price? Please provide information about the level of any premium and evidence to support your views.**

Pivotel’s view is that Telstra Retail does charge higher prices and that those higher prices constitute a premium. As stated above its monopoly provider position in many parts of regional Australia means it is not subject to competition for services.

**19. Is the extent of competition for mobile services in regional areas likely to change in the future in the absence of declaration? Please provide reasons for your views.**

There is no evidence that competition for mobile services will change and become more competitive in the absence of declaration given Telstra does not allow its own MVNOs to provide services in regional areas, and Telstra has refused to commercially agree to provide domestic roaming services to other MNOs including Pivotel. There are no other factors that could materially change the current market position in regional Australia absent a declaration of domestic roaming services.

**20. How would declaration affect competition in markets for wholesale mobile services?**

Pivotel maintains that depending on the scope of the declaration there will be significant position effects for competition from the declaration of domestic roaming in the wholesale mobile services market.

Firstly, other MNOs like Pivotel will for the first time be able to compete without the distortion of Telstra’s natural monopoly over regional coverage. In Pivotel’s case specifically, that will lead to Pivotel being better able to service the national and regional IoT mobile services markets.

Pivotel will be able to compete for IoT services in regional areas that are adjacent to Telstra coverage, and where a mobility element to or through Telstra’s coverage is perceived as being required by the end user.

The agricultural and mining and resources industries are likely to be the major beneficiaries of Pivotel being able to rollout 4G LTE networks in targeted locations, with the ability for Pivotel end users to access the Telstra network using domestic roaming.

Secondly, when domestic roaming is declared, there will be no incentive for Telstra to continue to prevent its own MVNOs accessing the expanded mobile coverage. This will lead to greater competition between the MNOs and MVNOs generally whether on price, inclusions, content or services.

The MNOs and MVNOs would be able to compete for business nationally, rather than for distinct metropolitan and regional markets as is the case today.

**21. How would declaration affect competition for retail mobile services in regional areas and nationally? Please provide reasons and any available evidence for your views.**

We strongly believe that competition will thrive both in regional and national markets after declaration as the number of retail offerings available regionally will increase substantially, and nationally the distortionary effect from Telstra's significant geographic coverage gap will be reduced considerably.

Regional consumers for the first time, will have a choice of retail service provider enabling them to access the functionality, content, services, support and pricing options suitable to their needs.

For national consumers with a need to travel to or through areas served only by Telstra coverage, they will also be able to select their choice of retail service provider without the distortion of having to select Telstra Retail for geographic coverage reasons.

**22. To what extent do consumers in regional Australia see Telstra as the most viable choice of service provider? If so, please provide an estimate of the proportion of such consumers and evidence to support your views.**

By definition, Telstra is a clear market leader in regional markets where it alone can provide geographic coverage.

In adjacent regional areas, Telstra is the preferred choice of service provider as whilst there may be limited coverage from another MNO in a town, that town is isolated from contiguous geographic coverage for consumers who live and work in those areas.

It is Pivotel's expectation that others will be able to quantify the extent to which Telstra is the chosen service provider in regional markets.

**23. To what extent do consumers in regional areas benefit from competition in the national retail mobile services market? Please explain your response.**

Our understanding is that Telstra offers its mobile plans on a national basis, and hence notwithstanding there is no consumer choice in areas served only by Telstra coverage, the need for Telstra Retail to be competitive nationally (albeit with a significant price premium) would benefit consumers in regional markets.

**24. What are the key factors that influence consumer choice of service provider in:**

- a. metropolitan areas?**
- b. regional areas?**

In metropolitan areas consumers are influenced by factors such as functionality, content, services, support, inclusions and pricing.

In regional areas consumers are influenced by geographic coverage.

**25. How important is geographic coverage, as distinct from population coverage, to consumers living in metropolitan areas?**

Population coverage is generally irrelevant as a factor for consumers living in metropolitan areas, however geographic coverage can be important to these consumers if they have a need to travel to or through regional areas.

Pivotel strongly believes the IoT mobile services market will drive a significant focus on geographic coverage for metropolitan consumers when new developments such as the connected car starts to become a reality in the Australian market from a 2018 timeframe.

**26. How important is geographic coverage to a mobile service provider's ability to compete in the national market for mobile services?**

Pivotel has direct experience as a mobile service provider competing in the national market for mobile services. It has been Pivotel's experience that functionality, content, services, support, inclusions and pricing are the factors that influence sales in metropolitan areas. However, in regional markets, even with coverage provided by more than one MNO, geographic coverage is a dominant factor.

Pivotel operates a MVNO under the brand Think Mobile. Think Mobile has the ability to resell VHA mobile services and Telstra Wholesale mobile services in a limited coverage footprint that does not cover the same geographic areas as Telstra Retail.

Think Mobile has been generally successful targeting metropolitan users with mobile service packages that focus on competitive pricing and inclusions, supported by a high quality Australian based call centre. These mobile service packages are bundles using wholesale services acquired from VHA.

In contrast, Think Mobile has used its Telstra Wholesale resell packages to attempt to secure customers in regional areas with limited success. The limited success in regional areas has been due to our inability to compete with Telstra Retail's vastly superior geographic coverage.

In IoT mobile service use cases, Pivotel has for example struggled to compete in asset tracking and fleet management markets as geographic coverage for these use cases is significantly preferred over other factors such as support, functionality, inclusions and price.

**27. Does the level of geographic coverage on a network impact a provider's ability to compete for business customers to a greater extent than other customers? Please provide reasons for your views.**

Pivotel's experience particularly in the IoT mobile services market is that business customers generally have a much higher regard for geographic coverage than consumer customers. Business customers rely on connectivity to their devices and are willing to sacrifice support, functionality, inclusions and price in order to maximize the connectivity to their devices achieved by the widest geographic coverage.

**28. How is declaration of a mobile roaming service likely to benefit consumers in regional areas and more generally? Is it likely to disadvantage consumers or any groups of consumers in any way?**

Pivotel cannot see any possible outcomes from a declaration of mobile roaming services that could disadvantage consumers or any groups of consumers.

Pivotel is completely unconvinced by Telstra's statements that ongoing investment in regional infrastructure will suffer if roaming is declared. In fact, Pivotel itself intends to make significant investments in regional infrastructure to support IoT use cases, and expect that with domestic roaming more of these IoT use cases will become commercially viable.

Competition will increase in regional areas, and we expect that investment in infrastructure will follow that increased competition. Increased consumer choice in regional areas is likely to lead to increased demand for mobile services in these areas.

**29. Is there potential for a new MNO to enter the mobile market in Australia? If so, to what extent would declaration facilitate their ability to enter and compete in the mobile market?**

Despite the fact that Pivotel as a MNO offered CDMA services through a roaming agreement with Telstra in 2004 until the CDMA network closure, and has been and is Australia's leading mobile satellite service provider, Pivotel is a new entrant into building terrestrial mobile networks. Pivotel has started to construct 4G LTE networks in regional Australia for targeted use cases such as IoT mobile services in mining and agriculture.

Declaring domestic roaming would have a materially positive impact on the services Pivotel can provide in regional Australia, as access to Telstra's regional coverage would enable Pivotel to offer contiguous services between its 'island' network infrastructure deployments.

For end users benefitting from the coverage and solutions provided by Pivotel's terrestrial network, the addition of a regional roaming solution would be a substantial and material benefit enabling mobility beyond Pivotel's network infrastructure deployments.

Declaration would help Pivotel compete strongly in the regional IoT mobile market, particularly in agricultural and mining and resources use cases.

Pivotel could also offer some very targeted national mobile services, again more likely in the IoT mobile service space, where its ability to offer flexible and customized mobility solutions would be very attractive to end users, notwithstanding that it was delivered through a domestic roaming model.

In respect to consumer mobile services, Pivotel already has a leading position in mobile satellite services, and the ability to provide a nationwide terrestrial mobile solution through roaming would greatly enhance Pivotel's mobile everywhere® philosophy of ubiquitous coverage. This is the model Pivotel proved to be extremely successful through the mid 2000's when Pivotel was able to combine a CDMA terrestrial roaming solution, with a Globalstar mobile satellite solution in a single subscription dual-mode product.

**30. How may the scope of the declared service (such as geographic scope and technologies to be included) affect the extent to which declaration of a mobile roaming service may promote competition in the relevant markets?**

It is Pivotel's view that either the declared roaming service should be applied nationally, or alternatively only in areas where there are any two or less MNOs providing geographic coverage.

With this scope it should be possible to achieve a strong competitive outcome with all MNOs able to offer a similar coverage footprint. It would not make sense to limit the declaration to area served by only one MNO, as that could force all other MNOs to inefficiently have to build infrastructure to match geographic coverage with each other in order to achieve the same coverage footprint without gaps.

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In terms of technology, Pivotel strongly believes that the declaration scope should be technology neutral in respect of the access services including voice, SMS and data. Any reduction in the scope of these services would seriously cripple the ability of an MNO using domestic roaming services to compete. The technology used to provide those access services should also be technology neutral so that 3G, 4G and eventually 5G services would be captured in the service definition.

**31. To what extent would declaration of a mobile roaming service promote the achievement of any-to-any connectivity in relation to carriage services that involve communications between end-users?**

We believe that a significant improvement in any-to-any connectivity will be achieved through domestic roaming, as customers of MNOs (and their MVNOs) who visit a geographic location where the MNO does not have coverage currently cannot connect to other end users.

With domestic roaming, the geographic area in Australia under which all end users should be able to communicate with all other end users will be doubled. This is likely to have a material positive impact on any-to-any connectivity.

**32. Do mobile networks in regional Australia exhibit natural monopoly characteristics? Please provide reasons to support your view. If so, what are the implications of this for the assessment of the effect of declaration on the efficient use of, and investment in, infrastructure?**

Absolutely. Telstra as a vertically integrated telecommunications carrier with extensive coverage has achieved a geographic coverage gap that can never be closed by terrestrial mobile services.

There is no chance that any existing or new MNO could possibly bridge the coverage gap in Australia given the high costs involved in rolling out a terrestrial mobile network in areas where population density is low.

The implications are that infrastructure competition in regional areas is demonstrably unviable and inefficient, and that a single network should be used to serve this geographic area. Telstra's ongoing success in securing government funding to extend coverage demonstrates that even for Telstra the business case for extending its network may be marginal at best and more likely unviable without government assistance.

This demonstrates clearly that there is no argument that declaration would remove any remaining commercial incentives to expand the geographic coverage of the network. The network is likely to only be extended where government or other subsidies are provided.

**33. Are there barriers and challenges to extending a mobile network in metropolitan and regional areas of Australia and how significant are they?**

No comment.

**34. What is the extent of the first mover advantage when extending into regional Australia? Has Telstra's position as the incumbent provider (for both fixed and mobile services) provided it with advantages in building a mobile network in regional areas? Please provide reasons and evidence to support your views.**

Telstra has a huge first mover advantages in regional network extension as evidenced by its success in winning the vast majority of government funding for network extension, which by definition has only further entrenched its incumbent provider advantage.

**35. What are the incentives to build or extend a mobile network in areas of regional Australia where population density is low?**

Government is providing the only incentives to build new infrastructure in these areas through funding programmes, as commercially there is no incentive extend mobile networks in these areas.

Pivotel intends to build new infrastructure in regional areas, but this is where there is a clear industrial use case for IoT services. For example in agriculture and mining, Pivotel believes the are commercially viable reasons to deploy 'islands' of coverage to support localized requirements.

It is completely unviable to build new infrastructure simply in an attempt to provide contiguous geographic coverage between these 'islands' of coverage. Domestic roaming is clearly the most efficient and effective way to achieve connectivity between isolated network deployments.

**36. To what extent would declaration of a mobile roaming service promote the efficient use of the infrastructure used to provide mobile services?**

Pivotel intends to build new 4G LTE infrastructure in regional areas, but this is where there is a clear industrial use case for IoT services. For example, in agriculture and mining activity, Pivotel believes there are commercially viable reasons to deploy 'islands' of coverage to support localized requirements.

It is completely unviable and inefficient to build new infrastructure simply in an attempt to provide contiguous geographic coverage between these 'islands' of localized coverage. Domestic roaming is clearly the most efficient and effective way to achieve connectivity between these isolated network deployments.

**37. How may the geographic scope of the service description affect the extent to which declaration could promote the efficient use of such infrastructure?**

It is Pivotel's view either the declaration should be national, or that the geographic scope of the service description must cover areas where two or less MNOs provide coverage.

If it were only to cover areas where one MNO provides coverage, it could lead to inefficient investment by the second and third MNOs trying to match coverage between themselves so that no unregulated gaps in coverage appear in areas where one of them did not provide their own network coverage, but the other did.

**38. How would declaration affect the incentives of an access provider to make investments in mobile infrastructure? Please provide evidence to support your views.**

Pivotel's view is that there are no commercial incentives for Telstra to grow its network beyond its current geographic reach.

If roaming is declared, the access seeking MNOs may increase their geographic coverage once they have secured sufficient customer demand to make network extension viable and efficient, thus converting roaming traffic to traffic on its own network.

The access providing network will continue to have an incentive to expand the capacity and functionality of its network, and in fact is likely to have a greater incentive to do so on the back of roaming revenues supporting network investment.

**39. What factors should we consider when examining the economic efficiency of extending mobile networks into areas without network coverage? Is it likely to be efficient for Telstra to extend the reach of its mobile network beyond the current geographic coverage? Please provide reasons for your views.**

Without further government subsidies, we do not see any commercial incentives for Telstra to expand its existing geographic coverage.

**40. To what extent is the declaration of a mobile roaming service likely to impact efficient investments by access providers in extending their network coverage and in upgrading their existing networks?**

In terms of coverage extension, if mobile roaming is declared it will enable MNOs to acquire customers in areas where it previously could not provide services. When a sufficient number of customers have been acquired in an area where a MNO relies on domestic roaming, it may then be an efficient investment for that MNO to extend its network to offer home network services rather than roaming network services.

In the absence of declared mobile roaming, there are no incentives to extend a MNO's network without a customer base to use it.

Similarly, where an access provider is reaching capacity at a location when considering both its home network traffic and inbound roaming network traffic, it would promote efficient investment in capacity upgrades to support the higher traffic levels. In regional areas where population density is low, capacity upgrades to an existing site are likely to be a far more efficient investment than building new network extension sites.

Finally, there seems no rational reason why a MNO as an access provider would not upgrade technologies (for example from 3G to 4G) simply because it is subject to declared roaming at that locality. If the MNO has sufficient incentive to upgrade technology at a site to support its home customers, it would seem illogical not to do so simply because it would have to offer that same technology to an access seeking MNO.

**41. How would declaration affect the incentives of an access seeker to make investments in mobile infrastructure in order to:**

- a. extend their network coverage?
- b. upgrade their existing network ?

**Please provide evidence to support your views.**

An access seeking MNO is likely to have a strong incentive to extend its network coverage when it has been able to acquire sufficient customers at a locality to make an efficient investment in new infrastructure to support those customers with home network services rather than roaming services.

Without domestic roaming, it is hard to see how MNOs can efficiently extend their networks without targeted government funding (such as the Federal Government's blackspot programme).

It is Pivotel's view that domestic roaming if declared, would not by itself have any influence whatsoever on an access seeking MNO's decision to invest in an upgrade technology (for example from 3G to 4G).

**42. What factors should we consider when examining the economic efficiency of an access seeker to extending its network into areas where there is an existing mobile network? Would it be efficient for either Optus or VHA to extend their mobile networks into areas where only Telstra has mobile coverage? Please provide reasons for your views.**

Pivotel's view is that Optus and VHA would have an incentive to extend their networks into targeted locations where they have been able to attract a sufficient number of customers to justify an efficient investment in infrastructure to provide home network services rather than roaming network services.

**43. Would restricting the scope of any declared roaming service to services on 3G networks address any dampening effect of the declaration may have on the incentives of MNOs to make efficient investments in mobile infrastructure?**

Pivotel has a very strong view that limiting domestic roaming to a technology type such as 3G, when 4G services are being made generally available nationally, would have a material dampening effect on the competitive outcomes sought by declaring mobile roaming

Basic access services across all available technologies should be competitively neutral in areas where it is inefficient to duplicate networks.

MNOs should be enabled to compete on inclusions, pricing, services, support, and content – any of these factors which could be seriously affected by limiting declared roaming services to a specified technology type.

**44. If the ACCC were to declare a mobile roaming service:**

- a. How should the service be described?**
- b. What would the appropriate geographic scope for the service be?**
- c. Should the service description be technology neutral or limited to certain technologies (e.g. 3G networks)? Please provide reasons for your views.**

Pivotel believes that the service should be described in technology neutral terms that ensures all access services (such as voice, SMS and data) are included in the service description and that all technologies available to provide the service (e.g. 3G, 4G and eventually 5G) are included within the service description.

Pivotel's view is that the geographic scope of the declaration should be national, but if this is not agreed then at a minimum it should expressly cover areas where less than three MNOs provide services (in line with the practice already established for DTCS).

The service description must be technology neutral, and not limit the scope to a certain technology like 3G. To be competitive, consumers roaming in a locality should and will expect access to the same access technology as home subscribers.

To establish a fundamental technology difference between home and roaming technologies, would entrench the same anti-competitive issues that already exist with the current geographic coverage gap between Telstra and the other MNOs to the detriment of the long term interests of end users.

**45. Should a declared mobile roaming service include mobile voice, SMS and data services?**

Pivotel is strongly of the view that all mobile access services including voice, SMS and data must be included in a declared mobile service. Any attempt to limit by service or technology the extent of services available to end users simply neuters any positive effect declaration may have on driving positive competitive outcomes regionally and nationally.

The declaration should be technology neutral and cover all access services available on the mobile network subject to the declaration.

**46. Are there services that should be included or explicitly excluded? Please provide reasons to support your view.**

All access services, including voice, SMS and data should be explicitly included in the service description.

**47. Are there other matters which should be explicitly set out in the service description?**

No comment.

**48. How is the setting of a regulated price for a declared mobile roaming service likely to impact competition in the mobile services market? Would the costs of accessing a declared roaming service likely to be passed onto consumers by access seekers and if so, in what form (eg. higher retail prices)? Please provide reasons to support your view.**

There is no prospect of Telstra commercially agreeing to domestic roaming, and hence declaration and the setting of a regulated price for roaming will be the only way in which competition in regional markets can be opened up, and competition in national markets strengthened.

Evidence seems to suggest that under previous and existing commercial arrangements for domestic roaming, higher roaming charges have not been passed on to consumers and have been absorbed in the overall cost base for mobile services by the MNOs and their MVNOs. Pivotel's MVNO Think Mobile enjoys the benefit of VHA's domestic roaming agreement with Optus, and there is no pricing distinction at a either wholesale or retail level for use of roaming services.

It is Pivotel's view is that in general, provided pricing is set appropriately by the ACCC, the benefit of providing flat pricing nationally across call types for a MNO or MVNO will outweigh any cost premium incurred. The enhanced ability to compete nationally for services should also improve the competitiveness of MNOs and MVNOs currently unable to compete effectively against Telstra Retail's huge geographic coverage advantage, and that increased competitiveness would also act to offset any increase in costs when roaming.