



Regional Connectivity Program

Discussion paper

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Response by Pivotel

Department of Communications and the Arts

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Canberra ACT 2601

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1. Background

- 1.1 Pivotel is pleased to provide a response to The Department of Communications and the Arts (the Department) discussion paper on the Regional connectivity Program (RCP) designed to improve digital connectivity in regional Australia.
- 1.2 Pivotel is well placed to deliver on the 'place based' approach of the RCP which focusses on the priorities of a particular location with tailored solutions through its experience and focus on connecting regional, rural and remote communities in Australia through its strategic Satellite holdings and LTE (4G) / NB-IOT Mobile Network.
- 1.3 Pivotel operates a mobile and satellite telecommunications network pursuant to a carrier licence issued by the Australian Communications and Media Authority in accordance with the Telecommunications Act 1997 (Cth) (Telco Act). It has points of interconnect in the Australian major capital cities and points of interconnect internationally in Auckland, Los Angeles, New York and Amsterdam.
- 1.4 Pivotel maintains a mobile carrier license and operates ground infrastructure in Australia, making it the fourth public mobile carrier in the country. It is the only Australian carrier with direct connection to all four major mobile satellite networks: Iridium, Inmarsat, Thuraya and Globalstar.
- 1.5 The company's suite of satellite and mobile technologies enable remote connectivity via satellite phones, satellite data modems, personnel and asset trackers, docking kits, machine to machine data terminals and specialist maritime communication.
- 1.6 Pivotel's 4G mobile network, EcoSphere®, extends its carrier network to deliver complementary terrestrial wireless services to rural and remote Australians. EcoSphere® is an innovative low-cost purpose-built cellular network to bring the digital economy and IoT to the bush. Using innovative small cell technology and a unique network architecture EcoSphere® can cost effectively delivery wide area cellular and IoT coverage to remote communities, mining, agriculture and pastoral properties using satellite or terrestrial backhaul. complemented by satellite point to point IOT and high-speed data services.
- 1.7 Pivotel is uniquely positioned to comment on the stated outcomes of the RCP, namely to:
 - 1.7.1 Provide place-based solutions to regional digital connectivity issues through a range of mobile and/or broadband services.
 - 1.7.2 Complement the National Broadband Network, the Mobile Black Spot Program and the telecommunications industry's commercial investment plans.

2. Pivotel's General Comments

- 2.1 Pivotel welcomes the Departments RCP program designed to improve economic opportunities and enabling full participation in the digital economy for those parts of Australia that are not adequately serviced by existing mobile networks or NBN fibre or Fixed Wireless technologies.
- 2.2 Pivotel's focus is on providing communications for regional and remote Australia using satellite services and 4G / LTE networks. Pivotel is unique in its ability to integrate these bearer services to create a unified environment where the most appropriate communications technology is used to service the end user need. This product capability is termed Pivotel ecoSphere®.
- 2.3 ecoSphere® forms the basis of Pivotel's 'defined area' coverage solutions. It is a custom designed, fully managed, 4G / LTE-M and satellite connectivity solution specifically tailored for areas outside of the cellular network footprint. The focus on LTE is driven by the technology's ability to support both low and high bandwidth use cases; in agricultural enterprises we are finding that there is widespread demand for video monitoring and the need to use tablets on and around the farm. This is in addition to the requirement to support multiple IoT devices gathering management information.
- 2.4 One key advantage of 4G / LTE solutions is that they operate in licensed spectrum bands where the operator has control over interference sources and can therefore predict performance with confidence and with an expectation that it will be maintained over time. In order to facilitate LTE deployments in areas where spectrum is not available under an apparatus licence, Pivotel has entered into a 10-year spectrum sharing agreement with Vodafone. This provides Pivotel with the ability to operate over wider geographic areas and utilise a greater number of spectrum band options.
- 2.5 The use of 4G LTE and the flexibility with regard to spectrum availability means that Pivotel has the ability to provide both a regional network build capability as well as single site solutions.
- 2.6 Currently Pivotel has 28 LTE base stations in operation or due to be in operation by the end of 2019. It is anticipated that a further 50 base stations will have been added to the networks by end 2020.
- 2.7 To date deployments have been mainly in Western Australia with a small network in NSW and Pivotel is currently in discussions regarding new networks in NSW, QLD, WA and NT. The WA network deployments include a major mining corporation and two agricultural networks co-funded by the WA Department of Primary Industry and Regional Development (DPIRD). The DPIRD networks are in build (one network in test phase) and are planned to be commercially operational in Q4 2019.

3. Questions from RCP – discussion paper

Question 1

Are there additional key elements that should be incorporated into the design of the Regional Connectivity Program?

Pivotal agrees with the stated 5 design principles of the RCP:

1. Funding applicants to include licensed telecommunications carriers
2. Funding applications to include evidence that the project is a priority for the local area
3. Financial co-contributions will be required
4. Funding applicants must demonstrate that the Proposed Solutions are not currently or foreseeably being provided in the area
5. Retail Services will need to be provided for a minimum of 10 years after Asset Completion

Pivotal recommends the following additions:

1. The solution to be provided as an “open access” network whereby all potential users have access to the given technology. i.e. in the case of a 4G / LTE mobile network build, all mobile users, regardless of which network operator they are a retail customer of, would have the ability to access the additional coverage provided as part of the solution. This would require further development of an industry wide standard via some form of national roaming agreement or MOCN technology. The “open access” network provider must be prepared to enter into some form of commercial arrangements on reasonable commercial terms with potential access seekers. The terms of access to be included in the funding application.

Question 2

Should other parties, for example local government authorities, business organisations or industry groups, be allowed to lead a bid for Regional Connectivity Program funding?

The objective of the competitive grants program as part of the Regional Connectivity Program is the delivery of services, not to build infrastructure. Pivotal’s view is the entity that is accountable for the delivery of the services should have the capability to construct and maintain the infrastructure and deliver the services and that same entity should be the entity that lead’s the bid. There is no doubt the bid lead will be working in close collaboration with local authorities, industry groups and business organisations in applying for and building the relevant solution. This is consistent with the objective that “direct contractual arrangement should be in place with the providers of the services, rather than through a third party such as a local government authority or state government.”

It would also be good to understand what is meant by a “broad range of projects should be eligible for funding through the program”? It would be beneficial to provide some guidance as to what projects would qualify and what programs would not e.g. A commercial mining venture may not qualify for funding, whereas a large independent rural property may qualify under the relevant criteria.

In any case some criteria would need to be established to determine what types of programs would qualify under the scheme.

Question 3

Are there other organisations beside local, state and territory governments that could be considered 'trusted sources of information' for the purposes of identifying local telecommunications priorities?

Question 4

Are there ways that the Department can facilitate linkages between potential infrastructure providers and local communities?

Local Telecommunications 'trusted sources of information'

Pivotel's view is there are other organisations besides governmental bodies that could be 'trusted sources of information' for the purposes of identifying local priorities. There are a number of potential organisations that may qualify, including:

- Local agricultural, farming and grower networks. E.g. Pivotel has worked closely with the "Stirling to Coast" farmers group to build a purpose designed, LTE network outside of cellular coverage area in WA
- Indigenous and remote/rural communities
- Rural Development Corporations e.g. Meat and Livestock Australia (MLA), Cotton Research and Development Corporation (CRDC), Grain Research and Development Corporation (GRDC), Agrifutures etc
- Universities
- CSIRO

Facilitating linkages between infrastructure providers and local communities

A provider register could be formed whereby relevant providers should submit their qualifications and capabilities in order to become "registered" applicants. This would involve some sort of vetting process to only qualify relevant parties capable of delivering robust technical solutions for the intended time frame of 10 years.

In addition, with regards to ways the department can facilitate linkages between potential infrastructure providers and local communities, Pivotel would like to encourage the use of a register for relevant projects where interested parties can nominate specific areas where connectivity is required and its purpose. This approach would assist in bringing together parties for the purpose of submitting relevant proposals. A recent example of where this type of approach has been implemented is 'AgTech Finder' where farmers and agronomists can find details on various communications service providers and technology vendors capable of delivering connectivity and agricultural IOT / monitoring solutions. <https://agtechfinder.com/>

It would also be beneficial to launch an awareness program for local communities and relevant industry bodies that increases awareness and uptake of the program.

Question 5

Are there any comments that you wish to make in relation to co-contributions?

Pivotel agrees with the proposed co-contribution criteria which are fundamentally similar criteria to the Mobile Blackspot Program with the department funding up to 50% of the eligible capital costs (or capitalised costs). The grantee and other 3rd party, direct or in-kind contributions, should make up the remaining 50%. Pivotel's "Stirling to Coast" network has also been co-funded in a similar manner i.e. 50% WA DPIRD grant and 50% Pivotel and other co-contributors with Pivotel bearing the risk for the other co-contributors.

Question 6

What type of projects should be considered for funding through the Regional Connectivity Program?

Pivotel has no issues with the proposed criteria for selecting proposed solutions for funding through the RCP. Specifically, in order to qualify projects must:

- not be covered by existing broadband access technology i.e. NBN fixed wireless or existing MNO 4G coverage (bearing in mind there may be a small degree of coverage overlap in certain instances and NBN Fixed does not support mobility).
- not be currently available or planned
- deliver some form business or community need i.e. provide benefit in agriculture, tourism or resources sectors and/or address health, social, public safety and educational priorities for regional Australia.

Question 7

Are there any comments that you wish to make in relation [to] the proposal that all Funded Solutions will provide Retail Services for a minimum of 10 years after the Asset has become operational?

Pivotel agrees with the requirement that solutions must be provided for a minimum period of 10 years and that joint applications must be underpinned by appropriate binding contractual arrangements with one important caveat to ensure ongoing viability of the solution.

As there will be a 10 year obligation on successful bids to continue providing retail services it will be very important to ensure the service remains commercially viable for the committed term. In putting forward proposals bidders will necessarily need to make assumptions on the expected traffic (revenue) volumes. Eliminating or reducing as many risks as possible under the RCP program will assist in making more otherwise commercially unviable sites viable. One way this can be helped is to mitigate the risk of incumbent operators 'over building' with a similar solution which diverts traffic away from a project funded by the RCP. This can be achieved in a number of ways:

- Mandating 'open access': ensures all end users have the capability to access the funded solution and removes incentive to 'overbuild',
- Exclusivity: successful bidder has exclusive access to service that location for 10 years after service goes live,

- Right to terminate service: if an incumbent operator overbuilds in a particular location the 10 year commitment period falls away and the bidder may choose to de-commission the solution.

Question 8

Are there any comments in relation to the proposed Eligible and Ineligible Areas?

Pivotal broadly agrees with the stated definition of ineligible and eligible areas. To enhance granularity Pivotal recommends the addition of one other category to be added to 'Ineligible areas':

- 'Areas that currently, or are planning to have, 4G (or 5G) mobile network coverage, by an incumbent mobile network operator.'

Planned network coverage must be defined within a certain timeframe (1-2 years) or committed budget, not an arbitrary plan allocation. Operator must be able to clearly demonstrate they have pre-existing committed funds allocated to a particular service area in order for an area to become ineligible.

Question 9

Are there any comments that you wish to make in relation to the proposed eligible and ineligible expenditure?

Question 10

Are there particular circumstances where it may be appropriate for the Commonwealth to make some contribution to ongoing operating expenses?

Pivotal agrees with the current definitions of eligible expenditure and the capitalisation of satellite backhaul with the exception of high speed transmission backhaul costs.

In addition, transmission backhaul pricing is the single largest operating cost component for regional and remote sites and has a very substantial impact on a site's economic viability. Access to competitively priced backhaul is therefore imperative to building remote sites. Where an infrastructure provider is sourcing the backhaul from a 3rd party in order to deliver a solution, it would also be appropriate for these backhaul costs to be subject to the same treatment as satellite backhaul i.e. the capitalised net present value of the cost of the backhaul to be included in the cost of the solution.

Other operating costs that could be considered for similar capitalisation treatment include site access and/or leasing costs and ongoing operations and maintenance costs.

Question 11

Is there a case for a third category, for highly localised solutions for projects that, for example, are seeking funding of less than \$200,000 (GST inclusive)?

Pivotal would recommend the addition of a third category for localised solutions seeking funding of less than \$200,000. Given one of the key objectives of the RCP is to deliver place-based solutions, Pivotal anticipates a large number of applications would fit into this category. Remote farms and communities can be provided coverage for substantially less than \$400,000 (assuming

50% co-contribution by the department) with the largest cost variable being high speed transmission backhaul (if required).

Question 12

Are there any other design principles that should be considered?

Pivotel is very supportive of the design principles proposed and has no further comments other than those provided previously in this submission.

Question 13

Do you have any comments on the proposed assessment criteria?

Pivotel agrees with the proposed assessment criteria provided, however questions the requirement for each funded solution having to meet all of the merit criteria, especially Criterion 1 (Economic benefit) and Criterion 2 (Social Benefit). Whilst each solution should be able to demonstrate project delivery (Criterion 3), financial co-contributions (Criterion 4) and value for money (Criterion 5), there may well be instances where the solution addresses either some form of economic benefit (Criterion 1) or social benefit (Criterion 2) but not both.

It is therefore proposed that the solution must meet at least one of Criterion 1 or 2, and all of 3, 4 and 5.

4. Closing remarks

Pivotel appreciates the opportunity to provide input to the Department of Communications and the Arts, Regional Connectivity Program and looks forward to participation in the program when finalised and playing an active role in improving digital connectivity for regional Australia.

For any questions in relation to this submission please contact:

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Yours sincerely

Pivotel Group Pty Limited