

Submission by ASCA

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The Australian Smart Communities Association (ASCA) facilitates, promotes and advises on how communities can build liveable, sustainable, workable smart cities. We put our citizens, local businesses and stakeholders at the core of our activities.

Our members are made up of local governments, Regional Development Australia committees, Regional Organisations of Councils, industry, businesses and individuals who **collectively represent 1 in 3 Australians**.

Whilst fixed nbn domestic services are not critical to the design, roll out and operation of Smart Cities, as many sensors and other data input devices are likely to be interconnected via lower data wireless services. However, the increasing population of video devices and collection of picture material and the use of advanced recognition tools and analysis techniques is vital for better management of our cities. Also for Low Powered Wide Area Networks, NBN infrastructure can be utilised for aggregated network connectivity for LPWAN Gateways. For Smart City deployment, the nbn infrastructure will be essential as the range and type of sensors and video cameras monitor and collect more and more information to be collated and analysed, and mega data gives greater insights into the daily eco-systems of our cities.

The Australian Smart Communities Association makes the following submission to the Joint Standing Committee on the National Broadband Network for its consideration on its continuing enquiry into the rollout of the national broadband network.

With respect to market, industry, or regulatory characteristics that may impede the efficient and cost-effective rollout of the national broadband network.

ASCA draws the Joint Standing Committee's attention to the nbn direction to connect only premises as part of the nbn investment. The policy position that non-premises are not part of the nbn roll-out should be reviewed and changed so that local government and other relevant authorities can request non-premises connections during the roll-out. This would reduce the financial burden on local governments as they implement their smart cities programs to make cities more liveable by improving traffic management, smart street lighting, improved security and smarter delivery of local government services.

The speed of the roll-out is a concern to many Australians. Communities want nbn delivered faster. Many local governments have extensive optic fibre networks throughout their local government areas, ASCA asks that nbnco be directed to a serious and considered examination of optic fibre infrastructure for those local government prepared to give nbnco access. By developing a partnership with local government, the potential for nbn to be rolled out faster in selected areas is possible.



The NBN is a 10 year infrastructure project. All long-term technology projects should undergo a continuous review process analysing and comparing design, build and operations against the intent, efficiency and effectiveness of the project. The Australian Smart Communities Association urges the Joint Standing Committee to examine the following:

- The government's focus post the change to a hybrid technology mix should address the service quality (bandwidth, latency, penetration) instead of technology used.
- Capacity, speed and coverage of communications continues to improve globally. To stay competitive Australia should aim to be in the top 10 of countries. A continuous review process must report on how Australia is achieving its global broadband infrastructure position.
- The nbn quality overall service (capacity, speed, coverage) should be measured and independently reported at the lowest possible level to assure the public (users) it is receiving value for money. It is suggested that local government area is the lowest level.

Federal and state government have a greater focus innovation, digital growth and economic development. One of the actions is smart cities/communities. Cities need to become smarter in order to improve lifestyle, drive job growth. We need to create smart cities, smart businesses and smart countries, with high-speed infrastructure, smart grids, intelligent buildings. An optic fibre broadband infrastructure (and wireless infrastructure) because of the uniqueness, affordability, capacity, robustness, security and quality necessary is fundamental to develop smart integrated city systems.

Changes to businesses processes and the demands of a modern economy are relentless and are going to force a cycle of continuous transformation. Developments linked to cloud computing, data centres, data analytics (big data), machine-to-machine (M2M), the internet-of-things (IoT) and the emerging Blockchain may all play a part in transforming our current world. Ultimately from these developments we are beginning to slowly see the emergence of Smart Cities, and indeed Smart Nations. Its critical our NBN infrastructure is powerful enough and robust to address these needs.

ASCA is concerned that the current nbn approach is erecting barriers that will make it very difficult to extend the infrastructure to a full fibre network. These obstacles are the nodes or street cabinets, some 20,000 of which will be installed throughout the cities, each one becoming an obstacle a flexible and scalable digital infrastructure. ASCA draws the Committee's attention to cities where FttN will be rolled out creating a strong divide to those with FTTdp. ASCA fears it will create a haves and have-nots – those on fibre networks (FttH and FTTdp) will have a network that is 50 to 100 times better than those who get the FttN. This may affect future smart cities development and restrict the ubiquity of capabilities

Any other matter pertaining to the national broadband network rollout that the committee considers relevant.

ASCA is concerned that the full benefit of the nbn is not being realised especially in rural and remote regions. The policy of restricting fixed line and wireless broadband access to towns of certain populations may have been expedient from a policy prospective at the time of the nbn policy framework but is flawed.

Most rural and remote towns are connected to the nbn via satellite (Sky Muster™). However numerous rural and remote towns are connected to the national telecommunications grid via optic fibre leaving the opportunity open for nbn connected via fixed service (not satellite) which would have two major effects; relieve the bandwidth demand on (Sky Muster™) and improve the type, speed and data allowance of nbn services available to rural and remote residents.



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Telstra is the predominate owner of the optic fibre infrastructure in rural and remote towns, but some towns have two separate optic fibre networks in existence. The Australian Government \$250M regional broadband backbone program (RBBP) installed optic assets around Australia. As an example, Ilfracombe in central west Queensland, has two optic infrastructure assets passing through the town. It lacks the population to qualify under the present government policy, to be fixed or wirelessly nbn connected. nbnco's role is to roll out the nbn in accordance with government policy hence Australia has numerous towns that could be re-classified to a terrestrial connection if government policy changed.

ASCA seeks a review of the Government's nbn policy framework to relax the population rule and connect rural and remote towns with existing optic fibre infrastructure to be nbn connected via fixed line or fixed wireless access technologies and not satellite.

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The adoption of smart technology in city/town management, energy, water, health and transport, along with high-speed broadband, could add more than 70,000 jobs to the Australian economy and bring 1.5 percent growth to Australia's Gross Domestic Product within five years.

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