



**Submission to the House of  
Representatives Inquiry into the  
National Broadband Network**

**March 2011**

**from the**

**Northern Territory Government**

## **Introduction**

The Northern Territory is an area of more than 1.35 million km<sup>2</sup> with a population of 219 800 people. Approximately one quarter of the Northern Territory population resides outside the major and regional centres, in smaller remote communities that range from a population size of 80 to 3000 people.

The majority of these remote communities are connected via satellite services often for emergency purposes only. The isolation of these communities substantially increases the costs of delivering government services and restricts the extent of services provided.

The remoteness of the Northern Territory and size of the population inhibits the level of competition in the telecommunications market and consequently restricts the level and type of telecommunication services offered.

The Northern Territory remains the only jurisdiction with a single provider for terrestrial interstate communications. This will change with the commissioning of the Regional Broadband Blackspots Program sponsored optic fibre connection in September 2011. This link will form part of the National Broadband Network (NBN) and for the first time provide the Northern Territory with competition in the telecommunications market and alleviate costs concerns.

## **The National Broadband Network**

The ubiquitous nature and national pricing scheme of the NBN has the capacity to transform the Northern Territory.

The National Broadband Network is a catalyst that can jump-start new technology driven service delivery models significantly improving productivity and quality of life for all Territorians, not the least for those in remote areas.

For the first time in Australia, high capacity broadband will connect all homes and small businesses, with a common and ubiquitous platform.

Valuable resources will be able to reach further and be more productive. More homes and businesses will be able to connect with government directly and access government services that will only be deliverable through high speed broadband.

NBN offers connection into Australian homes and premises which will fundamentally change what is happening in the home and how information or services are available to and from the home and business.

Communications is an enabling technology. It will require innovation, new products and services to realise the full potential of the NBN.

However, whilst remote communities, particularly those in the Northern Territory have the potential to benefit the most from the NBN, the NBNCo has yet to publish a policy position that no consumer will be disadvantaged by the introduction of the

NBN. The Australian Government has indicated that in some circumstances the universal service obligation (USO) will require Telstra to maintain the status quo for a period of 10 years. There has been no indication as to how within that 10 year period these disadvantaged communities will be provided for following the end of the 10 year period by which time the technology used to service these communities will likely be inadequate.

Specific circumstances where sizable communities are currently serviced by high speed radio links, and enjoy access to ADSL broadband will ultimately be disadvantaged, and take a backward step under the current policy.

## **Government Services**

Over the coming decades governments will find increasing pressures to do more with less. The growing and aging population, increasing financial pressures and continual increase in expectations will require a fundamental transformation in the way government delivers services.

The ubiquitous nature of the NBN will fundamentally change how governments deliver services to the community.

The NBN will provide the opportunity to deliver more efficient and effective demand driven services to the home and business premises in areas such as:

- justice and corrections
- education
- aging population and health
- emergency services
- environment and energy
- community and business connection with government.

The NBN provides governments with the opportunity to deliver services directly to the home like never before. A portion of the bandwidth delivered by the NBN link to the home or business, funded by government, would provide for a more efficient means of service delivery, and meet the expectations of the public over the next decade.

A move to greater use of online transaction with citizens has the potential to reduce individual transaction costs.

## **Health**

The Northern Territory has had significant success in implementing eHealth initiatives in all remote health centres under an agreement between the Northern Territory Government and the Aboriginal Controlled Community Health Services. As a result, more than 80% of remote health centres have moved towards electronic health records.

This has been further enhanced through the successful implementation of the eHealthNT Shared Electronic Health Record (SEHR) service which enables each electronic health record system to provide a summary of each presentation, with the patient's consent, so that it can be stored for access later by any participating healthcare provider when needed for ongoing patient care.

The Northern Territory's capacity to implement eHealth initiatives such as Telehealth, however, has been limited due to the low bandwidth and the cost of communications services to remote communities.

Under the recent Digital Regions Initiative National Partnership Agreement, the Northern Territory has jointly funded an upgrade of telecommunication exchanges in 17 remote communities. Along with the installation of other telecommunication infrastructure this will allow the Northern Territory Government to aggregate its communications services.

This now means that Telehealth can be implemented in the Northern Territory, but initially only in 17 remote communities. The implementation of this network beyond these 17 communities will require significant communications upgrades at a price that can be afforded under tight budgetary constraints.

The NBN has the capacity to and must deliver this.

Telecommunications into smaller communities must be optimised to allow for growth in our eHealth applications (Shared Electronic Health Records, care plans and Telehealth) and to provide ubiquitous access across health services both within the Northern Territory and across jurisdictional boundaries.

At present each jurisdiction has its own Telehealth and videoconferencing network and inter-jurisdictional videoconferencing communication still relies heavily on the use of out-dated ISDN networks which reduces the quality of the videoconferencing service.

A national network for health and the implementation of a national videoconferencing network will allow clinically appropriate high definition videoconferencing calls to be placed and sustained both within and between jurisdictions.

The NBN has the capacity to deliver this capability at a sustainable price.

## **Education**

The NBN has the capacity to transform the education sector. Access to resources from any location at any time of the day provides for an education network that can utilise scarce resources much more effectively.

The virtual class room means that expert teaching skills can be provided to a number of small remote communities simultaneously. In an environment where it is difficult to source teachers and retain them, the NBN offers the potential to reduce turnover

in teaching staff in remote communities, where remote won't seem so remote when friends, family and pastoral support are just a videoconference click away.

Furthermore the ubiquitous nature and pricing of the NBN guarantees an increase in collaboration between jurisdictions, schools, teachers and students in the same way email and aeroplanes shrunk the globe in the last century making us more aware of events in a shorter period of time than ever before.

The NBN offers the opportunity of greener computing through greater use of webinars and videoconferencing to reduce travel, accommodation and physical meeting logistics.

Access to up to 25 000 approved national digital learning objects that can be used by teachers in all schools across the Northern Territory and the digital distribution of books and educational videos for on demand use in the classroom, regardless of where that classroom is, become possible over the NBN.

Access to interactive digital excursions such as those offered through Questacon in Canberra and the ability for other schools around the world to take cultural virtual excursions into our cultural mecca of Indigenous heritage and unique tropical biosphere.

The ability to broadcast our stories out over the NBN using rich media solutions provides real 21st century skills opportunities for teachers and students. This will change our educational environment from a pure consumer of educational content from the national well, to a contributor of quality content from any location in the Northern Territory.

## **Remote Service Delivery**

On 20 May 2009 the Northern Territory Government announced Working Future, the vision for remote areas of the Northern Territory.

A central element of Working Future is the Territory Growth Towns strategy, whereby Indigenous communities in 20 locations will become the economic and service delivery centres for their regions, including surrounding communities and homelands.

The implementation of the Territory Growth Towns strategy is closely aligned with Remote Service Delivery National Partnership Agreement (RSD NPA). Fifteen of the 29 priority locations in the RSD NPA are in the Northern Territory and all of them are Territory Growth Towns.

The primary output of the RSD NPA is the development and completion of 'place-based' Local Implementation Plans (LIPs) for each town. These plans represent a detailed agreement between the Northern Territory Government, the Australian Government, Shire Councils and local people on how to Close the Gap of Indigenous disadvantage.

Every LIP contains the following agreed action:

'In close coordination with the current roll-out of eHealth and online education initiatives develop an integrated ICT strategy that covers: infrastructure requirements; deployment of equipment; use of new technologies by government agencies and; access to ICT services by businesses, non government organisations and local people'.

This action reflects a high level of interest among remote Indigenous communities to access services, information, communication methods and entertainment via current and emerging technologies that are often not available (or slow to be introduced) to remote areas.

It also reflects an imperative for initiatives in remote towns to be rolled out in a planned and integrated manner in order to ensure that the benefits of the National Broadband Network are maximised within limited resources.

The full implementation of the National Broadband Network in the Territory Growth Towns will transform the way in which these communities access information and engage with the broader community. The type of initiatives that remote communities are seeking to develop include:

- development of public internet facilities, including approaches that leverage the current high uptake of mobile devices in remote towns
- increased access to private sector services now available over the Internet but not provided locally, particularly banking
- more efficient delivery of correspondence (such as electronic billing and Centrelink advice) given regular mail services are unreliable or non-existent
- reduce travel costs through engagement with government agencies via videoconferencing
- increased access to community governance tools, such as regional videoconferencing, improving local engagement and empowerment
- enhanced ability to operate small and medium enterprises (eg. bookings for tourism businesses, websites for art centres)
- increased ability to deliver 'hub and spoke' approaches to service delivery, including from 'Growth Towns' to outstations and homelands and in this way address issues associated with 'urban drift'
- More reliable and efficient recording of community infrastructure information via 'tablet' or 'handheld' devices (eg. repairs and maintenance requirements for public housing)
- enable the establishment of Single Government Shopfronts that will provide assisted online access to a range of services not currently available (or available only intermittingly) such as:

- motor vehicle licensing and registration services
- births, deaths and marriage services
- fines recovery services
- justice, courts and corrections services
- power, water and sewerage payment and customer relations services
- library services
- Job Services Australia provider services
- aboriginal interpreter services
- electoral commission services
- land administration services.

## **Business**

High speed broadband will transform the way Northern Territory businesses do business.

It will provide opportunities for the Northern Territory business community to engage with more customers. The large distances and very isolated regional and remote communities will now have the opportunity to engage with Northern Territory businesses. Further it will extend the reach of businesses and communities into previously untapped urban, national and international markets and provide improved service and product delivery in particularly in sectors such as arts and tourism.

Ubiquitous high speed will also:

- improve business operations
- change and improve employment models through telecommuting providing a significant shift in the lifestyle choices available. This is of particular significance for remote communities where the local economic environment can be broadened to effectively one that is global
- improve efficiency of service delivery
- provide sustainable pricing for services that otherwise will be out of the reach of most communities, such as high quality videoconferencing
- impact the social fabric of remote communities by encouraging people to live and work in remote and regional areas because communication with friends and family is available at sustainable prices. And business opportunities will arise when people are no longer isolated from family and friends and will feel less isolated socially and culturally
- improve training and professional development capacity for employees through webinars, access to training materials and videoconferencing

- reduce travel requirements
- extend the reach of business expertise making it more accessible to provide business advice, training and information; and
- improve marketing opportunities through improved access to online technology.

The Access Economics report into Australian Business Expectations for the NBN (November 2010) concluded that over 50% of Australian businesses expect to see significant change in their business and how they communicate and interact with customers. The report also stated that there is an expectation the NBN will catalyse new developments that will change business behaviour, making it difficult to quantify all the benefits from the NBN.

## **Other sectors**

The management of the Northern Territory's natural resources will be improved by providing public access to feature media rich information. More accurate information will be maintained through a single central repository providing current and accurate information to the public and for government reporting.

Tourism will benefit with the ability to provide cost effective, sustainable and portable information to visitors to the Northern Territory. Virtual Visitor Information Centres using the latest digital technology will require large capacity high speed bandwidth to be truly effective.

## **Appropriate Technology**

The Northern Territory has significant experience of satellite and wireless communications. Over many years the promises of reliable high speed communications delivered via satellite have failed to live up to the promises. Adverse weather conditions, latency and cost have meant that satellite communications have fallen well short of the capabilities required to deliver government services in the form and manner required.

Latency in satellite communications, in particular has meant that some applications used in the delivery of health services can be significantly affected. The first choice for delivering communications into remote areas of the Northern Territory remains terrestrial, wherever possible.

With the demands of existing and emerging applications, higher speeds and capacity is required in the communications network. Some predictions indicate that the health sector alone could take as much as 25% of the capacity of the NBN.

Current ADSL has significant limitations in terms of speed and distance. Emerging technologies to deliver the 'last mile' show promise but will still require optic fibre to be substantially closer to the customer than is currently the situation, and offer no timeline for introduction on a production basis.



Optic fibre to the premise represents the optimal solution, which provides the perfect future proofing guarantee, with capacity to continue the upgrading of bandwidth as required, relatively cheaply.

There will always be a need for wireless and satellite. The Northern Territory is well aware of this need, perhaps more so than most jurisdictions, but its use should always be a second choice, where all other options are ruled out because of technical difficulties or exorbitant cost.

## **Conclusion**

The NBN will transform the Australian economy. It will open new capabilities and provide the capacity to deliver these new services. It will provide the reach to deliver high quality services to every Australian.

It has the potential to significantly shift how we access entertainment, how we communicate with family and business colleagues and importantly how we access government services such as health and education.

Fully implemented, the NBN will significantly change Australia and the Northern Territory forever and reach into areas of the Northern Territory that are too difficult or too expensive today.