



## THE DIGITAL ECONOMY

The National Broadband Network is being established throughout Australia under the Federal Governments National Broadband Plan policy to position Australia as a leading digital economy by 2020.

Throughout Australia, both rural and remote, there has been a steady movement towards alternative broadcasting methods, online education opportunities, the ability to access information from the broader community, and a need for precise and immediate medical and law enforcement information and records.

As of 2011, Australia is upgrading to the National Broadband Network Policy as part of the Federal Governments Broadband Guarantee to provide a high-speed National Broadband Network to all states and territories. This promises to provide many opportunities to those who otherwise would not have access to information modern society takes for granted.

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### 1. Introduction

Telecommunications and Information Communication Technology (ICT) services are seen as a vital tool to the next century. To have a good ITC system in place has many advantages in society. Against the background of the perceived appropriateness of ICT's to the Northern Territory Government, the crucial research question is: why are these technologies, given their usefulness, not yet standardised across the Territory? A wide range of factors support the widespread introduction and use of the new technologies. The estimated population of the Northern Territory, According to the Australian Bureau of Statistics as of June 2009, was 224,800 with a break down of approximate figures being: Darwin 127, 532; Palmerston 30, 00; Alice Springs, 27,877; Katherine 10,095; Nhulunbuy 5,001; Tennant Creek 3,185; Wadeye 2,394; Jabiru 1,327; and, Yulara 1,205. Having a relatively small population the Northern Territory can contribute to the Australian economy for it has endless recourses and expertise.

### 2. Victoria Daly Shire Communication Strategy

Three of the five fastest growing shire's populations in the Northern Territory are Darwin; along with Roper Gulf, and Victoria-Daly. The information revolution that is sweeping the rest of Australia is now rapidly approaching the Northern Territory. The private sector, communities, local government recognizes the opportunities, challenges and complexities of information technology and the cost of installing a new network. While the impact of the National Broadband Scheme (NBS) is tremendous, the existing infrastructure, socio-economic and cultural issues pose major difficulties in introducing and implementing new technologies for the fibre generation. The major problems are not technical but managerial, political, cultural and also due to a lack of resources. Therefore the Northern Territory needs to find its own solutions to local problems and informing government of the needs that are required.

#### 2.1 Communities within the Victoria Daly Shire

The Victoria Daly Shire covers 168.277 square kilometres and has a population of around 8, 285. This comprises of several communities and five of them have broadcast facilities - Kalkaringji, Wadeye, Yarralin, Nauiyu and Palumpa. With NBN these studio's can exchange information on many fields and offer employment opportunities to the local communities. The Northern Territory recognises shortfalls and solutions can be forwarded to the Local/National government to implement appropriate changes to be made to the Northern Territory that faces a unique satiations.

#### 2.2 Challenges Include

- Efficiency in the workplace and efficient ITC system manufacturing or service delivery will help the flow of information from different sectors of all industries. This will help the industries to be more productive within the region and later nationally.
- Research may include most of the sectors of the economy and enhance the territory with new technologies. Universities, schools, collage where the future of the territory lies depends on the ITC's for upgrading the knowledge off the communities.
- Social Communications in the rural area's of the Northern Territory have limited or no access to mobile or wireless reception. Sites like Facebook, Gmail, Twitter and many more cannot be accessed due to this issue.
- The time spent trying to access information using a network not properly set up for remote and rural access could lead to the feeling of being incompetent with technology which could further lead to not using the technology.
- Household crime, assault, robbery and the experience of crime varies across the Territory. Most crimes may or is inflicted by the use of alcohol, drugs or poverty and keep records by authorities. This will enable information to be exchange between law enforcement agencies.
- Utilising the radio stations to exchange the above-mentioned challenges will inform and also educate the local communities. Seizing the opportunities of national and global networking would allow the region to access interactive learning and communicate to the world, to get information from bigger centres in Australia and the rest of the world. This could aid in combating poverty and ignorance from all directions.
- The communities in the Northern Territory are educated to understand the importance and the need for ITC's and generally poverty can lead to the perception that computer technology and the thought of new development is for more influential people within society and also a luxury.

### 2.3 Support infrastructure.

There are times that a small repair can cost a large amount of money and in which spare parts and technical 'experts' from the manufacturers have to be sourced and flown to communities whenever the technologies break down. Having to travel to different communities leads to waste of resources, time and money, lack of support from the government leading to underfunding of science and technology programmes in tertiary institutions;

#### *Poor infrastructure*

- In most of the communities one has to look at the basics, including the age of the electrical structures and the telecommunication system.
- The product delivered by the suppliers has no capability to sustain the needs of community's that will enhance the living standards and knowledge.
- *Illiteracy and the lack of basic computing skills.*
- Northern Territory institutions are funded by government and private sectors that are not apathetic to the need for ICTs, the educational institutions are not being provided with adequate funds to acquire and teach these technologies.
- Lack of a science and technology policy impedes the growth and development of a culture of science and technology, and also, at the educational level, downplays the significance of science and technology in the perception of students.
- The new communication technologies have their strengths and drawbacks, they should not be developing the Northern Territory without using these new technologies as this will result in their future generations further lagging behind and will find they further removed from mainstream Australia and major capital centres. What is needed most is effective and efficient, not to mention wise, telecommunications and culture policy, as

well as research that informs such policy. Telecommunication needs be seen not as an apolitical tool but as embedded in culture, politics and our mutual futures. If developing the Northern Territory infrastructure without using these new technologies, the future generations will further lag behind and will find themselves further impoverished and uneducated. If the use of these technologies continue without addressing the concerns and needs of communities, what is most effective and efficient, not to mention a development of a telecommunications and culture policy, as well as research that informs such policy the implementation of National Broadband Network will not be successful.

### 3. Local and National and Federal Government

ITC is a necessity to and for all the sectors in the Northern Territory's economy. The products and services represent the in put from all sectors which include government, councils, private business and community based programmes. For all these sectors, and taking into mind that the telecommunication sector is one of the fastest growing sectors globally, the Northern Territory is not reaping the benefits.

A range of factors were seen as inhibiting the use of new ICTs.

1. The high cost of laying out the NBN within the Northern Territory is leading to a restriction of access to the new technologies. Therefore people are doing things the way they are due to lack of deregulation and government legislation. This lack of deregulation gives monopoly to limited information technology companies which are producing a harsh economic climate.
2. Infrastructural problems such as inadequate telephone or satellite lines and lines cutting off when connected to the Internet leads to frustration and not using the technology.
3. Lack of basic education and computing skills within communities.

#### 4.0 Health

##### Introduction

The community's health risks are associated with higher rates of illness or injury in the population. Such factors may be high blood pressure, environment pollution or to lifestyle choices such as smoking and alcohol. To use media in these communities and to promote and advertise the structures Victoria Daly Shire offers can contribute substantially to the reduction of disease and disability, and thus to an increased length of life and quality of life in Northern Territory. However, many risk factors are modifiable. Their impact may often be reduced through action taken by individual.

There has been a gradual move to store all patients' records in digital format. The advantages are

1. Writing will be easy to read.
2. It will be a more economical storage of data.
3. Access will be quicker.
4. Transfer of records will be quicker between medical institutions.
5. Data can be examined to provide analyses of medical conditions, e.g. regional patterns.
6. Agreed codes for different conditions, treatments, parts of the body etc
7. Inputting enormous amounts of data from paper-based records
8. Having security systems to protect confidential data

It is important to note the problems with certain diagnostic web-sites that are not trustworthy. This can lead to incorrect diagnosis and cause false complacency or anxiety. On the internet you can find a wide variety of medical information, including: Symptom diagnosis, for people who wish to identify their problem without consulting a General Practitioner information about available treatments/alternative therapies and Patient Records Teleconferencing has been used to share expertise. Surgeons in one country have helped those in another.

## 5. Vast System

V.A.S.T. (Viewer Access Satellite Television) is set replace the existing "Aurora" satellite television system used by many travellers and households. So what does this mean for those of us currently receiving our television from Aurora?

1. New decoder (set top box) and a Dish.  
The new service will not be accessible on any existing decoder and currently the only approved devices are the rather pricey and function poor UEC decoders.
2. Buy a new smart card (these now come with the decoder).  
This new card will (electronically) lock it's self onto the decoder and will not function in any other decoder (and the decoder will not accept any other card).
3. The government is paying for the initial installation.
  - a. What will the maintenance cost be?
  - b. Who will do the maintenance?

## 6.0 Indigenous communities

For All Communities within the northern territory and especially in rural areas the speed of internet is slow and frustrating. This will affect all sectors of economic, social and cultural growth and development. The time spend to do a simple task can be extensive and it leads to being frustrating and thinking it is the individual lack of computer skills. Northern Territory media should be supported and introduced to advancing internet technologies. In addition to improving connectivity, the Northern Territory needs to move towards building its own content on the net. This involves training in new ways for information gathering and presentation. The development of net "meta information" (information on information on the net) is crucial to optimize the use of scarce bandwidth and to get pertinent information to users that are not connected.

## 7.0 Satellite, mobile phone sector

Nigh patrol uses satellite phones in some communities where there is not regular mobile coverage. They are only used in case of emergency. There have been times when signal has dropped out or been hard to find, this may have been affected by dense cloud cover. Going outside most of the communities there is no mobile phone coverage and some have no coverage within.

## 8.0 Closure

The growth of the Northern Territory depends on how good the infrastructure of the region is and this depends on telecommunication. The Northern Territory is lagging behind the rest of Australia and the infrastructure is not keeping pace with the rest of the Australian states and territories. The broadband layout started in the major centres like Sydney, Melbourne and Brisbane where there is already a good system in place. The Northern Territory where the telecommunication structure needs the most upgrading is left behind.