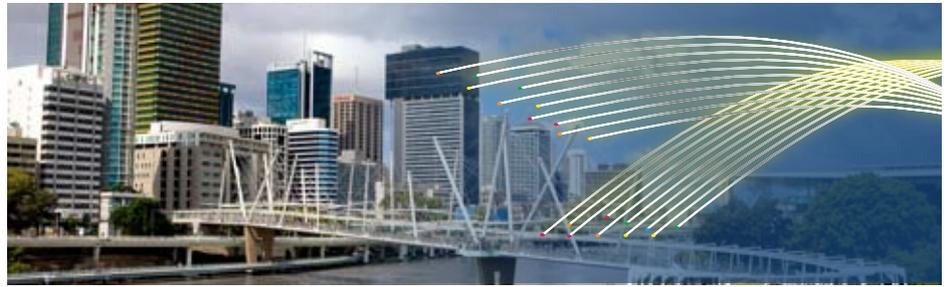




Queensland NBN strategic plan

2012 – 2016

The Queensland Government's plan for making the most of the National Broadband Network



Foreword

The National Broadband Network (NBN) will be a critical catalyst for social and economic transformation across all parts of Queensland.

Not only will the NBN change our way of doing business, it is also likely to create many new businesses, products and services.

For our communities and for individuals, higher-speed broadband will enrich lives, through better connections between people and organisations, more opportunities for learning and improved health care, and greater business opportunities.

The Queensland Government will leverage the NBN to develop enhanced government services in many areas.

To make the most of the opportunities the NBN presents, we have developed a comprehensive strategy that involves working closely with all tiers of government, industry, the not-for-profit sector and the broader community.

The *Queensland NBN strategic plan* highlights our opportunities to leverage benefits from the roll out and use of the NBN over the next four years.

It is targeted at five key areas identified by Queenslanders in their responses to our discussion paper:

- awareness
- collaboration
- digital literacy
- emergency management
- service delivery.

New innovations start by substituting an improvement in something we already do. For the NBN that means faster internet widely available to all Queenslanders, but the real benefits will come from using new technologies in ways we can't yet imagine.

We cannot just wait and see how the NBN might improve our lives – for it to be truly successful, it is up to all of us to engage, collaborate and explore new ways to use it.

I am pleased to present the *Queensland NBN strategic plan*, so all Queenslanders, whether in regional areas or cities, can have access to fast broadband, and the endless new opportunities it will provide.

Simon Finn MP

Minister for Government Services, Building Industry and
Information and Communication Technology



The National Broadband Network

The Queensland Government believes the NBN will offer significant opportunities to help achieve economic and social benefits for all Queenslanders. That is why we want to see a fast and comprehensive roll out of the NBN in Queensland.

The Australian Government has stated that the NBN will provide 93 per cent of Australian homes, schools and workplaces with a 'fibre to the premises' (FTTP) connection delivering speeds of 100 megabits per second. The NBN will connect all other premises with next generation wireless and satellite technologies offering speeds of 12 megabits per second or more.

We are working closely with the Australian Government to make sure the NBN reaches all communities across Queensland as quickly as possible, and generates the maximum benefits for all Queenslanders.

What can be expected from the NBN over the next four years?

The Australian Government has given an undertaking it will build the NBN during the next decade. In the next four years, NBN Co will be establishing its business processes and systems to allow it to roll out a network that can connect to more than 5000 premises a day.

This start-up time also allows Queensland to prepare for the roll out of the NBN. This four-year plan focuses on getting the foundations right in Queensland so we can take full advantage of the NBN as it is rolled out completely across the state.

Delivering benefits

This plan contains opportunities that will be developed with key stakeholders and built into a Queensland NBN master plan which will outline key actions to be delivered over the next few years.

As we learn more about the potential of the NBN, new initiatives that benefit Queenslanders will be implemented.

The Queensland Government has set a number of objectives for the initial stages of the NBN roll-out program.

These are to:

- maximise the geographic reach and rapid deployment of NBN optical fibre in Queensland
- maximise the employment opportunities from the NBN construction phase and beyond
- facilitate the development of Queensland's digital and broader economy
- provide for optical fibre to be connected to:
 - ▶ all education, health and public safety facilities in Queensland
 - ▶ all state and local government libraries
 - ▶ all local government council administration buildings
 - ▶ a central facility in all hub towns

and where fibre-to-the-premises cannot be justified, wider distribution should be by wireless technology.

To ensure these objectives are achieved, this plan has been developed detailing a range of opportunities that will benefit all Queenslanders.

Vision for a connected Queensland

The purpose of this plan is to highlight the opportunities the Queensland Government is pursuing to leverage the NBN's deployment and to maximise the economic, employment and social benefits for all Queenslanders.

This plan contains a number of opportunities that have been identified in response to the Queensland Government's discussion paper on the NBN, issued in April 2011. The main themes that emerged from the communities responses to the discussion paper were the need for:

- greater **awareness** through community and other forums on the emerging benefits Queenslanders can gain from the NBN and high speed broadband
- **collaboration** between local and state governments, local businesses and communities to maximise returns, particularly around regional development and jobs
- access to **digital literacy** courses at all levels for people to develop their skills to make the most of the NBN
- improved disaster and **emergency management** through enabling greater information flows between communities and emergency response agencies using the NBN
- the gap in **service delivery** between regional and urban Queenslanders to be closed by using the NBN to distribute expertise and improved services like health and education.

This plan will address each of these issues over the next four years under the headings:

- awareness
- collaboration
- digital literacy
- emergency management
- service delivery.

As our future becomes more reliant on the digital economy, our success will depend on how well we can make use of the NBN, complementing the value of the resources we produce with the knowledge we possess.

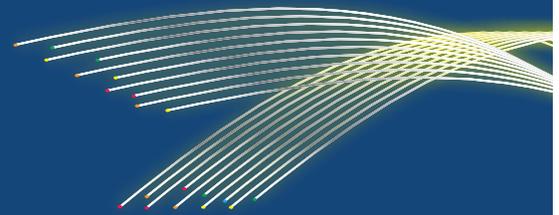
To successfully take advantage of these opportunities, the Queensland Government needs the collaboration and support of many stakeholders within Queensland, as well as others, including NBN Co and the Australian Government, to realise the full benefits of the NBN for our digital economy.



By 2020 the NBN will have helped us achieve a connected Queensland where:

- the creativity and imaginations of Queenslanders are no longer constrained by distance due to limited telecommunications and access to information
- Queenslanders can use world-class telecommunications services from any location in the state
- students of all ages across Queensland can access global learning content in any subject they choose
- Queenslanders can receive health and age care monitoring and support in the comfort of their own homes, anywhere in the state
- a number of Queensland businesses are world renowned for their innovative broadband internet-based products and services.

Awareness



Challenges

Achieving a broad degree of awareness about the NBN is a priority for the Queensland Government. This will lead to increased confidence in the NBN and greater participation in the broader digital economy.

There are three key areas where awareness and collaboration and the National Broadband Network will substantially benefit the Queensland economy:

- **NBN construction**
The NBN will mean the investment of more than \$9 billion in Queensland over the next nine years and create more than 3000 new jobs.
- **NBN in our businesses**
Use of the NBN to generate business productivity and growth over the longer term will result in ongoing economic benefit.
- **NBN in our homes**
Use of the NBN in Queensland homes will contribute to improved education, lifestyle and choice.

To maximise the economic benefit of the NBN, opportunities to increase awareness and demonstrate the potential business uses are required.

Key opportunities

In conjunction with local government, develop a collaborative stakeholder awareness program to engage communities in the use of the NBN.

1. Work with the private sector to develop a digital exhibition and experience centre in Brisbane, showcasing applications and services offered over the NBN to build business and public awareness of NBN.
2. Engage leading digital experts to promote learning and sharing of broadband and digital economy expertise.
3. Foster the identification and development of opportunities for new digital services and new business models to make the most of the NBN.

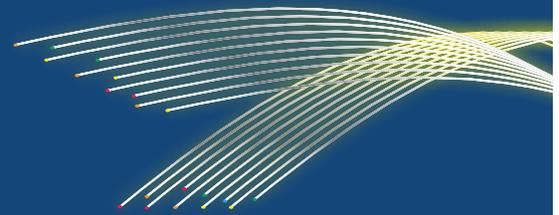
The Queensland Government has funded the Australian Information Industry Association to develop a toolkit for Queensland businesses to assist them to transition to the digital economy. The Queensland Government has also collaborated with the local information and communication technology (ICT) industry to raise awareness of the job and business opportunities the NBN may provide. The Queensland Government will continue to work with these ICT industry groups to support the development of digital economy plans in regional Queensland.



Smart Businesses in the Digital Economy

The Queensland Government has worked with the ICT industry on the Smart Businesses in the Digital Economy program, creating awareness of regional and business opportunities arising from greater participation in the digital economy enabled by the NBN. A series of workshops was held in eight regional centres across the state during 2011. Feedback from local government, business and community leaders in each region was positive, highlighting the importance of education and awareness building.

Collaboration



Challenges

The Queensland Government will work with NBN Co and its construction partners to identify the skills needed to ensure Queensland jobs are created, maintained and expanded during the NBN implementation and beyond.

We will expedite the roll out of the NBN across Queensland by coordinating necessary state planning mechanisms to support any federal legislation.

We will work collaboratively with the Australian Government to address gaps in fibre backhaul in regional locations, and with NBN Co, local governments and regional development groups to facilitate and extend the roll out of the NBN in Queensland.

The Queensland Government owned electricity utility, ENERGEX, will also work collaboratively with NBN Co to assess synergies during the roll out and operation of the NBN and electrical networks in new estates to improve energy management.



Key opportunities

In conjunction with local government, develop a collaborative stakeholder awareness program to engage communities in the use of the NBN.

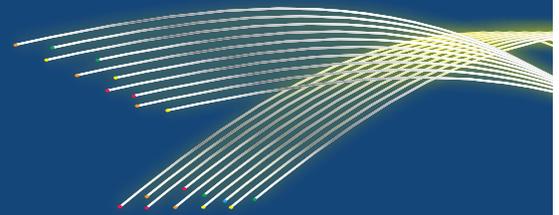
1. Maximise opportunities for Queensland industry and local businesses in building the NBN by engaging with industry stakeholders and specialists such as the Industry Capability Network.
2. Foster an industry development program to promote strategies for the adoption of broadband-enabled applications and technologies by Queensland businesses.
3. Investigate a staged approach to establishing regional and remote digital test beds and a digital homestead display centre in collaboration with the CSIRO.
4. Support the roll out of the NBN across Queensland by coordinating necessary state planning mechanisms to support any Australian Government legislation.
5. Investigate the use of co-investment to extend the reach of fibre and wireless connectivity of the NBN in Queensland and stimulate the development of next-generation broadband applications.
6. Work collaboratively with the Australian Government to address gaps in fibre backhaul in regional locations.
7. ENERGEX and NBN Co to assess synergies during the roll out and operation of the NBN and electrical networks in greenfields to improve energy management.
8. Work with agencies leading Closing the Gap (a commitment by all Australian governments to improve the lives of Indigenous Australians) initiatives in Queensland to identify their NBN needs and the needs of their communities.

Digital homestead – Far North Queensland cattle station

The CSIRO and the Queensland Government will investigate the development of a digital homestead at the CSIRO Lansdown Research Station outside Townsville.

The homestead could be a test site for NBN-delivered farm management tools such as telediagnosis for assisted crop quality, pest detection and animal health, together with planning tools for pest and weed control.

Digital literacy



Challenges

Digital literacy is the ability to use digital technology to locate, evaluate, use and create information. Broadband will have a significant impact on the future delivery of education and e-learning by improving access to digital learning resources, encouraging communication among schools, teachers and pupils, promoting professional education for teachers, and linking local, regional and national databases for administrative and supervision purposes.

Enhanced digital literacy is needed at all levels in the community including:

- general skills for citizens to actively engage in the digital economy including the need for continuous learning
- work skills for use in an employee's work life to improve productivity and businesses competitiveness
- specialist skills for ICT researchers and workers to develop and support new business and consumer applications and services.

The NBN also enables learning from home with much of the same facilities as at school with the potential for access to educators from anywhere.

The NBN will enhance the capacity of our businesses to conduct their daily business activities across the nation and globe seamlessly, provided they are appropriately skilled.

The Queensland Government currently provides live broadcasts and on-demand educational and professional development programs and student learning across the state through OneChannel. This service features web and video conferencing, podcasts, internet telephony, chats with experts, blogs, wikis and forums. It draws on contemporary learning theories and technologies that impact on current business and learning practices.

Queensland tertiary and TAFE sectors also provide courses in on-campus and online modes.

The Queensland Government continues to invest in high performance computing capacity and to develop and deliver e-research services.



e-learning

To date the Department of Education and Training e-learning programs have generally been built so they are suitable for broadband speed constrained recipients. With the advent of the NBN, they will now be able to develop new programs with high-quality video content, and explore opportunities for hubs of excellence to bring new learning experiences to students across Queensland.

Key opportunities

1. Enhance the digital literacy competencies of educators, students and parents by exploring a digital literacy program including online training materials.
2. Promote the use of the NBN for learning and connecting educators, students, parents and content specialists.
3. Explore new e-learning programs and capability using video content to enhance the learning experience of students.
4. Provide capacity for vocational education and training students to use the NBN to develop knowledge and skills.
5. Develop broadband and digital economy labour supply initiatives.
6. Support the delivery of digital economy skill development programs to businesses.

Emergency management

Challenges

The recent flood disaster across Queensland brought the benefits of digital communications into sharp focus. Social networking sites, live media coverage, blogs and web pages have all been used to keep Queenslanders:

- in touch with their loved ones and friends
- informed of developments during the disaster, as well as the efforts taken to get Queensland back on its feet and help focus appropriate responses for assistance.

The Queensland Government is working with NBN Co to identify opportunities to align NBN infrastructure plans as part of the disaster reconstruction effort. As part of this effort, Grantham in the Lockyer Valley will be an early recipient of the NBN.

In addition the ubiquity of the NBN (that is, connected to every home and business) could allow electronic meter sensors and the electricity networks to be linked at multiple locations, creating opportunities for better home safety as well as energy efficiency and improved energy management.

Key opportunities

1. Work with NBN Co to identify opportunities to align efforts to establish infrastructure as part of the disaster reconstruction effort.
2. Work with local governments, NBN Co and the Australian Government to increase Queensland NBN take up and usage rates.
3. Explore opportunities for a public safety collaboration portal to connect people to vital public safety and disaster information using the network capacity of the NBN.
4. Explore using the multimedia capacity of social networking sites to keep the public informed in times of emergency.
5. Examine opportunities for digital services centre to be established across Queensland.
6. Investigate a state-wide government wireless network to improve the operations of the emergency service organisations in Queensland.



Electricity distribution management

The NBN is providing the opportunity for ENERGEX and NBN Co to explore opportunities to more effectively manage electricity distribution. The use of the NBN for widespread sensing and monitoring of the electricity network allows a 'smart network' to be developed providing more customer choices and energy efficiencies.

Service delivery

Challenges

The challenge to deliver health, education, legal, financial and other services to regional areas that are on par with services available in cities has traditionally been addressed by encouraging specialists in these areas to locate to the regions. The NBN will support greater service parity by enabling expertise in these services to be delivered from anywhere in the state or the world.

In addition the attractiveness of regional Queensland will increase as government and business are able to deliver high quality services over the NBN.

Many sufferers of chronic ailments, like diabetes and hypertension, prefer to have their condition monitored from the comfort of their own home rather than needing regular visits to doctors or hospital stays.

The NBN, with its connection to every household, even creates the opportunity to provide home health and age care to the 50 per cent of citizens over the age of 60 who currently do not have an internet connection.

Key opportunities

1. Pilot home health monitoring in Townsville over the NBN, to reduce the need for patients to travel to or be accommodated in clinics.
2. Explore opportunities to trial the application of assistive technology to support the disability and community services sector in Queensland.
3. Explore home age care monitoring to support seniors in their own homes as an alternative to attending acute care facilities.
4. Expand the range of health and education services to rural and remote school communities by exploring new digital knowledge products and knowledge exchange.
5. With the private sector, examine opportunities for establishing a government home services centre to develop and market test new products and business models to provide services to citizens in their own homes using the NBN.
6. Enhance the business planning frameworks of Queensland Government agencies by developing digital action plans that identify opportunities for using the NBN for government service delivery.
7. Develop a 'carbon accumulation through ecosystem recovery' program to use the NBN to provide information to landholders on the carbon potential of regrowth vegetation and best practice land management.
8. Explore opportunities for government and other employees to telework from home or smart/telework centres using the NBN to reduce emissions caused by commuting and to offer more flexible working arrangements.
9. Explore opportunities for an online portal for Queensland wetland information for the long-term conservation and management of wetlands with a focus on the Great Barrier Reef catchment.



Townsville home health pilot

In the Townsville NBN early-release site, the Queensland and Australian governments and local doctors are collaborating to pilot the home monitoring of patients with type two diabetes.

Service delivery

During the early stages of NBN deployment in Queensland, a home health pilot will be undertaken to:

- understand how patients prefer to use such a service
- develop new health care support models shifting the emphasis from clinics
- bring hospitals into patients' homes.

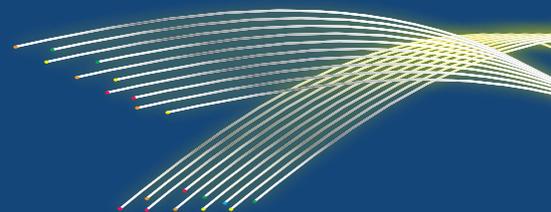
Currently in the educational sector all Queensland state school students (including students in regional areas) have access to an e-learning environment that supports digital learning. Distance education and online training is available through all TAFE institutes.

Queensland Government's Smart Service Queensland provides a coherent approach to service delivery using a range of channels. Smart Service Queensland will increasingly become the Queensland Government's interface to all its customers for both information and transactional services.



Home services development centre

To close the gap on service delivery between regional and urban Queensland, a home services development centre will be established to pilot the home delivery of government services. The facility will enable new in-home health, education, detention, energy management and other applications to be tested, and citizens' responses to be considered.



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