

Smart and Connected Living: Brisbane and South East Queensland

Smart, Connected Communities Global Conference, Incheon.

September 2009



Dedicated to a better Brisbane

National Broadband Network

- Australian Government announced the NBN project in April 2009
- Fibre-to-the-premises to 90% of homes and businesses, wireless to remaining 10% of premises
- Speeds of 100Mbps and beyond
- Wholesale-only, open access network



National Broadband Network

- The Australian Government has established a company that will invest up to \$43 billion to build and operate the network
- Construction will take 8 years to complete
- Seeking private investment of up to 49%
- Government will ultimately sell its stake
- First rollout in Tasmania (given current poor level of broadband services)
- Further information: www.dbcde.gov.au



brisbane

australia's new world city

- Brisbane is the capital city of Queensland, Australia.
- The Central Business District is located on the Brisbane River - 15 kilometres from a major sea and airport.
- The city, home to over 1 million people, is recognised as one of the world's most desirable destinations for business, leisure and lifestyle.



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The goal: a connected city vision

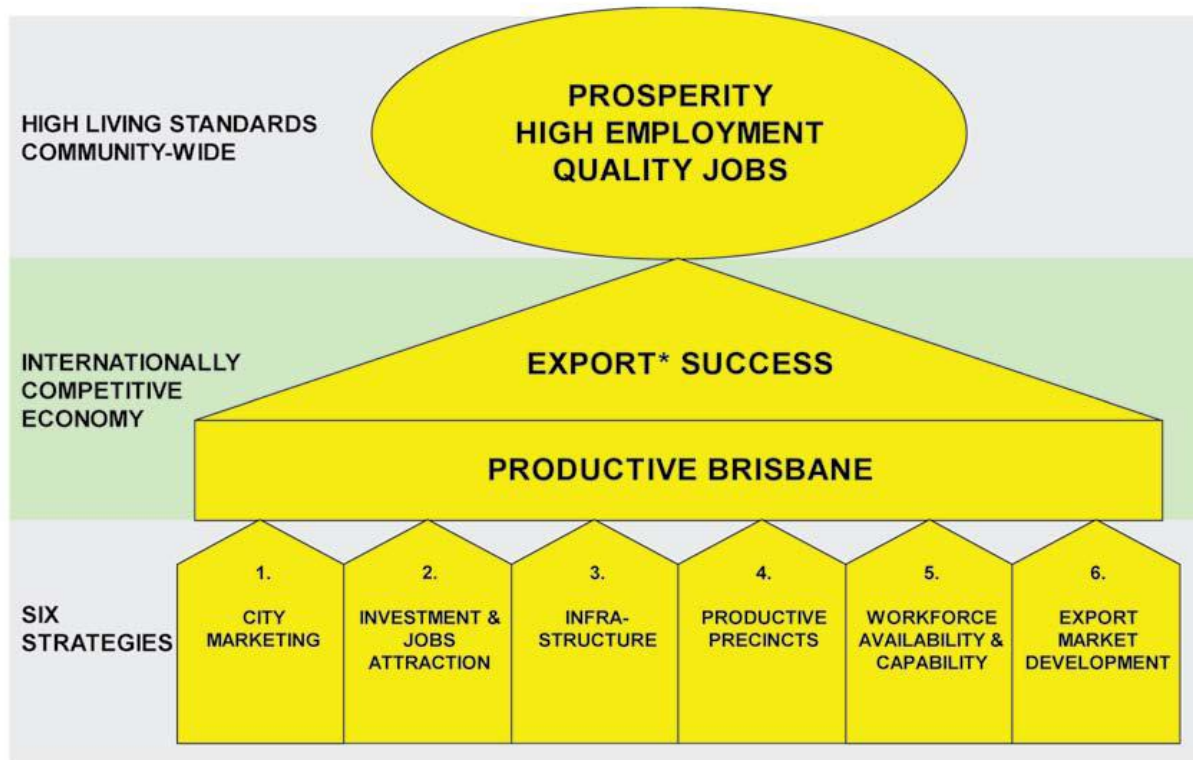
“cities are also venues where rapid, dramatic change is not just possible but expected. Thus they present real opportunities for increasing energy efficiency, reducing disparities in development and improving living conditions in general. ...History demonstrates that integrated urban policy can be a solid path towards development. ”

Ban Ki-moon, Secretary General, United Nations in
Harmonious Cities: State of the World's Cities 2008/09
(UN Habitat)



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Broadband & economic development



Ultra high speed broadband enhances all aspects of the economy

*Out of region exports

Source: Brisbane Economic Development Plan, 2006-2011



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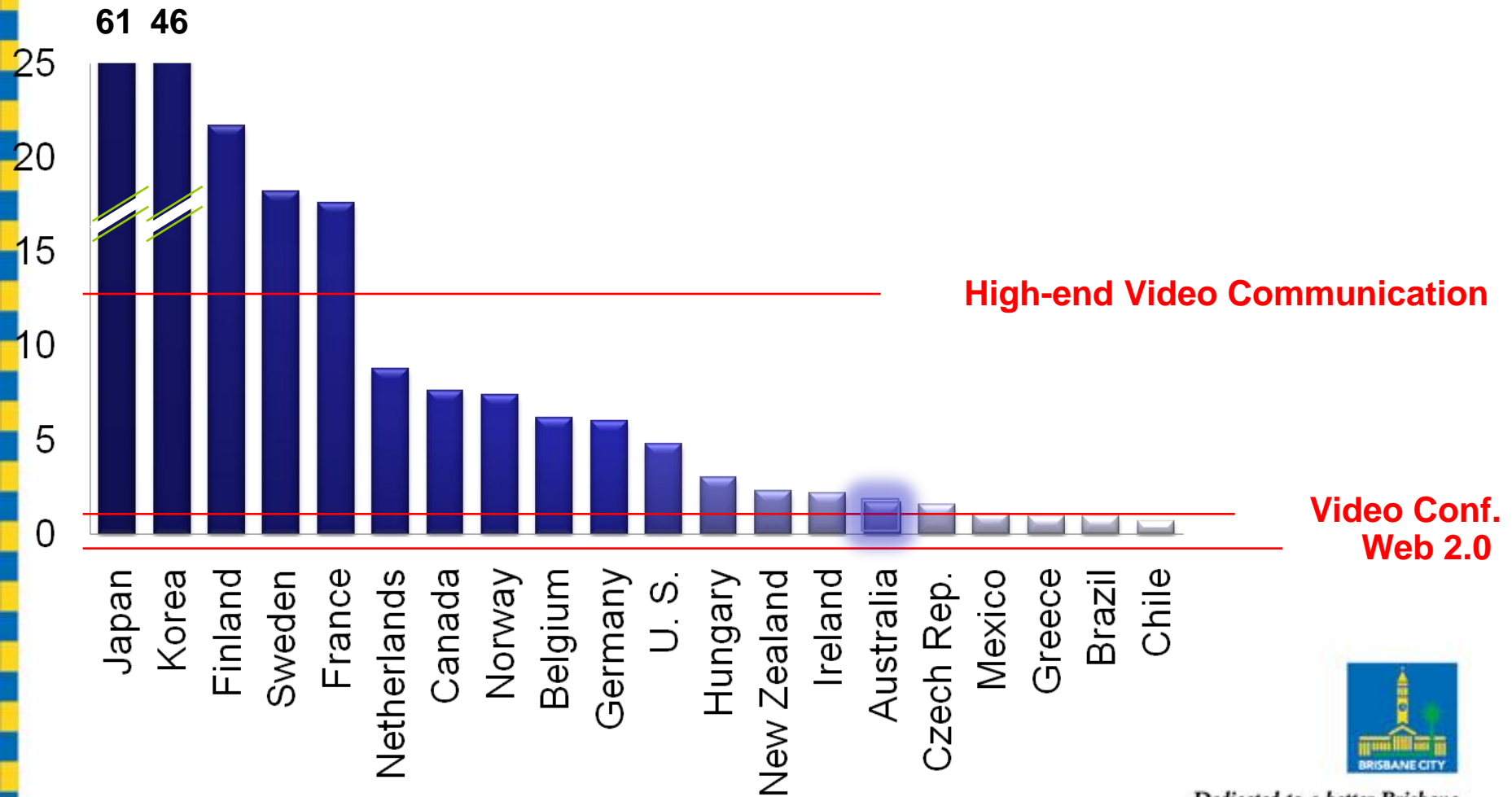
Economic, social and environmental benefits

- Foster development of high productivity, knowledge-based industries
- Competitive advantage for business
- Streamline delivery of services (e.g. health and education)
- Reduced traffic and congestion resulting in lower CO₂ emissions
- Possibility for real-time monitoring and enhanced management of electricity and water use



Queensland / Brisbane on the world stage!

Average Speed, Mbps



**Video Conf.
Web 2.0**

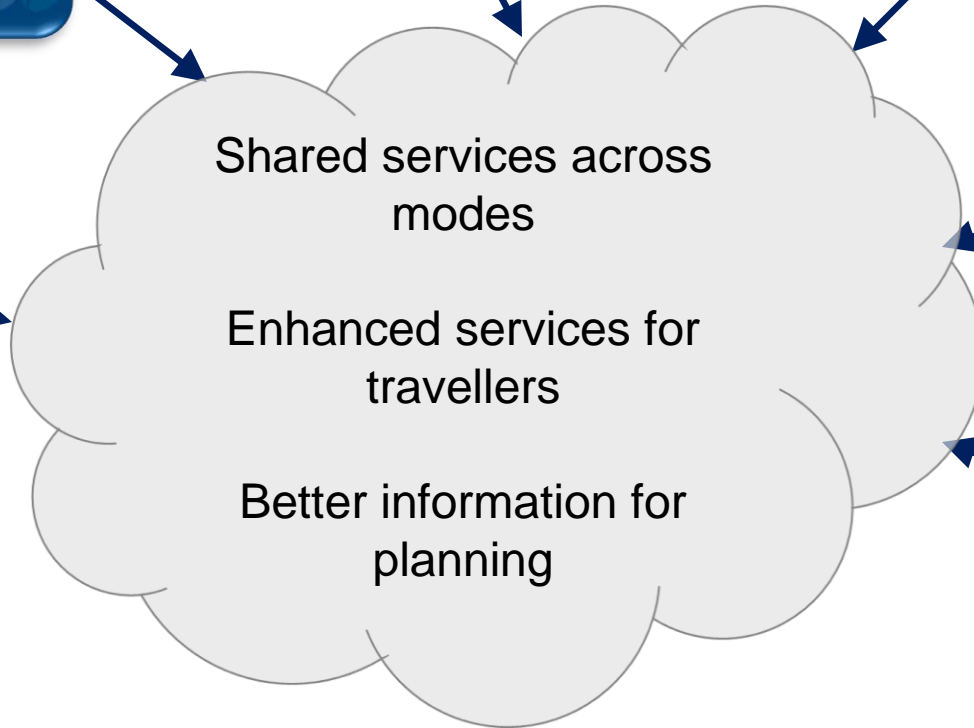


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Connected Transport – Traffic Congestion

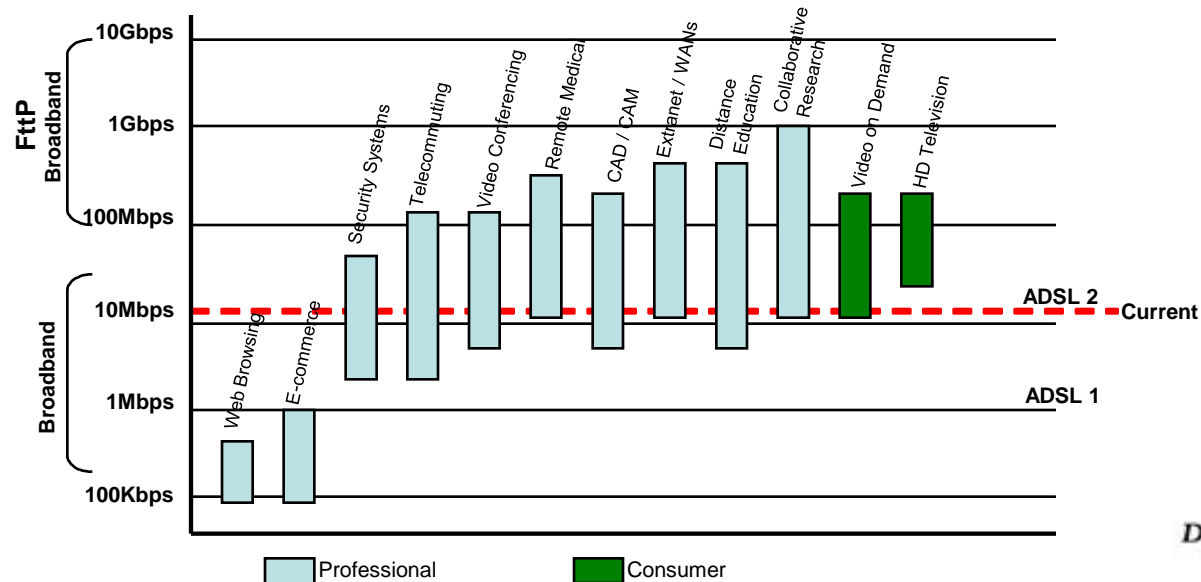


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Content and application opportunities

- Voice telephone
- Video telephone
- Internet browsing
- E-mail
- Pay-TV
- Video on demand
- Online gaming
- Interactive online services
- File transfer
- Telecommuting
- Corporate data networking



Potential fibre backbone network

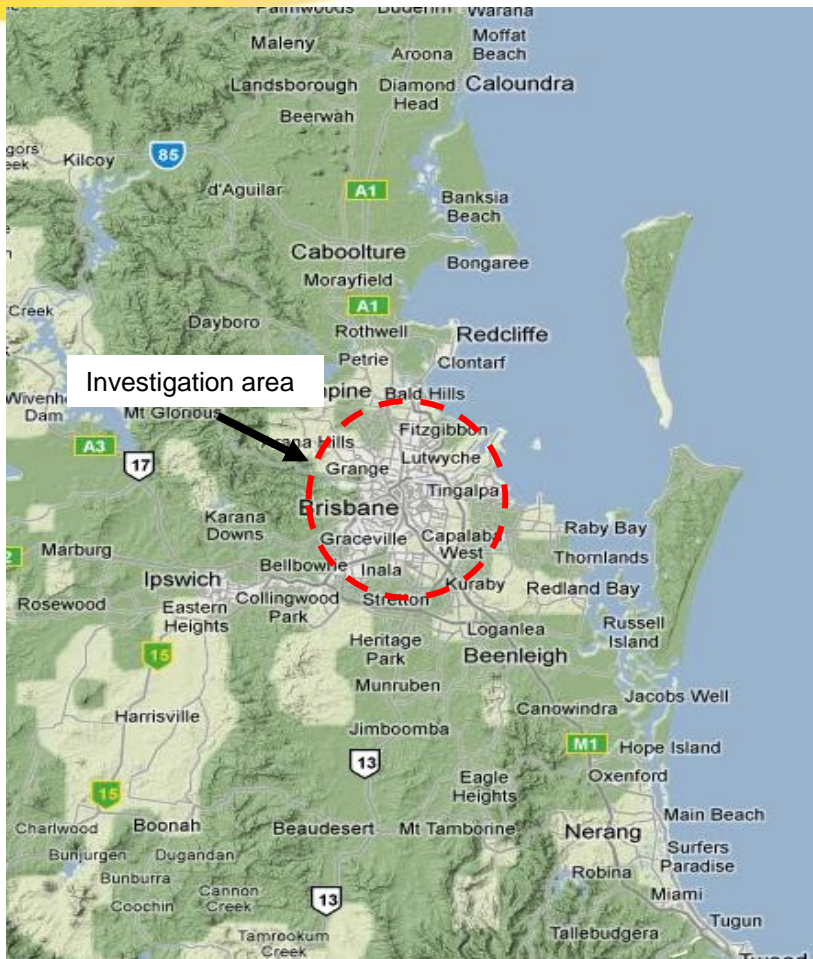


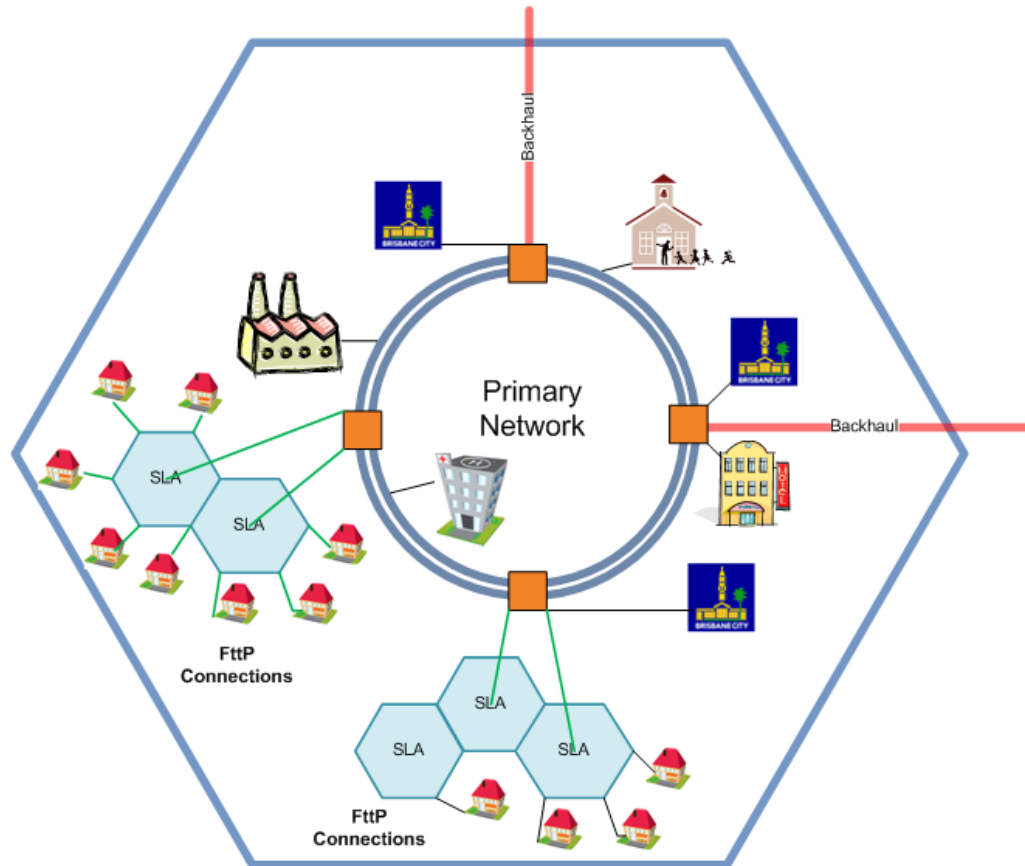
Figure 1. Map of South East Queensland



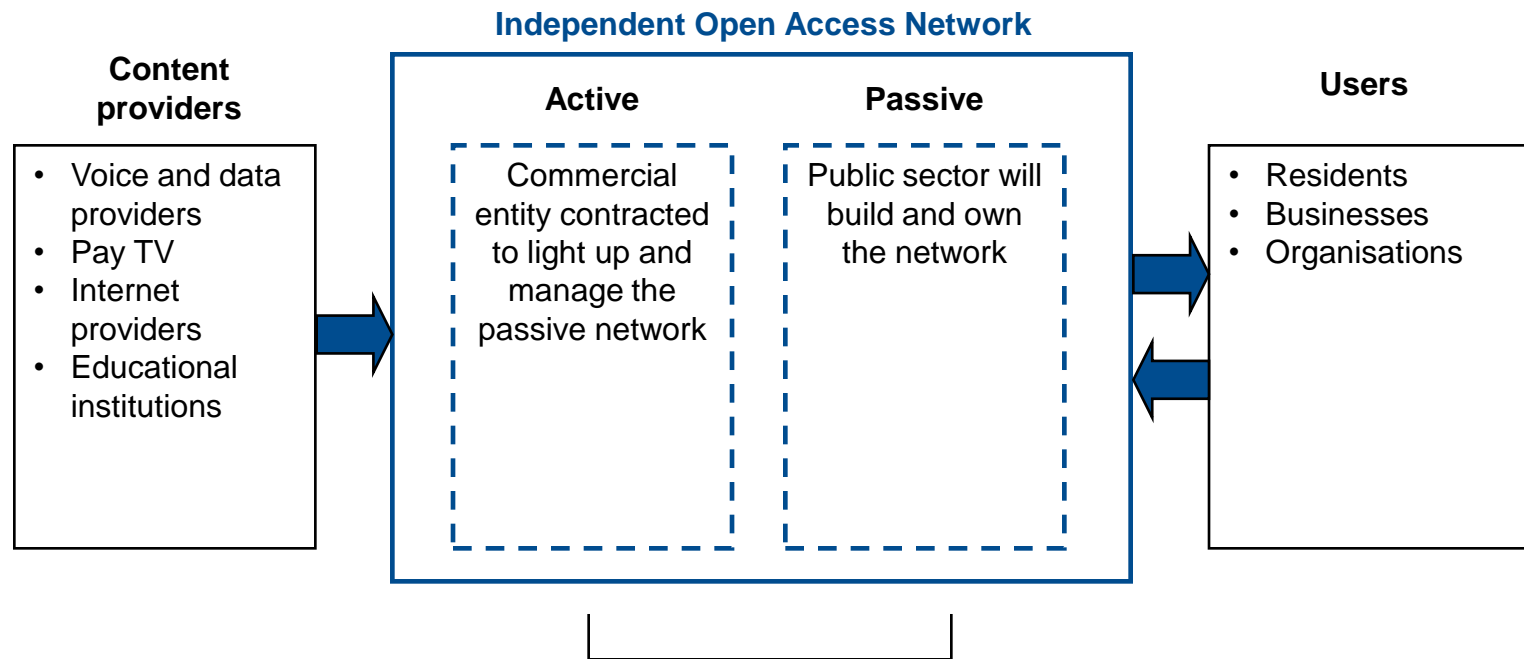
Primary: — (Existing) — (Proposed) Secondary: —

Figure 2. Map of potential backbone for FTTP network
Source: BCC FTTP business case (2008)

Primary and secondary network: concept diagram



Open access delivery model



Contractual relationship
(e.g. passive owner could seek tenders for active operator/s)



Alternate models

- Council considered alternate models
 - Deploying the network across the city
 - Only selecting the most profitable suburbs
 - Giving the network operator exclusivity
- The staged primary/secondary network model was considered optimal as it reduced risk by:
 - staging costs over time
 - allowing increased private sector involvement as each stage progressed



Risks of building network

- Unable to access required sites for installation of network equipment
- Public opposition to construction of the network and its visual impact (particularly for overhead cables)
- Take-up of network services is lower than anticipated or price has to be lowered
- Finding a private sector partner willing to operate the network on a wholesale-only open access basis



Opportunities for network construction

- Single Council for entire City
- May be able to lower construction cost by using other Council infrastructure such as water and sewer pipes
- Take-up may be higher than anticipated, leading to higher revenue
- Council could use the network for its own business needs



Brisbane City Council and ETRI

- Brisbane City Council and the Electronic and Telecommunications Research Institute (ETRI) from Daejeon signed a memorandum of understanding on 9 October 2008
- Focussed on sharing information on broadband networks and technology
- ETRI visited Brisbane in 2008 and 2009



Recent BCC activities

BCC fibre to the premises business case	December 2008
BCC Registration of interest process	March 2009
Australian Government announced 'National Broadband Network'	April 2009
Audit of BCC's fibre assets	June 2009
BCC commenced requiring ducts to be installed in new developments in Brisbane	July 2009



The Case for Smart+Connected Communities

Within 20 years, a city of 5 Mln:

City Revenues :: +\$15B

GDP Growth :: 9.5%

New Jobs :: 375,000

Energy Efficiency :: +30%



What Brisbane City Council is doing?

- Council is 'NBN ready'
 - completed asset audit
 - working with other councils on policy issues
- BCC may become a passive network owner (e.g. ducts and fibre) for the NBN in new estates in Brisbane.
- BCC has strong relationships with network specialists including ETRI.
 - BCC welcomed ETRI delegations in 2008 and 2009.

