




**Qitcom – Innovate, Connect, Transform**

**Australian National Broadband Network**

**Paul Budde**  
**Industry Analyst and Consultant**

# Overview

---

- 
- A vertical stack of four blue, downward-pointing arrowheads, each containing a white letter (A, B, C, D) from top to bottom. These arrows point to the corresponding list items on the right.
- **Global developments**
  - **Australia's National Broadband Network**
  - **The NBN and trans-sector services**
  - **Investment opportunities**

# Introducing myself

**International consultant:**

Broadband  
Smart Grids  
Trans-sector

**BuddeComm:**

CEO

**Smart Grid Australia:**

Founder and Executive Director

**Global Smart Grid Federation:**

Founding Board Member

**UN:**

Special advisor to the ITU/UNESCO Broadband Commission for Digital Development

**Clients:**

International investment houses  
Government  
Industry



Australian Government



[newzealand.govt.nz](http://newzealand.govt.nz)



## Global developments - Government

---

- The internet has changed the telcoms business environment and the vertical integrated model is under pressure
- Telcos slow to adjust to new digital media competition



- x40 Governments see broadband as essential infrastructure (ITU)
- Acknowledged that fast broadband enables e-health, e-learning, smart grids, smart transport, public safety, digital economy and digital media

**GOVERNMENT LEADERSHIP IS IMPERATIVE FOR TRANS-SECTOR TRANSFORMATION**

# Global Developments – Broadband social and economic benefits

- Positive correlation between broadband penetration and **GDP growth** in 120 countries
  - 1980-2006: GDP growth of 1.2% for each 10% of broadband penetration
- Positive correlation between broadband penetration and **labour productivity growth rate**

Broadband penetration	Labour productivity growth rate
1%	0.02%
5%	0.07%

- EU: Broadband job growth 2006-2015 projected at 2,112,000 new jobs
- USA: 40 million households not using broadband has a negative revenue impact of US\$55 billion per year

# Global Developments – Facilitating a Digital Economy

---

- The digital economy needs high speed infrastructure on a utilities basis
- NBN infrastructure builder does not necessarily reap the greatest reward

## **INFRASTRUCTURE NOT A TELECOMS ISSUE**

- Conflict of interest between a vertically integrated telco and the need for low cost infrastructure for the digital economy



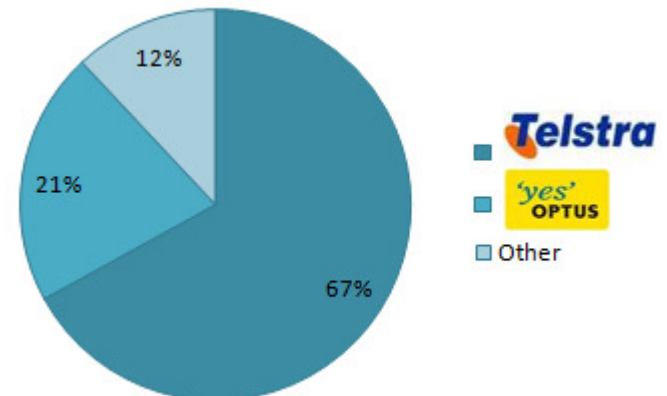
# Lead-up to the NBN in Australia

- Telstra privatisation (regional and competition issues)
- Telstra's initial FttH proposal – 50% coverage and \$85 for 512kb/s
- New Labour government elected in 2007
- Structural separation and NBN Legislation passed in 2011

## Industry profile:

- 200 competitors
- Telstra largest vertical integrated operator:  
fixed + mobile + broadband + Pay TV
- Telstra has 90% of all telco profit

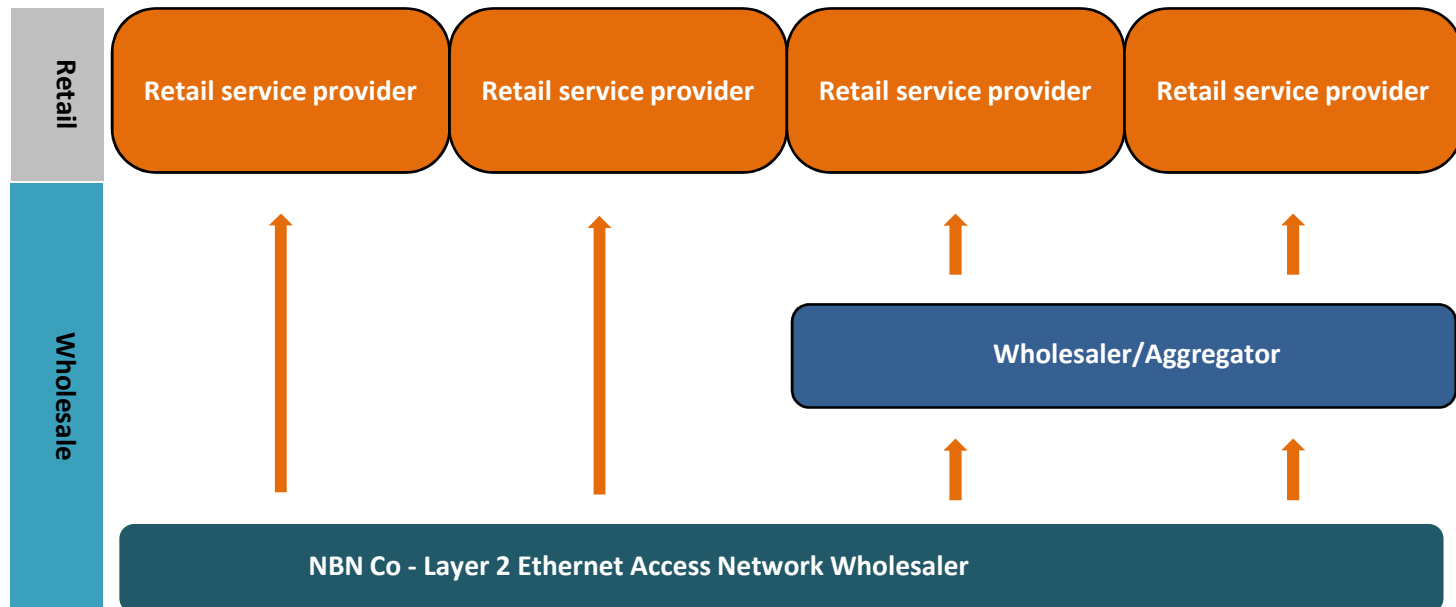
Total market share by revenue



# The Australian solution: Step 1 - NBN Co



- NBN Co established in 2009
- AU\$36 billion infrastructure plan released in December 2010
- Wholesale only with forecast IRR 7% per annum
- NBN Co is the owner of infrastructure



# NBN enables a new service and industry structure

## *Old world*

Fixed-line voice and internet

Legacy PSTN fixed-line network

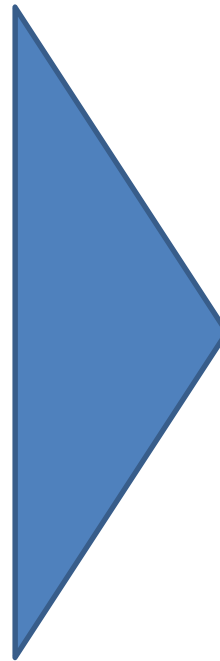
Dominant retailer and wholesaler

Digital divide

Basic telecommunications services

Pricing – high compared to overseas with legacy constructs based on geography and usage

Success factors – Network / infrastructure ownership



## *New world*

National high-speed broadband, voice and video (IPTV / VoD / Media)

Future proofed Fibre

Open up competition

Digital ubiquity

Next generation of smart / social / productivity networks & applications

Pricing – dramatic decrease driven by VoIP; affordable high bandwidth broadband for all. New models (Triple-play, content & advertising, energy, health, education & SaaS)

Success factors – Customer relationship, services, innovation & applications

# NBN Technologies and coverage

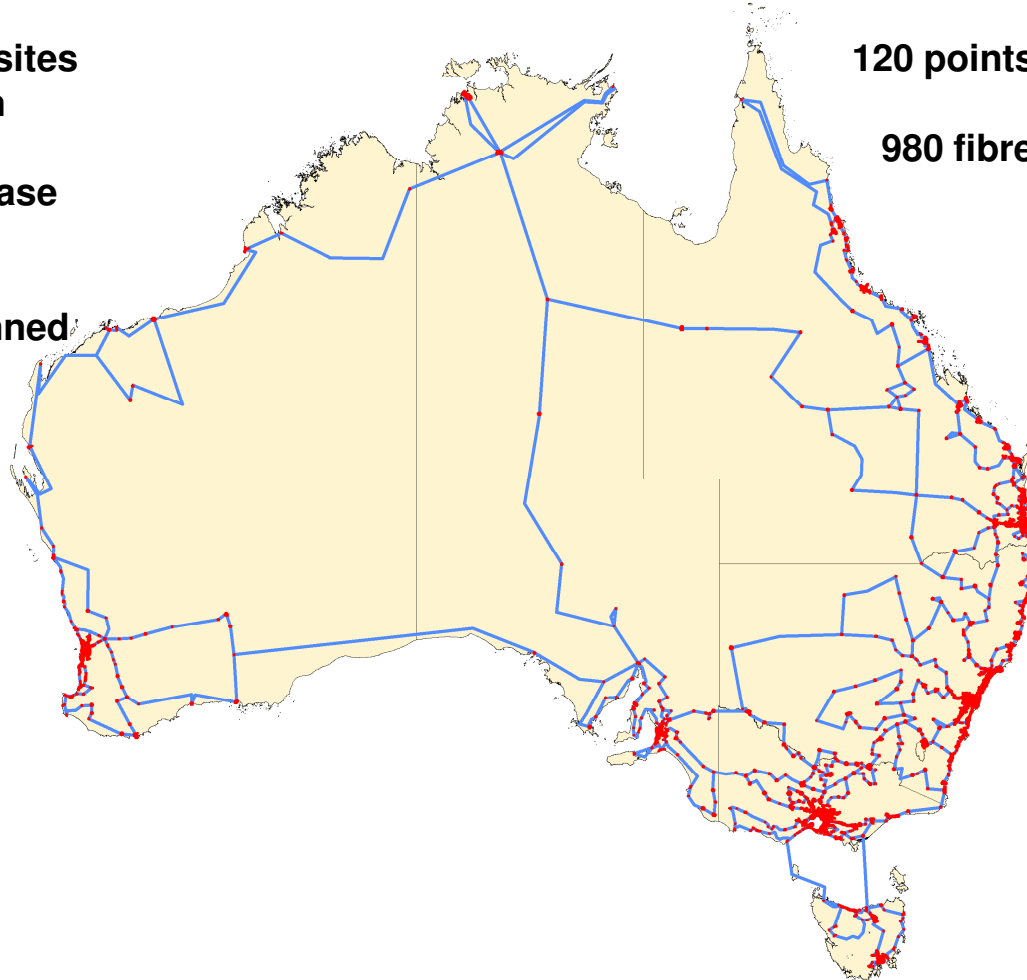
- x5 First Release sites under construction

- x19 Second Release sites announced

- x30 projects planned for 2011

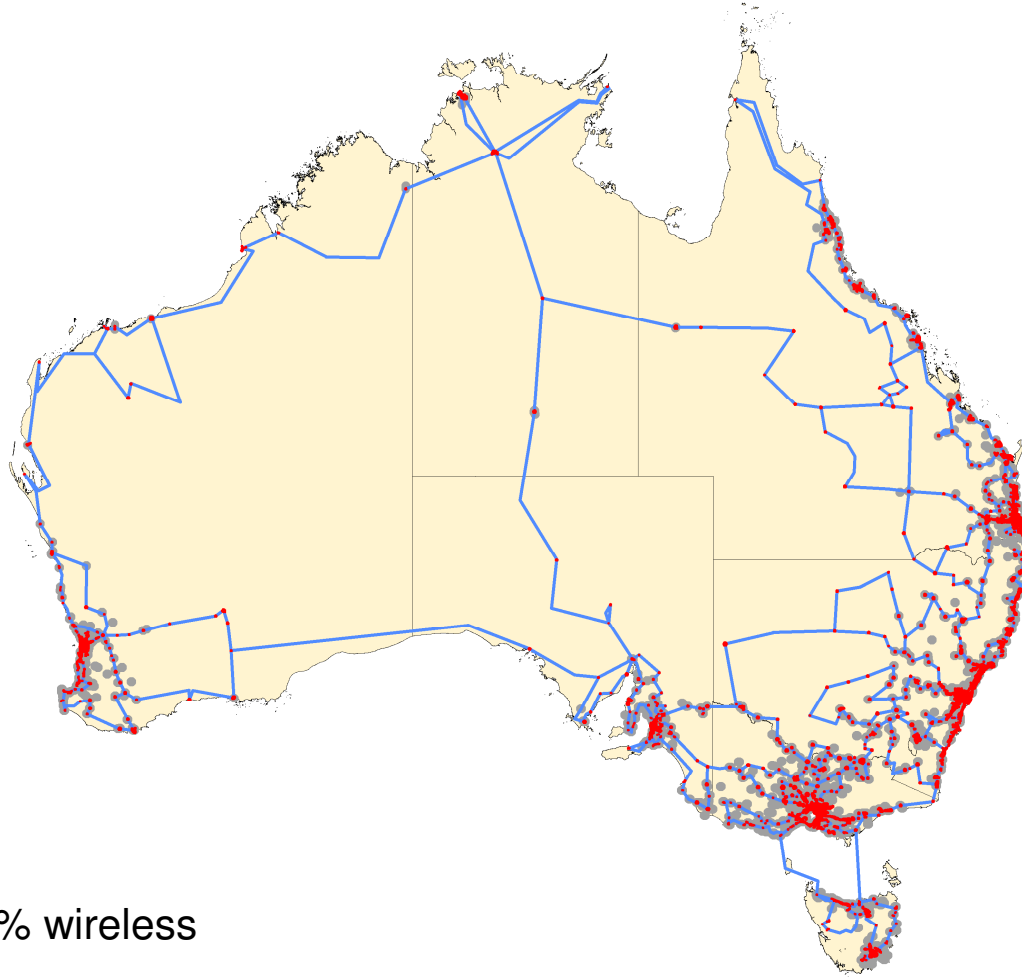
120 points of interconnect

980 fibre serving areas



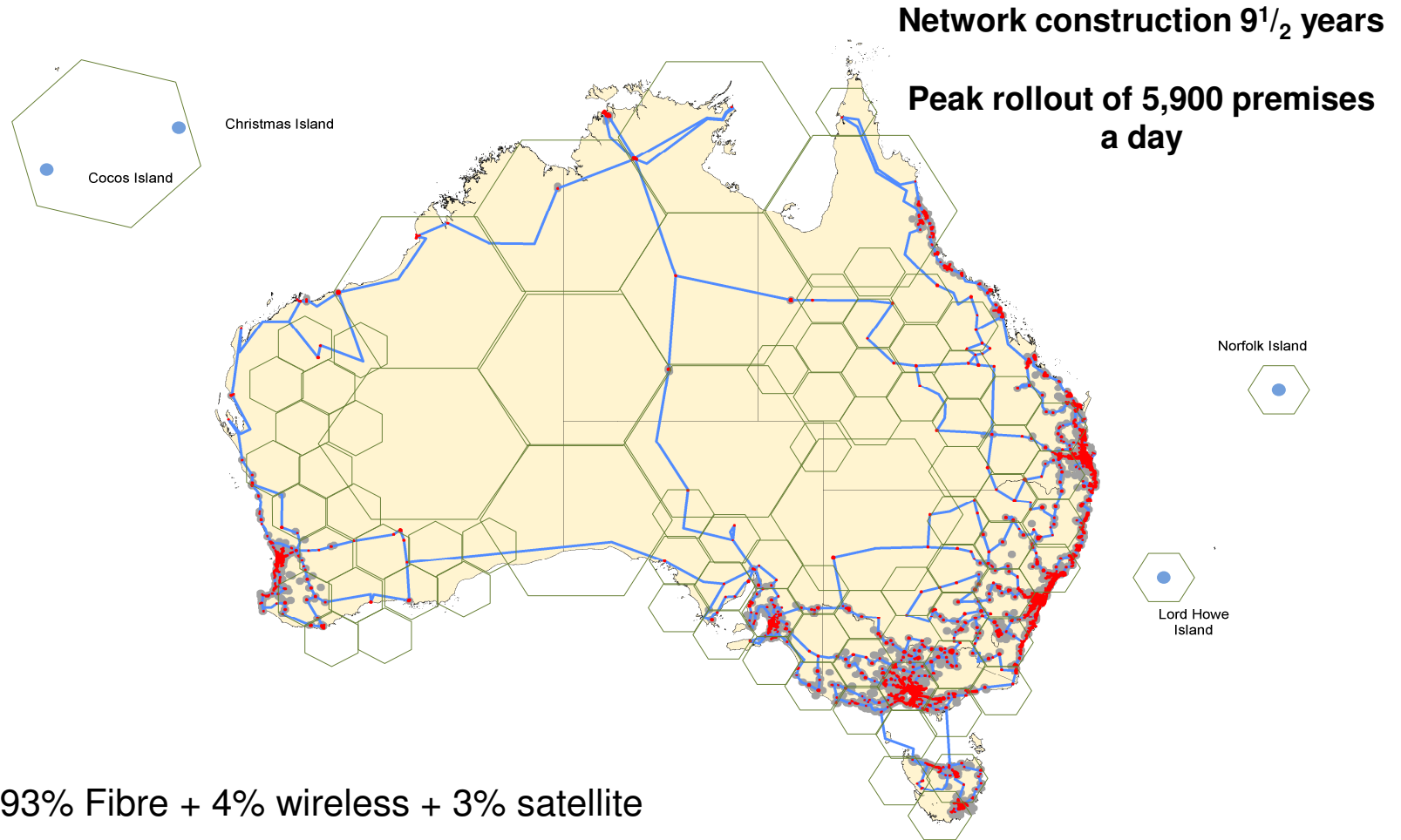
93% Fibre

# NBN Technologies and coverage



93% Fibre + 4% wireless

# NBN Technologies and coverage



## Premises passed (and active)

Incremental year-on-year: Years 1-3 of 30 year plan

	FTTP Brownfields	FTTP Greenfields Build	FTTP Greenfields BOT	Satellite First Release	Wireless	Total
June 2011	13,000 (-)	- (-)	45,000 (35,000)	165,000 (-)	- (-)	223,000 (35,000)
June 2012	132,000 <sup>9</sup> (5,000)	7,000 (5,000)	120,000 (92,000)	- (13,000)	14,000 (1,000)	273,000 (116,000)
June 2013	805,000 (255,000)	63,000 (55,000)	84,000 (64,000)	- (20,000)	269,000 (25,000)	1,122,000 (419,000)
<b>Total</b>	<b>950,000</b> <b>(260,000)</b>	<b>70,000</b> <b>(60,000)</b>	<b>249,000</b> <b>(191,000)</b>	<b>165,000</b> <b>(33,000)</b>	<b>283,000</b> <b>(26,000)</b>	<b>1,717,000</b> <b>(570,000)</b>

***13 million premises by 2021***

Note: Premises rounded to the next thousands.

- A premises is passed / covered when the shared network and service elements are installed, accepted, commissioned and ready for service which then enables an end user to order and purchase a broadband service from their choice of retail service provider

- A premise is activated when a valid service order is received to install the dedicated fibre optic cable connection to the premises, optical network termination unit and reliable power supply unit with battery backup option (for fibre premises)

## NBN Co – Funding and pricing

---

- Uniform national wholesale access price: 12/1Mbps service AU\$24 / month
- Annual revenue forecast:
  - AU\$5.8billion in FY2021
  - AU\$7.6 billion in FY2025
  - Positive operational earnings from FY2018
  - Positive net income from FY2021
  - AU\$20.8 billion total by end construction period
- Government equity requirement: AU\$27.5 billion
- NBN Co to seek funding from capital markets from FY2015

## NBN applications: Smart Grids

- Driven by Prime Minister – AU\$100 million funding
- Consortium with Energy Australia
- Blueprint for national roll out
- The first 5 pilot roll outs of the NBN are all linked to Smart Grid rollouts
- Policy attention energy: renewables, EVs, smart meters, Grid IT



## NBN applications: e-health and e-learning

---

- Healthcare needs to move towards e-health(aged care, post-surgery)
- Savings projections up to AU\$10 billion – flow on effect to telecoms
- E-identifier facilitates e-health (AU\$470 million)
- 17,000 GPs and 22,000 retirement villages
- Top down approach from schools and hospitals
- A laptop per child (AU\$1 billion investment) – taken home after school – significant traffic flows



## Conclusions and opportunities

---

- **Business models:** Structural separation  
Whole-of-infrastructure approach  
Trans-sector approach  
Applications  
Mini telcos (healthcare, media, education, energy)
- **Investments:** National broadband (utilities – construction)  
Value added infrastructure (middleware, cloud, digital economy)  
Social and economic infrastructure investments (trans-sector new revenue streams)  
Applications (social media, IP, mobility, GIS, location) – OTT  
Submarine cable (utilities)





## BuddeComm resources and contacts

---

- **BuddeComm reports – special offer**

Australia - The National Broadband Network – 2011  
(Publishing date February 2011 approx 205 pages)

Special Offer US\$750

Single User PDF Licence

Normal Price US\$995

Please order by email [sales@budde.com.au](mailto:sales@budde.com.au)

**The largest telecommunications research site on the Internet with close to 2,000  
downloadable information documents**

*For regular updates join our free email list*