

# Rural and Remote Broadband Access: Issues and Solutions in Australia

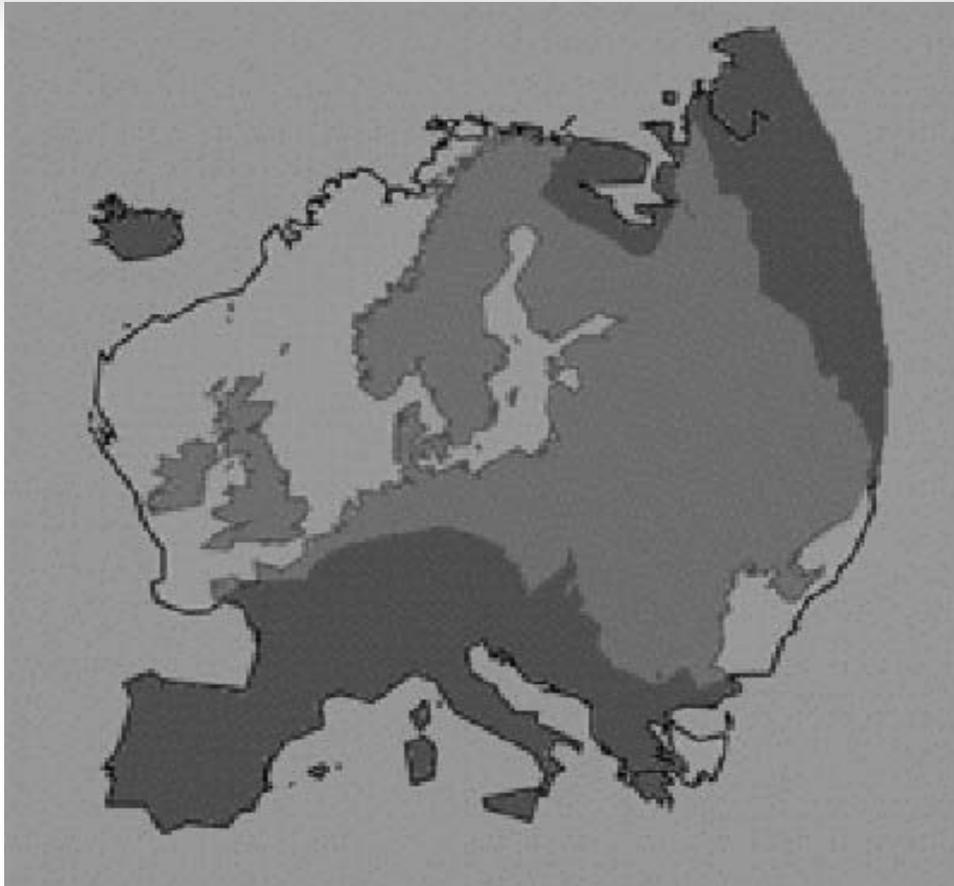
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# Overview

- Australia's geographical size and population density present an extreme set of challenges to the provision of broadband services in remote areas
- But this experience also provides valuable lessons which can be applied to other countries wanting to maximize their broadband coverage
- In particular, there is no one-size-fits-all response to issue, but with a combination of measures by carriers and targeted / market-conforming assistance from Government significant gains can be achieved

# The challenge

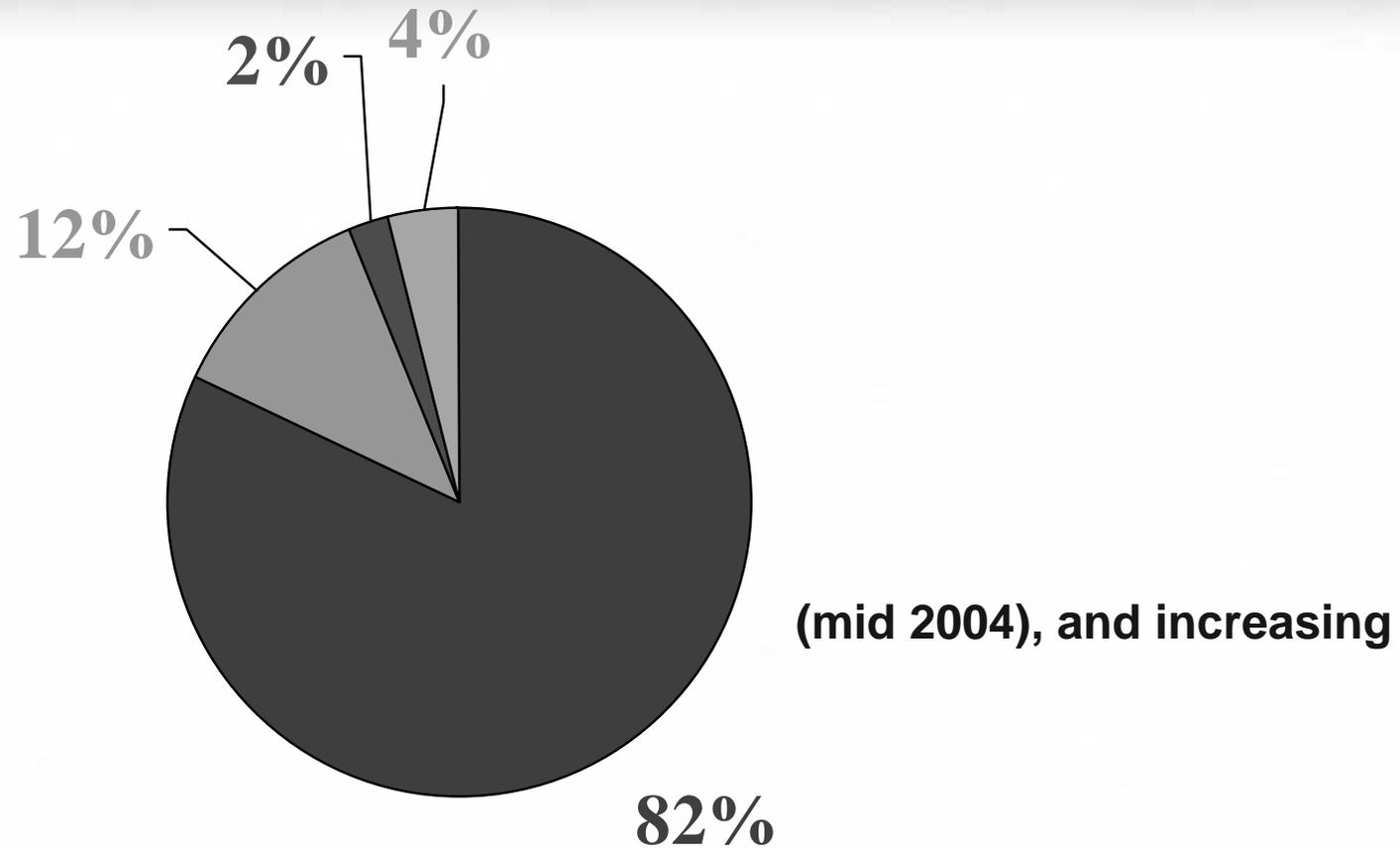


- Brisbane to Melbourne is the same distance as Lisbon to Paris
- Sydney to Perth is same distance as Madrid to Moscow
- 80% of the population lives in 5 cities

**Telstra is seeking to supply affordable broadband to 20m people spread across a landmass the size of Europe**



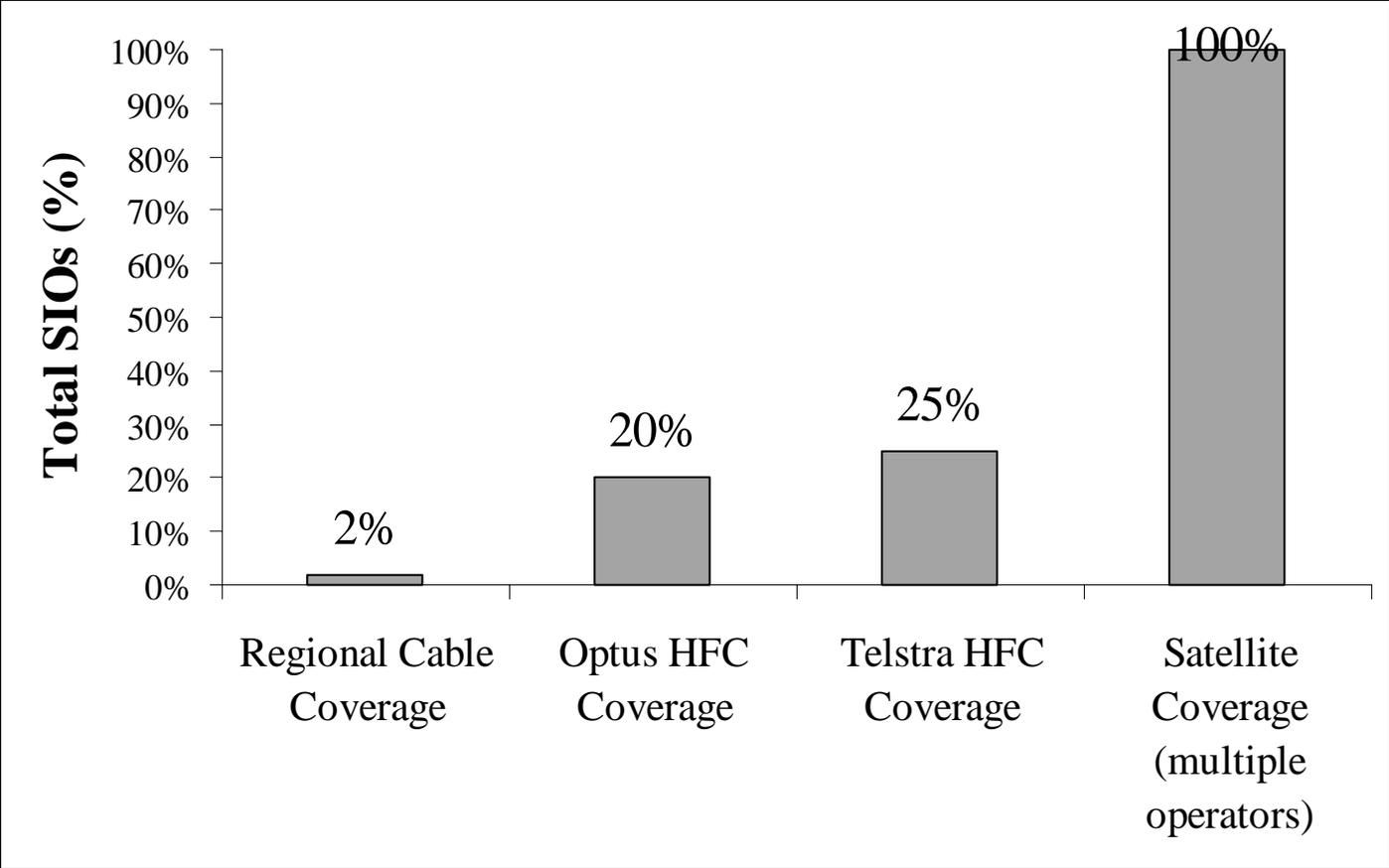
# Limits on ADSL Availability



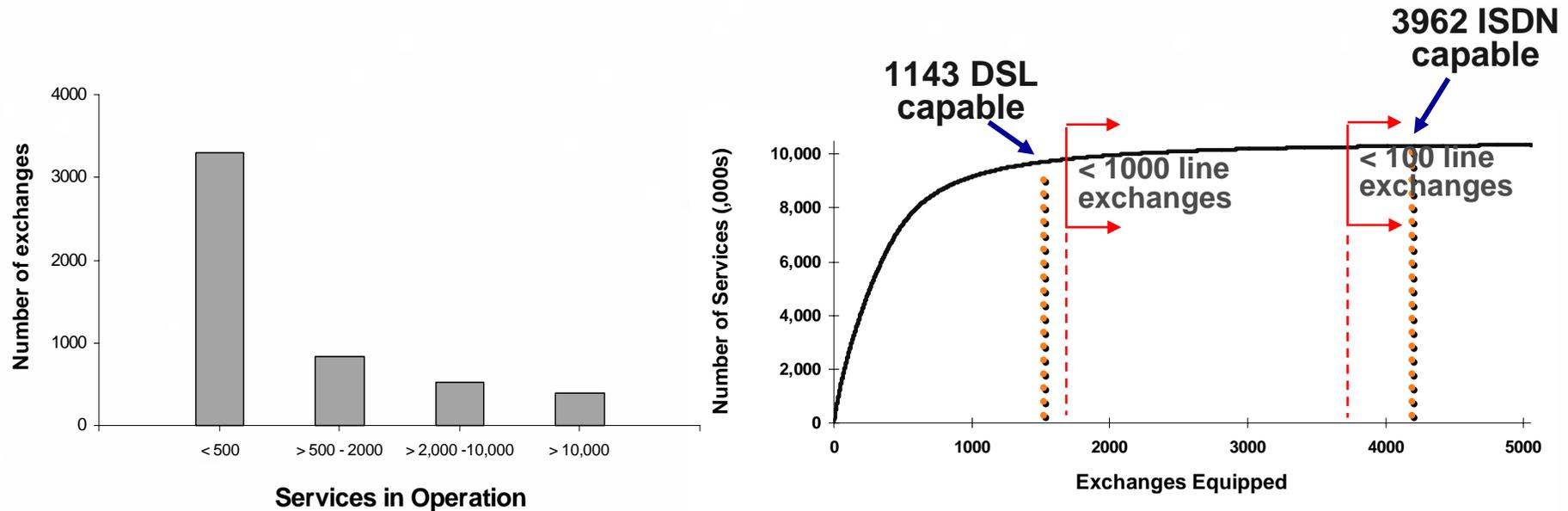
- Telephone lines able to receive ADSL Broadband
- Service from non-ADSL exchange
- Customer outside ADSL transmission limit
- Non ADSL capable CAN Electronics



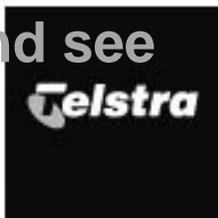
# Current broadband availability (Cable and Satellite)



# Hard to go much further: The tyranny of density



- The vast majority of Telstra's exchange service areas have less than 500 services
- The economics of servicing low density exchanges with DSL or cable are poor
- Yet rural customers demand service on equivalent terms and see alternatives to DSL/cable as poor substitutes



# So what is the solution?

- **There is no one size fits all solution**
- **Instead a combination of responses is required to maximise the opportunity for Australians in remote areas to get access to broadband at speeds and prices broadly equivalent to those in metropolitan areas:**
  - Ensuring that we have a clear picture of demand levels
  - Prioritise distance over speed
  - Adopt a multi-platform strategy
  - Work with government to identify/fill the gaps

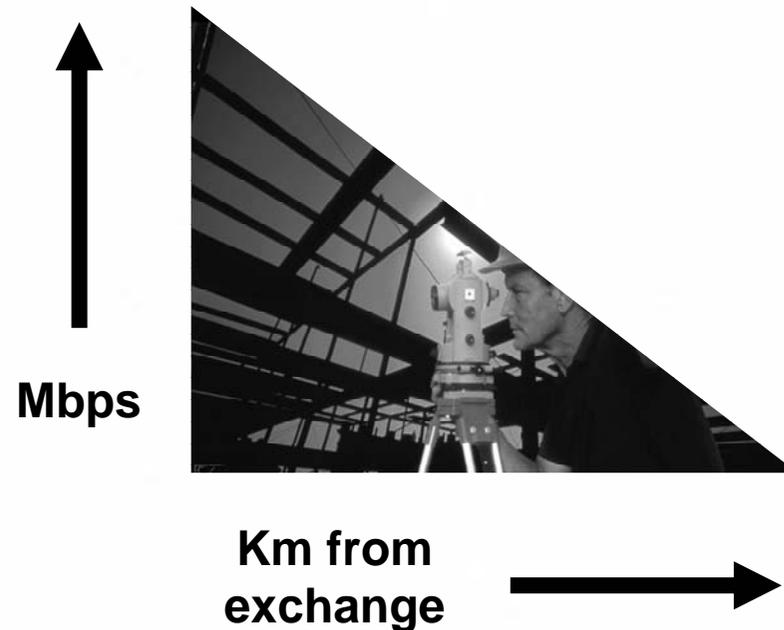
# Demand led

- Ensure further investment in exchange enablement focused on areas where demand is sufficient with ADSL demand register (pioneered by BT)
- In 12 months the register has received 45,000 expressions of interest and resulted in an additional 102 exchanges being enabled. A further 256 exchanges have been scheduled for enabling
- CAN electronics remediation is also being prioritised via this process



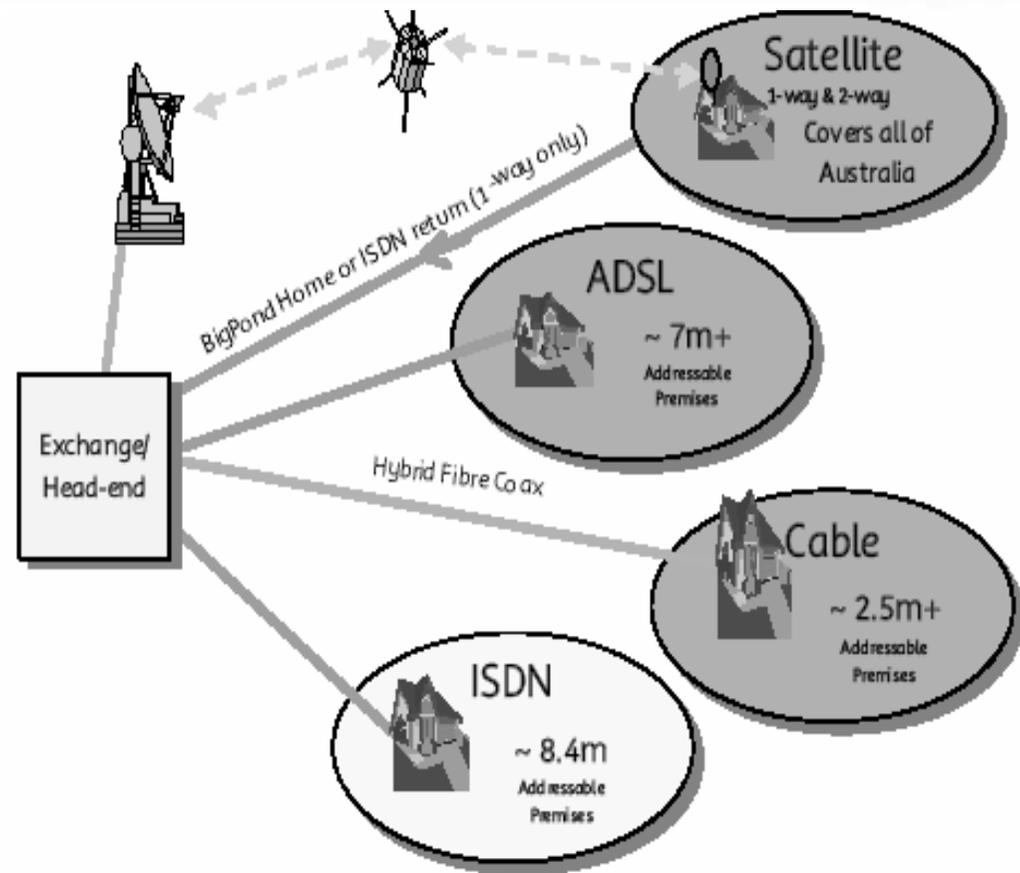
# Distance not speed

- Telstra must always seek to service the maximum number of Australians when rolling out new services
- For ADSL services this means we have invested in a network configuration that maximises distance from an exchange to ensure greatest coverage
- The challenge is that current speeds do not always match those found in high density cities
- Telstra will offer higher speeds when demand and applications are sufficient

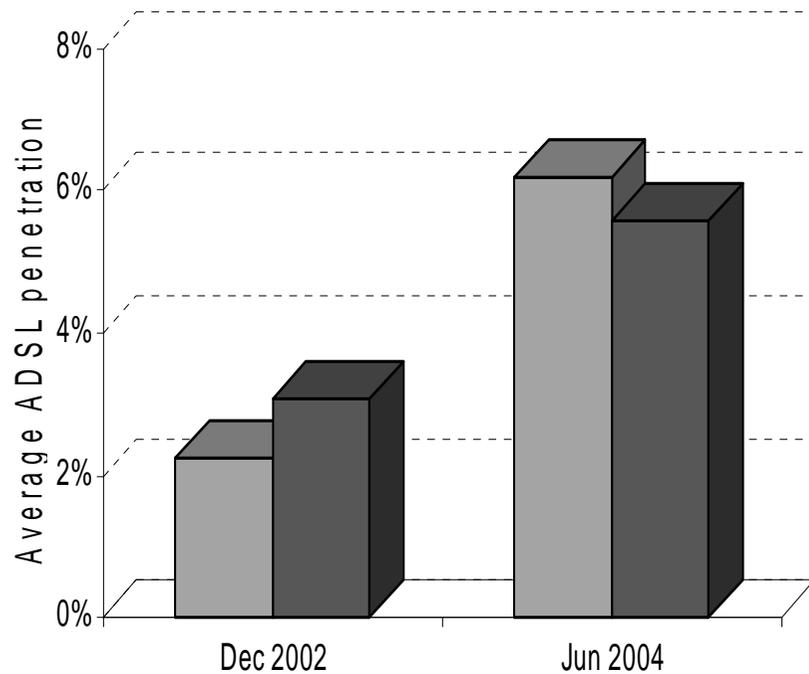


# Multi-platform

- There is no single optimal technology for supplying broadband to all Australians – different platforms are required in different contexts
- Even in the future a mix of FTTP, xDSL; cable and terrestrial wireless technologies will be required
- The key issue here is to ensure that competition policy does not undermine investment incentives in new platforms

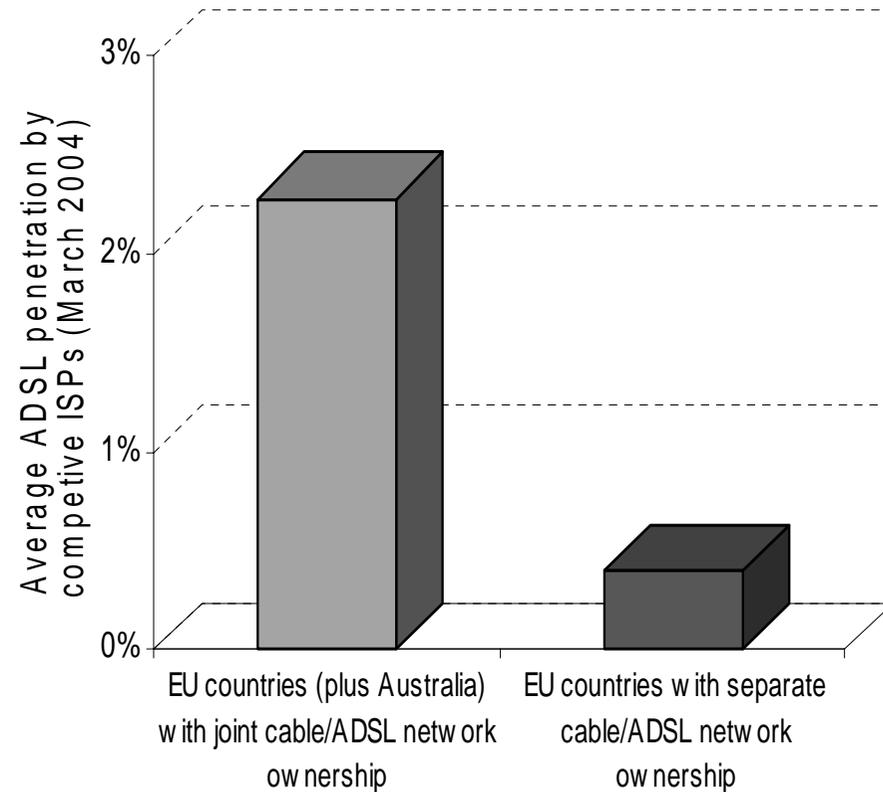


# The observed impact of multi-platform operators on coverage and competition



- OECD countries with joint cable/ADSL network ownership
- OECD countries with separate cable/ADSL network ownership

Note: Countries with less than 60,000 broadband services in 2002 excluded.  
 Data source: NECTG Analysis



Note: EC country data for March 2004. Australia data for June 2004.

Data source: NECTG Analysis.



# Work with Government to fill in the gaps

## The Higher Bandwidth Incentive Scheme (HiBIS)

### The Scheme

1. 4 year Australian government \$100m (€60m) subsidy initiative
2. Identify areas where BB is not currently available at close to city prices
3. Pay one-off subsidy (\$1,540 - \$3,300) for each eligible HiBIS customer connected
4. Individual carriers limited to 60% of the funds available

### Telstra's Response

1. Reduce the ADSL demand register thresholds for exchange enablement by between 40% and 60%
  - From 150 to 35 customers for the cheapest exchanges and from 225 to 125 for the most expensive
  - Of 256 exchanges scheduled for enabling 50 got there thanks to HiBIS
2. Reduce one- and two-way satellite packages to prices close to those in the cities



# Policy lessons

- The USO is an inappropriate policy tool for broadband
  - It is too blunt an instrument for what is a complex technological and economic problem
  - Very real risk of distorting market outcomes and wasting community resources
- Rather the HiBIS scheme provides a more appropriate model for Government intervention
  - Target the intervention to where the market is not providing
  - Use Government subsidies where possible rather than distortionary industry taxes
  - Utilise a market conforming mechanism for allocating the subsidies to ensure technology/competitive neutrality and cost minimisation
  - Pay the subsidy when the customer gets a service at the right price rather than subsidising the duplication of infrastructure without a customer benefit