

# NBN Co—Initial Steps

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# OUR LATEST THINKING ON

- What are NBN Co's role and objectives?
- What services will NBN Co provide?
- What technology will NBN Co use?
- What is NBN Co's business model?
- What's happening in Tasmania?
- Next 6 months
- How are we going to continue to consult with the industry?

# NBN OBJECTIVES

- Provide a wholesale service that enables competition and innovation by service providers
- Offer open access and equivalence, creating a level competitive playing field for retail service providers
- Facilitate any to any connectivity
- Promote maximum end-user choice in terms of both services and providers
- Deliver appropriate network reliability, resilience and security
- Allow secure simultaneous delivery of multiple applications with predictable levels of quality

# FEDERAL GOVERNMENT/NBN CO/LEAD ADVISOR

## Federal Government

- Regulation of
  - Telco industry
  - NBN Co
  - Greenfields
- NBN funding model
- Competition regime

## Lead Advisor

- Optimal market structure and implications for
  - Service definition
  - Regulation
- NBN business case
- Wholesale access model
- Commercial negotiation issues
- NBN Co funding

## NBN Co

- Industry engagement
- Wholesale access model
  - Layer
  - POI location
  - Geographic pricing
  - Equivalence
- Wholesale access service definition
- Technology selection
- Network design
- Operational design
- Roll-out plan
- Commercial negotiations

# NBN CO MODEL: GOVERNMENT BUSINESS ENTERPRISE

- The Hon. Stephen Conroy and Hon. Lindsay Tanner are the two shareholder ministers
- Shareholder ministers set objectives for NBN Co
- NBN Co Board
  - Oversees NBN in line with ASIC requirements
  - Submits 3 year strategy document annually
  - Notifies Government of 'significant' events
  - Ensures appropriate governance

'Governance Arrangements for Commonwealth GBEs'—June 1997

## NBN Co

## Service providers (and other access providers)

### Objective

- Lowest cost
- Open access
- Reliable foundation for services

- Innovation
- Differentiation
- Active competition

### Scope

- Primarily where economies of scale mean one supplier is most cost effective

- All areas where economics are such that two (ideally three or more) wholesale providers can compete effectively

### Implication

- Layers 1 and 2 outside major centres and outside inter-capital backhaul

- Layers 3 and above
- Inter-capital backhaul
- CBD layers 1 and 2

# AVOIDING CONFLICTS OF INTEREST

- Layer 2 bit-stream transport and connectivity i.e. no end-user ready voice, internet or video
- No participation in the retail market—NBN will not seek to serve the business or consumer market directly
- Clear ownership limits that ensure no shareholder (particularly no retail service provider or related party) has control

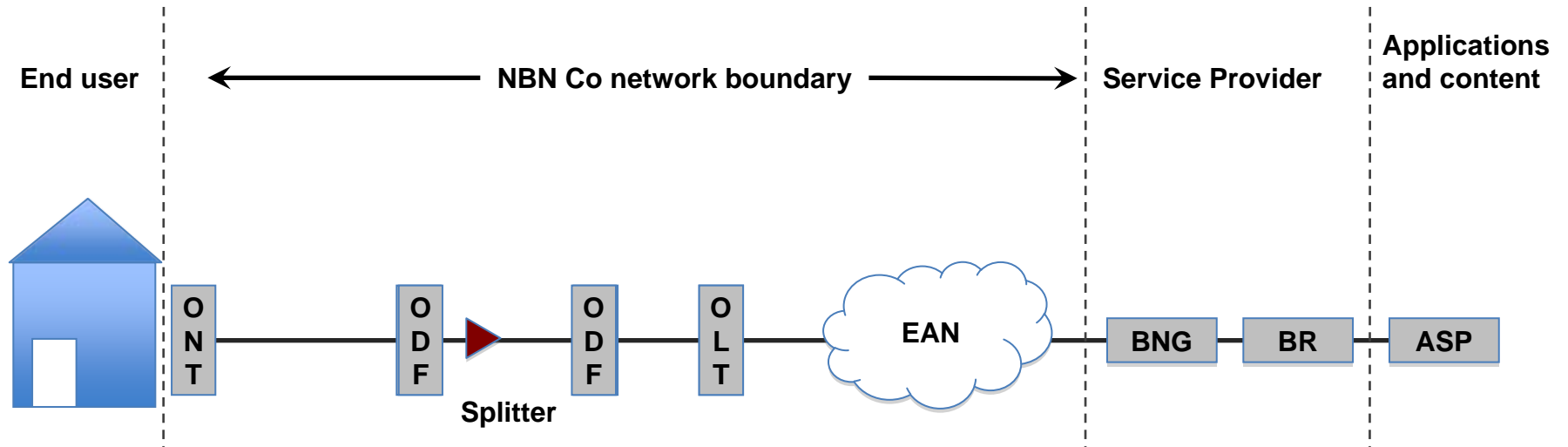
# HIGH-LEVEL PRODUCT DEFINITION

- Wholesale bit-stream product which is
  - As close as possible to access at the physical layer
  - As close as possible to SP having its own network
- Aligned with global standards (to the extent they exist) to
  - Ensure competitive vendor pricing
  - Minimise the risk of stranded technology
- With functionality required to
  - Support innovation and competition at higher layers
  - Deliver differentiation, flexibility and choice to end-users

# ACTIVE SERVICE FEATURES

- Able to support network security and integrity
- Quality of service enabled
- Likely multi-cast enabled, if not now, in the future
- Able to support a range of CPE
- Likely able to support multiple service providers to one premise

# NBN CO BOUNDARY



# LATEST TECHNOLOGY THINKING

- Fibre to the premises for majority of homes and businesses
- Where FTTP not practical, next best alternative
- Ethernet based
- Layer 2 with security, QoS, multi-cast features
- PON based architecture—most likely GPON
- Likely inclusion of RF in downstream
- Likely inclusion of POTS capability via an ATA in the ONT

# RATIONALE FOR ETHERNET

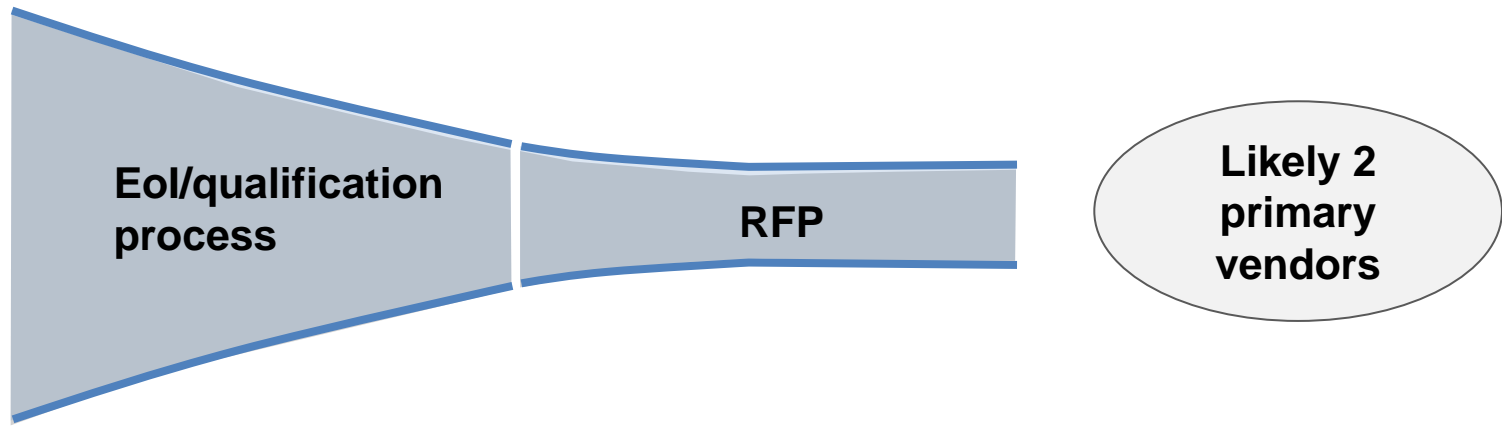
- Competitive equipment market
- Flexible bandwidth
- Multiple services on same physical interface
- Multiple downstream providers on the same physical interface
- Transparency to higher layer protocols
- Testing can be done by upstream and downstream providers independently

# RATIONALE FOR PON (PASSIVE OPTICAL NETWORK)

- Service flexibility and simplicity
- Global industry adoption driving volumes up and costs down
- More economical than point-to-point for residential—lower fibre costs and power consumption
- Consistent with asymmetric bandwidth needs for residential (if GPON)
- Does not exclude some point to point for business with higher bandwidth requirements

# NBN CO ENGAGEMENT OF VENDORS, CONSTRUCTION PROVIDERS AND OTHER PARTNERS

EQUIPMENT VENDOR EXAMPLE



## Approach

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• Clear qualification criteria</li> <li>• Opportunity to contribute practical and innovative thinking</li> </ul> | <ul style="list-style-type: none"> <li>• Comparable pricing models</li> <li>• Opportunity to demonstrate approach to network design</li> </ul> | <ul style="list-style-type: none"> <li>• Ensures competitive pricing</li> <li>• Reduces supply chain risk</li> <li>• Manageable interoperability</li> </ul> |
|---|--|---|

## Desired outcome

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Selection of vendors with ability to deliver world-class integrated solution</li> </ul> | <ul style="list-style-type: none"> <li>• Selection of vendors who deliver the greatest total value</li> </ul> |
|--|---|

# WHAT ARE WE DOING IN TASMANIA?

- Tasmanian pilot encompasses approximately 5,000 houses
- Gives us the opportunity to better understand the challenges of roll out
- Infrastructure will stand the test of time
- We will still be working on network design for the national roll out in parallel
- Full-scale national roll out may be different—different design detail, vendors, construction companies etc

# NBN CO'S NEXT SIX MONTHS

## Will be largely completed

- Building our organisation
- Designing our offer
- Selecting technology
- Designing high level network architecture
- Negotiating with potential partners
- Establishing operational program management office

## Will be underway if not completed

- Negotiation of initial understanding with ACCC
- Pricing architecture discussions with customers
- Conducting tender process
- Obtaining carrier licence
- Negotiation of necessary spectrum and satellite slots

## Will have started

- Planning roll-out schedule
- Execution of acquisitions – where appropriate
- Designing BSS/OSS
- Designing processes

# ENGAGING WITH OUR KEY CUSTOMERS

- Working with Communications Alliance as a broad industry body for our initial presentations to industry
- Seeking your input via participation in the CA working groups
- Encouraging anyone with something to contribute to participate
- Incorporating as an important contribution to the development of our offer and model
- We hope to work with a variety of industry bodies to capture inputs from all interested parties