Broadband and Beyond 2011

Mike Quigley – NBN Co

NBNCo
Limited

Construction is underway
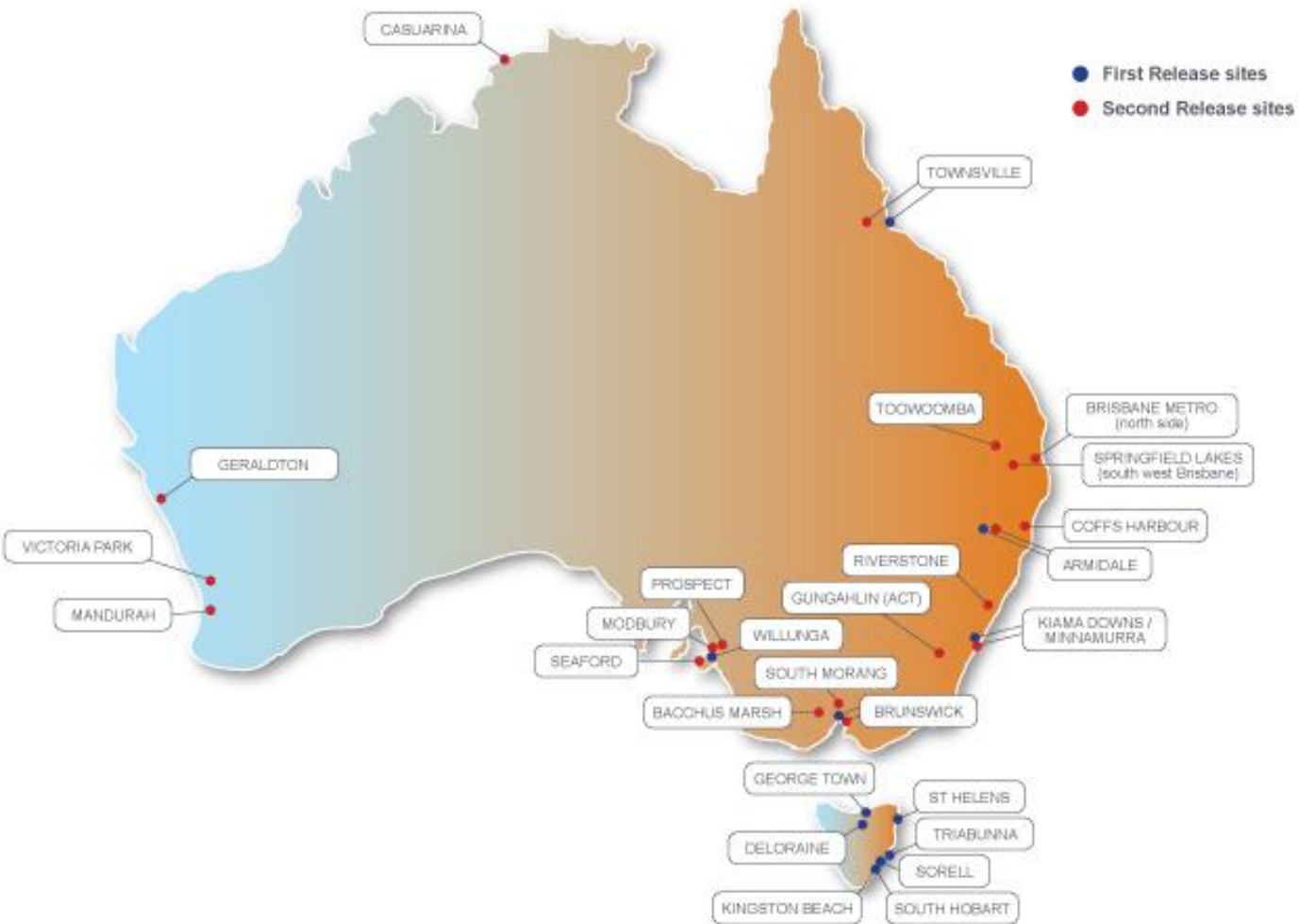
First Release sites
Second Release sites

CASUARINA
TOWNSVILLE
TOOWOOMBA
BRISBANE METRO (north side)
SPRINGFIELD LAKES (south west Brisbane)
GERALDTON
COFFS HARBOUR
RIVERSTONE
ARMIDALE
VICTORIA PARK
PROSPECT
GUNGAHLIN (ACT)
MANDURAH
MODBURY
KIAMA DOWNS / MINNAMURRA
WILLUNGA
SEAFORD
SOUTH MORANG
BACCHUS MARSH
BRUNSWICK
GEORGE TOWN
ST HELENS
DELORAINE
TRIABUNNA
SORELL
KINGSTON BEACH
SOUTH HOBART

NBNCo Limited

First release site - Willunga South Australia

- Willunga is a rural town south of Adelaide in the City of Onkaparinga, South Australia

- It is 47 km from the Adelaide CBD

- 941 premises in first release site

- 64% of Willunga premises with internet connection

NBNCo Limited

First release site – Brunswick Victoria
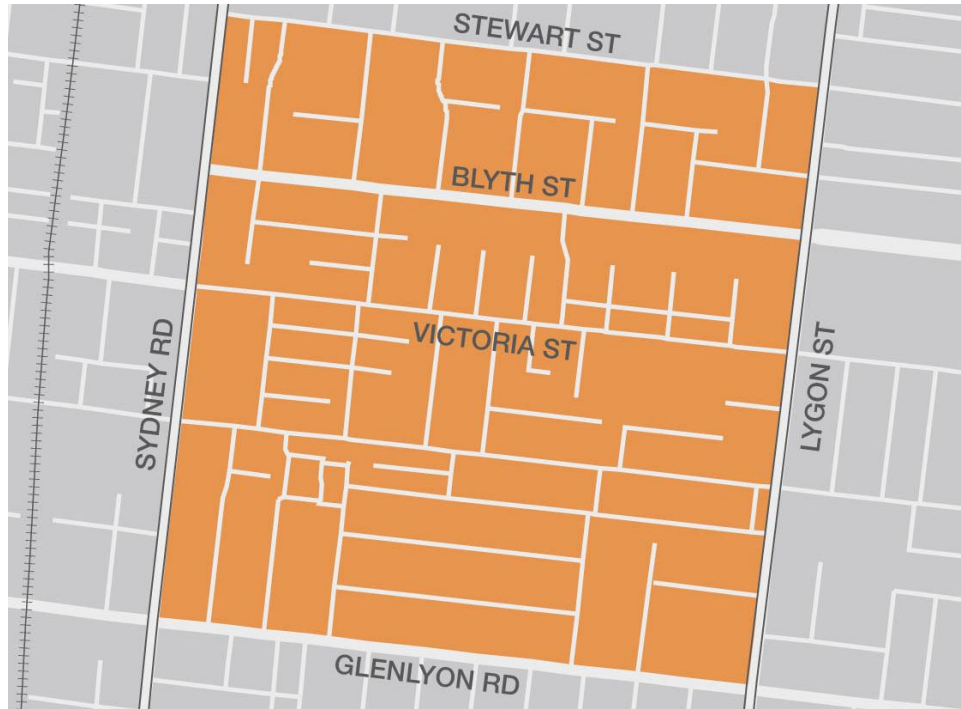
- Brunswick is an urban suburb in the City of Moreland in Victoria

- It is 6 km from Melbourne's CBD

- 2600 premises in first release site

- 55% of Brunswick premises with internet connection

NBNCo Limited

First release site – Townsville Queensland

Plinth for Cabinet Hub
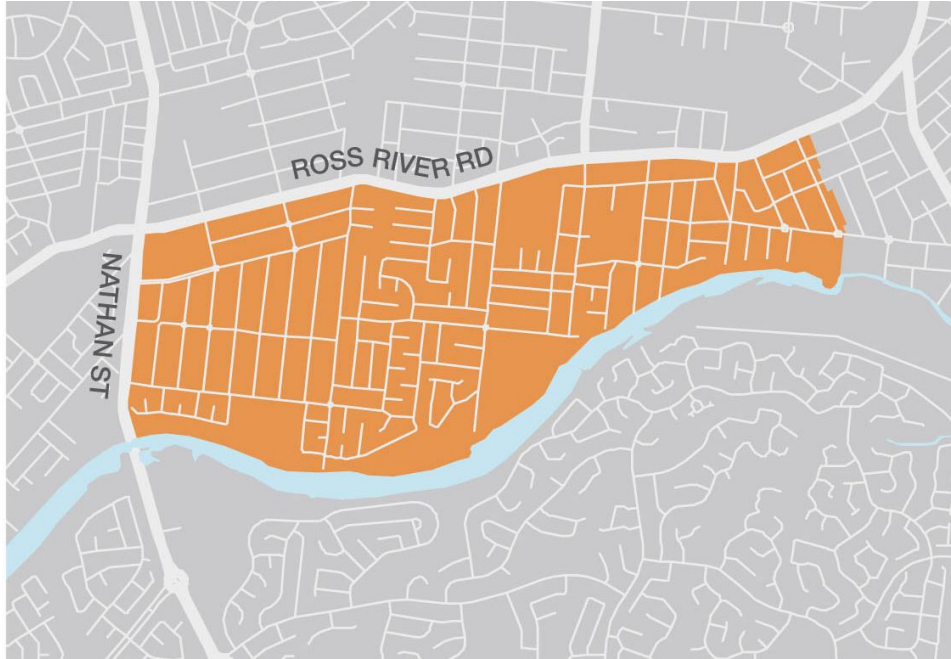
- Townsville is a tropical city on the north east coast of QLD
- It is Australia's largest urban centre north of the Sunshine Coast
- 2500 premises in first release site
- 63% of Townsville premises with internet connection

NBN Co Limited

First release site – Minnamurra & Kiama Downs NSW

- Minnamurra is a coastal suburb in the Illawarra region of NSW in the Municipality of Kiama
- It is within a 2 hour drive south of Sydney
- 2350 premises in first release site
- 68% of Kiama premises with internet connection

Source: ABS Census 2006

Zone Terminal Multiport

© NBN Co 2011

First release site – Armidale New South Wales
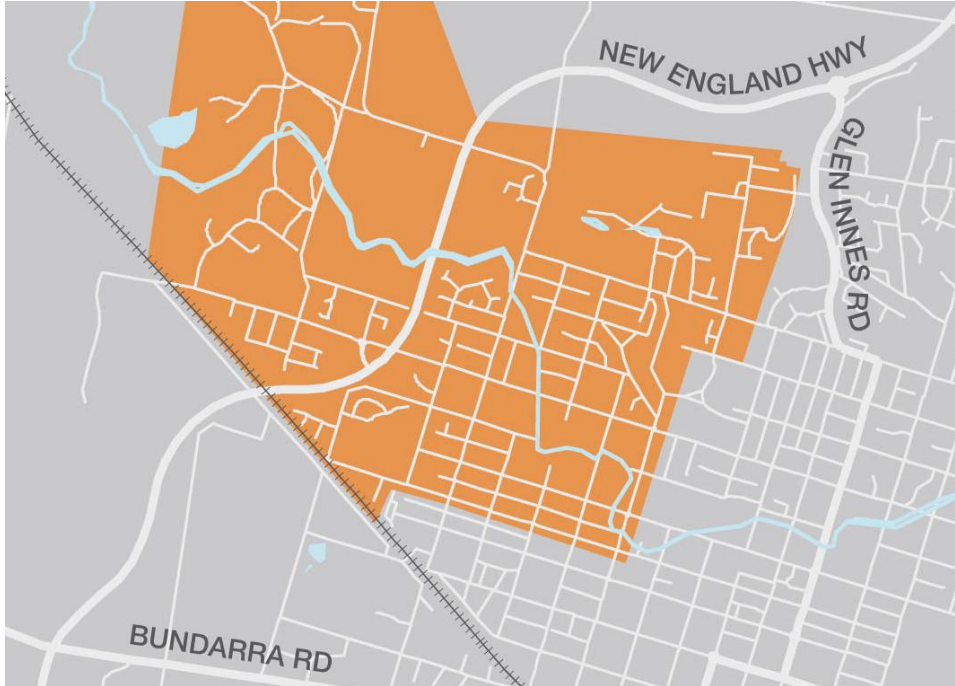
- Armidale is a regional town situated half way between Sydney and Brisbane and 2 hours from the coast

- 4800 premises in first release site including the University of New England connections

- 61% of Armidale premises with internet connection
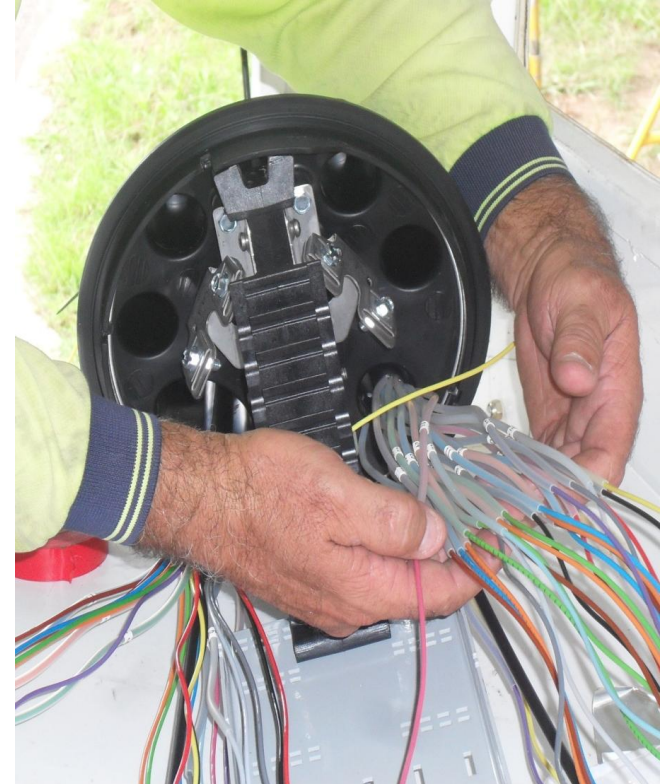
Across all First Release Sites
90% complete passive build

NBNCo
Limited

Community and stakeholder engagement

Some of the things that we are doing…

- Creating a safe workplace for all employees and suppliers

- Targeted community engagement throughout the construction of the new network

- Making sure that suppliers are engaged as partners and are a key component of our community engagement process

- Transparent engagement with all stakeholder levels

Community satisfaction is a key aim for construction roll-out

NBNCo Limited

Building a wholesale telco

Long-Term Timeline
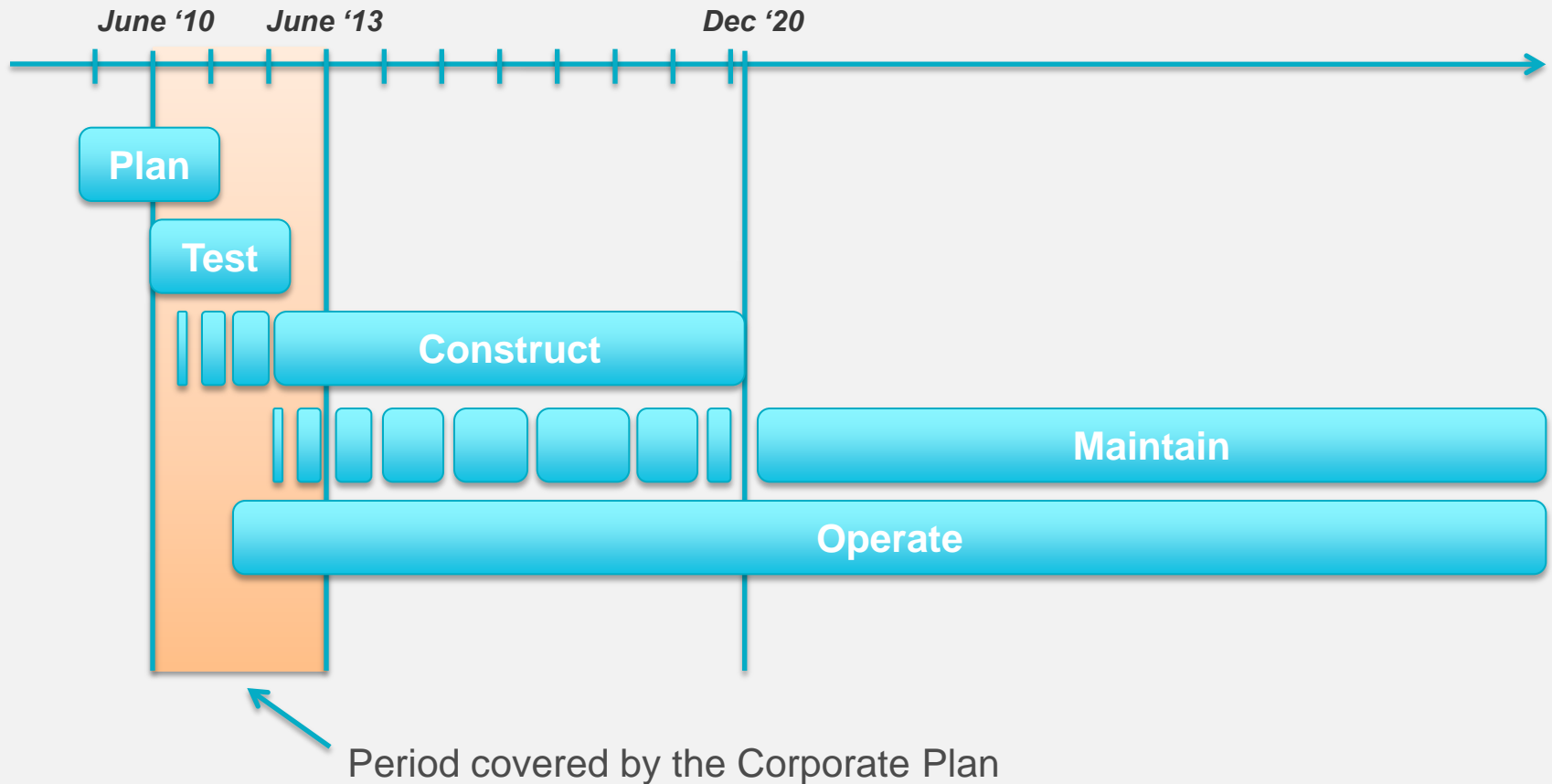
June '10   June '13   Dec '20

Plan

Test

Construct

Maintain

Operate

Period covered by the Corporate Plan

NBNCo Limited

Fibre, satellite and wireless product construct

CONNECTIVITY SERVING AREA

POINT OF INTERCONNECT

1. UNI

2. ACCESS VIRTUAL CIRCUIT (AVC)

NTU

Fibre Access Node

FIBRE

NTU

SATELLITE

3. CONNECTIVITY VIRTUAL CIRCUIT (CVC)

4. NNI

POI

Access seeker backhaul

NTU

WIRELESS

ALLOCATED TO THE END USER

AGGREGATING MULTIPLE END USERS
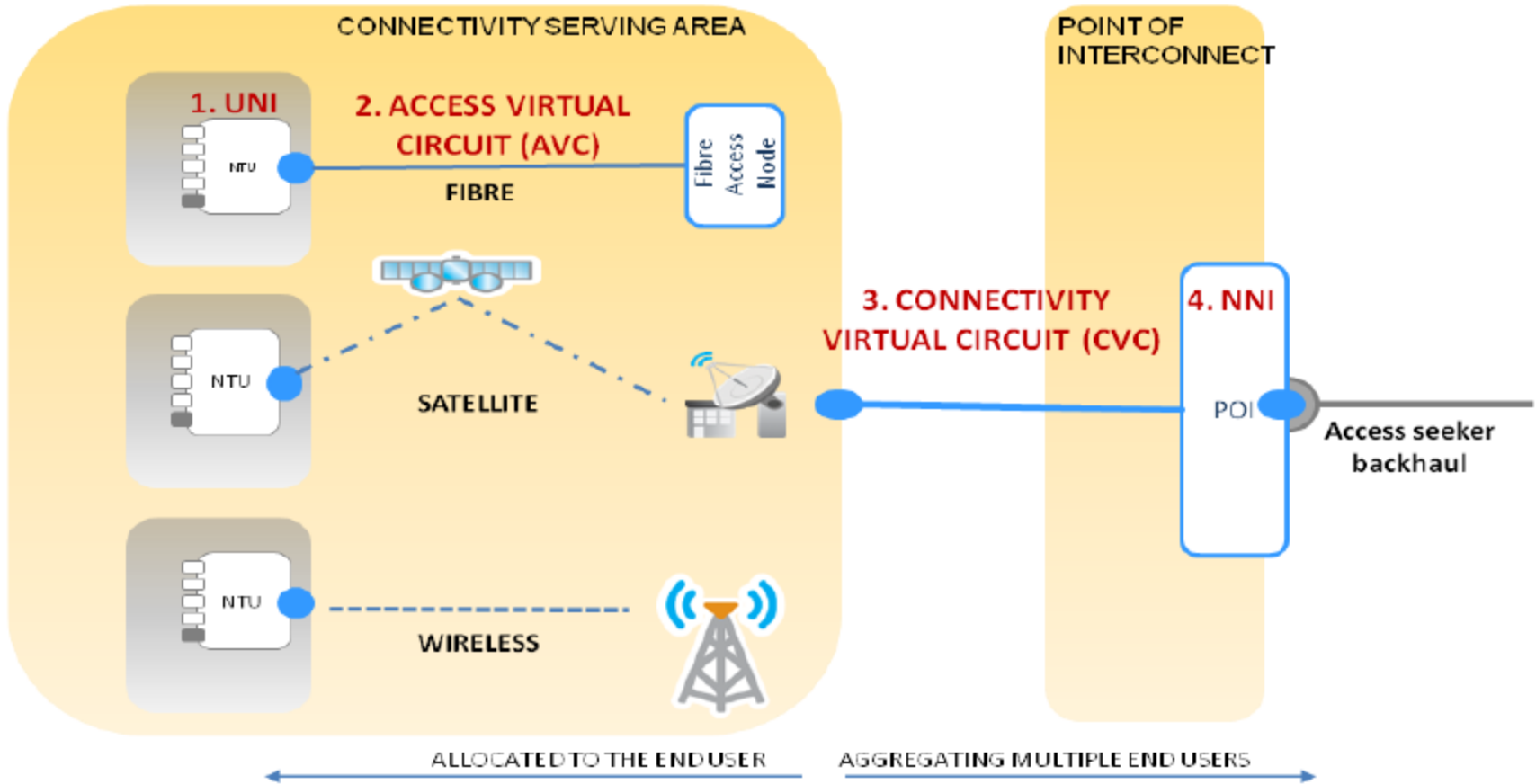
Source: NBN Co

Expectations

NBNCo
Limited

Wireless – distance and contention effects

LTE proof of concept peak rates
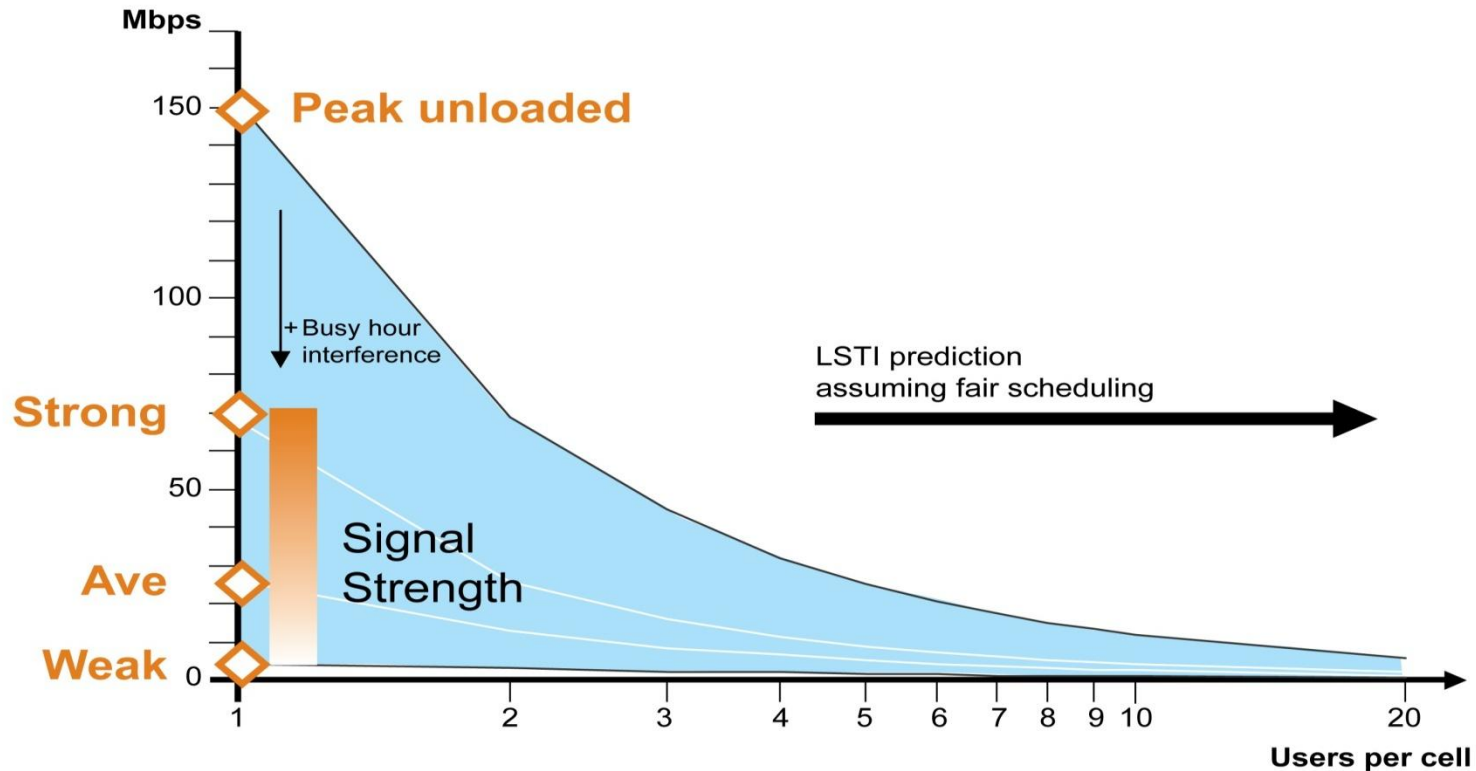
Notes: 2x20MHz, 2x2 MIMO
Source: LTE/SAE Trial Initiative (Oct 2009)

Mobile broadband _and_ fixed broadband

- "If you take HSPA+ and you go out to West Texas and put two people in a cellsite you can get 20 meg. Take HSPA+ and put it in downtown Manhattan and you load a cellsite, even with fibre backhaul, probably the best you're going to get is two to three meg. LTE will be the same thing." *Randall Stephenson, CEO AT&T*

- "Could we wait eight years and not require high-speed fixed networks? The answer is no, because of the capacity issue." *Hugh Bradlow, CTO Telstra*

- "We're looking at compound annual growth of mobile data in the order of 95% for the next five years. If that's going to be effectively carried, and the service delivered and the customer experience maintained and enhanced, then we will need to be using fibre....When you look at the volume of data and the size of files and the use of video, you can't have that stuff floating around endlessly. We've got to get it efficiently onto a fixed network." *Chris Althaus, Chief Executive, AMTA*

NBNCo
Limited

New wireless versus fixed network perspective

- Analysis Mason – independent telecoms, tech and media consultants

- 75% wireless data in Europe downloaded "indoors" ie to home wireless/Wi-Fi network

- Smartphone's iPads able to switch from the mobile network to a home or other available Wi-Fi network.

- Helps keep user costs down

- Helps network providers by shifting traffic from shared, capacity-limited mobile networks to fixed networks.

- Analysis Mason believes this trend will continue and expects that customers will download almost 90 per cent of data "indoors" by 2015.

NBNCo
Limited

NBN Co is building a *fixed* wireless network

variable cell boundaries

Mobile – variable number and type of devices

MOBILE VOICE AND DATA CORE NETWORK

WWW

12Mbps - cell boundary

Fixed wireless – single type of device, fixed number of connections

Professionally installed antenna

POINT OF INTERCONNECT

NNI

Backhaul

Access Seeker Point of Presence

NBNCo Limited
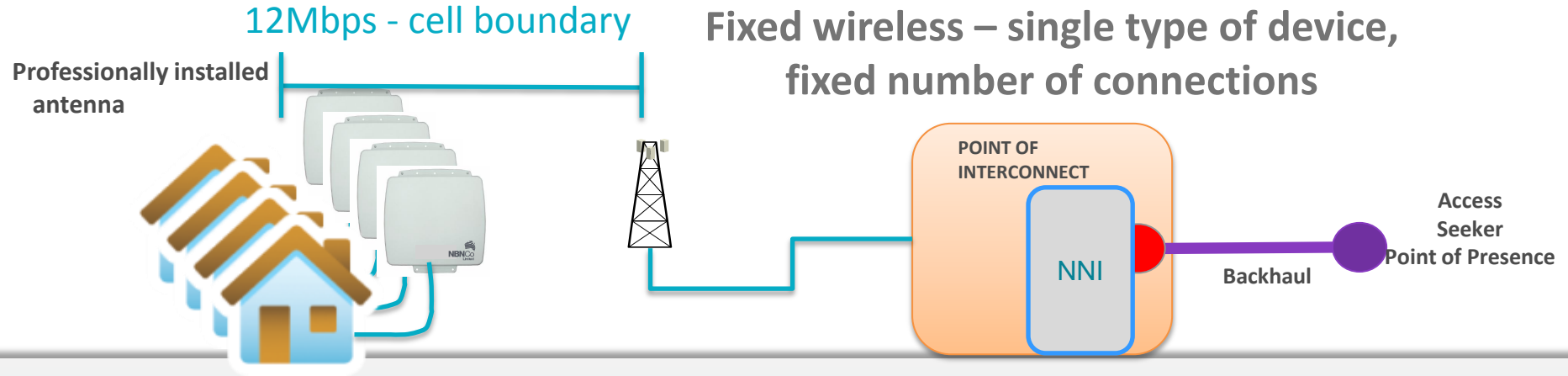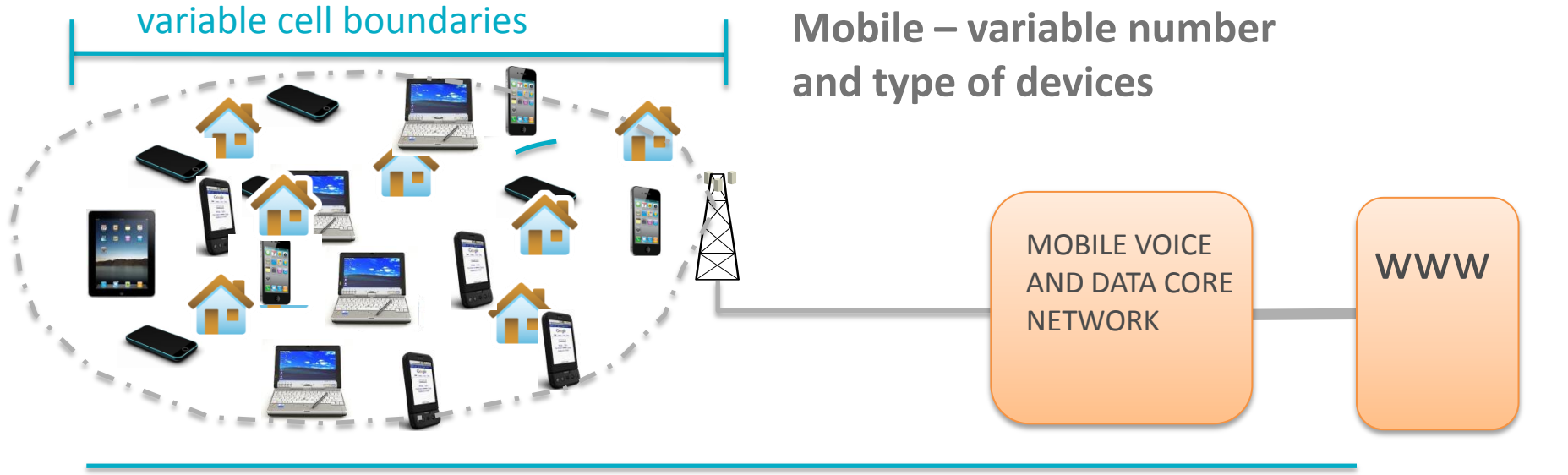
Revenue Assumptions - Passed vs Active End Users by 2025
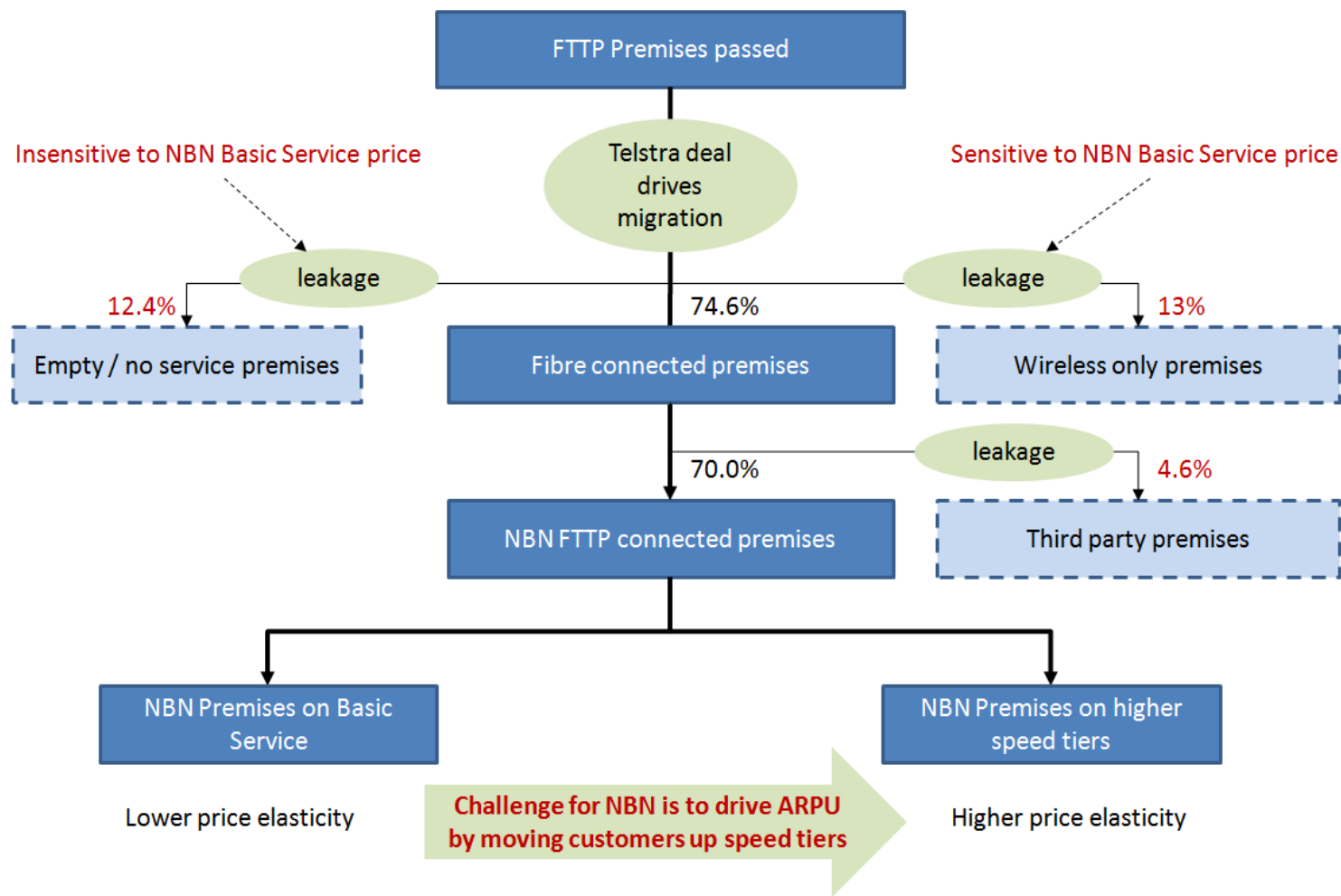
FTTP Premises passed

Insensitive to NBN Basic Service price

Telstra deal drives migration

Sensitive to NBN Basic Service price

leakage

leakage

12.4%

74.6%

13%

Empty / no service premises

Fibre connected premises

Wireless only premises

leakage

70.0%

4.6%

NBN FTTP connected premises

Third party premises

NBN Premises on Basic Service

NBN Premises on higher speed tiers

Lower price elasticity

Challenge for NBN is to drive ARPU by moving customers up speed tiers

Higher price elasticity

Financials Summary

Key Financial Performance Indicators (Nominal Dollars)

Key Performance Indicators	
IRR	7.04%
Payback Year	FY2033
Total Capex (to end of Construction Period)	$35.9 bn
Connection Capex (to end of Construction Period)	$10.0 bn
Revenue (to end of Construction Period)	$20.8 bn
Opex (to end of Construction Period)	$21.8 bn
Peak Funding in FY2021	$40.9 bn
Estimated Government Equity	$27.5 bn
EBITDA Positive	FY2018
EBIT Positive	FY2020
EBT Positive	FY2021
Levered Free Cash Flow Positive	FY2022

Source: NBN Co Corporate Plan – business case assumptions

© NBN Co 2011

Wholesale access input cost