

# Building New Zealand's fibre future

Chorus fibre lab visit, 16 May 2013

ADSHEL

We're working to bring **ultra-fast broadband** to your neighbourhood

We're trying hard to keep disruption to a minimum. Thanks for your patience.

[www.chorus.co.nz/in-your-neighbourhood](http://www.chorus.co.nz/in-your-neighbourhood). 0800 MY FIBRE

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# UFB

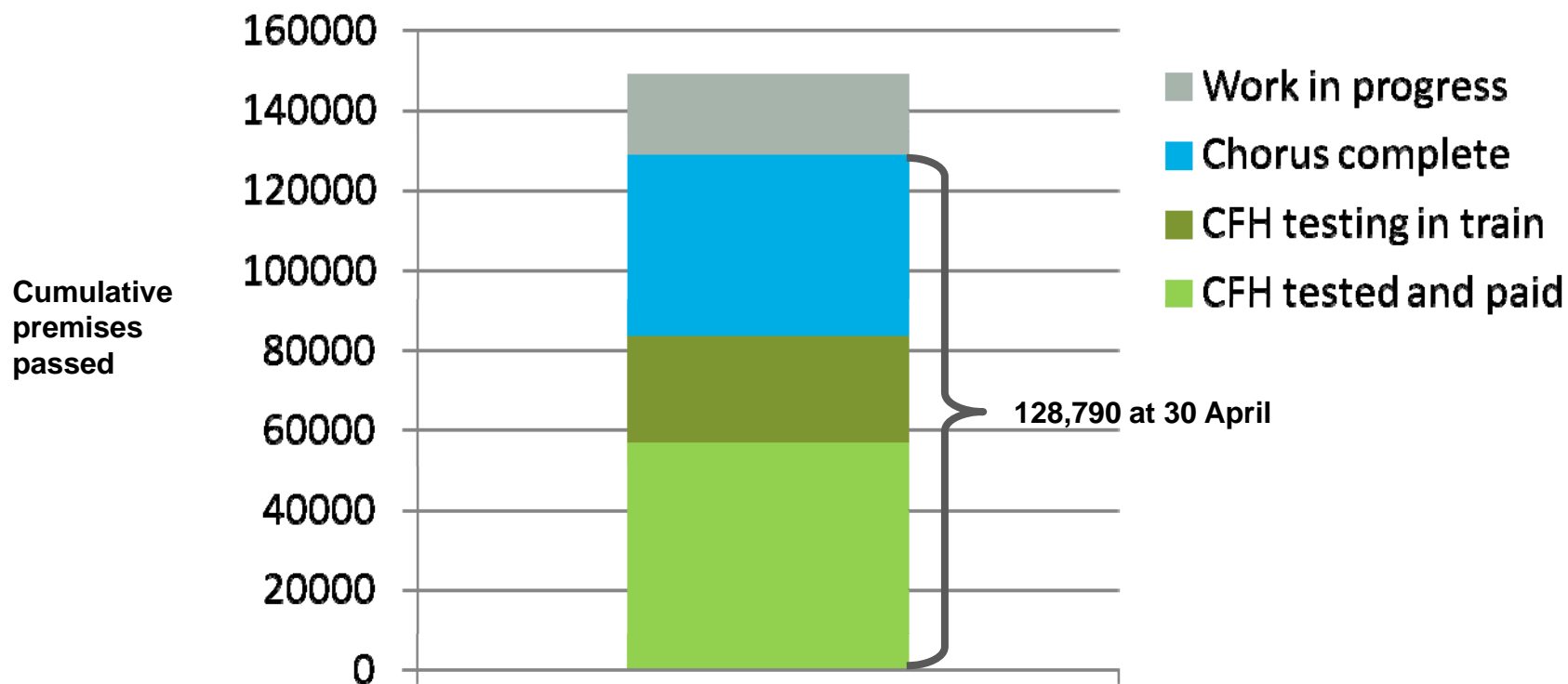
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# DEPLOYMENT

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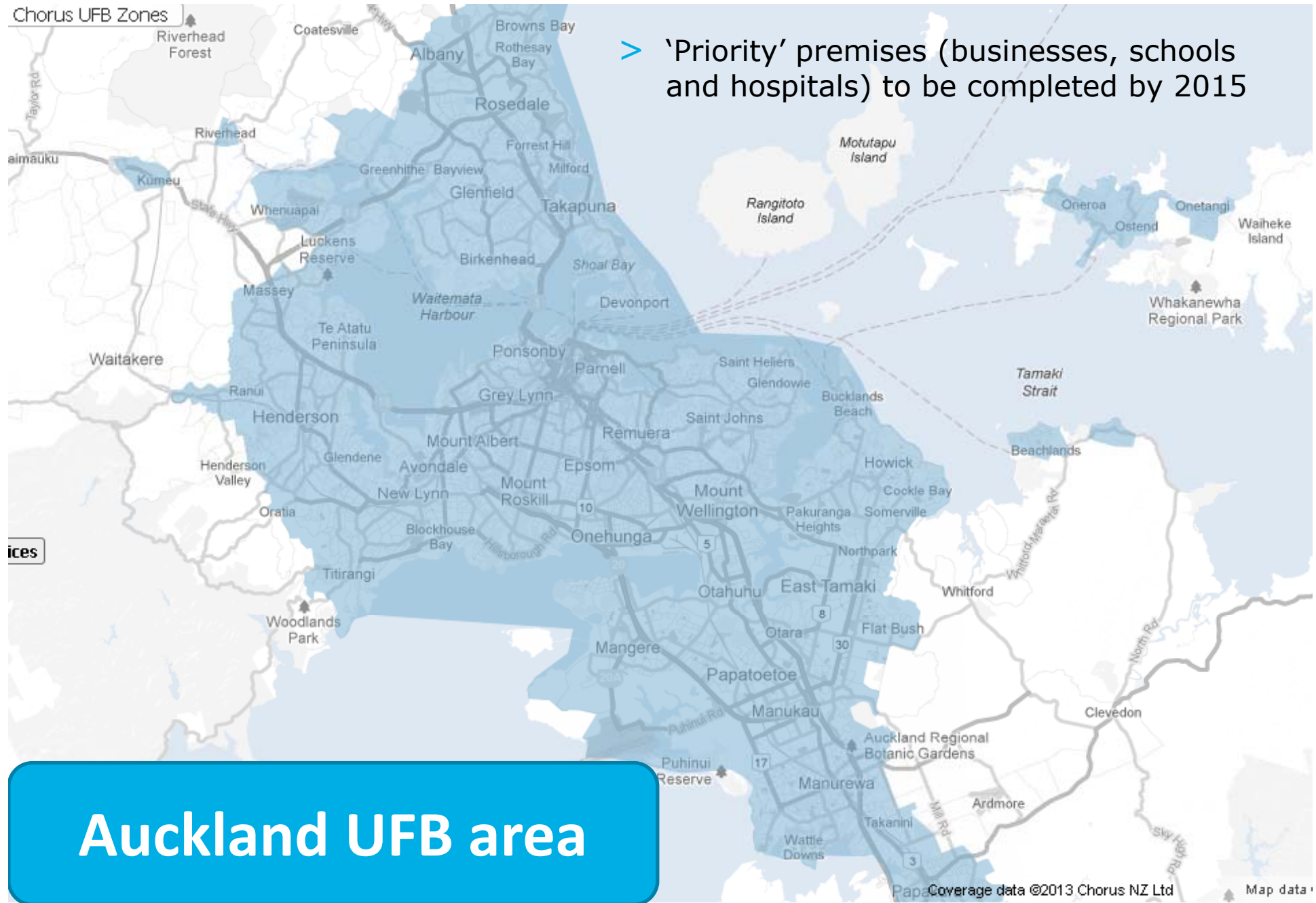
# UFB rollout progress

- > On track for Year 2 cumulative target of 149,000 premises
- > Chorus build complete for **128,790** premises at 30 April
- > March most productive month yet with 16,000 premises passed
- > CFH testing is on completion of "area units" with multiple cabinets



Chorus UFB Zones

> 'Priority' premises (businesses, schools and hospitals) to be completed by 2015



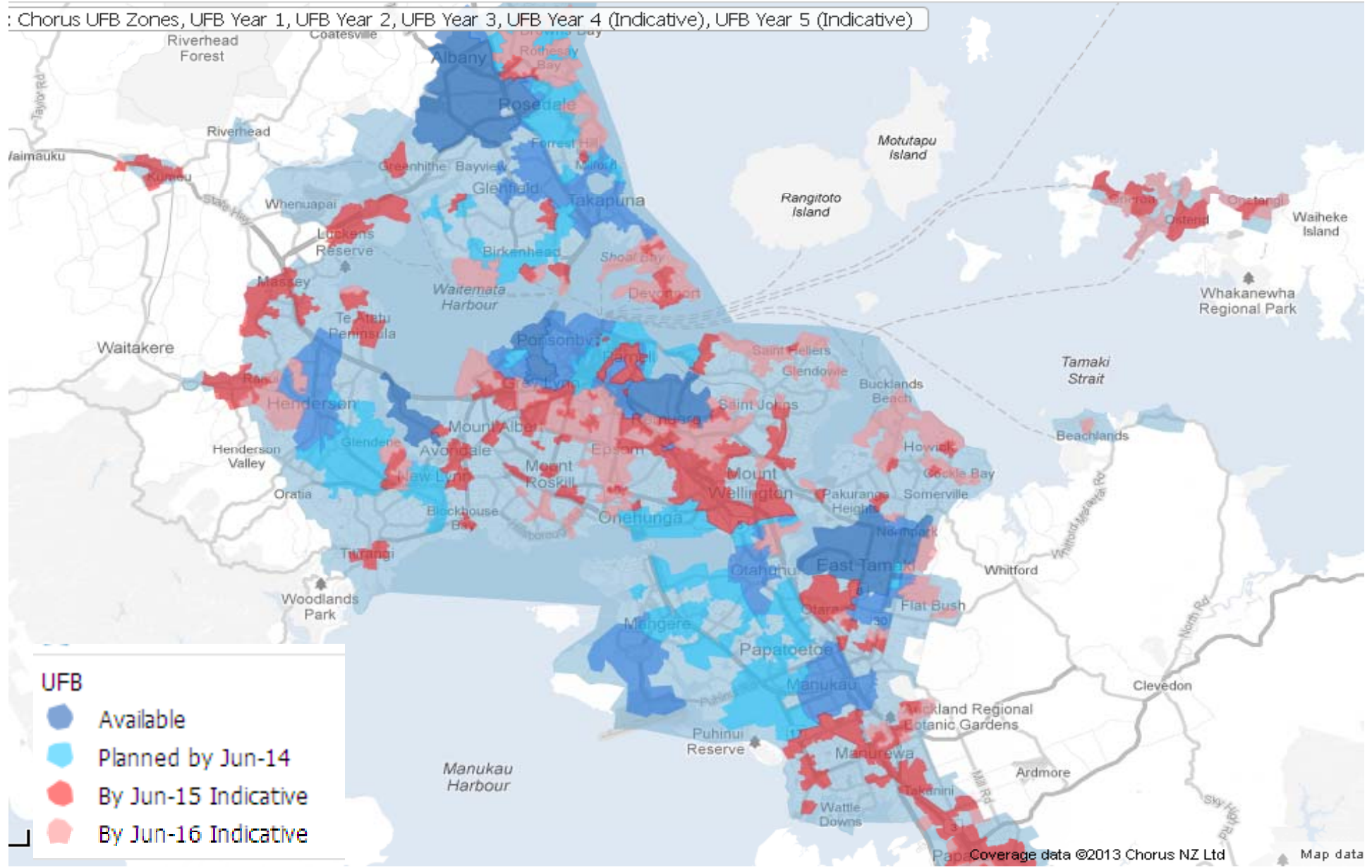
Auckland UFB area

Coverage data ©2013 Chorus NZ Ltd

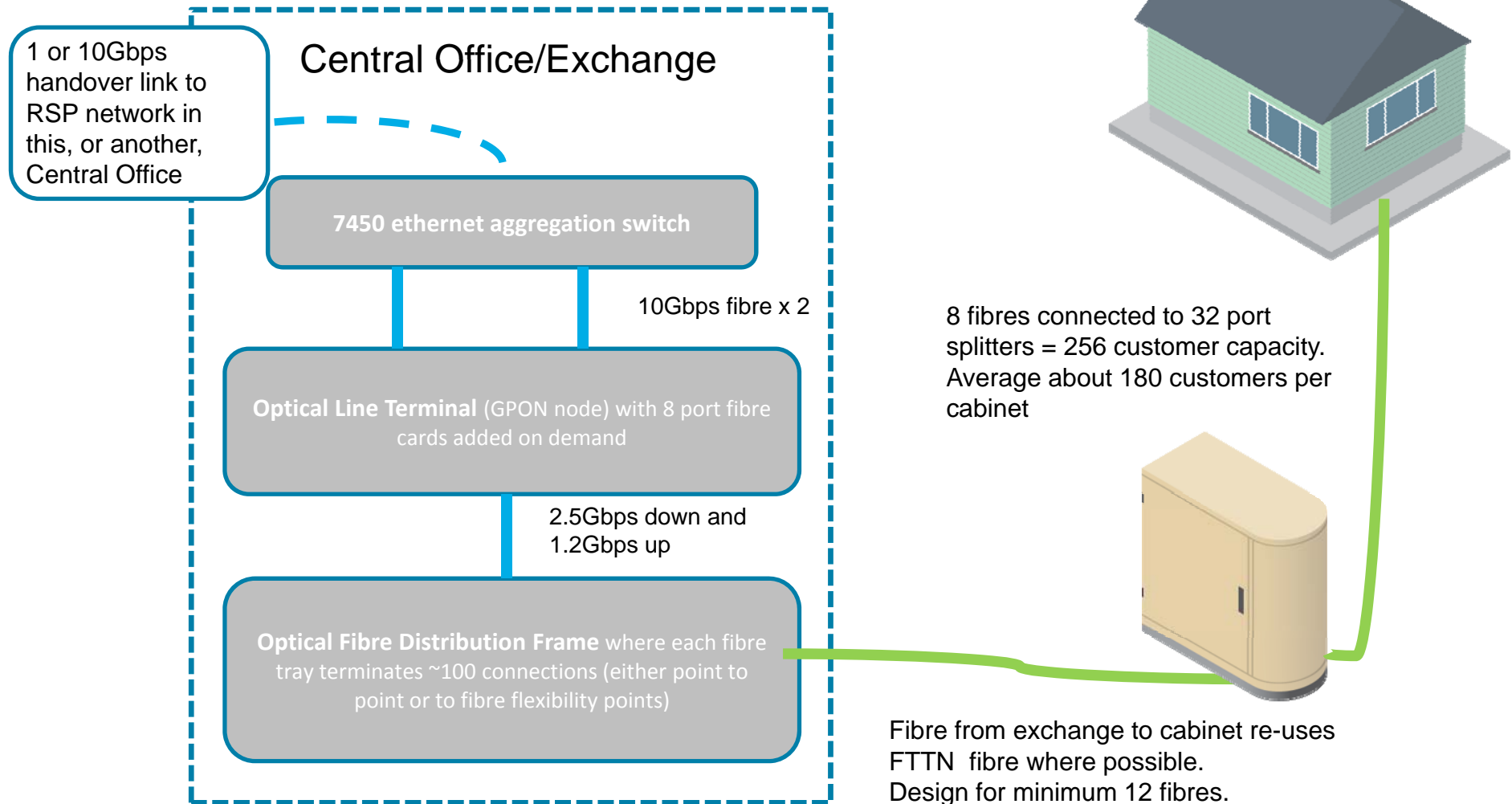
Map data

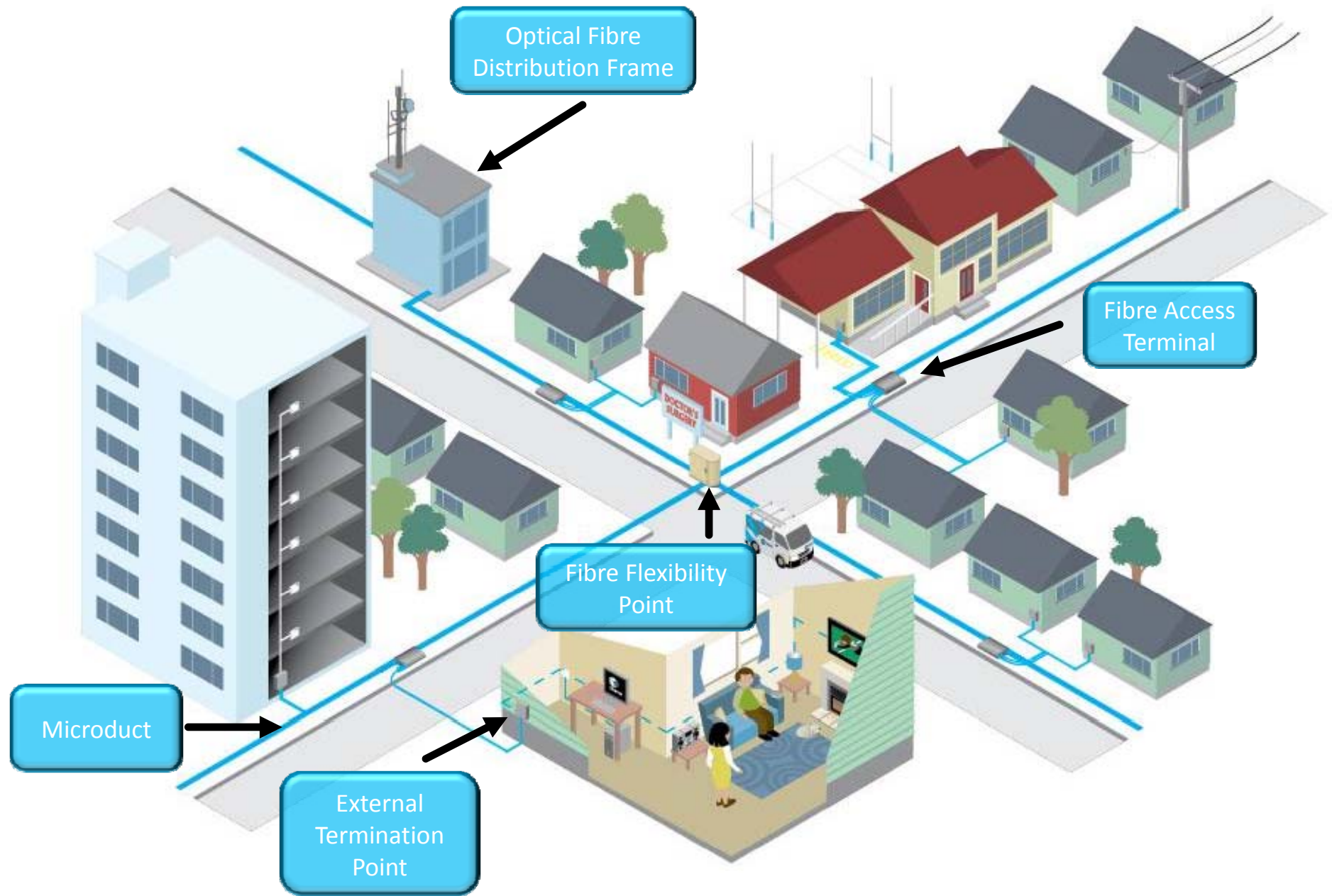


: Chorus UFB Zones, UFB Year 1, UFB Year 2, UFB Year 3, UFB Year 4 (Indicative), UFB Year 5 (Indicative)



# Fibre network architecture







## Two distribution architectures (current mode)

Where new duct required or space in existing duct **install microduct**

Comprises 26 tubes enabling air blown fibre to ~1km.  
Fibre cost deferred until connection.  
Can scale fibre (8 to 12 fibres per microduct) if more connections needed in future.



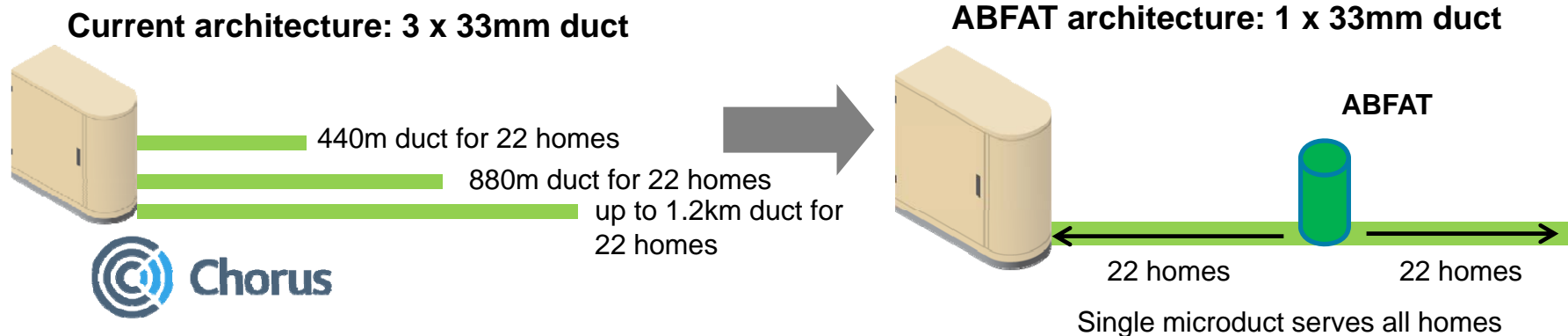
Where there is existing duct, but no space for microduct, **install 'lean' fixed fibre**

Fibre hauled into existing duct, where space is available, to extend from cabinet past premises



# Evolution: Air Blown Fibre Access Terminal

- Adds a network integration point closer to premises
- Enables use of single 26-way microduct, reducing material and civil costs (can re-use more existing duct)
- Example shows saving of 1.3km in ducting
- Reduces provisioning from >1km to ~440m



# UFB capex elements

## UFB communal capex

### > Civil costs

- drilling
- trenching
- laterals to boundary
- reinstatement
- traffic management
- arborists

### > Network specific costs

- materials
- hauling
- installing network components
- splicing and jointing
- testing

### > Other

- project management
- consigned materials (e.g. fibre, duct)

## UFB layer 2 capex

### > Layer 2

- aggregation switch
- GPON shelf
- GPON line cards
- splitter
- ONT

# UFB

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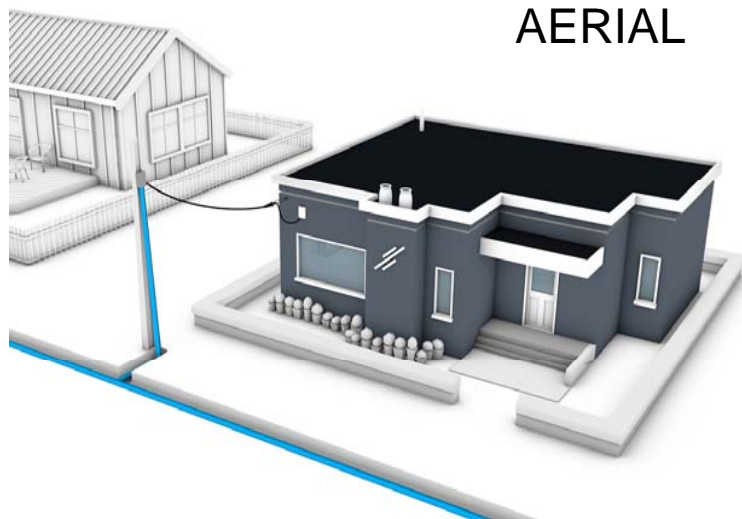
## INSTALLATION

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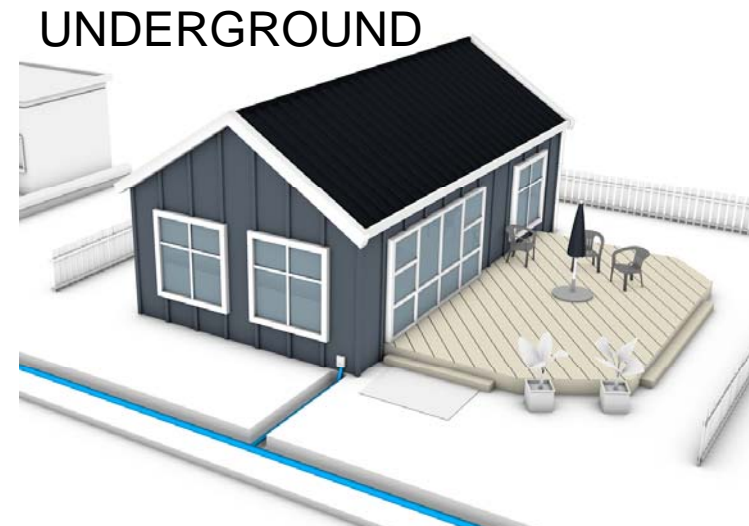


# Connections to premises

- > RFI underway for provisioning work
- > Too early to accurately assess costs given volumes
- > Additional work being done in-home to support RSPs
- > New Government code for access to multi-unit complexes



OR



About 1/3 of existing connections are aerial lead-ins.  
The copper lead-in is replaced with a fibre lead-in.

Underground connections are either through  
existing ducts if in place, or new duct is installed.



1. Fibre is blown from the cabinet to the home and connected at the cabinet.



2. The other end of the fibre is connected at the External Termination Point (ETP) on the side of the house



3. A hybrid fibre-copper cable is run from the ETP to the internal wall where the Optical Network Terminal (ONT) is to be located.



4. Fibre connectors are inspected and the ONT is programmed and then connected.

UFB

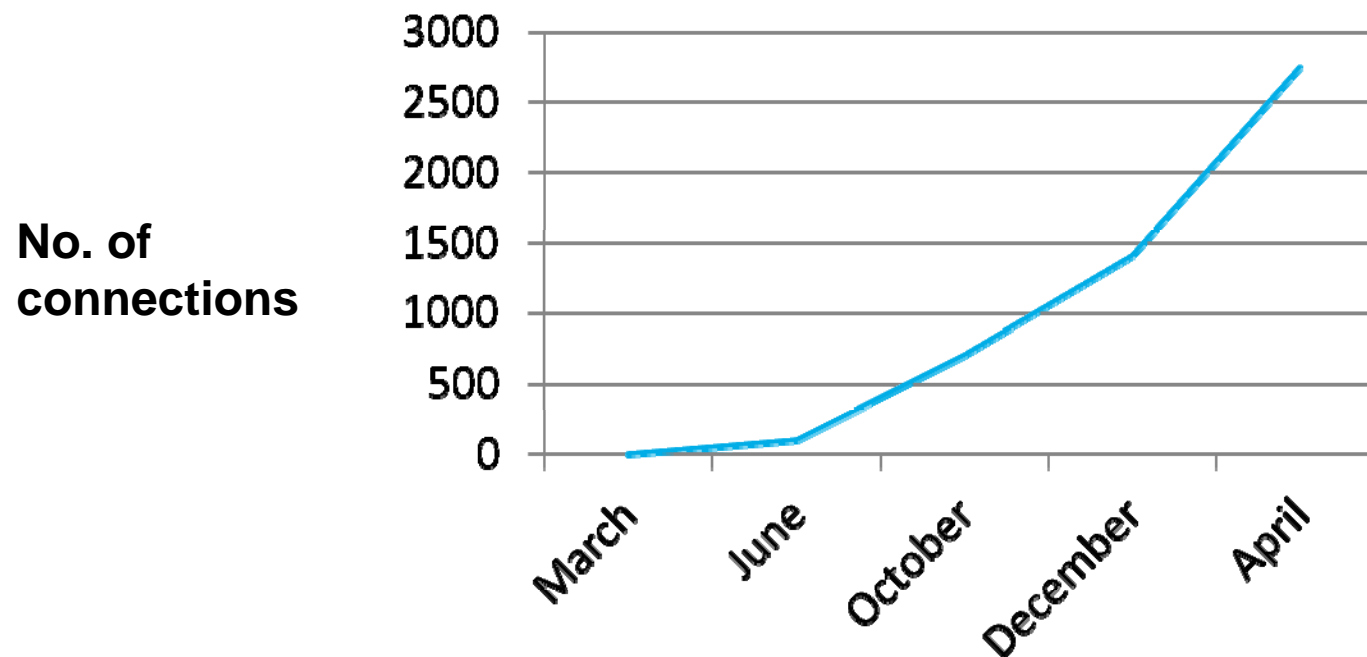
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IN THE HOME

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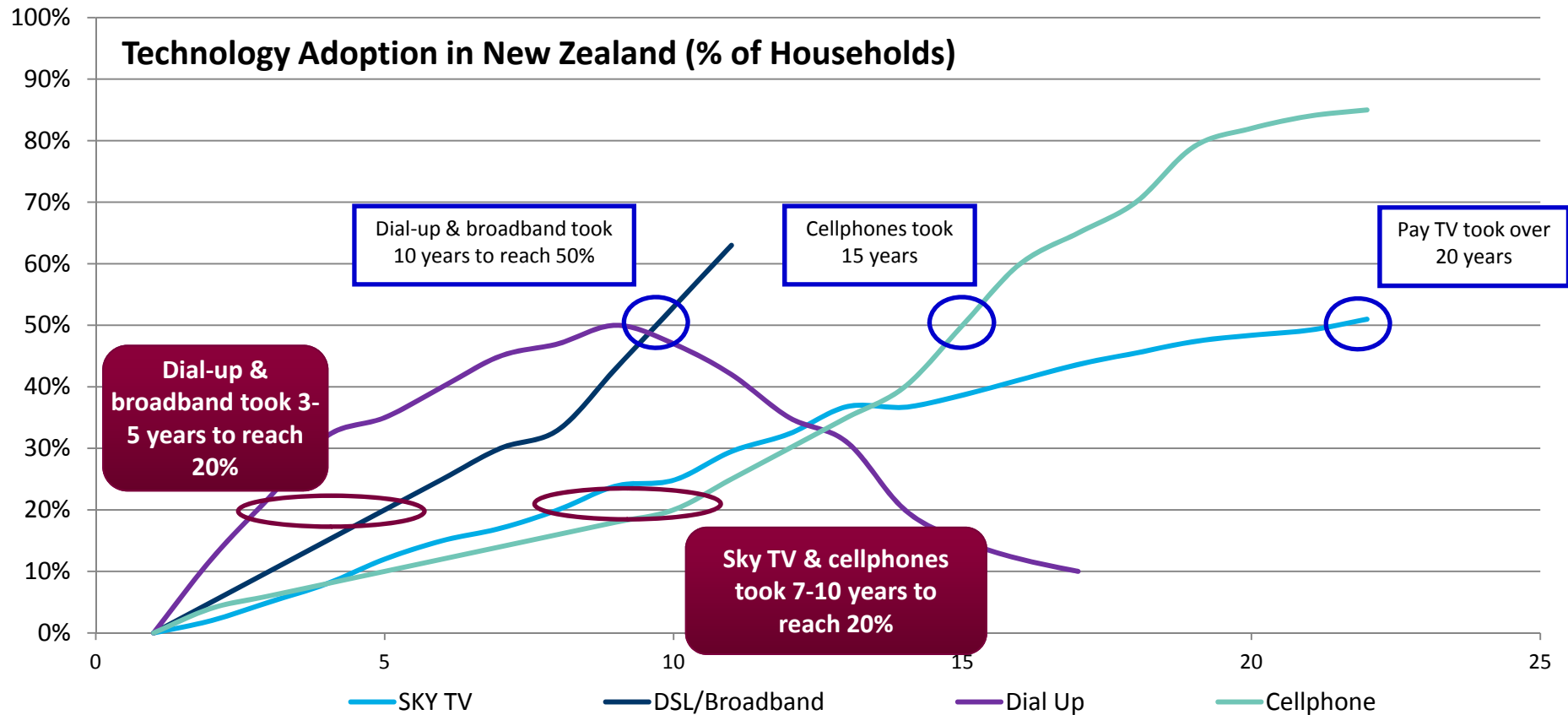
# UFB uptake

- > 2,750 connections on UFB network at 30 April
- > Excludes connections on Chorus' existing fibre network
- > Telecom entered residential market end March
- > Migration of existing Chorus subdivisions to UFB has begun



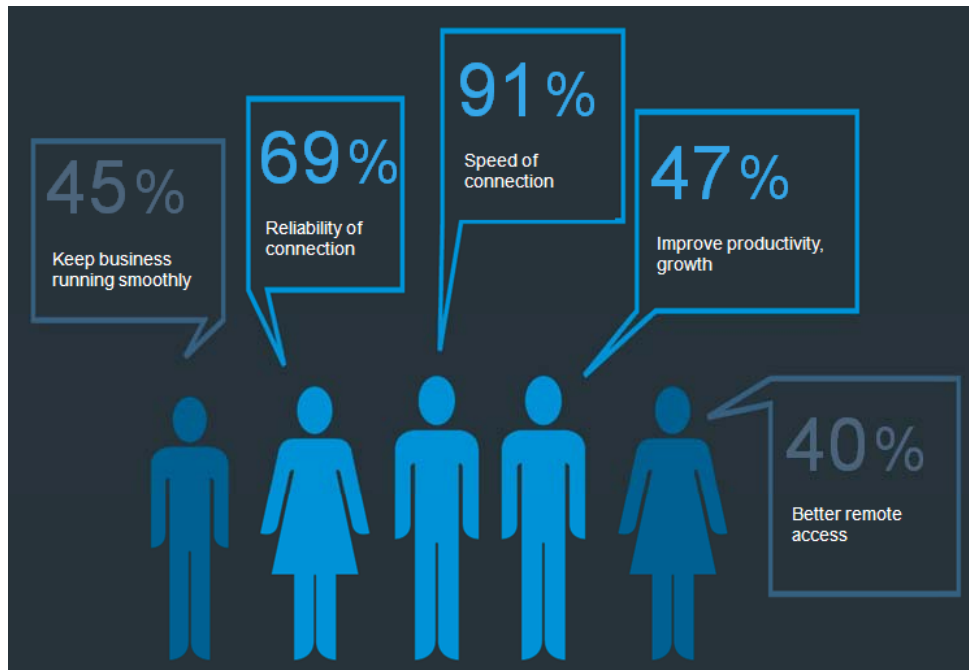
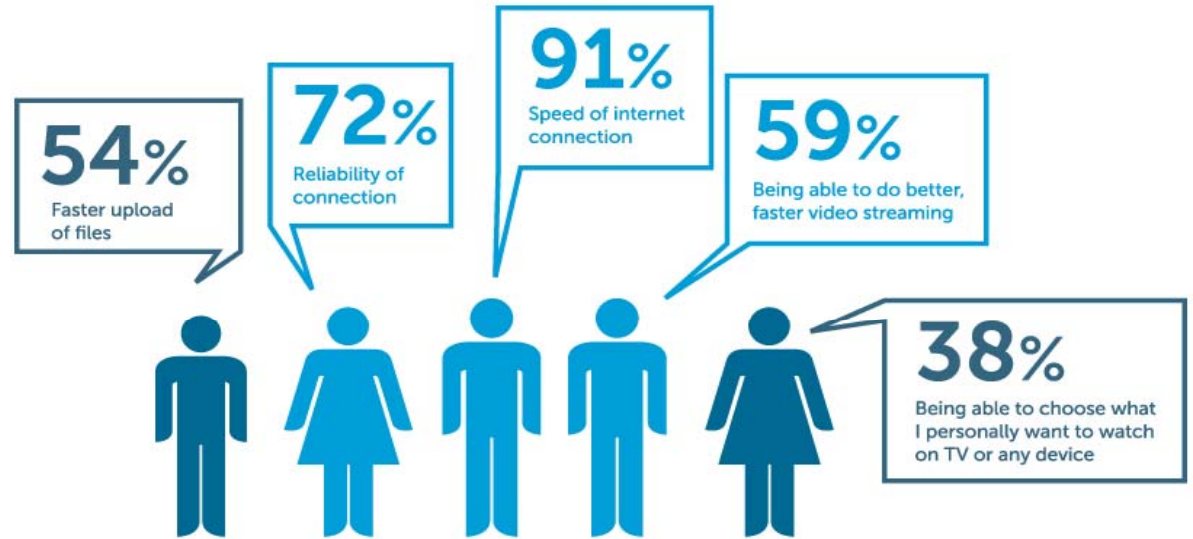


# Technology shifts don't happen overnight



# Top 5 reasons to take up fibre

## > Residential



## > Businesses (single site)

Source: Colmar Brunton surveys, 2012

# Fibre is all about bandwidth



- > Bandwidth demand is being fuelled by proliferation of internet-enabled devices
    - our research shows **on average three connectable devices per home**: smart phones, tablets, e-readers, internet TVs
  - > Globally, online data traffic is increasing exponentially as people do more online
    - **NZ data traffic forecast to increase 500%** between 2011- 2016 (Cisco) with internet video 74% of consumer traffic
    - Forecast traffic per household to grow from 9GB to 44GB
-

# TV is prime connection point

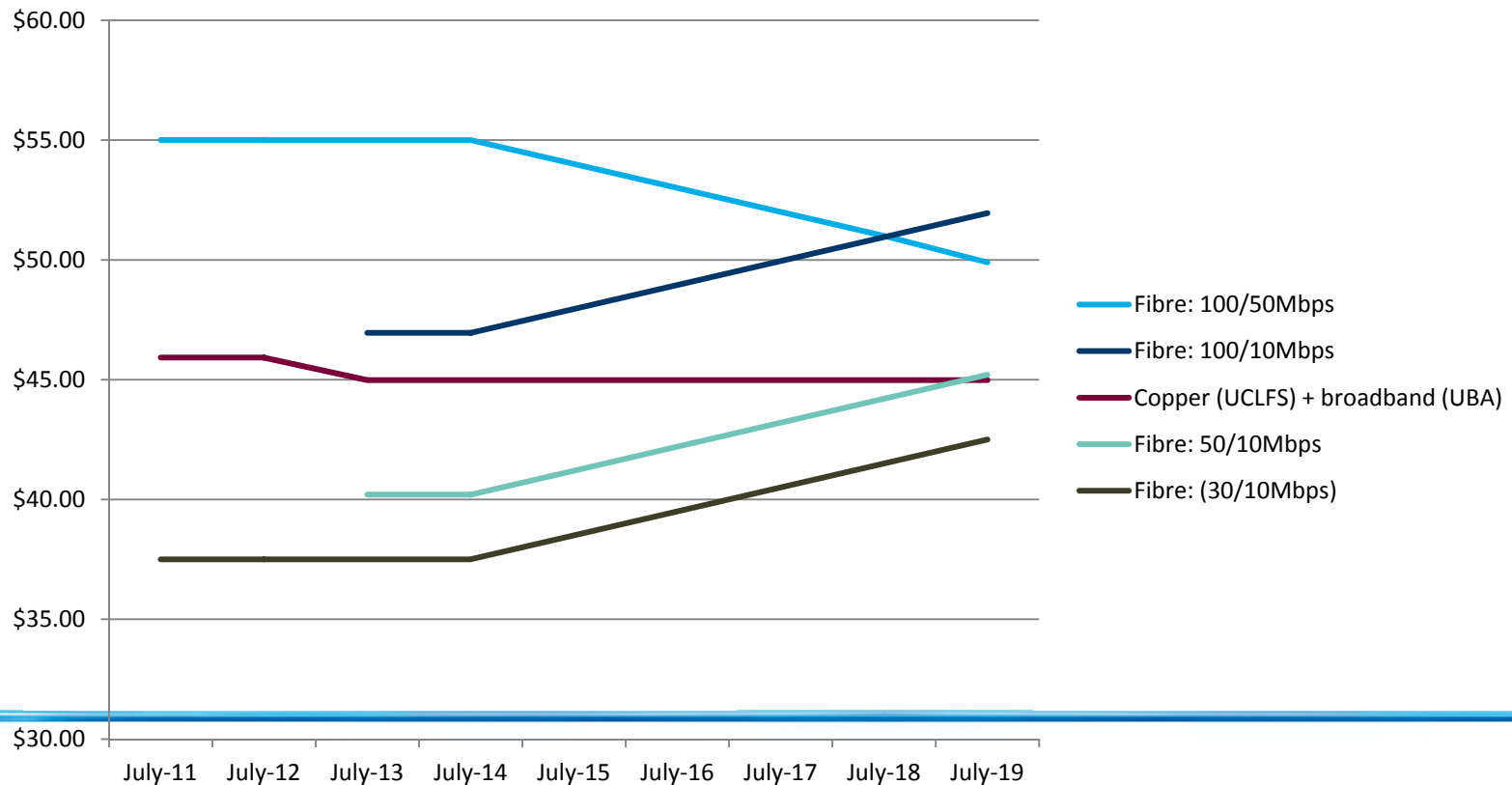
- > Wifi modems and consumer devices mean home connection point is moving away from a static desktop
- > New TVs and decoder boxes ethernet capable
- > Optical Network Terminal (ONT) also has multicast port for dedicated delivery





# New Chorus fibre plans

- > Two new fibre plans introduced for RSP testing to complement entry level 30/10 Mbps service
  - 50/10Mbps service starts at \$40.20
  - 100/10Mbps service starts at \$46.95
  - based on UFB price book



# VDSL a stepping stone to fibre

- > Available to about two-thirds of Chorus lines today
- > Uptake limited to 3,000 lines with commercial pricing
- > Re-pricing to \$21.46 under UBA STD with no speed guarantee
- > Fosters bandwidth demand ahead of fibre roll out
- > Enhances fixed line offering
- > Ability to stop new VDSL sales from mid 2015 for completed UFB areas
- > Can withdraw VDSL service if availability affects Chorus UFB uptake

