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## openreach

## **Business Briefing**

18 November 2021

## Openreach today

01

Clive Selley CEO, Openreach

## Welcome and Agenda

01	Openreach today	5 – 13
02	Market context and strategy	14 - 23
03	Customers and trading	24 - 32
04	Service and cost transformation	33 - 42
05	Financial delivery and outlook	43 - 48
06	Q&A	49 - 50
07	Technical innovations	51 - 60

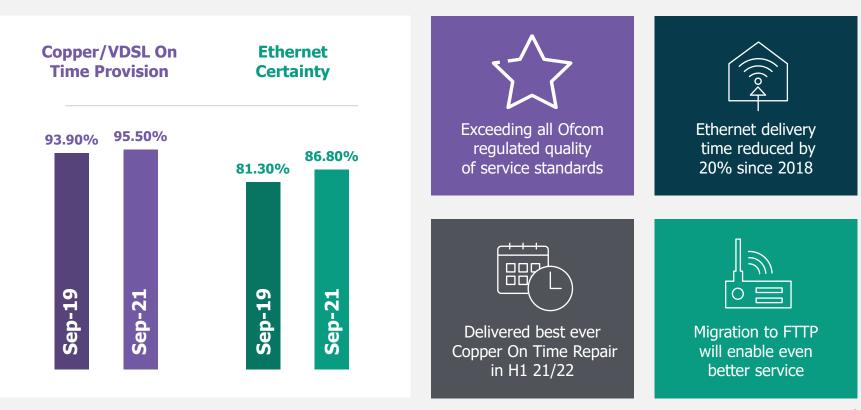


## Doing what we said we'd do

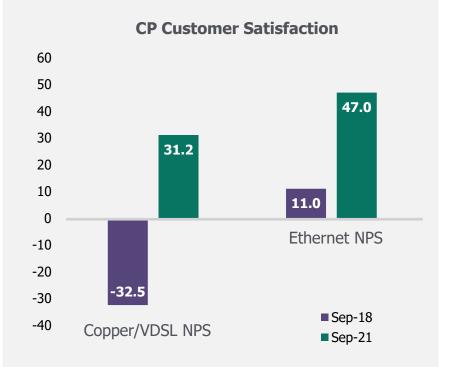
The key objectives we set out in 2019

- **Improve service** for customers
- Build close, collaborative relationships with our Communications Provider (CP) customers
- Move our customer base from ADSL to VDSL Superfast broadband
- Improve the **productivity and efficiency** of our engineering functions
- Translate service, productivity and efficiency gains into **stronger financial results**
- Rebuild this business of ours on a full fibre platform
- Re-skill our workforce for a full fibre world

## Despite Covid-19, service levels have improved significantly on the Copper, Ethernet and FTTP platforms



## **Relationships with CP customers and trust from householders and business** owners across the UK has risen steadily





#### **Better service**

Delivering significantly better service, and kept the UK connected during Covid-19 lockdowns



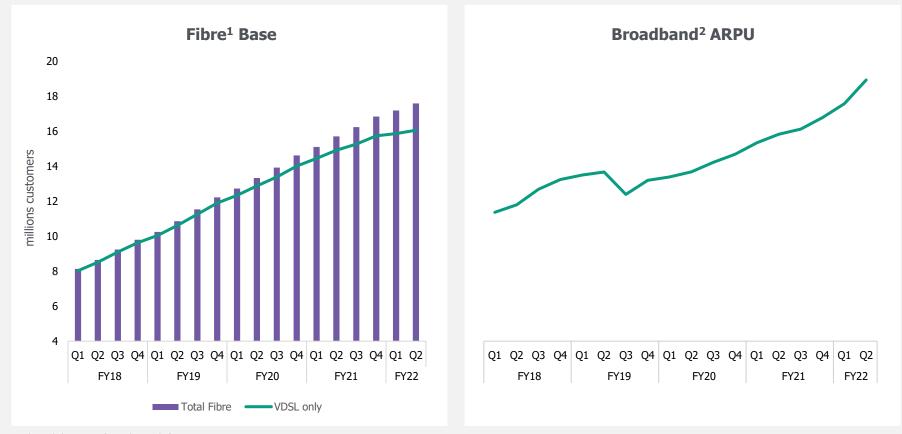
#### **FTTP deal**

Equinox, the 10 year FTTP deal to drive rapid adoption, designed with our CP customers

#### Co-provisioning with CP customers

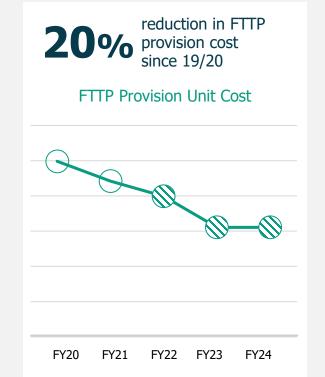
Sky engineers to complete in-home part of Openreach FTTP installations

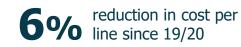
## The 2018 volume deal has driven rapid adoption of the VDSL platform



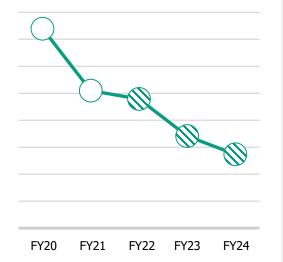
1. Fibre includes VDSL, Gfast and FTTP platforms 2. Total Rental Revenue (WLR, LLU and NGA) / Physical Lines

# In the last two years we've eliminated £385m of annualised failure costs, further improvements to come





Cost per Physical Line<sup>1</sup>

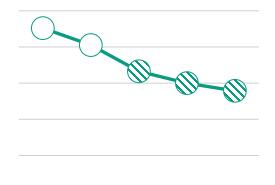




**Ethernet Unit Costs** 

FY20

FY21

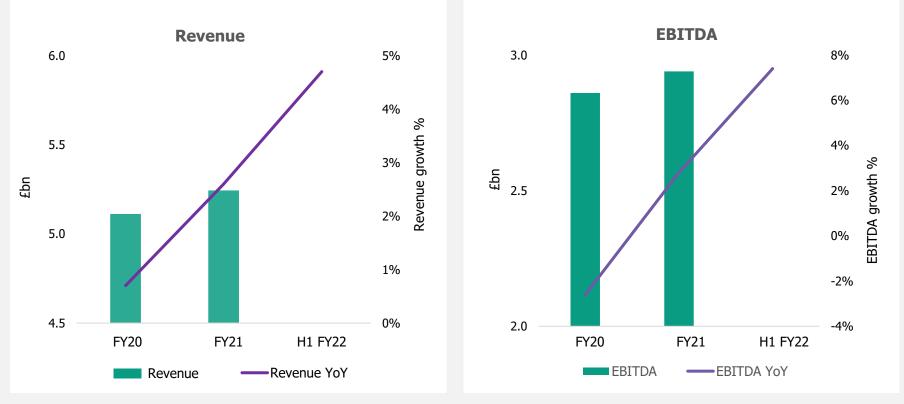


FY22

FY23

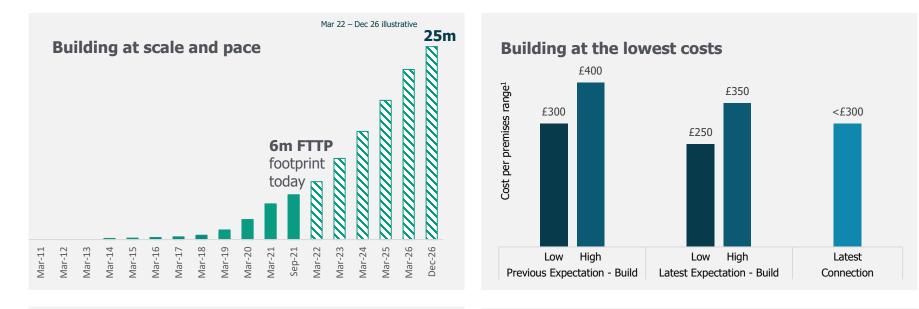
FY24

# We are on track for a third year of revenue growth and second year of EBITDA growth



## Phase one of the big fibre build is behind us

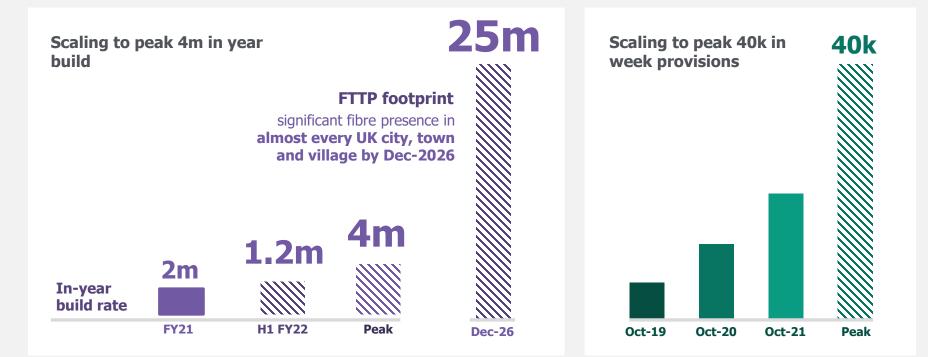
We're market leaders on pace, cost and quality – in all geo types



**15,000+** FTTP build and provision engineers today



## Phase two of the big fibre build is underway and will see us deliver a peak 4m in-year FTTP build and large-scale FTTP provisioning



Our differentiator is our huge direct labour workforce and ability to recruit or dual-skill 5,000 engineers to fibre each year.

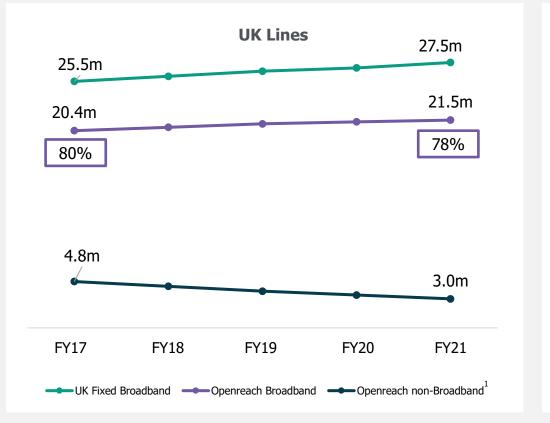


- **01 Majority of customer base on VDSL**, which meets the needs of most consumers today
- 02 Building at an unrivalled pace and cost. Will be almost everywhere by Dec-2026
- **03** Selling and provisioning in higher volumes every week, Equinox deal will drive rapid adoption
- **04** We are transforming, simplifying and taking cost out – full fibre will super-charge cost reductions
- 05 We will continue to command the strongest economics, as we are ahead on:a. People and skills, and
  - b. Technical innovations

# Market context and strategy

**Richard Allwood** Chief Strategy Officer

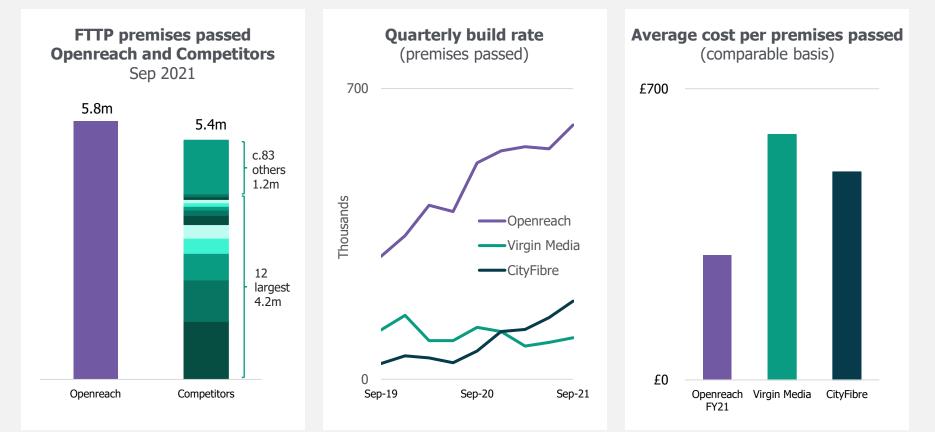
## The broadband market is growing



20/21 vement	mo
440	Market growth
(260)	Competitive losses
180	Openreach broadband net adds
- (430)	Multi-line consolidation Migration to broadband
(250)	Openreach physical line net adds <sup>1</sup>

1. Some CPs pay us for both a FTTP and WLR lines at the same premises. We consider this to be a temporary solution whilst CPs optimise their IP voice services and expect the WLR at these premises to be terminated and so exclude it from the underlying total shown

## We're well ahead of the competition



## **Regulation and public policy support** scale fibre build



## Regulation

- No surprises: framework set for at least 10 years
- Indexation; premium for FTTP with pricing freedom above anchor
- Physical Infrastructure Access to support entry
- Changes to switching framework



## Public policy

- Subsidy for non-commercial areas
- Progress on barrier busting
- Corporation tax super deduction



## **Strategy: key themes**

Move at pace to:

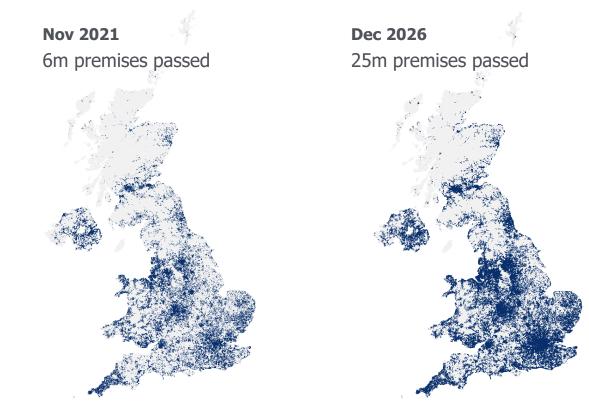
- **I** Build nationwide at lowest unit costs
- II Migrate all our customers brilliantly at competitive prices
- **III** Simplify and reduce costs



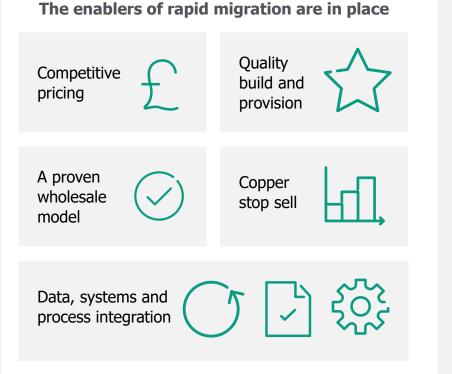
## Nationwide build progressing at pace

Postcodes with access to Openreach FTTP

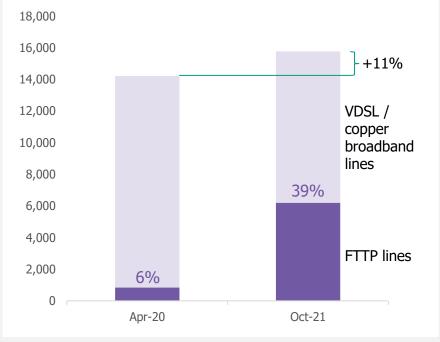
Sep 2018 682k premises passed



## We're ramping the pace of migration to FTTP



## **Openreach broadband lines in the Salisbury exchange area**



FTTP will unlock a structural improvement in our economics, significantly reducing opex and capex intensity



## **Digital impact and sustainability**

#### Tackling climate change

- Transition our fleet to electric vehicles by 2030
- Reduce electricity consumption as we withdraw legacy products
- Reduce waste across our operation including extraction and re-use of legacy equipment
- Net Zero by 2030

## Building a more inclusive business

Represent the communities we serve. 50% of senior management will be female by 2025.



#### Supporting better digital lives

Launched our connect the unconnected proposition





- **01** Attractive, and therefore competitive, market
- **02** Openreach best placed to win
  - Lowest cost, fastest builder
  - Nationwide relationships with all CPs in place
  - Competitive pricing designed with and for our CPs
  - High quality VDSL platform
- **03** Transformed economics
- **04** Environmentally sound

# 03

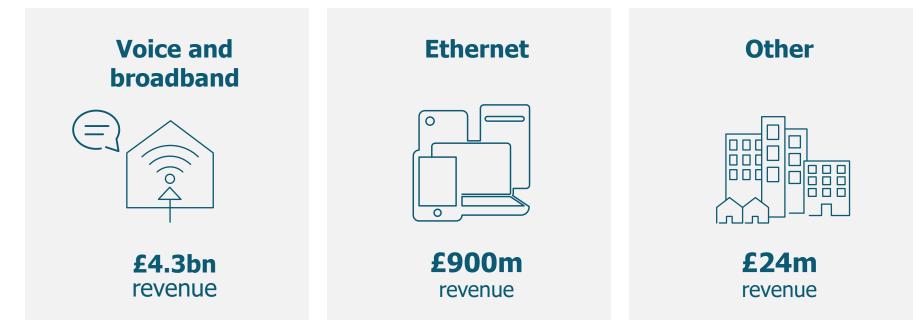
## Customers and

trading

Katie Milligan Managing Director, Customer, Commercial, Propositions and Northern Ireland

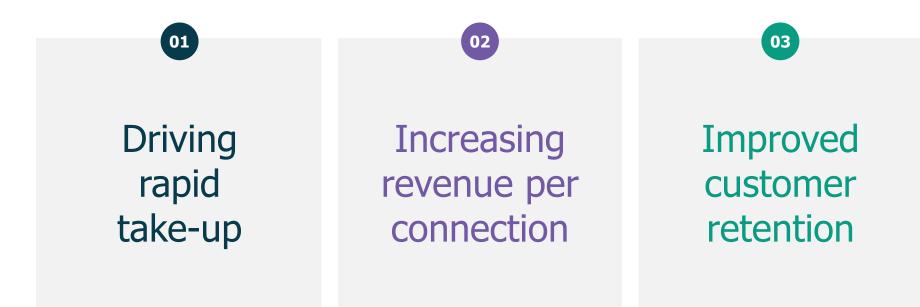
## **Trading and Product portfolio**

A reminder of our market



## **Our key priorities**

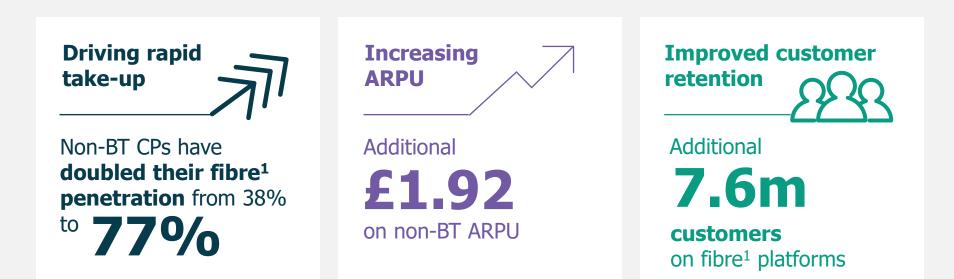
Across all our products and segments



## **Looking back**

Over the last three years we've driven year-on-year revenue growth following our 2018 volume deal





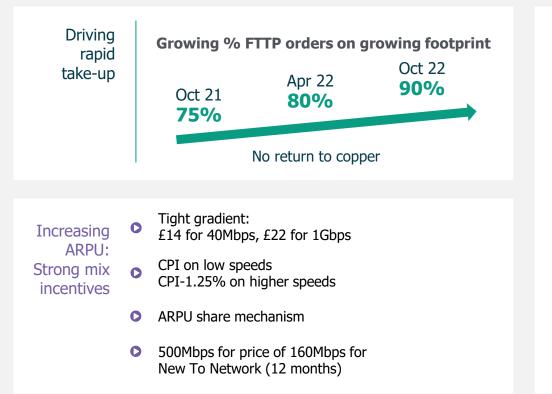
## Key principles of the Equinox FTTP deal

Openreach has engaged with industry to design a deal that follows five key principles

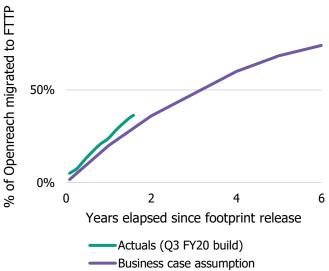
1	Make FTTP the preferred technology	• Single, simple CP commitment to sell FTTP where available, in place of VDSL / copper
2	Create a modest premium on FTTP	<ul> <li>Maintain a full fibre premium vs. VDSL, recognising willingness to pay for quality broadband</li> <li>Offer a choice of speeds on the bandwidth gradient for CPs to create their own offers</li> </ul>
3	Price competitively	<ul> <li>Openreach prices that are competitive given the scale, breadth and quality of our platform</li> <li>Mix incentives to encourage take up of higher bandwidths, and recognise the shift to higher speeds over time</li> </ul>
4	Provide certainty	• Up to 10-year price certainty for up to 10-year copper stop sell commitment
5	Simplify	National rental pricing that applies to all Openreach FTTP footprint

## **Looking forward: Equinox**

Our focus has shifted to filling our FTTP platform using the commercial FTTP only deal

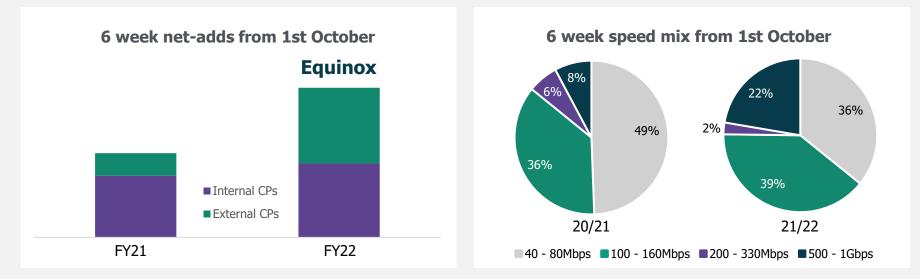






# Equinox now launched and Openreach is growing market share in competitive areas

12 CPs have signed the offer, including our five largest



## Weekly churn on FTTP is 33% lower than VDSL

## **Ethernet and backhaul connectivity**

Ever-increasing demand for bandwidth is driving the business market

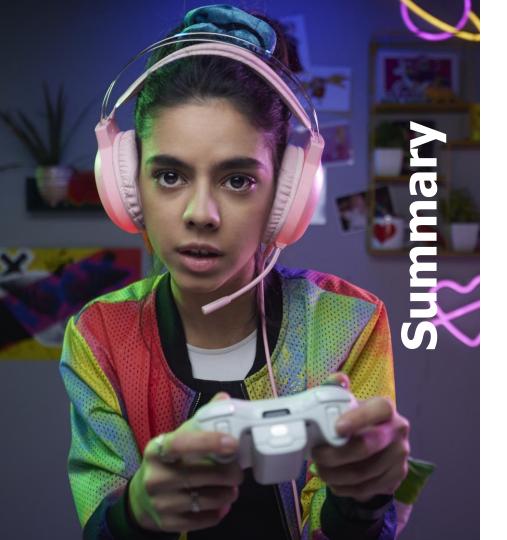
Driving rapid take-up

Year-on-year growth and a return to pre-Covid demand levels Encouraging greater speed mix

Majority of Ethernet demand now 1Gbps

Improved customer retention

Signed multiyear 'very high bandwidth' deals with key CPs



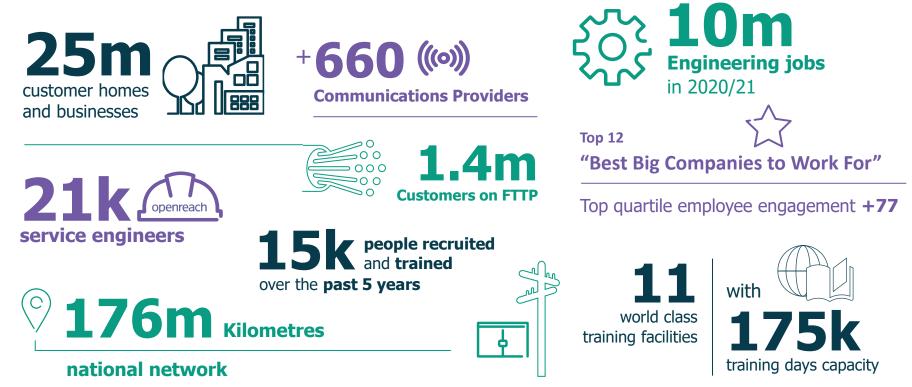
- **01** We've demonstrated a strong track record filling our VDSL platform and we'll do the same on FTTP
- **02** 1.4 million customers are already on FTTP meaning we have more than 4.5 million homes to go after
- **03** FTTP take-up is ahead of expectations, and churn is much lower than on VDSL, demonstrating the attractiveness of our FTTP network
- **04** We see strong Ethernet demand and outlook following Covid-19 recovery

## Service and

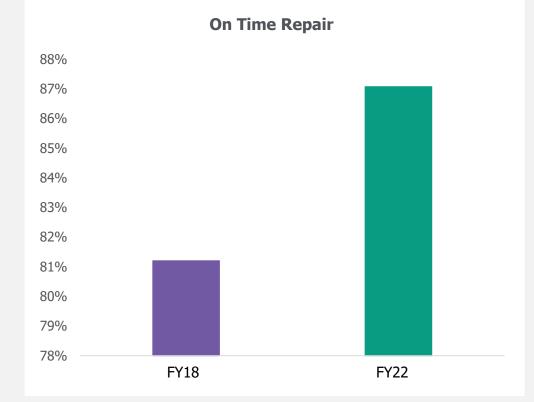
## cost transformation

<

Olly Kunc Managing Director, Service Delivery We serve 25m homes and businesses across a huge national network of Copper, VDSL, Ethernet and increasingly FTTP



## Best ever service, despite highly turbulent times throughout Covid-19





Network fault rate down 5% since peak



Repeat faults rate down 15% in 4 years

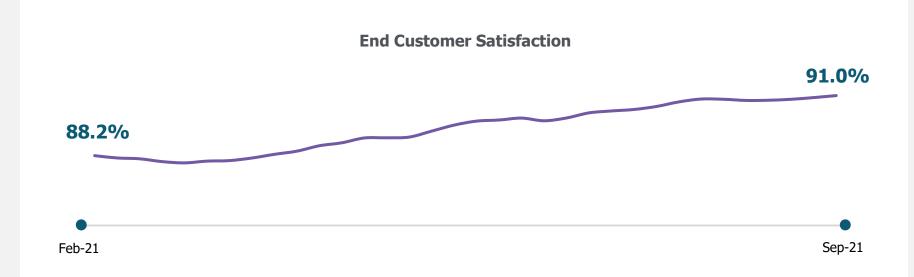


On Time Provision consistent at >94%



Missed Appointments reduced 50% from 15/16

### **Strong service reflected in end customer and CP feedback**



#### End customers have never been happier

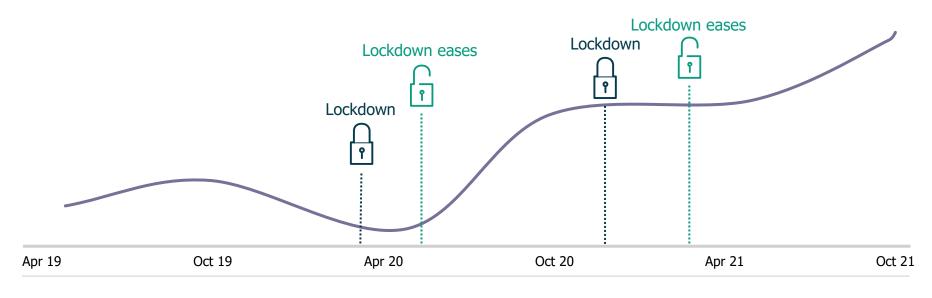
Following lockdown release we've seen progressive increases in customer satisfaction

# CP NPS up by 63.7 points since 2018

Service improvement is recognised by our CP customers

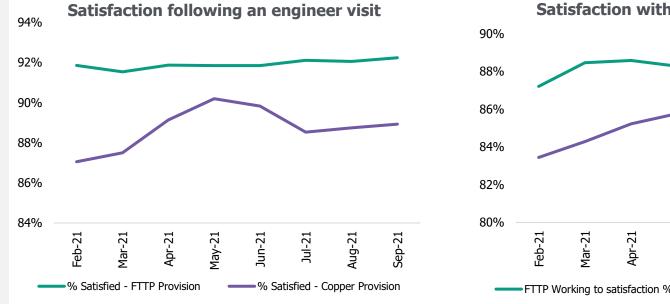
# FTTP continues to grow rapidly

**FTTP Provisions** 





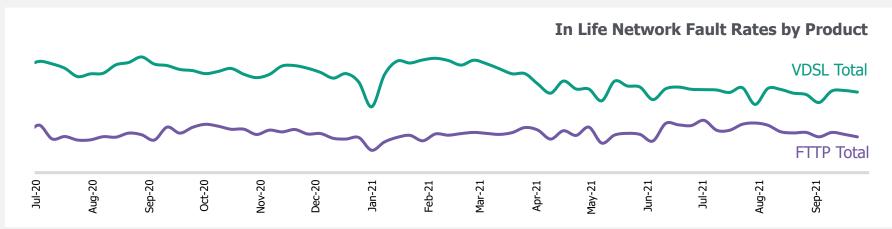
# FTTP customer satisfaction is strong and in life service drives lower churn



Satisfaction with product connectivity May-21 Jun-21 Sep-21 Jul-21 Aug-21 FTTP Working to satisfaction % Copper Working to satisfaction %

92% 50% FTTP on time provision lower early life failure than VDSL / copper

# FTTP in life performance is strong and will drive lower costs



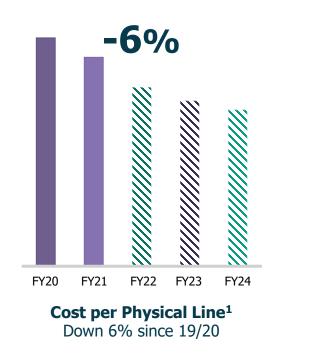
Network faults half of copper with limited weather impacts More stable technology Strong and consistent performance through Covid-19 home-working Subsequent provisions much lower cost

and "zero" touch

#### Further innovation opportunities

New engineering practices, testing and diagnostics capability and CP co-provisioning partnerships

## **Costs reduced significantly to FY22 with more to go**





# Award winning recruitment and training capability









# **£15m investment** since 2016

11 regional Open Street training centres

# 175k days skilling capacity

Up from 65,000 in 2016

# 5,000 engineers this year

Deployed on fibre through a combination of recruitment and dual-skilling



# We're aiming for

- **01** Fantastic service on copper Delivering commitments efficiently
- **02** Scaling on FTTP with world class service Re-skilling workforce as copper declines
- **03** Innovation and collaboration Digitalisation and big data revolution
- **04** World class team Safe, engaged, highly skilled

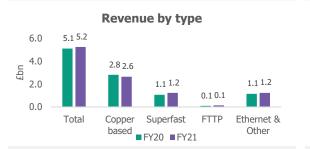
# Financial

# delivery and outlook

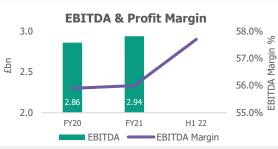
Matt Davies Chief Finance Officer

# **Financial Performance**

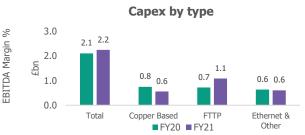
### Strong dependable financial performance as we migrate to new technologies



#### (2) EBITDA and Profit Margin



# (3) Capex



#### LOOKING BACK

(1) Revenue

- Revenue growth of 1% in FY20 and 3% in FY21
- FTTP accounts for just £0.1bn of revenue in FY21

#### **IN YEAR**

Revenue growth 5% in H1 FY22

#### LOOKING BACK

• EBITDA of £2.9bn in FY21 up 3%

#### LOOKING BACK

- FTTP capex growth of £0.4bn in FY21
- Total capex growth of £0.1bn in FY21

#### **IN YEAR**

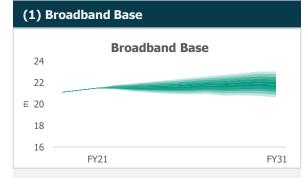
- EBITDA up 7% in H1 FY22
- EBITDA margin up from 56% FY21 to 58% H1 FY22

#### **IN YEAR**

- FTTP capex growth of £0.1bn in H1 FY22
- Total capex spend broadly flat in H1 FY22

### Revenue

### The broadband base and revenue is resilient



#### (2) ARPU ARPU <sup>10</sup> <sup>10</sup> <sup>10</sup> <sup>5</sup> <sup>0</sup> <sup>21/22</sup> <sup>25/26</sup> <sup>30/31</sup>

#### LOOKING BACK

- Base up from 21.1m in FY19 to 21.5m in FY21
- Share dropped from c.80% in FY19 to c.78% FY21
- Market share decline offset by c.0.4m annual growth in the broadband market

#### LOOKING FORWARD

- Market share reduces in all scenarios
- Broadband base broadly maintained in all scenarios
- Impact on broadband base from market share loss limited by c.0.4m annual growth in the broadband market

#### LOOKING BACK

 Broadband ARPU has grown as a higher proportion of the base have taken VDSL broadband.

#### LOOKING BACK

FY21

(3) Revenue

6.0 נףח

5.0

 Revenue growth driven by growing broadband base and higher mix of VDSL

Revenue

#### LOOKING FORWARD

- Conservative assumption of flat prices in real terms by product type
- Real term ARPU growth comes from higher mix of FTTP – underpinned by Equinox deal

#### LOOKING FORWARD

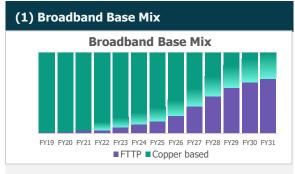
• In all scenarios revenue grows over the long term

#### 45

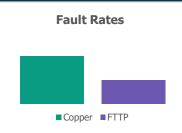
FY31

# Opex

## Cost per line decreases over time as Openreach migrate to FTTP



#### (2) Fault Rates by Product



# (3) Cost Per Line Average Service Cost Per Line FY21 FY26 FY31

#### LOOKING BACK

• Broadband mix on FTTP just 5% in FY21

#### LOOKING FORWARD

 Broadband base will become dominated by FTTP by FY31 – underpinned by Equinox

#### LOOKING BACK

• Faults on copper reducing as we filter out non effective copper repair visits

#### LOOKING FORWARD

Fault rates to reduce in line with migration to
 FTTP

#### LOOKING BACK

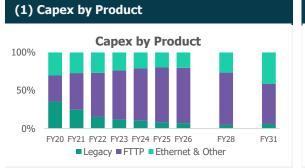
• Service cost per line reduction driven largely by efficiency programmes improving productivity and reducing non effective visits

#### LOOKING FORWARD

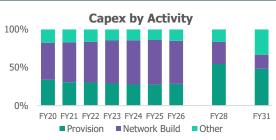
- Service costs make up c.35% of Opex costs
- Average service cost per line drops by around 50% by FY31
- Opex savings c.£500m by FY31

# Capex

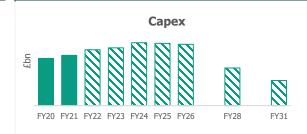
# Investment in FTTP drops significantly in FY28 as the bulk of FTTP build completes



#### (2) Capex by Activity



#### (3) Total Capex Spend



#### LOOKING BACK

 Copper network has historically been our largest investment, supporting VDSL superfast deployment and take up

#### LOOKING FORWARD

FTTP peaks in FY26, offset by reductions in legacy

#### LOOKING BACK

- Network build is the material investment type
- Pivoted from copper augmentation to fibre build

#### LOOKING FORWARD

- Network build dominates capex until 2026
- Provision scales to growth in FTTP base
- Post 2026 network capex drops as bulk of FTTP build completes

#### LOOKING BACK

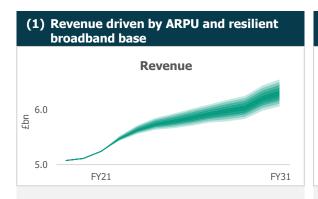
- FTTP capex growth of £0.4bn in FY21
- Total capex growth of £0.1bn in FY21

#### LOOKING FORWARD

- Total capex peaks from around FY24
- Peak investment in FTTP between in FY26 is offset by lower legacy investment and efficiency
- FY28 Capex drops off by at least £1bn as bulk of FTTP build completes
- FY31 Capex drops as FTTP provision volumes slow

# Summary

## Openreach will deliver growth across revenue, EBITDA and NFCF



# (2) EBITDA further supported by increasing margins\* EBITDA

# E 2.9 FY21 ARPU Service cost FY28 ARPU Service cost FY31

#### HEADLINE

We are confident we will grow revenue over the long term in a wide range of altnet build scenarios

#### **KEY ENABLERS**

- Growing broadband market cushioning any losses to altnets
- ARPU growth in real terms driven by higher mix of FTTP and CPI linked indexation

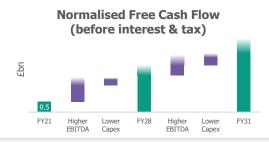
#### HEADLINE

The growth in revenue will translate to growth in EBITDA which will be further enhanced by expanding margins

#### **KEY ENABLERS**

- Revenue flow through from higher ARPU FTTP
- Migration to lower cost to serve FTTP platform

# (3) Cashflow benefits from higher EBITDA and lower capex\*



#### HEADLINE

Normalised Free Cash will grow significantly FY28 as the bulk of build activity completes and then continue to grow to FY31 driven by lower Capex and growing EBITDA

#### **KEY ENABLERS**

- Build to 25m homes completes in December 2026
- Provision volumes hit peak in FY28
- EBITDA increases from revenue flow through and lower cost to serve FTTP platform



- **01 Majority of customer base on VDSL**, which meets the needs of most consumers today
- 02 Building at an unrivalled pace and cost. Will be almost everywhere by Dec-2026
- **03** Selling and provisioning in higher volumes every week, Equinox deal will drive rapid adoption
- **04** We are transforming, simplifying and taking cost out – full fibre will super-charge cost reductions
- 05 We will continue to command the strongest economics, as we are ahead on:a. People and skills, and
  - b. Technical innovations



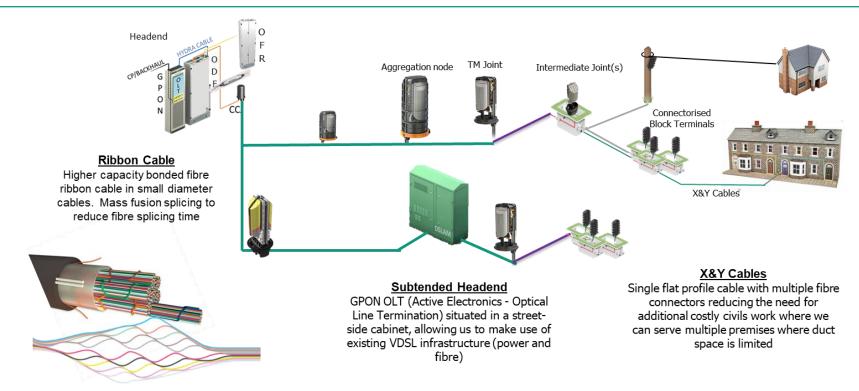
# Technical innovations

# **Technical innovations**

Group	Initial location	Innovation	Host
		Subtended headend	
	Showcase	X&Y cable	Claire
		Fast installation	
	Meeting room area	<ul><li>Ribbon fibre cable</li><li>Mass fusion splicing</li></ul>	Fi
	G.09	Digital workflow for fibre: • Orion • MyServices App	Tamsin

# **Engineering innovation**

#### Network diagram showing innovations



GPON: Gigabit ethernet Passive Optical Network; OLT: Optical Line Termination; ODF: Optical Distribution Frame; OFR:Optical Fibre Rack; CC:Cable Chamber; TM: Transportation and Mobility (Supplier name for fibre nodes)

# **Engineering innovation**

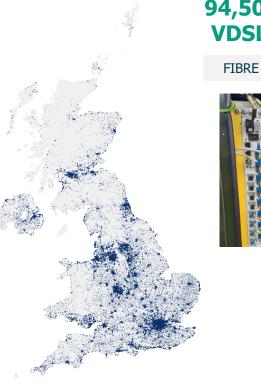
Solution Description

Key Messages

Subtended Headend A small part of the FTTP headend remotely situated in a street cabinet, allowing us to make use of existing VDSL infrastructure (power and fibre)

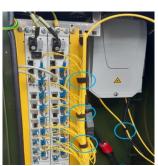
#### Enables faster and cheaper FTTP build in rural areas

- Avoids costly civils works and traffic management delays by re-using existing equipment built for VDSL
- Reduces the number of costly spine routes required
- 2 fibres can enable as many as 6,500 homes with FTTP (would normally require more than 200 spine fibres)



# 94,500 existing VDSL cabinets

**POWER** 



# **Engineering innovation**

Solution	Description	Key Messages	
X & Y Cables and fast installation	Single flat profile cable with multiple connectors. Used where duct space is limited, to reduce the need for costly civils work	<ul> <li>Faster and cheaper FTTP connections</li> <li>Where space is limited and we can only fit one cable through the duct, this enables us to connect multiple premises with a single cable, avoiding expensive civils work</li> <li>The 'X cable' can be deployed to 4 premises served by a single small diameter duct (e.g. rubber duct 100) and the 'Y cable' can be deployed to 2 premises</li> <li>Cost effective final drop solution for terraced, semi detached, converted multi-dwelling units and maisonettes.</li> </ul>	
Ribbon fibre cable & mass fusion splicing	Provides the ability to mass fusion splice 12 fibres in a single action – increasing productivity and reducing physical cable size	<ul> <li>Faster and cheaper FTTP build in rural and urban areas</li> <li>Reduces the time it takes to splice high volume fibre cables in our spine network by a factor of 12</li> <li>Cable design, with higher fibre density in small diameter cable, avoids future capacity constraints and more capable of getting through limited duct space</li> </ul>	

• Openreach first to bring technology to Europe; optimized to work with our network and engineering practices



# **Civils solutions**

Solution	Description	Key Messages	
Cleanfast Machine	The Cleanfast is a game changer for carriageway trenching. It can trench up to 670mm in depth, without needing to remove the spoil from the roadside. With its innovative vacuum system, it's capable of clean trenching 1,000 metres per day. No matter how rural the project, the spoil can be tipped into low sided skips and taken away from the site.	<ul> <li>Faster and cheaper FTTP build</li> <li>Causes less disruption to local residents in remote and rural locations</li> <li>Speeds up build and deployment by up to 10x compared to other methods</li> <li>Increases likelihood of being granted permits in the first instance (e.g. AONB and National Parks)</li> <li>Environmentally friendly, dust and debris removed instantly through the vacuum attached</li> <li>Reduces manual handling and musculoskeletal injuries</li> </ul>	<image/>

#### Marais Trencher

Narrow trenching machine of limited size, making the machine perfect for housing estates and cul-de-sacs

#### Faster and cheaper FTTP build

- More than 5x quicker than conventional methods for both footpath and carriageway trenching
- Less disruptive for residents and road users
- Environmentally friendly with narrow trenching
- Remote controlled increasing safety for the operative



# **Civils Solutions**

Solution

Ground

Penetrating

Radar (GPR)

Description

#### **Key Messages**

GPR is a non-intrusive method of detecting buried objects and ground features. It operates using a range of frequencies depending on the application it is being used for:

200-900MHz for utility detection

1GHz – 2GHZ for pavement analysis

<100Mhz for geological investigations

GPR can be handheld, mounted on a cart to be pushed or towed behind a road vehicle.

GPR works by transmitting radio waves into the ground and detecting the reflections returning to the antenna. The time this takes to happen gives the depth to the target.

#### Faster and cheaper FTTP build

- Helps identify non-metallic objects/utilities that are not detectable using conventional methods such as plastic gas and water services hence avoiding delays caused by strikes
- Less disruption to residents
- Safer working environment with increased utility strike avoidance

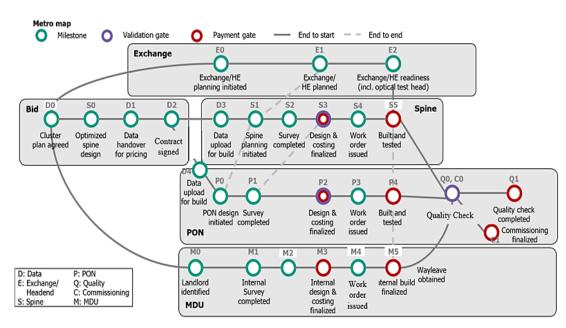




# **Systems innovation**

#### Solution

#### **Digital Workflow for Fibre**



A digitised fibre plan and build journey to enable our scale build

- We've mapped our fibre journeys and detailed process steps – and we've built them into an endto-end digital solution which allows us to scale our build whilst maintaining control over cost and quality.
- Updates happen automatically as part of the 'day job' reducing manual steps for our engineers.
- Our goal is that all systems will be automated (no swivel chairing, forms, spreadsheets) - ensuring end-to-end data quality.
- We've introduced modern apps using the latest IT platforms.

# **Systems innovation**

Solution Description

Orion

#### **Key Messages**

Providing our partners access to all the key services required to install full fibre FTTP broadband

A modern app installed on an industrial grade PC for use in all weather conditions by surveyors from both Openreach & our partners.

Allows an engineer to complete a survey whilst out in the street – making sure that our build plans are informed by the realworld situation.

A set of best practice build rules are applied automatically to every survey ensuring quality is built into our network from the outset.

- Survey & planning is critical to driving scale FTTP build. We now have 9,500 surveyors trained on Orion.
- 88.5K surveys completed already ensuring that our build time & costs are optimised before we commence the work.
- Build quality is assured from the outset – reducing re-work and improving customer experience at point of provision.





# **Systems innovation**

Solution	Description	Key Messages	
	Using the latest cloud technology to enable any partner, including CPs, to work effectively on behalf of Openreach.	<ul><li>Benefits</li><li>Improving engineer and customer experience</li></ul>	
	Works on multiple platforms because our partners use various devices.	<ul> <li>Enable partners to work more effectively on behalf of Openreach.</li> </ul>	
MyServices App	<ul> <li>Enables partner engineers to:</li> <li>View job details</li> <li>Activate and test the service</li> <li>Self-serve network services such as network re-routes</li> <li>Complete sustamer bandaver</li> </ul>	<ul> <li>Successfully scaled our business in unprecedented times to keep the UK connected</li> <li>Underpinning and enabling the scaling of our multi-billion-pound UK fibre broadband build</li> </ul>	My Services
	Complete customer handover		

All within simple and intuitive guided journeys which help engineers perform at their best first time, on time, every time.

Windows

🗯 iOS

android

# openreach

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