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Openreach
Business Briefing

04 December 2019

Forward looking statement

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Certain statements in this presentation are forward-looking and are made in reliance on the safe harbour provisions of the US Private Securities Litigation Reform Act of 1995. These statements include, without limitation, those concerning: our service delivery strategy and transformation plans; our financial expectations including revenue, opex, capex and FTTP investment; and our roll out of FTTP.

Although BT believes that the expectations reflected in these forward-looking statements are reasonable, it can give no assurance that these expectations will prove to have been correct. Because these statements involve risks and uncertainties, actual results may differ materially from those expressed or implied by these forward-looking statements.

Factors that could cause differences between actual results and those implied by the forward-looking statements include, but are not limited to: market disruptions caused by technological change and/or intensifying competition from established players or new market entrants; unfavourable changes to our business where Ofcom raises competition concerns around market power; unfavourable regulatory changes; disruption to our business caused by an uncertain or adversarial political environment; geopolitical risks; adverse developments in respect of our defined benefit pension schemes; adverse changes in economic conditions in the markets served by BT, including interest rate risk, foreign exchange risk, credit risk, liquidity risk and tax risk; financial controls that may not prevent or detect fraud, financial misstatement or other financial loss; security breaches relating to our customers' and employees' data or breaches of data privacy laws; failures in the protection of the health, safety and wellbeing of our people or members of the public or breaches of health and safety law and regulations; controls and procedures that could fail to detect unethical or inappropriate behaviour by our people or associates; customer experiences that are not brand enhancing nor drive sustainable profitable revenue growth; failure to deliver, and other operational failures, with regard to our complex and high-value national and multinational customer contracts; changes to our customers' needs or businesses that adversely affect our ability meet contractual commitments or realise expected revenues, profitability or cash flow; termination of customer contracts; natural perils, network and system faults or malicious acts that could cause disruptions or otherwise damage our network; supply chain failure, software changes, equipment faults, fire, flood, infrastructure outages or sabotage that could interrupt our services; attacks on our infrastructure and assets by people inside BT or by external sources like hacktivists, criminals, terrorists or nation states; disruptions to the integrity and continuity of our supply chain (including any impact of global political developments with respect to Huawei); insufficient engagement from our people; and risks relating to our BT transformation plan.

BT undertakes no obligation to update any forward-looking statements whether as a result of new information, future events or otherwise.
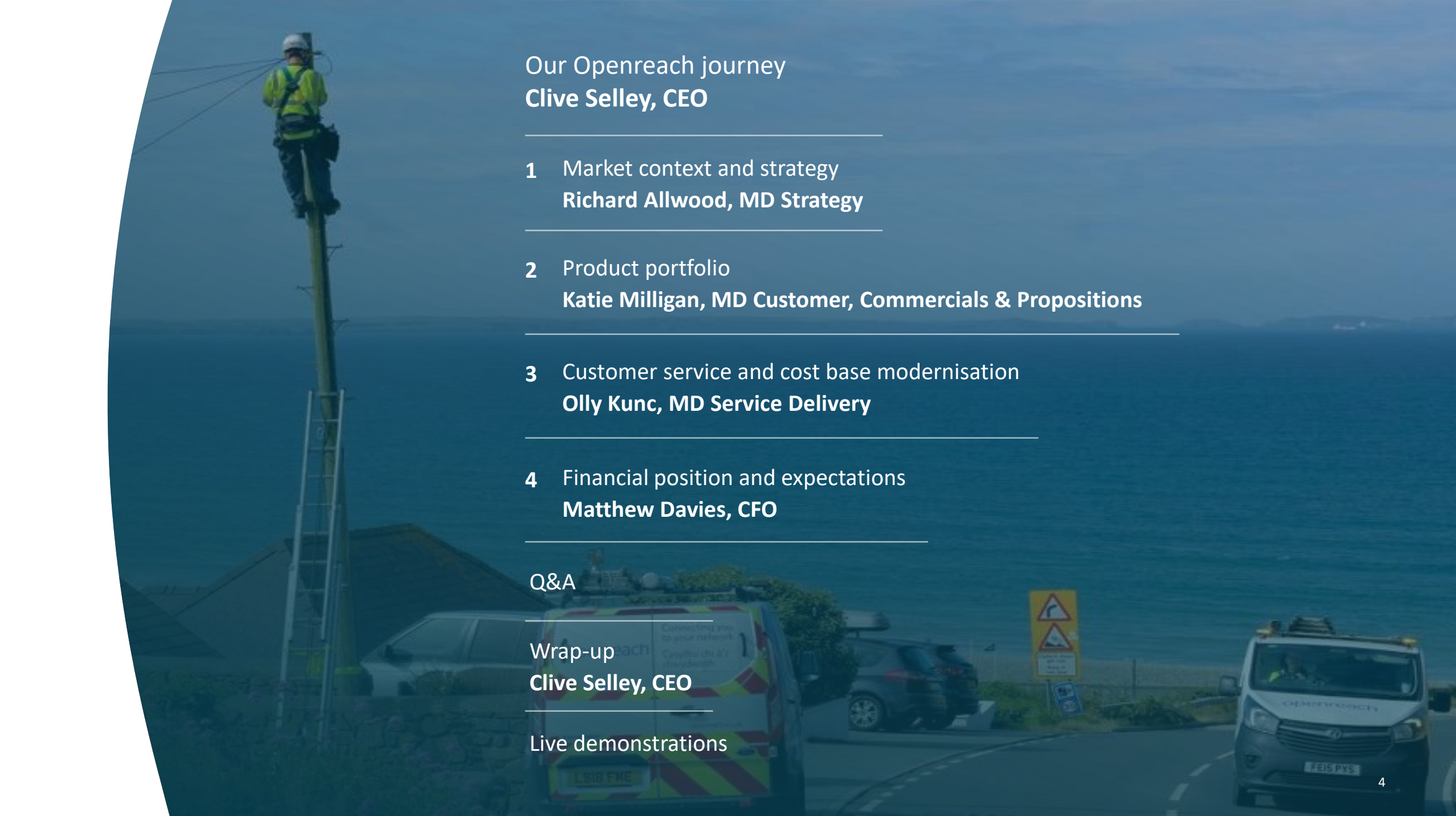
Welcome

Clive Selley
CEO, Openreach

Our Openreach journey
Clive Selley, CEO

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1   Market context and strategy
Richard Allwood, MD Strategy

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2   Product portfolio
Katie Milligan, MD Customer, Commercials & Propositions

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3   Customer service and cost base modernisation
Olly Kunc, MD Service Delivery

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4   Financial position and expectations
Matthew Davies, CFO

Q&A

Wrap-up
Clive Selley, CEO

Live demonstrations

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| Openreach journey | transforming the way we operate… |

Creating Openreach Ltd

1. **Independent, wholly owned subsidiary** of BT Group plc

2. Majority independent board

3. **UK's largest ever TUPE[1] process**

4. Business wide re-branding

5. **Huge rise** in employee engagement

1. TUPE – Transfer of Undertakings (Protection of Employment) Regulations

Our Journey

Openreach journey	transforming the way we operate…

Regulation

1. **Positive relationship with Ofcom**

2. **Significant price reductions** imposed to date, but not expecting any further major price reductions

3. Tougher regulated **service level obligations** and will continue to improve by working with CPs[1]

4. **5 year regulatory cycles** covering all products, starting April 2021

5. Regulatory environment shifting very materially to support investment with the fibre 'enablers'

1. CPs – Communications Providers

Our Journey

Openreach journey	transforming the way we operate…

Service improvement

1. We must **continue to provide better service**, to improve the customer experience and reduce unnecessary cost

2. **Service is better than ever**
   - Network faults reduced by 6% year-on-year
   - Delivering 18% more Ethernet circuits year-on-year
   - Missed appointments by our engineers at record lows

3. Moving to FTTP – **a service 'game changer'**

Our Journey

| Openreach journey | transforming the way we operate… |

Network strategy

1. Made superfast broadband (FTTC[1]) available to nearly **28m homes and businesses**

2. Maximising the value of the FTTC platform, **with over 13m** customers

3. **Efficient build and strong take up** of FTTC gives us confidence for FTTP investment and monetisation

4. Re-inventing Openreach as a **Full Fibre business**
   - Now **deploying FTTP[2] to a premise every 26 seconds**, accelerating build rate every quarter
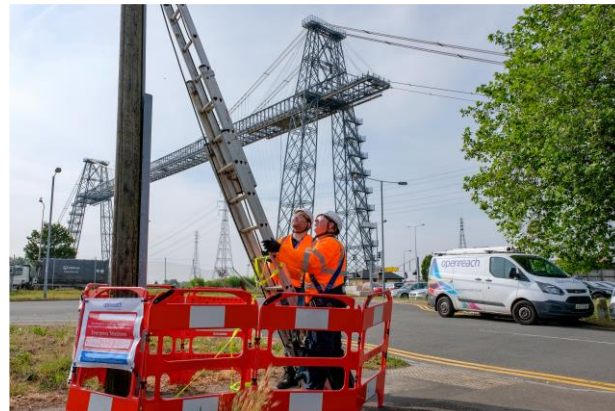
1. FTTC – Fibre to the Cabinet
2. FTTP – Fibre to the Premises

Fibre First

We have a Full Fibre ambition

Largest FTTP network in the UK

- Over 2m premises passed, 4m by March 2021
- Ambition to pass 15m by mid-2020s, subject to the right conditions
- Ultimately want to cover most of the UK

Building at the fastest rate

- Currently passing c.23,000 premises per week
- Ultimately believe we can pass c.3m premises per year

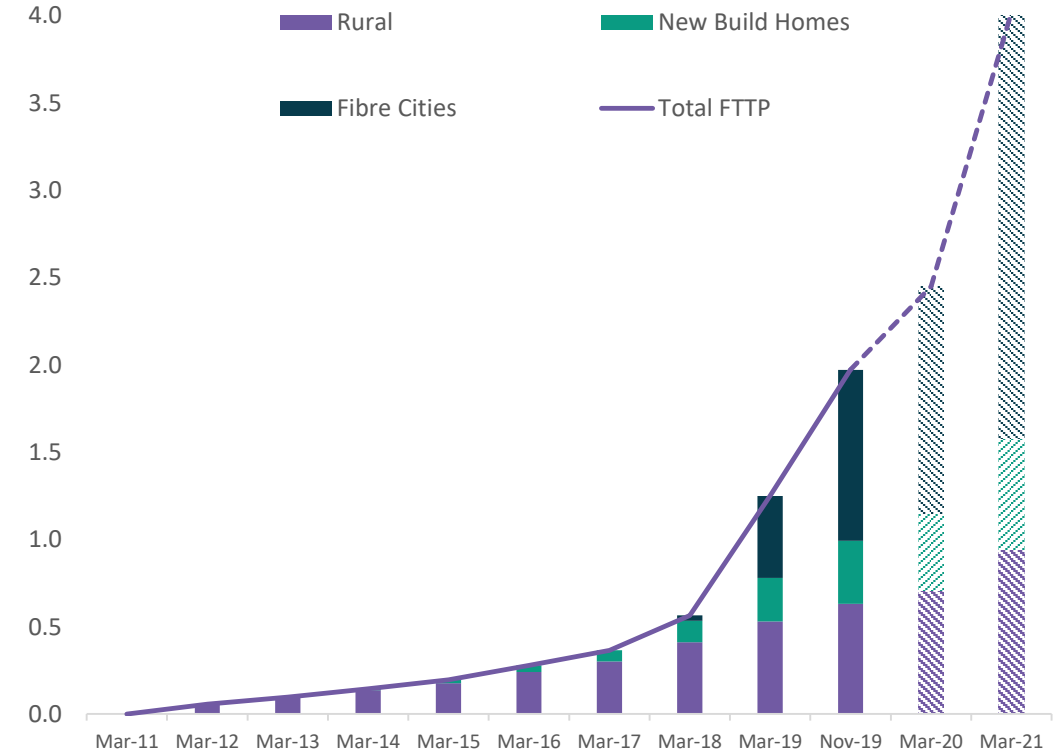### Building at low cost and high quality

- Scoured the world for best-practice
- Secured people & equipment supply chains

Selling it increasingly quickly

- Refining our provisioning techniques and cost
- Pricing the platform increasingly competitively

Premises passed (m)

Legend:
- Rural
- Fibre Cities
- New Build Homes
- Total FTTP

Chart x-axis: Mar-11, Mar-12, Mar-13, Mar-14, Mar-15, Mar-16, Mar-17, Mar-18, Mar-19, Nov-19, Mar-20, Mar-21

Chart y-axis: 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0

Building a better Openreach for the future

✓ Continue to raise service levels, eliminating failure costs

↻ Maximise value of the FTTC platform

⛑ Build FTTP infrastructure faster, cheaper and to high quality

⚙ Work with Communications Provider customers to drive rapid FTTP take-up

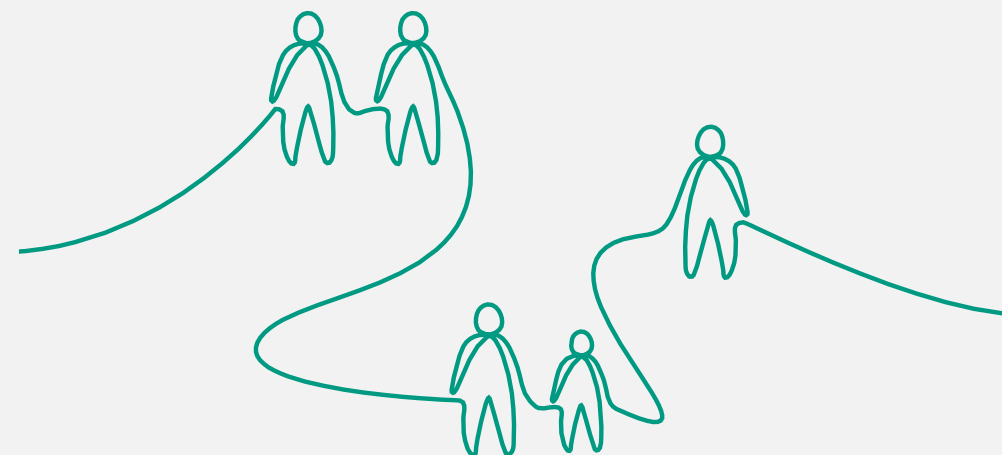🤝 Work hard to secure fibre 'enablers' from Regulator and Government
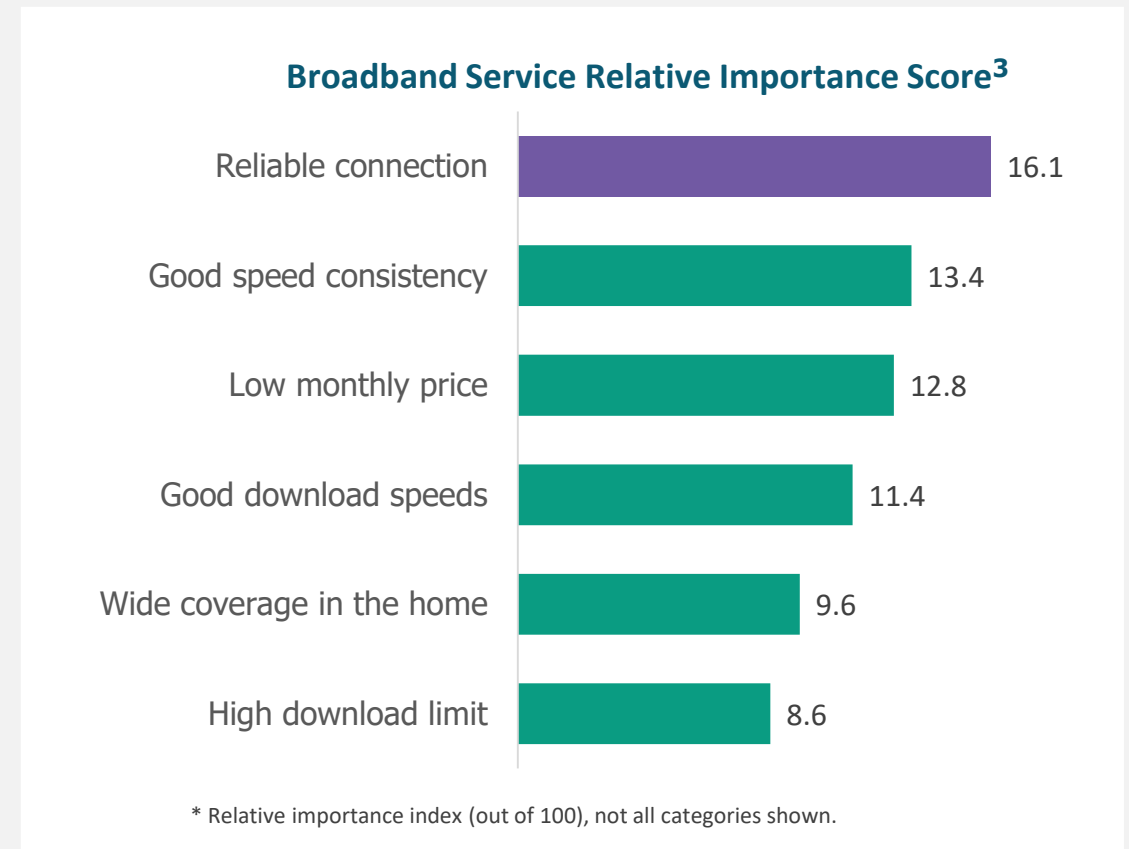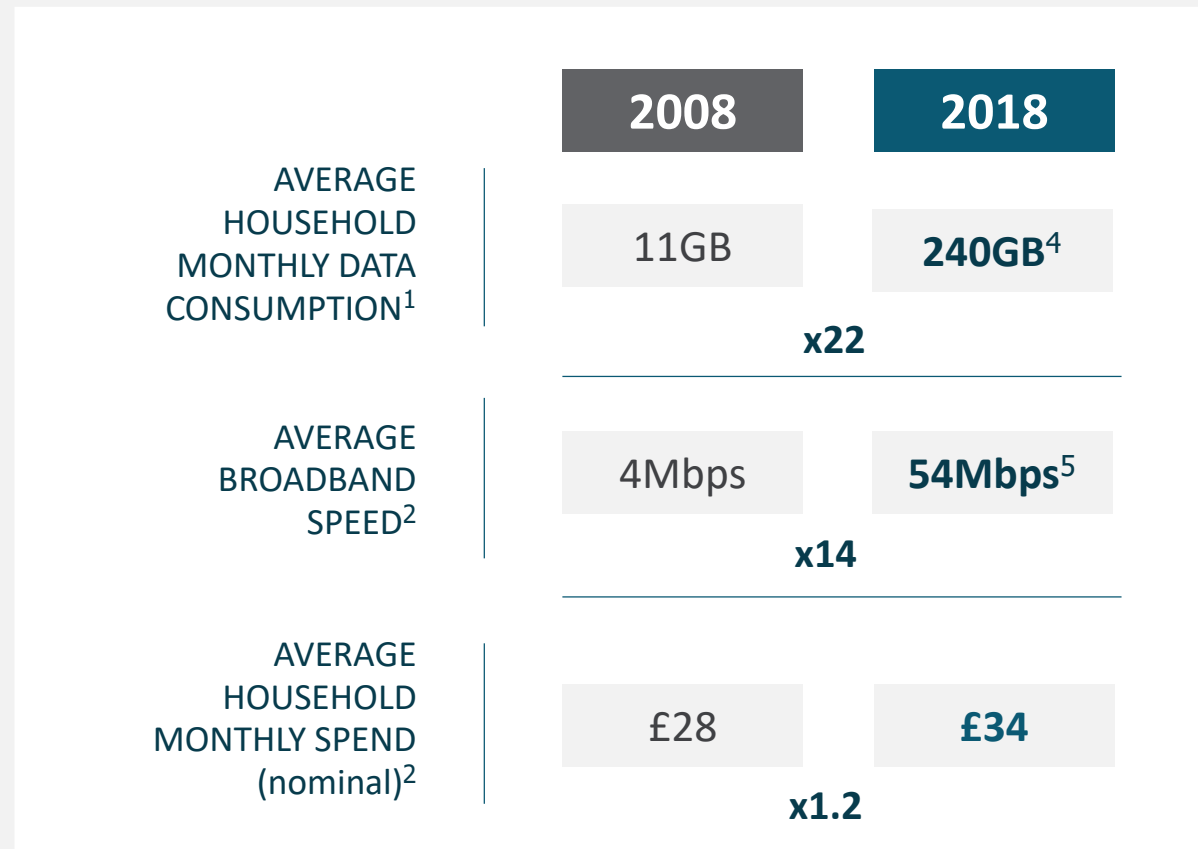
Market Context & Strategy

Richard Allwood
MD Strategy

Customers

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Customers will pay more for higher quality broadband services; higher quality is not just about speed

	2008	2018	
AVERAGE HOUSEHOLD MONTHLY DATA CONSUMPTION[1]	11GB	240GB[4]	x22
AVERAGE BROADBAND SPEED[2]	4Mbps	54Mbps[5]	x14
AVERAGE HOUSEHOLD MONTHLY SPEND (nominal)[2]	£28	£34	x1.2

Broadband Service Relative Importance Score[3]

Reliable connection	16.1
Good speed consistency	13.4
Low monthly price	12.8
Good download speeds	11.4
Wide coverage in the home	9.6
High download limit	8.6

* Relative importance index (out of 100), not all categories shown.

Public policy

The public policy goal is consistent despite the uncertain political context

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> The Government has set clear, ambitious targets for the availability of full fibre...we want to see 15 million premises connected to full fibre by 2025, with coverage across all parts of the country by 2033.

Future Telecoms Infrastructure Review - DCMS, July 2018

Department for Digital, Culture Media & Sport

> We intend to bring full fibre and gigabit-capable broadband to every home and business across the UK by 2025.

Boris Johnson, November 2019

Conservatives

> It's time to make the very fastest full-fibre broadband free to everybody, in every home in every corner of our country. Making it free and available to all will open up opportunities for everybody.
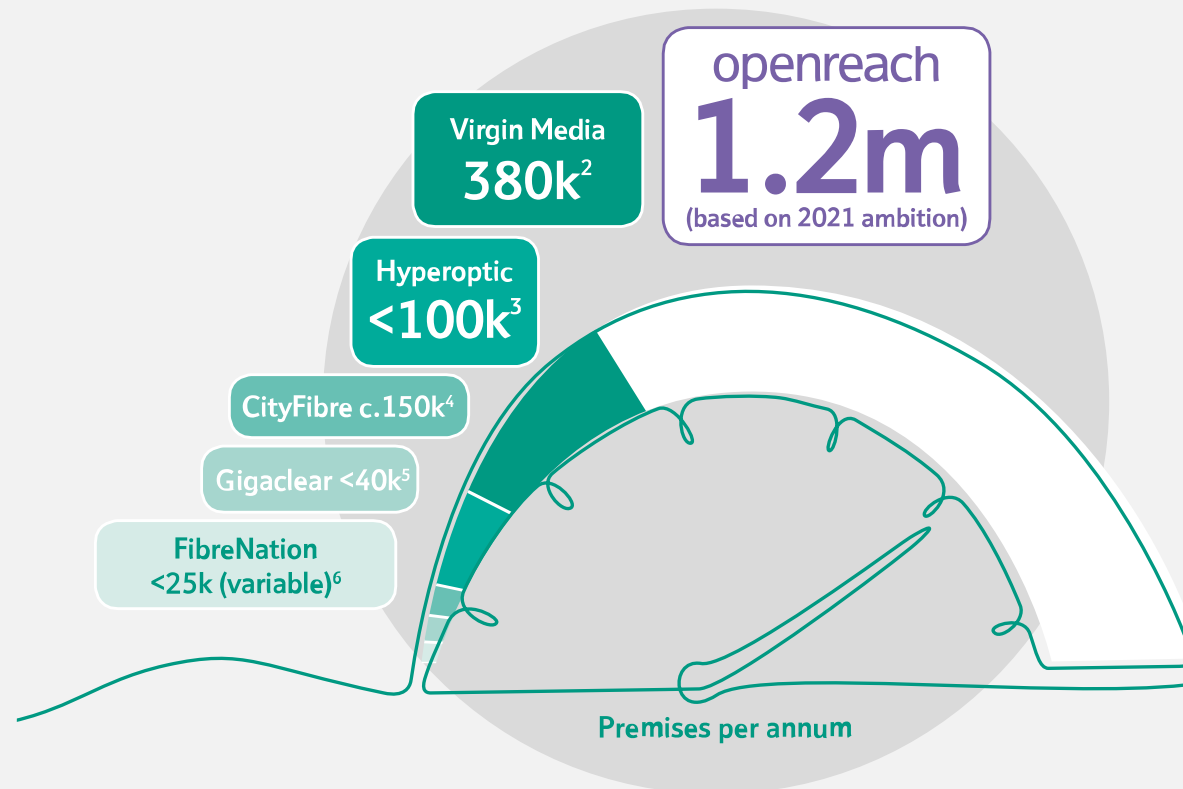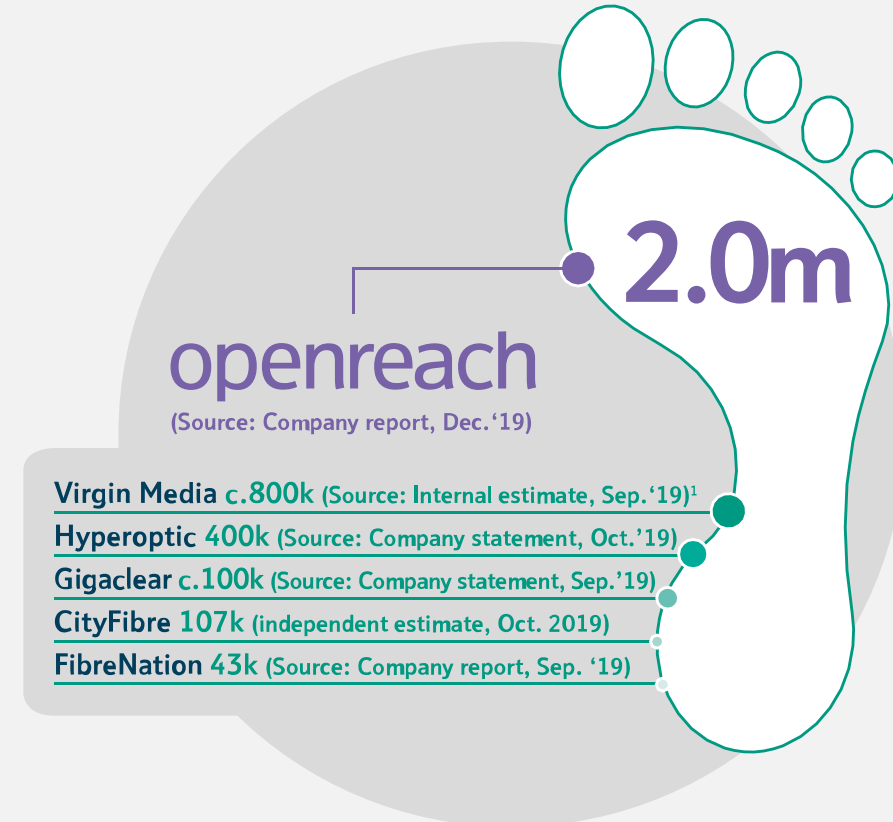
Jeremy Corbyn, November 2019

Labour

Competitors*

We have developed clear momentum in our build, reaching 2m premises passed

Build rate/year

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1.2m
(based on 2021 ambition)

Virgin Media
380k[2]

Hyperoptic
<100k[3]

CityFibre c.150k[4]

Gigaclear <40k[5]

FibreNation
<25k (variable)[6]

Premises per annum

Current footprint

2.0m

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(Source: Company report, Dec. '19)

Virgin Media c.800k (Source: Internal estimate, Sep. '19)[1]
Hyperoptic 400k (Source: Company statement, Oct.'19)
Gigaclear c.100k (Source: Company statement, Sep.'19)
CityFibre 107k (independent estimate, Oct. 2019)
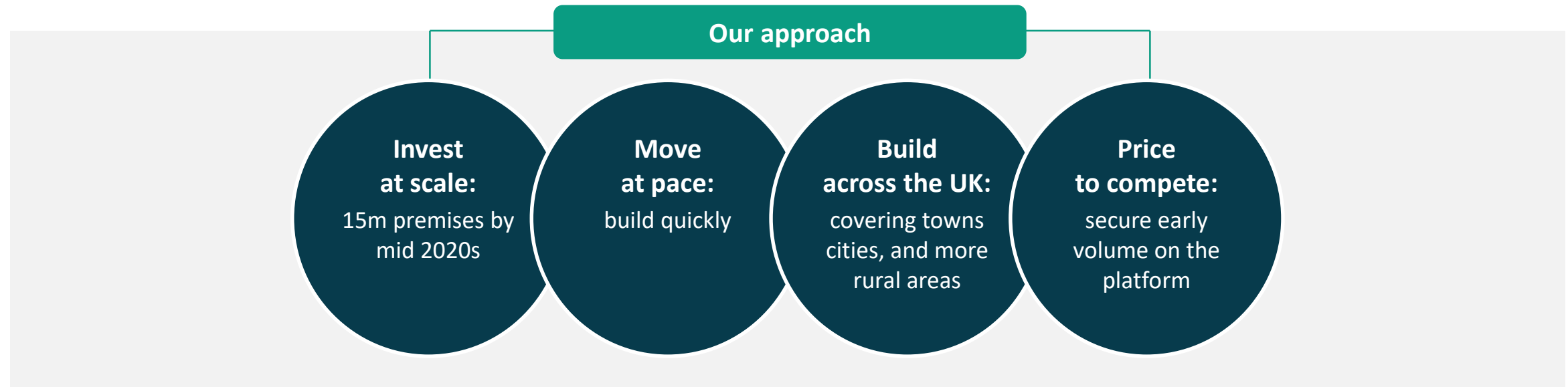FibreNation 43k (Source: Company report, Sep. '19)

1. Internal estimate, based in part on independent (Point Topic) coverage estimates and company reports. 2. Internal estimate, based on 2019 quarterly run rate (c.95k) as taken from company reports (Q1) and internal estimates (Q2 + Q3)
3. Internal estimate based on company stated build progress. 4. Extrapolated from independent (ThinkBroadband) 2019 coverage estimates (7.5k/month Feb. to Aug., ≤15k/month Aug. to Oct.).
5. Internal estimate based on company stated build progress. 6. Based on company reported build progress.

*Competitor data is based on data which each competitor has put into the public domain.

Response – FTTP investment

Scale investment in FTTP is our preferred approach, if it is supported by regulatory and policy enablers

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Our approach

Invest at scale:
15m premises by mid 2020s

Move at pace:
build quickly

Build across the UK:
covering towns cities, and more rural areas

Price to compete:
secure early volume on the platform

This investment will unlock

| a transformed customer experience | a radically simpler operating model | a competitive platform that can win | fair returns for investors |

Securing the enablers needed to achieve fair returns

We're making progress

1

Indexation of legacy services

Ofcom has proposed indexation of legacy
services in prospectively competitive areas

2

Premium for FTTP anchor

Ofcom has proposed to set an FTTP anchor price at a modest premium to FTTC and allow this to index, with pricing flexibility above the anchor

3

Support for switchover

Ofcom is supportive of switchover in principle. We have proposed that stop-sell begin once 75% of premises have ultrafast available

4

Pricing flexibility

Ofcom has proposed that Openreach is unable to discount FTTP prices geographically within the prospectively competitive area

5

Fair bet clarity

Ofcom is supportive of the principle. We have asked for further detail on the mechanics

6

Business rates exemption

We continue to engage with Government on the need to exempt FTTP from business rates to help secure investment

7

Policy Change

In October's Queen's Speech there was some welcome changes proposed to wayleaves and mandating full fibre in new build homes

8

Approach to 'final 3rd'

We have proposed an extension of indexation and anchor uplift (alongside Government funding for the final 10%-20%)

Summary

The environment is shifting in a way that will reward large scale investment in FTTP over the 2020s

We are gearing up to be ready. We're pleased with the start we've made and we think we're very well placed to drive and benefit from FTTP deployment
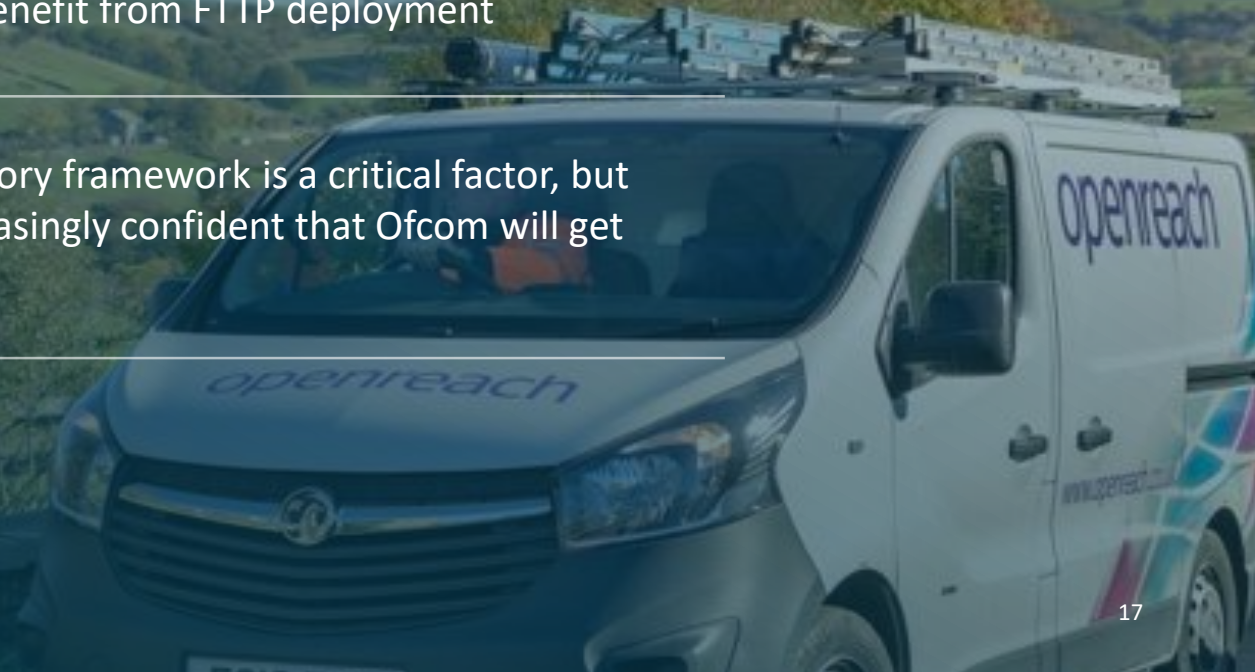
The regulatory framework is a critical factor, but we're increasingly confident that Ofcom will get this right

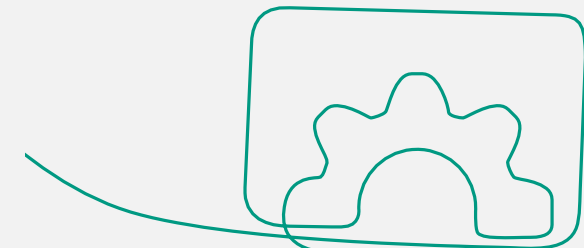**Product Portfolio**

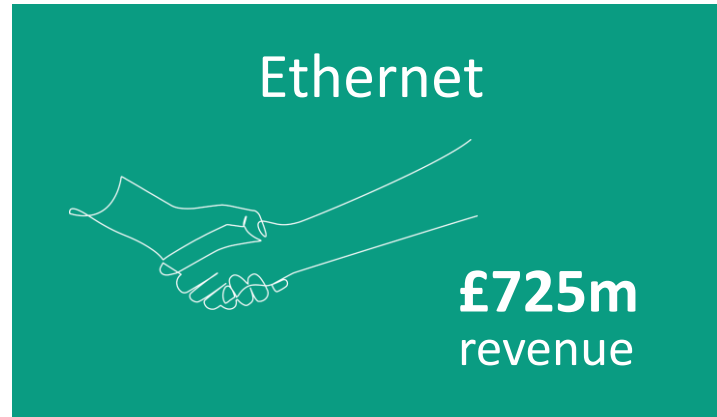**Katie Milligan**
MD, Customer, Commercials & Propositions

Trading and Product Portfolio

A reminder of our market

Voice & Broadband	Ethernet	Infrastructure access
£4.2bn revenue	**£725m** revenue	**£2m** revenue

Our key priorities across all customers

1 Deepening relationships with customers from transactional to partnerships

2 Transforming our portfolio as the market and competition changes

3 Working with our customers to deliver compelling propositions

Our objective

Fill our network and ensure we have sustainable demand that gives us confidence to invest in the future

Figures from end of 18/19 financial year

Voice & Broadband Portfolio

Embracing digital transformation

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Voice

Launch digital product portfolio

Publish pricing and incentivise migration

Complete the transition to All IP[1] technology

Withdraw the PSTN[2] network

Broadband

Moving customers to **superfast**

Getting the **FTTP list pricing** right

Run **short-term offers** in cities

Construct **long-term deals**

1. IP – Internet Protocol
2. PSTN – Public Switched Telephone Network

Business Connectivity & Corporate

Ever-increasing demand for bandwidth is driving the business market in both access and backhaul
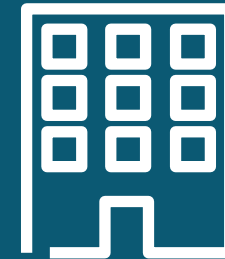
Backhaul

- Scalable portfolio to meet bandwidth demand
- Bespoke customer deals
- Mobile backhaul to support 5G

Ethernet

- Record demand
- Bandwidth demand increasing – up to 1Gbps
- Evolving portfolio

Business FTTP

- FTTP driving convergence of consumer and business needs
- Growth opportunity in SME[1] market

1. *SME – Small and medium-sized enterprises*

Infrastructure access

We're committed to delivering scalable products to help others build

Ducts & Poles

- ✓ **Launched revised product in April 2019** and enhanced scalability and usability in October 2019

- ✓ **Empowered** customers to self-serve and drive down cost to build

- ✓ **Deeper integration** with customers to allow them to scale their build more effectively

Dark Fibre Interexchange

- ✓ Dark fibre product available from **non- competitive exchange** to any other exchange

- ✓ **Launch** on the 20th December 2019

- ✓ Enables **smaller CPs** to build out across the UK

Summary

Openreach has a unique position in the market offering nationwide access to over 600 CPs who are providing real choice to end customers

The strategy is clear – we get customers on the right platform, then move them on to the best products

It's an exciting time – we have an FTTP platform growing faster than anyone else, and we're the scale provider in this market

Customer Service & Cost Base Modernisation

Olly Kunc
MD, Service Delivery

Service Delivery – Overview

Service Delivery contains 60% of the people in Openreach and 40% of the cost base

20k people

Service Delivery Consists of **20,000** people across the UK including **16,500** Field Engineers

176m km

national network

Across a national network that is **176,000,000 km** long, supported by **4,800,000** telegraphs poles and junction boxes
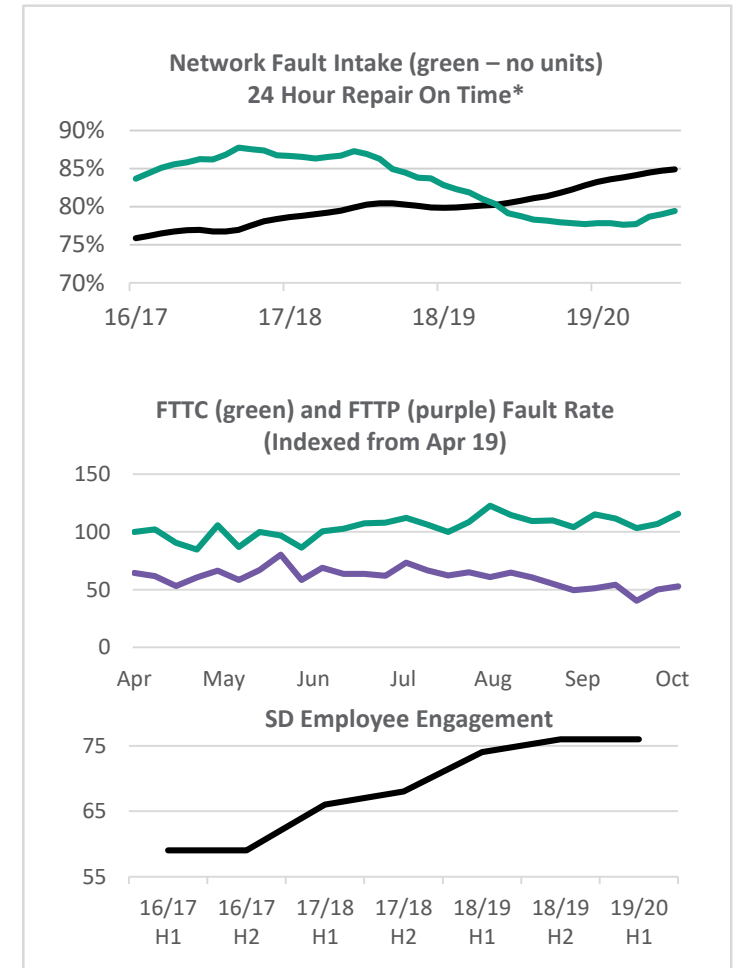
9.8m

Engineering jobs in 2018/19

on behalf of over **600** Communications Providers

Focused

in recent years on improving **service** and **network performance** on our copper network

Top quartile

performance in employee engagement gives us the opportunity to deliver bigger transformation

50% lower network fault rate

Starting the transition to FTTP – a platform already performing at 50% lower network fault rate and unaffected by weather

**Network Fault Intake (green – no units)
24 Hour Repair On Time***

**FTTC (green) and FTTP (purple) Fault Rate
(Indexed from Apr 19)**

SD Employee Engagement

Left hand axis

Service Delivery – Transition to FTTP

We are at the beginning of a mass provision journey and are learning fast so we can reduce cost

450k lines

We have provided nearly 450k lines to date and are delivering over 5k a week and growing

We are learning and maturing rapidly to improve experience and reduce cost per install

Engineers training and growing in experience

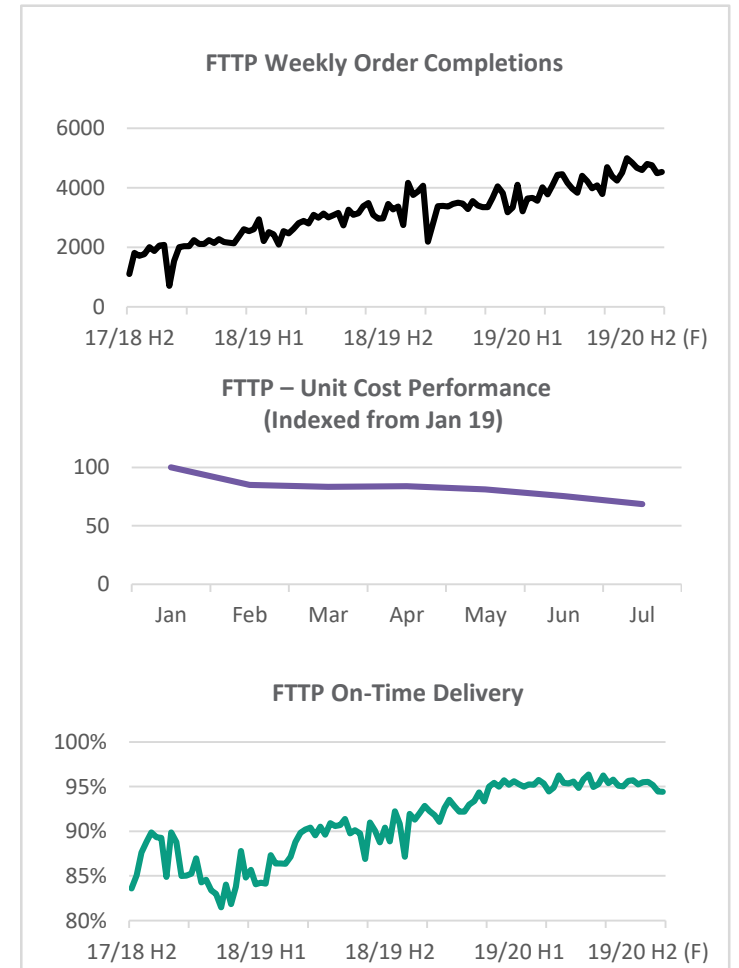**Developing** processes and IT

Innovating in components and techniques

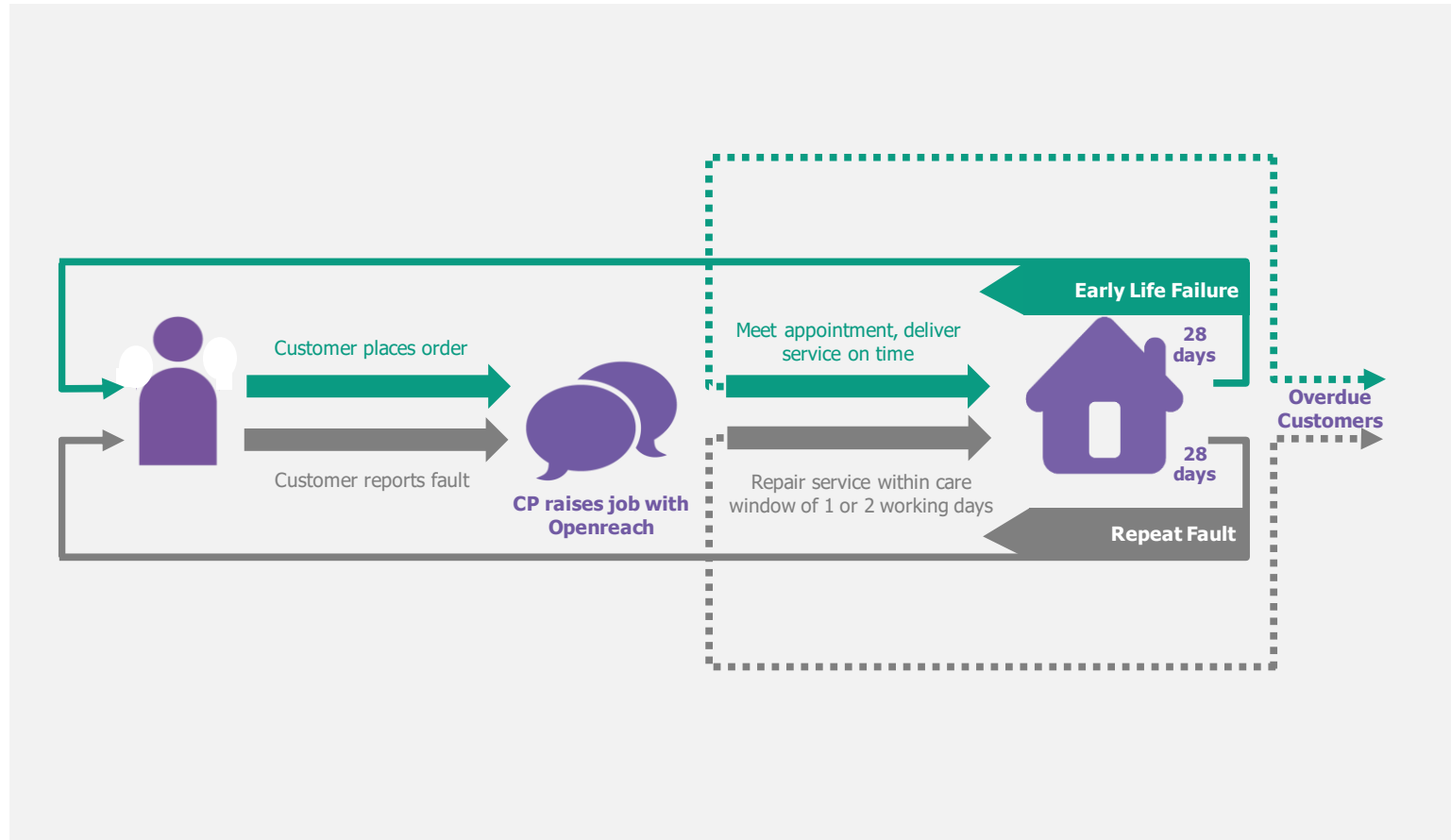**High volume** local selling to reduce travel time

Deep integration with CPs for seamless customer journeys

FTTP Weekly Order Completions

FTTP – Unit Cost Performance (Indexed from Jan 19)

FTTP On-Time Delivery

Service Delivery - Opportunity on copper platform
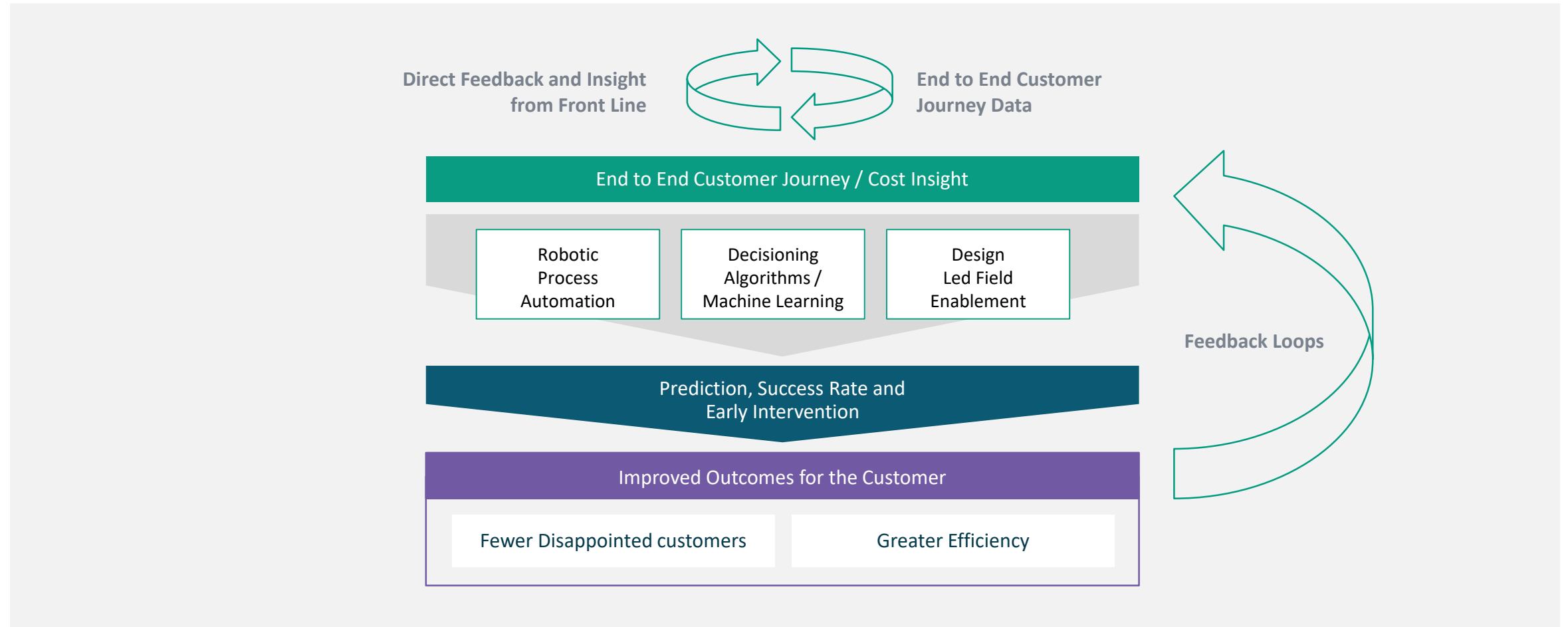
There is significant efficiency and customer service opportunity by reducing fault rate and wasted effort in failed journeys

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Diagram labels:

Customer places order

Customer reports fault

CP raises job with Openreach

Meet appointment, deliver service on time

Repair service within care window of 1 or 2 working days

Early Life Failure

Repeat Fault

28 days

28 days

Overdue Customers

Right-hand list:

1. Provision orders drive revenue, faults mostly do not – **reducing fault rate** through network intervention is positive

2. Our legacy systems and processes can lead to on **day failures**

3. Many jobs remain **stuck in our processes** – costing penalty payments and absorbing resource

4. **Simplifying and intervening** in these processes will significantly improve customer service and cost efficiency

5. We have launched a programme to utilise new techniques to **tackle this opportunity**

6. Delivering **first time, every time and on time**

Service Delivery – Approach to transformation

Improve service and efficiency by analysing end-to-end customer journeys, removing process inefficiencies and enabling our engineers to improve success rate

Direct Feedback and Insight from Front Line

End to End Customer Journey Data

End to End Customer Journey / Cost Insight

| Robotic Process Automation | Decisioning Algorithms / Machine Learning | Design Led Field Enablement |

Prediction, Success Rate and Early Intervention

Improved Outcomes for the Customer

| Fewer Disappointed customers | Greater Efficiency |

Feedback Loops

Summary

Continue to improve service every day – keeping our customers happy and engaging our engineers

Rapidly develop our FTTP provision
ways of working to bring down cost and delight customers

Transform our copper platform
processes to reduce failure costs and disappointed customers

Financial Position & Expectations

Matthew Davies
Chief Financial Officer

Revenue

Resilient customer base and improving mix has been offset by lower prices driven by regulation and the volume discount deal

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① Base resilient and mix improving

Product Base Size
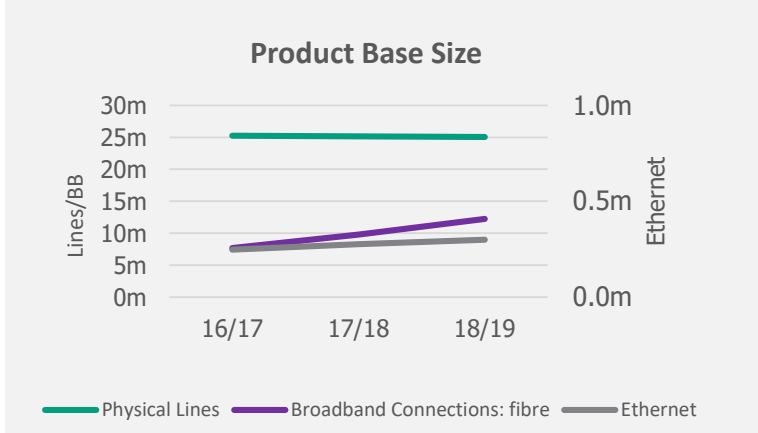
LOOKING BACK
- Physical line base resilient
- Broadband fibre growth supported by volume deal
- Ethernet growth steady

LOOKING FORWARD
- Physical lines declines from increasing competition
- FTTC growth should be sustained to FY22
- FTTP growth to accelerate in the longer term

### ② Price reductions offset mix upside

Product ARPU
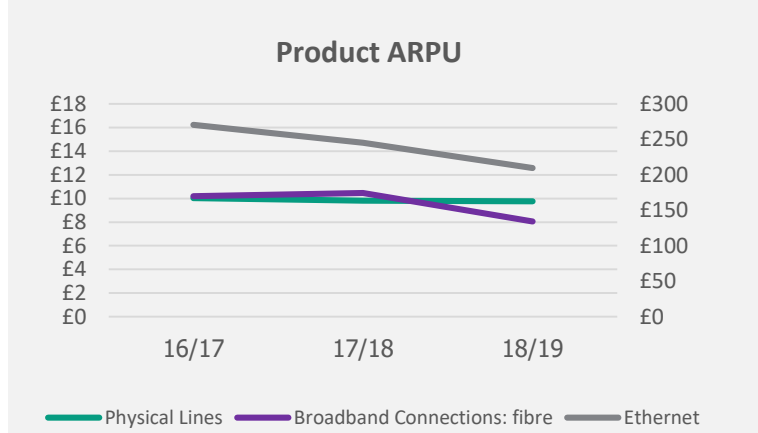
LOOKING BACK
- Physical line ARPU[1] stable
- Broadband fibre ARPU declining from regulatory and volume discounts
- Ethernet ARPU declining from regulatory impacts

LOOKING FORWARD
- Physical lines ARPU steady / growing with inflation (subject to enablers)
- Broadband fibre (FTTC) steady / growing with inflation (subject to enablers)
- Broadband fibre (FTTP) supported by £1 to £2 anchor premium (subject to enablers)

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③ Resulting in broadly flat revenue
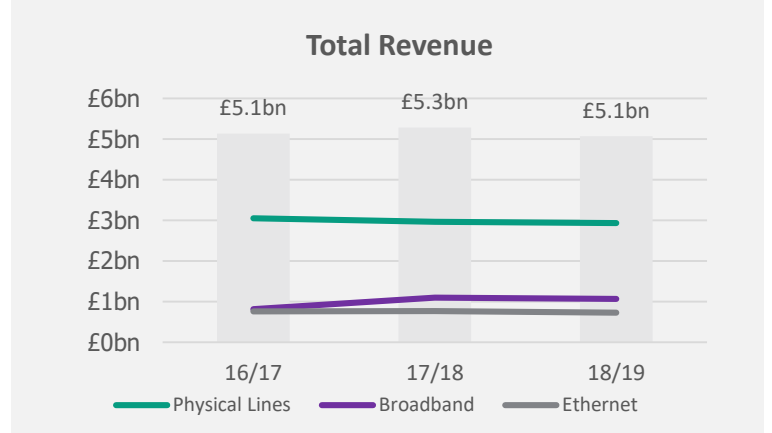
Total Revenue

LOOKING BACK
- Total revenue broadly flat
- Physical line revenue declining offset by growth in Broadband fibre revenue
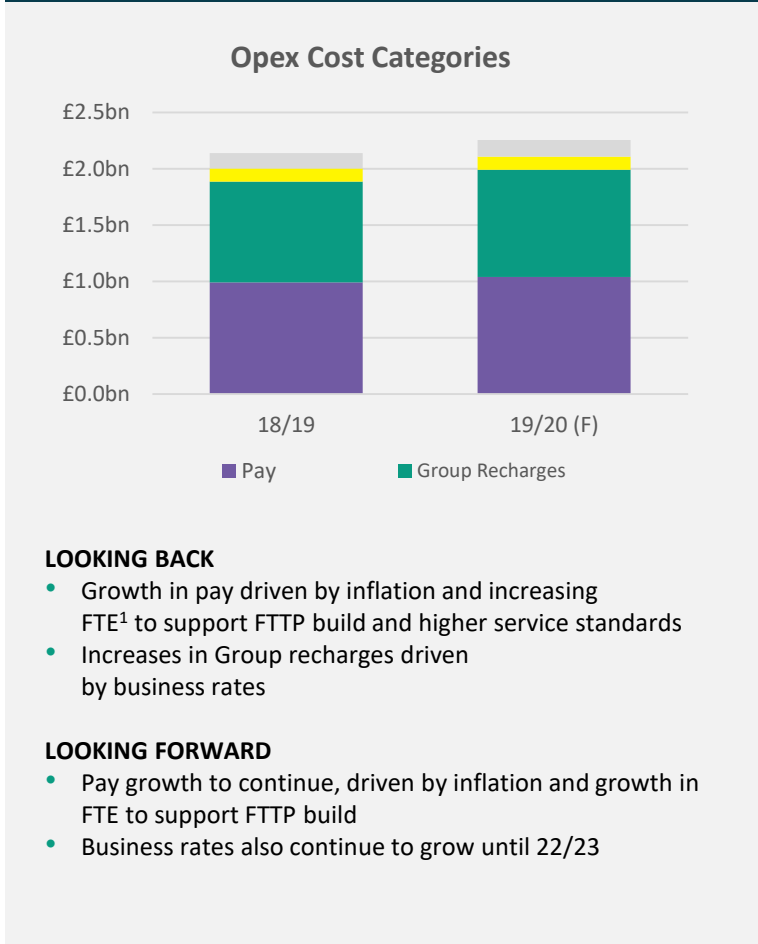- Ethernet revenues broadly flat

LOOKING FORWARD
- Physical lines revenue decline - enablers not sufficient to offset volume decline
- Broadband fibre growth driven by increased FTTC / FTTP penetration and indexation (subject to enablers)
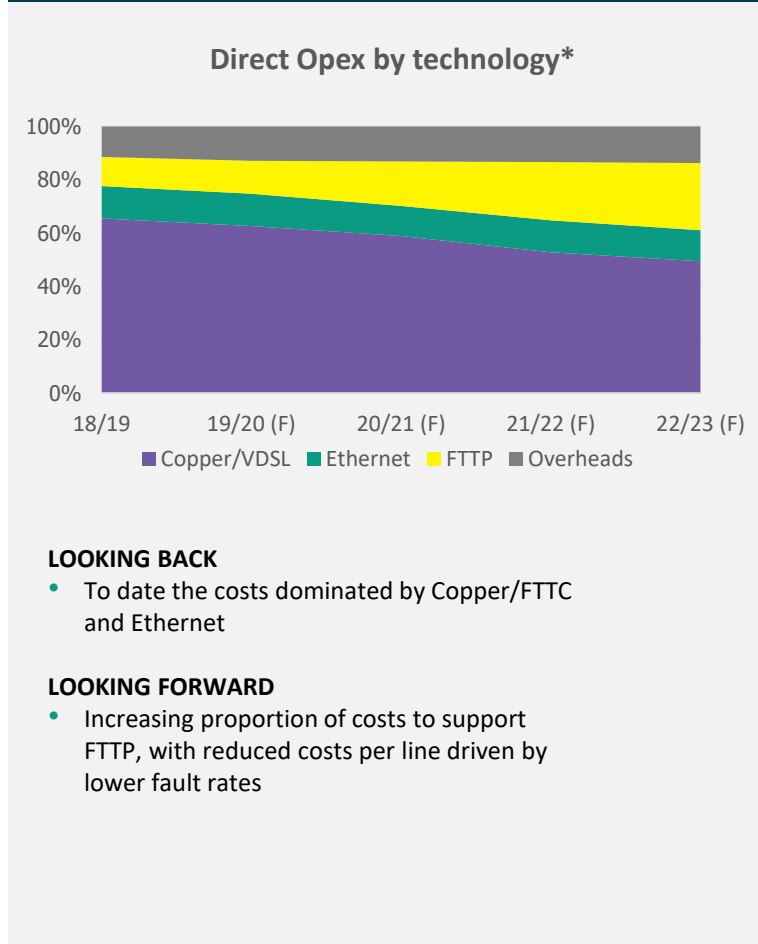- Ethernet growth driven by volume

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1. *ARPU – Average Revenue Per User*

Opex

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Opex costs dominated by pay and group recharges which have both been increasing

① Opex costs increasing

Opex Cost Categories

£2.5bn
£2.0bn
£1.5bn
£1.0bn
£0.5bn
£0.0bn

18/19   19/20 (F)

■ Pay   ■ Group Recharges

LOOKING BACK
- Growth in pay driven by inflation and increasing FTE[1] to support FTTP build and higher service standards
- Increases in Group recharges driven by business rates

LOOKING FORWARD
- Pay growth to continue, driven by inflation and growth in FTE to support FTTP build
- Business rates also continue to grow until 22/23

② Proportion of FTTP spend growing

Direct Opex by technology*

100%
80%
60%
40%
20%
0%

18/19   19/20 (F)   20/21 (F)   21/22 (F)   22/23 (F)

■ Copper/VDSL   ■ Ethernet   ■ FTTP   ■ Overheads

LOOKING BACK
- To date the costs dominated by Copper/FTTC and Ethernet

LOOKING FORWARD
- Increasing proportion of costs to support FTTP, with reduced costs per line driven by lower fault rates

③ Partly offset by gross savings

Gross Savings versus 17/18 Baseline

£200m
£150m
£100m
£50m
£0m

18/19   19/20 (F)

■ Transformation   ■ Procurement   ■ Service efficiency

LOOKING BACK
- Growth in pay and Group recharges partly offset by c.4% direct Opex efficiency

LOOKING FORWARD
- Efficiency contribution to increase, supported by the service efficiency programme

* Excludes Group Recharges / assumes 15m business case
1.   FTE – Full-time equivalent

Capex

Capex growth driven by increased network spend on FTTP partly offset by reduced copper spend

1 Capex costs increasing

Capex by Category

Legend: Network, Customer Provision, Asset Replacement, Other
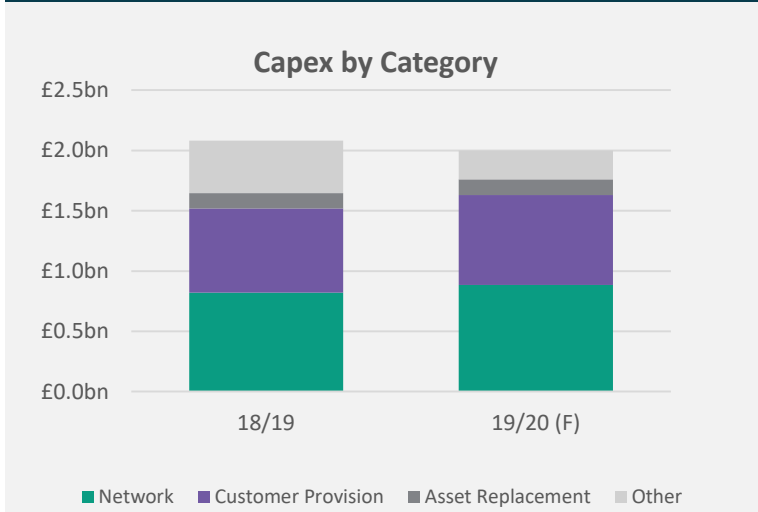
LOOKING BACK
- Network capex growth driven by FTTP build
- Customer provision growth driven by FTTC take-up

LOOKING FORWARD
- Investment in customer provision to continue as FTTC penetration increases to FY22
- In longer term FTTP provision to grow significantly

2 Increasing proportion of FTTP spend

Capex by technology*

Legend: Copper/VDSL, FTTP, Ethernet, Other
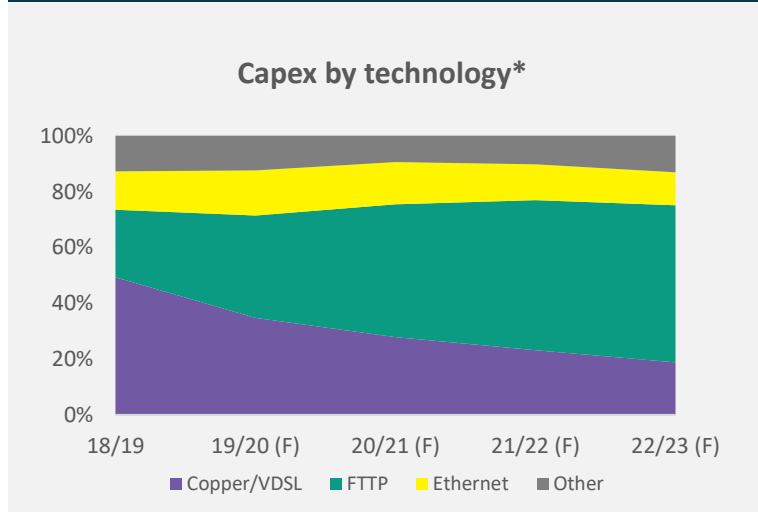
LOOKING BACK
- Growth in FTTP partly offset by reduction in copper/FTTC
- Majority of copper decline driven by lower network investment with copper provision flat

LOOKING FORWARD
- Continuation of reducing copper spend more than offset by increased FTTP investment

3 Partly offset by gross savings

Gross Savings versus 17/18 baseline

Legend: Transformation, Procurement, Service efficiency
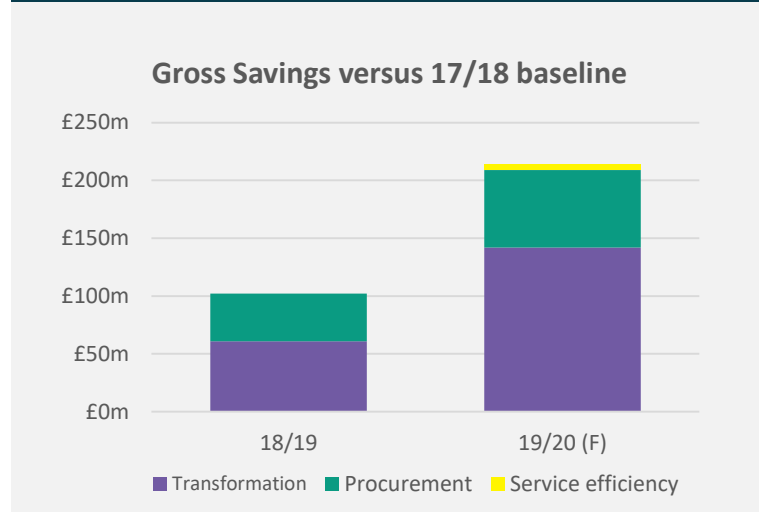
LOOKING BACK
- Growth in network investment partly offset by c.4% efficiency
- Efficiency driven primarily through transformation and procurement

LOOKING FORWARD
- Transformation efficiency to be sustained with majority of service benefits in Opex

Assumes 15m business case

FTTP Investment

There are three key dynamics that drive the business case that would support a fair return for our shareholders
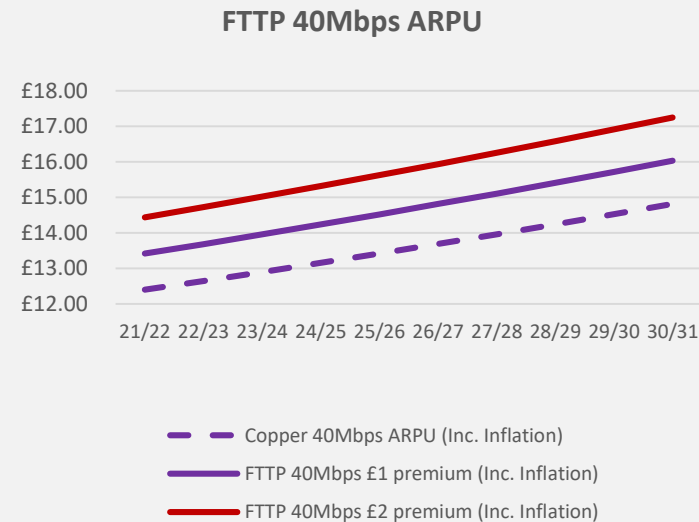
1 Build costs

Build Costs

- Low end
- High end
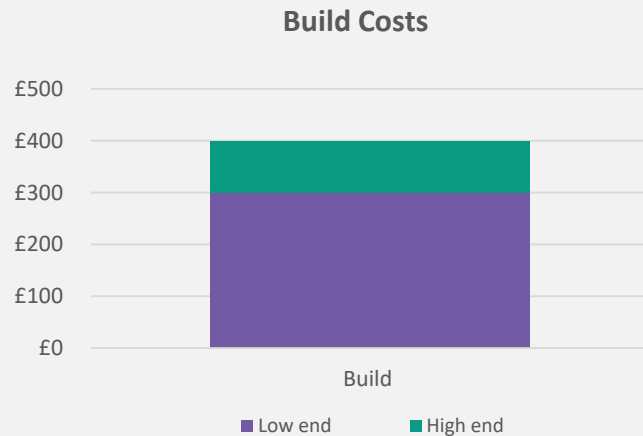
KEY ENABLERS
- Barrier busting and cumulo relief from Government
- Securing competitive outcome based deals from sub-contractors
- Rapid migration reducing provision costs

OUTLOOK
- Confident on build costs with actuals coming in at the lower end of the range
- Too soon to call provision costs

2 Take-up and ARPU

FTTP 40Mbps ARPU

- - - Copper 40Mbps ARPU (Inc. Inflation)
- —— FTTP 40Mbps £1 premium (Inc. Inflation)
- —— FTTP 40Mbps £2 premium (Inc. Inflation)

KEY ENABLERS
- Price inflation, copper withdrawal and FTTP anchor
- Focused on securing volume deals with CPs

OUTLOOK
- Confident on securing the enablers
- In discussions with CPs to find a volume deal that works for all parties

3 Increasingly efficient network

FTTC and FTTP Fault Rate (Indexed from Apr 19)
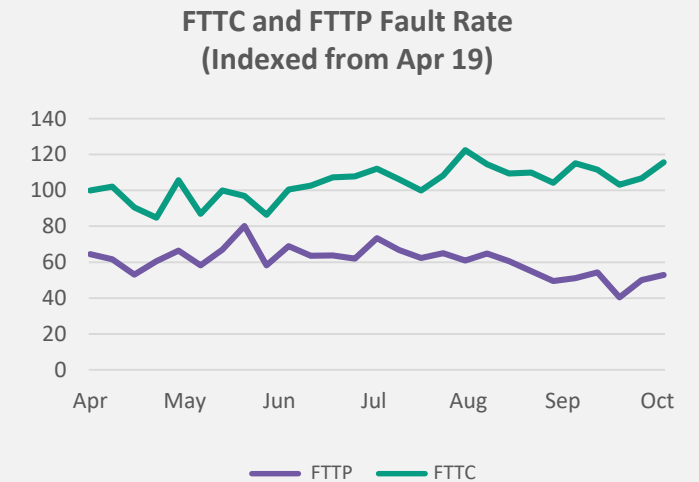
- —— FTTP
- —— FTTC

KEY ENABLERS
- Rapid migration and copper withdrawal

OUTLOOK
- Significant reduction in network faults seen in FTTP deployed to date
- Benchmarks from roll out of FTTP in other regions also encouraging

Summary

£ — No major regulatory price reductions and future indexation – supporting sustained revenue growth

★ — Increased efficiency and migration to FTTP – helping to partly offset Opex investment in Service and FTTP

⬇ — Reduction in copper network investment and longer term copper provision – helping to partly offset Capex investment in FTTP
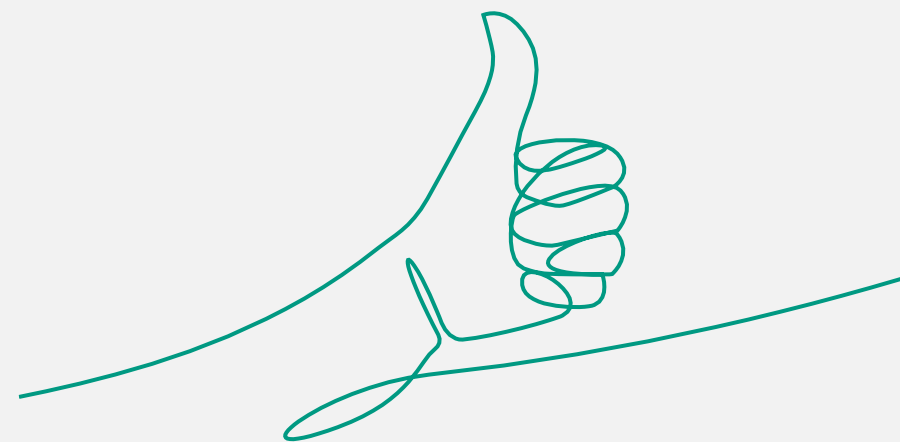
📄 — Increasingly confident that our FTTP investment will give a fair return to shareholders:
- Build costs at the lower end of expectations
- Constructive conversations with CPs on take up and price points
- Operational savings being realised in line with expectations
- Positive signs on securing the enablers

Clive Selley
CEO, Openreach

Building a better Openreach for the future

Continue to raise service levels, eliminating failure costs

Maximise value of the FTTC platform

Build FTTP infrastructure faster, cheaper and to high quality

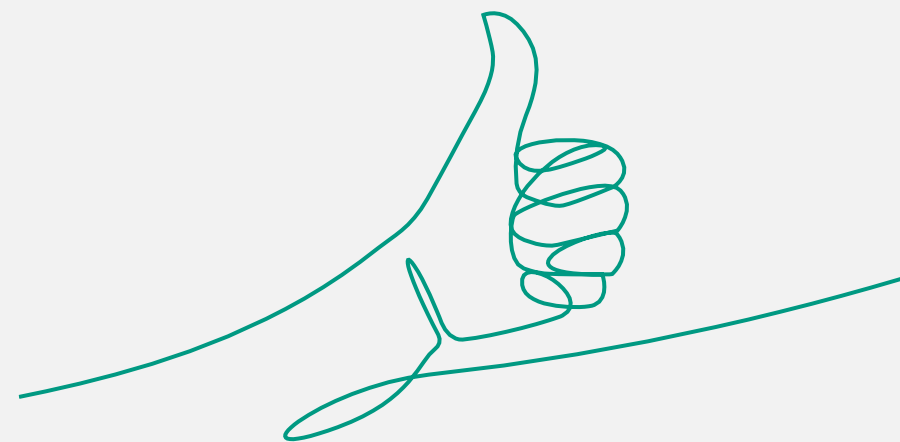Work with Communications Provider customers to drive rapid FTTP take-up

Work hard to secure fibre 'enablers' from Regulator and Government

Q&A

Wrap-up

Clive Selley
CEO, Openreach

openreach