Vodafone pre consultation submission
Non confidential summary
2024

Markets

- There has been no change in competition conditions in enterprise leased lines markets.

- Lack of competition has allowed Openreach to increase prices by CPI and also shrink the service wrap, increasing our costs by more than just CPI.

- We have outlined to Ofcom that the current geographic boundaries do not reflect competition conditions for BCM services. We have evidenced (confidential submission) that there are substantial areas of the Area 2 geographic market that do not have BCM competitors present or prospectively present and that the dark fibre remedy should be extended.

- We ask Ofcom to proactively engage on exchange exit. The plans are costly and impact both the resilience and costs of backhaul. The plans could also risk our ability to buy from local access rivals.

Dark fibre exchange backhaul

Background

- **Converged backhaul infrastructure**: We build and operate a converged backhaul network which transports our cell site, mobile voice and data, our home broadband voice and data and our enterprise services fixed, broadband and high-capacity circuits. Our services maybe direct retail or wholesaled to other CPs.

- **High capacity, high quality and cost efficiency**: The backhaul network is high capacity to support all of these services. Dark fibre is our preferred backhaul service as we are in control of our costs, have the ability to independently upgrade the capacity required and can managed our own technology progression, breaking free of Openreach's product life cycles.

- **For resilience we require 2 diverse access/routes per exchange**: The backhaul network needs to be resilient due to the importance of the services. Consequently, we require 2 separate and diverse access points and circuit routes from each exchange, meaning that we will buy/install backhaul from 2 sources at each exchange. We have chosen a fixed set of exchanges which we connect to.

1. To what extent do you use the DFX remedy? If you operate from DFX exchanges (BT+0 exchanges where no alternative PCO operates within 100m), are all your lines DFX, or do you operate a mix of DFX and actives? If you operate a mix of DFX and actives, please outline why you have continued to use actives rather than migrating all lines to DFX?

    - **100% utilisation:** We have installed DFX at all the exchanges where we require exchange backhaul from and where it is available.

- **DFX should be available from any BT only exchange**: Due to exchange exit Ofcom should remove the 100m PCO rule from BT only exchanges and enable DFX at all BT only exchange. New CP network extension to exchange will focus on "enduring exchanges", those listed to be in situ for the long-term post exchange closure.

- **Exchange backhaul market definition requires reconsideration due to exchange exit**: a) BT only exchanges should all qualify for DFX as new build cannot now be expected. Also noting that CPs using PIA do not offer an alternative due to resilience incompatibility; and that some Local access FTTP builds are counted at present but cannot offer backhaul only local access in particular footprints. b) resilient backhaul construction requires evaluation, today connections between exchanges and CPs nodes are excluded from the market where these are in the BT only footprint they should be included.

2. Has there been any barriers to use of the DFX remedy?

- **Initial barriers at launch**: there were initial barriers, these issues have now been overcome.

- **Openreach Product restrictions**: Openreach adding contractual clauses that restrict the flexibility for use – e.g. resilience only offered on DFX to DFX, not on DFX to active products; rules on onward linking of services onto DFX links; rules on what we can connect over DFX links e.g. DFA pickup.

- **Regulatory certainty**: Post WFTMR21 we had to disconnect DFX circuits (that had been in situ a short time since the remedy was launch in 2019) and return them back to Openreach active circuits as Ofcom changed the DFX geographic markets expecting fibre build. This was inefficient and expensive and caused a ripple of regulatory risk across the business. This risk is more acute when Openreach does not have a commercial equivalent (the case currently with all dark fibre services), as this means that supply is interrupted in addition to charges increasing when regulation is removed.

3. Do you expect any future changes to your use of the DFX remedy?

- **Adaptation to account for exchange exit**: to maintain resilience and cost-effective resilience we should revisit the technical discussions that lead to the DFX of today and reconsider availability of the remedy between other locations – e.g. cell site to CP node /point of presence

Extra points

a) Given the critical nature of communications networks Ofcom needs to undertake a far more comprehensive assessment of infrastructure that supports exchange backhaul
   - Whether the CP's infrastructure is access / route diverse from other supplier noting that were CPs use PIA these risks overlap and loss of resilience.

b) Competitiveness of the suppliers, we would suggest 3 or more route diverse suppliers
   - CP must be present (near where the exchange is not enduring is no longer a relevant constraint)

- CP operates a trunk network; an access network operator is not going to be able to offer backhaul services

c) Our work with Frontier Economics (alongside PX and Sky) illustrates there is something wrong in the IEC market with Openreach making very high returns on these products.

Customer experience, quality of service, shrinkflation

Ethernet job control shrinkflation

We are experiencing a range of behaviours and scenarios which we would categorise as 'shrinkflation', this is where the scope of Openreach's activities in providing a service is reducing without a corresponding reduction in the charges levied. In our case, the need for the activity reduced or removed by Openreach has not gone away. The Retailer is required to step in to undertake the missing activity, replicating it to the best of their ability. As the Openreach pricing does not reduce to reflect the transfer of the activity, the cost of the full service to the Retailer, and ultimately the end consumer, increases. In this note, we explain the removal of "Ethernet job control" which was a component of Ethernet connection service and therefore a service that has been subjected to shrinkflation.

Between 2008 and 2018 Vodafone had a Openreach Job Control team operating from Bristol. The team enabled a high level of interaction via regular calls and ad-hoc discussions, in order to collaboratively work together to manage the order volume and quality. The Job Control functionality is set out in the background to Ofcom's deemed consent decision[1]. The activity was a part of the connection service cost stack when Ofcom set the 2017 charge control and the prior periods.

We deemed the Job Control team function as being vital to the efficient operation of Ethernet connections.. We actively challenged the removal of the team. Openreach ultimately unilaterally determined to remove the Job Control Function putting in an alternative, substantially lower-skilled team, able to deal with 'Quick win' orders but nothing beyond. Vodafone has been forced to deploy its own internal resources, at additional cost to Vodafone to replicate the function of the Openreach job control. We provide in confidence to Ofcom the detail of our team and the additional cost this brings to our business and ultimately our customers. Since 2018 the Ethernet connection service has included less functionality yet increased in price up ~£208 per circuit on average over the period to today. Over the same period Openreach quality of service performance has declined, indicating that Openreach price increases have not offered any value having flowed through to improving service quality.

Ethernet team changes result in more orders being tagged as complex

This section set out a further shrinkflation situation in the order journey which reduces the overall quality of service, raising our costs of customer management, prevents the full claim of contractual SLGs and extends the duration before our customers become revenue generating for our business.

Since the disbanding of the Ethernet job control team and their replacement with a lower skilled service desk Openreach has sought to claim that the Ethernet order mix has changed becoming more complex. Openreach claims that many VF orders are complex orders. These Openreach assertions are not borne out by the data. Below we show our order mix for each year 2017 onwards [confidential]. The CAT types are

Openreach's[1]. The data presented shows the reverse of Openreach's claim with the number of orders placed having duct and fibre already in situ steadily increasing over time (by virtue of Openreach maintaining and growing its market share). Our experience is that order provisioning mix profile has progressively trended to simple orders. If Openreach are having a different reported experience the evidence suggests that the real variable that has changed is the competency / experience level of the Openreach order processing personnel.

CAT mix showing that most orders remain as 1.1 and 1.2 and those of 2.1 or greater reducing to less than 10% of the delivered workstack.

While we have experienced the order mix trend to existing duct and fibre, we have also observed a service trend since 2019 whereby Openreach has extended the CDD date offered for orders. While orders tend to require less work, as years pass, the end-to-end time taken to process the order from a customer perspective has extended. While Openreach complying with the Ofcom QoS MSL of 86% of orders completed on or before iCDD and (almost[2]) maintaining an MTTP of no more than 38 working days our real-life experience is that service levels have declined, and we have suffered service shrinkflation as orders are taking far longer overall to complete.

Table 1.2: LL Access and IEC QoS Standards

Standard	Level (Years 1 – 5)
MTTP (Mean time to provide) across orders	No more than 38 working days
Upper percentile limit for provisions	No more than 4.5% of orders older than 133 working days
Certainty: Percentage of orders completed on or before initial Contractual Delivery Date (iCDD)	86%
Certainty Cross-Link: Maximum mean period for the iCDD	No more than 53 working days
Faults repaired within the SLA	94%

We have examined whether the adjustment by Openreach to offer an iCDD further into the future benefits the customer by providing a more realistic achievable delivery date. This is not the case. Openreach extending the iCDD has not improved service performance.

We have examined the impact of the regulated pricing framework on service performance. The chart below compares Openreach price changes between 2018 and 2024 and service performance (MTTP). Increases in price have not resulted in fixed or improved service levels. [confidential supporting data charts removed]

In summary Vodafone and its customers are negatively impacted by this clear example of service shrinkflation, negatively impacting the consumer experience of those who rely on Ethernet services.

[1] See Openreach EAD product description for definitions (which are out of date)
[2] Investigation into Openreach's quality-of-service performance in leased lines access and wholesale local access in 2022/23 - Ofcom

a) Customers have to wait longer for their service to be installed.

b) The lengthier iCCD does not improve provisioning outcomes for date certainty with customers still subject to installation delay as Ofcom observed in its investigation of 2023 MTTP.

c) The lengthier iCDD does however impact compensation for the CP and end customers as this extra time period does not quality for SLGs if the CDD is ultimately missed. We calculate that multiple million pounds should have been paid in SLGs between 2019 and 2023 had Openreach not adopted the iCDD extension, illustrating the shrinkflation harm to both Vodafone, and the end customer.

d) The extension to the end-to-end process increases our costs of doing business as we need to manage the customer engagement over a longer time duration.

e) The extended end to end provisioning time impacts our cash flow as it now takes longer for a customer to become revenue generating.

Despite significantly levels of market failure in the provision business connectivity services, (with all the indications suggesting Openreach's SMP is strengthening, not weakening), the regulatory framework currently offers no safeguards to prevent consumers of ethernet services from being negatively impacted by Openreach's shrinkflation initiatives. With prices rising by +CPI and the level of service provision falling, consumers are hit twice. With no competitive constraint to moderate Openreach's conduct in the market, it is vital that regulatory steps are taken to enhance the specificity of the framework to prevent Openreach unilaterally withdrawing from providing fit for purpose job control functionality.

EAD 2 Shrinkflation risk

- EAD2 is an evolution of EAD which seeks to be more efficient than the current generation of EAD. This includes:
    - achieving equipment, space and power efficiencies at the handover end within the BT/Openreach Exchange and at the customer location.
    - harmonising more the provisioning and repair order journey with FTTP.
    - efficiency at the customer location.

What is the present status?

- Openreach plan to launch a new variant of EAD for future orders from March 2026, with trials from late 2025.

What are our concerns?

- No commercial information with respect to EAD2 pricing has been provided. Openreach has said it intends to provide a “terms sheet” in Summer. At this stage we cannot be certain that Openreach

will reduce its product prices to reflect the cost efficiencies it will be making. Our experience has been that Openreach makes product and process changes which place costs on us as a purchaser without a share of the associated cost reductions[3]. There will be cost saving to us in the form of space and power at Openreach Exchange locations but we are concerned that these costs savings will be out weighted by increases in our other costs.

- CPs will incur costs to onboard the new variant and to build extra capacity to accommodate extra handovers. This includes changes to our IT to enable us to use the Openreach system and changes to our provisioning and repair team processes and supporting IT. Additional network build may also be required by CPs.

- Openreach proposes to remove the NTE it provides at the customer end for EAD2 circuits. Ofcom will be aware that CPs often, but not always, "double end" circuits by adding their own NTE at the customer site in addition to the NTE that demarks the end point of Openreach's service. Under EAD2 we would not

  (a) be able to cease supply NTE where we double end

  (b) we would incur additional costs for additional NTE volumes, in the cases where we would not double end today.

  (c) we will need to change our customer equipment to make it compatible with Openreach's single fibre working. Single fibre working is not adopted by industry generally. We understand this NTE will be more costly.

  (d) we will incur new costs to onboard into our product line a new NTE.

Ofcom's role

- Ethernet services are regulated and charge controlled by Ofcom. Depending upon the timing of the EAD2 product launch Ofcom should either set

  - The product characteristics – whether Openreach is required to supply the customer NTE

  - the starting charges for the EAD2 service, accounting for this transfer of costs from Openreach to CPs

  - the charge control for the basket of Ethernet services and whether EAD2 requires a specific sub basket control

[3] Our prior note to Ofcom on shrinkflation in the Ethernet provision process set out how Openreach has descoped the ordering team leading to our cost to increase as we ourselves have to fulfil the function previously fulfilled by Openreach, meanwhile product prices have risen.

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Dealing with shrinkflation

We have provided Ofcom with detailed information about how, during the course of market reviews, Openreach has altered the product offered, in effect shrinking its offer. Put simply, Openreach is currently able to charge more and deliver less.

This is detrimental to consumers, as Retailers have to pick up, carry out and incur the cost of the "shrunk" activity. This raises Retailers' total cost of provision and leads to higher market prices, and weaker price competition. It is not acceptable for Openreach to incrementally provide reduced services, for steadily increasing cost, to the detriment of all of the other parties involved in the provision and consumption of the relevant services and the market in general.

Ofcom could solve the issue going forward by setting out in the legal instrument a definition of the relationship between the product offer, its service wrap offer and pricing. We have set out below, an example of how this detriment could be remedied, by a minor change to legal instruments, delivering a significant benefit to this market, for a proportionate level of intervention.

In Part 2 of the WFTMR legal instruments Ofcom sets out Interpretation (page 17 onward 2021 WFTMR Volume 7: Legal instruments (ofcom.org.uk)). This text could be minimally augmented to incorporate additional text to prevent future shrinkflation by setting out a basic understanding of the product features and service.

For example for Ethernet it presently reads: v) “Ethernet Services” means services presented with the standard networking protocol defined under that name in IEEE 802.3 and published by the Institute of electrical and Electronics Engineers;

This could be updated as follows: V) "Ethernet Services" offered under the Openreach EAD portfolio as a fully managed product with proactive jeopardy managed delivery. Supplied over a single optical fibre with GE 102 Pro or XG120 (10G) Adtran device at the customer end and FSP150 (infill only) or XG120 at the aggregation handover end. Provisioning support with 1) a service desk of a multi site team with ~150 heads including staff bands [x] available during working hours for general enquiries and initial escalation requirements. 2) High Level Escalations team and Directors Service Office team available for orders requiring additional support and resolving delayed orders 3) Deemed Consent Governance team to ensure compliance 4) Quality team to drive process improvements and compliance. Repair support with 1) NOC team available 24/7 via phone, e-chat or using SABOR, 2) 5 hour repair SLA 3)Service Test tool for self-service to test circuits. Changes can be implemented by Openreach following review and confirmation by the OTA that proposed operating changes do not lead to a transfer of cost from wholesaler to retailer.

	EAD	EAD2	FTTP	SoGEA	DFA/X	OSA/OSEA
What should our experience as a purchaser be?	Fully managed product, proactively jeopardy managed delivery	Fully managed product, proactively jeopardy managed delivery			Fully managed product, proactively jeopardy managed delivery	Fully managed product, proactively jeopardy managed delivery
Equipment at customer end	Adtran device GE 102 Pro XG120 (10G)	Passive demarcation - TBC	Fibre ONT	NTE Master Socket	Patch Panel (wall mounted or rack) Connectorised block Connectorised terminal (squid)	Adtran or Ciena devices FSP3000 XG210 6500 4200
Equipment at handover end	Adtran device FSP150 (infill only) XG120	N/A - Shared headend infrastructure managed by Openreach	N/A - Shared headend infrastructure managed by Openreach	N/A - Shared headend infrastructure managed by Openreach	Patch Panel	Adtran or Ciena devices FSP3000 XG210 6500 4200
Fibre type	Single fibre working	Single fibre working	Single fibre working	Copper	Single or Dual Fibre working	Single or Dual Fibre working
Provisioning support	Service Desk Multi-site team - estimate 150? heads Available during working hours for general enquiries and initial escalation requirements High Level Escalations team and Directors Service Office team available for orders requiring additional support and resolving delayed orders Deemed Consent Governance team to ensure compliance Quality team to drive process improvements and compliance	Assume the same as current EAD for now	e-chat support via EiVA chatbot Basic escalations support	e-chat support via EiVA chatbot Basic escalations support	Service Desk Multi-site team - estimate 150? heads Available during working hours for general enquiries and initial escalation requirements High Level Escalations team and Directors Service Office team available for orders requiring additional support and resolving delayed orders Deemed Consent Governance team to ensure compliance Quality team to drive process improvements and compliance	Service Desk Multi-site team - estimate 150? heads Available during working hours for general enquiries and initial escalation requirements High Level Escalations team and Directors Service Office team available for orders requiring additional support and resolving delayed orders Deemed Consent Governance team to ensure compliance Quality team to drive process improvements and compliance
Repair support	NOC team available 24/7 via phone, e-chat or using SABOR 5 hour repair SLA Service Test tool for self-service to test circuits	Assume the same as current EAD for now	e-chat support via EiVA chatbot Basic escalations support	e-chat support via EiVA chatbot Basic escalations support	NOC team available 24/7 via phone, e-chat or using SABOR 18 hour repair SLA	NOC team available 24/7 via phone, e-chat or using SABOR 5 hour repair SLA

FTTP right first time

Communication Providers ordering new connections on Openreach's FTTP network often encounter significant delays when they try and onboard consumers to the new fibre network. This impacts both newly acquired customers and existing customers upgrading from copper-based services

Unsurprisingly from a customer perspective, this amounts to an extremely frustrating initial experience, souring their first impressions of fibre. As a broadband retailer we are immediately on the back foot, placed in a situation where either a new customer quickly becomes unhappy, or an existing customer, who was previously content becomes unhappy.

[confidential information removed]

A remedy is necessary to safeguard the consumer experience, creating the right incentives for Openreach to report ready for service premises numbers more accurately in the first place and encourage a swift engineering remedy should any delay occur. This might involve two new safeguards:

- To encourage Openreach to take action to avoid placing premises in a ready for order / service list where there has been insufficient preparatory network intervention to allow fibre to be delivered within an acceptable timeframe: Where a premises appears on the list as ready for order, but any order placed cannot/could not be delivered within an acceptable number of working days, then a fixed fee flat payment is made to the CP who placed the order, in recognition of the additional order handling and customer management required in such cases.

- To encourage a swift remedy: the creation of an automatic trigger for a wholesale compensation

payment for any delay to order provisioning for premises on the Ready for Order list which are not subject to MBORC conditions. This would be in the form of a daily payment for each working day over fifteen working days for any orders in this predicament.

We believe this two pronged approach would create the right incentives to provide a more accurate Ready for Order premises list in the first instance, while encouraging better practice / a more customer centric delivery drive in circumstances where delays to delivery do arise. As you know we are keen to see a range of QoS safeguards introduced around fibre provisioning and service. This is just one area where QoS standards would benefit consumers.

We are also reaching the point where mandatory migrations to fibre will become more common, with the copper network closing in a phased exchange-based timetable. To place consumers who are part of a mandatory process into a situation where their fibre order is subject to an indefinite delay is not acceptable. Indeed, exchange closure triggers around fibre availability will provide a misleading picture unless there is more accurate reporting of what premises are truly ready to order.

With fibre is now the default access solution for much of the country, regulatory intervention to secure QoS minimum standards is becoming more urgent, with millions of UK consumers expected to make the transition to fibre in the next five years. The industry is currently discussing what other measures could make a meaningful difference to Openreach behaviours and the consumer experience. We hope this will culminate in a set of proposals that outline what QoS standards and safeguards are necessary to restore trust in the Openreach provisioning journey, seeking to safeguard the overall consumer fibre experience. We will update Ofcom on progress in this area soon.

Today there are insufficient competitive constraints on Openreach to secure a quality fibre provisioning experience for UK consumers. Automatic trigger service payments to retailers (to both incentivise good Openreach conduct and help retailers fund the costs incurred in managing disappointed customers) are key to safeguarding the consumer interest.

We are therefore keen to see minimum standards hard baked into future regulation, providing a breakwater, with the clear prospect of regulatory action should Openreach fail to deliver on the minimum standards on fibre delivery.

Exchange exit

- Exchange exit is not EOI it favours BTLoB who only buy from OR. Exchange exit benefits BTGroup and fails to share savings outside the group or compensate CPs for the costs they will incur due to the change. . CPs who have embraced competition policy are commercially stranded

- Competition will be impacted in LL local access and IEC markets.

- Ofcom should be involved in the choice of exchange to close to minimise competition impact and the detail of the commercial arrangements which will also have competition impact if unfair.

Summary of actions Ofcom should undertake in the TAR

The TAR must set out regulatory principles and remedies to safeguard consumers from new and displaced costs as Openreach / BT Group seek to reduce their operating costs; local access competition; resilience and associated costs of mobile networks and resilience and associated costs of backhaul networks.

In the paper below, we propose Ofcom sets remedies to address the following:

1. **The need for network competition safeguards.** Rival network local access competition for FTTP and leased lines that has been facilitated by the availability of Openreach's distributed exchange network. The loss of the exchange network could impact rival wholesalers' ability to be price competitive and lead to considerable sunk assets. Ofcom must require Openreach to adapt its products, and, if relevant, offer compensation to ensure that local access competition is not weakened by exchange exit. A range of solutions is warranted in order to meet a variety of scenarios. These services and terms must be negotiated and agreed in time (end of the current FY) to give at least 3 years to move customers in the first phase and then 4 years for subsequent phases. Delay in agreement would necessitate extensions for lines where migrations are more difficult.

2. **Fair access to quality enduring exchange space (Openreach's access locate terms).** As we transition into the long term, it is essential that exchange space is built according to modern standards and that the space, rack, and power services offered are effective and efficient. Ofcom must now fully implement EOI for exchange space services. Ofcom must set a quality standard for enduring exchanges. Space allocation should have independent oversight by the OTA.

3. **Commitment to a definitive enduring exchange list.** We need to have confidence that our investment to support Openreach exchange exit is sufficiently long term and end state so we can fully plan our network's resilience and architecture, safe in the knowledge that rework will not be required at a later date. Ofcom must intervene requiring BT/OR to set out commitments on its enduring network topology.

4. **Ongoing Dark fibre exchange backhaul (DFX) access via grandfathering[4].** The important cost savings from dark fibre backhaul must not be lost. Installed services should be extended, critically the

[4] A grandfather clause (or grandfather policy or grandfathering) is a provision in which an old rule continues to apply to some existing situations while a new rule will apply to all future cases. Those exempt from the new rule are said to have grandfather rights or acquired rights, or to have been grandfathered in.

extension must 1) be to a location of relevance to our backhaul network, 2) ensure resilience of our backhaul network, and 3) ensure the resilience of our mobile cell site backhaul architecture. Ofcom must update the regulatory rules to permit use of existing, to be extended, DFX circuits post exchange exit.

5. **Ongoing dark fibre access (DFA) via updated rules.** The dark fibre regulated service and associated cost base is important for the management of the costs associated with mobile backhaul network. In competitive areas we are able to obtain rival wholesale dark fibre services whereas Openreach will only offer dark fibre where it is mandated by regulation. Ofcom must update the regulatory and product rules to permit DFA handover elsewhere in the network.

6. **A fair approach and clarity to Openreach Project Management Services and Charging.** The present offer to assist on certain CNI and complex orders does not go far enough. Ofcom must require the OTA to assist industry to define CNI and complex orders to give parties clarity and common understanding.

7. **The development of new SLAs/SLGs for A-end shifts.** Circuit migration will be undertaken by a mixture of cease and re-provide and A-end shift. The A-end shift function has not been subject to SLAs and SLGs in the past. As this function will reach far higher volume during the programme, SLAs and SLGs are essential. Ofcom may have to step in if commercial discussions fail and also may need to consider how it features and is reported via the MSLs.

8. **A robust Openreach change management process for the exchange exit programme.** Industry needs clear timelines and a change management process. Ofcom must intervene requiring BT/OR to set out commitments.

9. **The appointment of an independent arbiter.** A programme of this complexity needs recourse to a 3rd party to quickly resolve these disputes and allow parties to 'move forward' with delivery. Ofcom should require BT/OR to appoint an independent arbiter.

10. **A fair circuit compensation offer which recovers the real costs CPs will face with timely payment.** The compensation of £1000 per circuit is too low to cover the associated costs which CPs will incur. The proposal to make the compensation long after the costs are incurred will harm consumers and competition. Ofcom should investigate and determine the level of compensation to avoid consumer detriment, including the timing of payments to CPs.

We further propose that Ofcom sets the following programme expectations and principles:

1. The programme will have **professional dedicated management with high operational standards** working with integrity, transparency and clear management accountability in all work streams. It must be clear to all who the decision makers are, the level of oversight that occurs (including from elsewhere in BT Group). There must be a firm emphasis on robust forward planning in consultation with CP customers, working together to set practical and achievable plans giving certainty. Decisions taken should be accountable and evidence based.

2. At all times the end user **customer experience** should be understood and inform decision making. Prioritisation needs to be given to minimise any operational or service disruption on end users, preserving their service experience before, during and after any migration activity prompted by exchange closure work, and avoiding repeated migrations or disruptions over time.

3. A **fair funding** mechanism should be made available to CPs and those end users impacted by exchange closure requirements, with reasonable costs met to ensure CPs and those end users do not bear the cost of BT/Openreach's change programme. CPs and end customers expect recompense of costs through direct funding of costs as they occur, covering their necessary project management and field activities incurred. CPs do not expect to incur non recoverable costs, or to incur higher service charges due to this programme.

4. **Providing planning certainty** is critical at all stages in the project. Efforts must be made to provide this as early as possible (ideally years in advance) over a wide range of topics. Details of what sites are closing, what migration options are open, what handover locations are available for each closing site, what product options are available, what mitigation is offered are crucial, together with a clear event timetable.

5. The end state objective must be to include **Product Excellence** throughout, going beyond a space rationalisation exercise. The remaining, more concentrated handover locations should be built future-ready and to data centre standards with resilient space, power and operating environments. As a provider of business, government and MNO services, products that meet these sectors requirements for reach, resilience and power supply independence must be available early on. All products should be built to be responsive to CPs prospective needs and seek to set new standards in service and functionality.

6. A long-range closure plan needs to develop with industry. Every exchange should be given an industry agreed Scale/Complexity rating. Limits on the number of concurrent closures including large scale or complex closures a CP can work on must be agreed.

7. Openreach must ensure there is sufficient quality space and power at the Openreach Handover Points (OHP) for all CPs' current dispersed requirements at the proposed concentrated OHPs.

8. Services are to be migrated to a like for like service, where existing products cannot be migrated, a like for like solution must be made available.

9. Exchange site naming conventions must remain the same (same site code in new exchange) to enable easier migration and lower IT costs for CPs.

10. A range of migration processes offered with contractual SLAs and SLGs to support the process.

11. Before commencement the programme must be set out. CPs are not to be at a commercial disadvantage whether the exchanges they use closes early or later in the closure programme. CPs are not to face additional costs of hosting parallel space, power etc during the process of migration. An end user, business, enterprise or MNO customer should by design face only one outage as a consequence of the programme.

12. Leased line product replacements developed in partnership with industry and launched widely and timely to minimise new connections to sites that will shut. Early launch of dark fibre services.

13. The programme must evaluate the options for minimising carbon emissions by eliminating unnecessary site visits, equipment duplication and associated power use.

14. CPs need inputs to complement their own network facilities when seeking to construct fully resilient exchange aggregation and backhaul networks. Openreach must provide the essential building blocks suitable for the differentiated network architecture of CPs rather than managed backhaul connectivity solutions designed for BT downstream.

Openreach narrative

Openreach has characterised that exchange exits and Openreach's end-state network have been a 20-year long certainty. Vodafone strongly refute this. Whilst we agree that Openreach have been clear on plans to consolidate its broadband network to around 1000 exchanges, these plans did not extend to leased lines, and it was not clear that there would cease to be any ability to access the network at these locations. In fact, since 2004, Openreach actually encouraged CPs to extend their network coverage by offering EAD Local Access pricing (which required an onsite exchange presence to consume). Ofcom's Openreach monitoring have noted that Openreach only began to discuss the long-term handover architecture of their network in December 2020.

Vodafone has provided confidential information that supplements the detail in the section above.

PSTN shut down and Exchange closure

1. When Openreach meets the first copper retirement threshold in an exchange area, it can stop selling new copper services. Given the impact of Equinox 2 on encouraging migration to FTTP, have you observed / do you expect to observe any additional impact of regulatory stop sell on your decision, or ability to, sell new copper services?

   We operate a fibre first policy, which means we will aim to provide our customers with the best available access network available to them.

   We are keen to see Openreach offer FTTP or SOGEA to all locations (with any exceptions very limited and restricted to genuine economic barriers in very deep rural locations). BT Wholesale will offer the only solution to unserved premises (utilising the SoTAP product from Openreach, but presenting it as ADSL). We have a number of competition concerns relating to BT Wholesale's supply monopoly for these customer sites (many of which are CNI enterprise locations).

   In the consumer area, landline dependency may be a reason to retain or order new copper (to ensure a line is self-powered), but BBU solutions will eventually replace this, with this customer cohort that last to migrate. Given the nature of this customer group, we are keen to ensure that any migration is smooth and well planned. Price shocks on legacy products and punitive wholesale charges for delays would not be appropriate given the customers involved.

   Inert customers who have no desire to change their underlying service remain a challenge. While we can encourage customers to move to fibre and offer upgrades and special offers, a large minority often do not react and will remain until migration is forced upon them (this will eventually impact landline dependent customers). Equinox 2 does not address this. We are keen to see more wholesale special offers on connections.

2. When the second copper retirement threshold is met, the charge controls on Openreach's copper WLA anchor products are removed and Openreach may choose to charge more.

a) Do you expect Openreach to increase copper prices once it meets the second threshold in an exchange area?

We imagine this would be technically difficult for Openreach, but not impossible. We would remind Ofcom that some consumers do not engage with the process and ignore all contact attempts to encourage migration. Vulnerable, landline dependent customers (including telecare users) may be impacted. Clear regulatory guidance around the closure of copper and copper disconnection are needed to allow us to take legitimate action to terminate service if all reasonable attempts to migrate have been thwarted or ignored.

Ofcom should require Openreach to publish upfront pricing plans for such copper connections for the full duration of their lifetimes. This is required to enable CPs to plan the end-to-end migration and disconnection programme appropriately. Our experience from PPCs has illustrated the likelihood of unexpected ultra-high price rises at short notice.

b) How do you expect to react to Openreach meeting the second threshold in an exchange area? We are particularly interested in your incentive and ability to pass through higher copper prices to retail customers; and whether you expect to encourage customers to migrate to Full Fibre in other ways, in response to the second threshold.

We may be forced to pass costs onto customers (contractual terms allowing) in order to encourage migration. Where customers have no reasonable alternatives open to them (either FTTP or SOGEA) solutions need to be offered by Openreach. It would be unacceptable to leave a customer who has enjoyed connectivity on the Openreach network, with no service offering. Ofcom need to be clear what obligations apply in these circumstances. Openreach can't withdraw service without an alternative wholesale offering available (even if another part of BT is providing it – such as the BT Wholesale ADSL example above).

Where customers fail to engage in the process and all reasonable migration attempts have been made, CPs need the ability to act. We need to make sure Ofcom's consumer regulation allows this approach and a route to disconnection should all reasonable attempts to engage be ignored. Without a last resort process, copper retirement cannot occur, and consumer charges are likely to be higher in aggregate as a result.

3. In our supplementary consultation to the Wholesale Fixed Telecoms Market Review (WFTMR),[1] we set out a third threshold at which Openreach could withdraw copper regulation, where full fibre services are available in an exchange area. We excluded this threshold from our final policy in WFTMR 2021 on the basis that it was too early to define the conditions that should trigger the complete deregulation of copper services.
    - If a third threshold were to be introduced in the upcoming review period, would you expect this to have any impact on the pace at which you try to migrate retail customers to FTTP, beyond the impact of the second threshold?

We target a fibre first approach, so encourage migration to fibre where and whenever it is made available. This encouragement ratches up in intensity over time and if all copper regulation was removed and we had sufficient confidence in the migration of landline dependent customers we would seek to migrate all

[1] Consultation: Copper retirement – conditions under which copper regulation could be completely withdrawn in ultrafast exchanges, 15 Oct 2020, paragraph 3.26.

customers to fibre (landline dependent customers take longer to migrate due to the need for more safeguarding).

Should Openreach either cease to provide copper services at all or raise the price at a wholesale level we would need to take immediate action to either migrate the customer to fibre (which requires their participation and cooperation) or confirm to them that we will be ceasing their retail service (should they fail to engage at all).

Ofcom need to set out clear expectations on consumers around the steps that can be followed by retailers to allow retail prices to rise where consumers remain on legacy services beyond a clearly notified date and the process around which a cessation of service can be conducted as a last resort. Remaining silent on this point would be unwise and contribute to confusion on the sensitive topic of forced migration/ forced disconnections.

We are however deeply concerned about any circumstances where Openreach meets this third threshold and triggers the end of its copper services in an area, but a minority of premises in that area are unserved by fibre. Where a premise has historically received copper and Openreach connectivity before, it cannot be acceptable to leave this customer without a fixed connection of some sort. This is not a retailer issue; it is a gap in wholesale provision that must be addressed. If a water company upgraded the pipes but did not lay new pipes to minority of premises, it would not be reasonable to ask that consumer to self-provide water from the nearest river, that water company would need to offer some level of mitigation. Likewise, if there was an electricity DNO upgrade, each premise would receive a new grid connection to replace the old wiring. While we accept that fibre economics makes 100% coverage difficult, an alternative wholesale solution offered by Openreach (even if it is white labelled from another vendor using a different access technology) should be offered.