

30th January 2018

CWU Submission to the Department for Digital, Culture, Media and Sport on the Future Telecoms Infrastructure Review: Call for Evidence

Introduction

1. The Communication Workers Union (CWU) represents nearly 60,000 members in the telecommunications industry working in around twenty companies including BT, Telefonica UK, Virgin Media, Sky and TalkTalk. We are the largest representative body for workers in the digital communications sector.
2. The CWU welcomes the Government's Future Telecoms Infrastructure Review consultation. We support the objective to encourage long term investment in ultrafast full fibre connections, but there is also a pressing need for all premises to be able to access basic and superfast coverage. This is vital to ensuring no one is left the wrong side of a digital divide in the immediate term. Around 1.1 million UK premises are still unable to receive a basic 10Mbit/s connection.
3. Securing long term investment in telecoms infrastructure requires a shift in regulation away from the pursuit of lower pricing and cost cutting, which has been a key priority for Ofcom to date. Network operators will need sufficient pricing flexibility and regulatory stability to justify major network extensions and upgrades. Regulation and investment considerations must also properly account for the costs of decent labour standards, which are essential for delivering a high quality, world class digital network for the UK. In addition, far higher levels of public funding will be required to help achieve the Government's digital infrastructure goals.

Q1: What is the existing UK telecoms market structure and policy framework able to deliver?

Basic and superfast broadband

4. The UK's basic and superfast broadband coverage is amongst the best in the world.¹ However, too many premises still lack access to decent broadband. Ofcom estimates that around 1.1 million UK premises (4%) cannot access a broadband connection capable

¹ According to Ofcom's latest international comparisons, the UK ranks first for the availability of fibre broadband networks amongst the EU5 (UK, Italy, Spain, Germany and France) nations, using Fibre to the Cabinet (FTTC) technology. Consequently, Ofcom's data shows that in 2017 the UK was ahead of its EU5 competitors in the provision of access to services offering download speeds of 10Mbit/s or more (98% coverage) and access to speeds of 30Mbit/s or more (92% coverage).

of delivering a download speed of at least 10Mbit/s and an upload speed of at least 1Mbit/s.

5. Inadequate broadband access is a particular concern for small businesses, which increasingly rely on broadband to operate effectively. A disproportionate number of small businesses (7%) cannot access a 10Mbit/s basic service, whilst 500,000 (16%) do not have access to superfast broadband, compared to 9% of premises as a whole.²
6. The Government and the regulator must take a tougher, more interventionist approach to address these problems. The plan to introduce a statutory broadband Universal Service Obligation (USO) will help, but this must be properly supported by investment incentives and public funding where necessary to maximise its potential and ensure its success.

Full fibre broadband

7. Although the UK is outperforming the rest of the EU5³ nations for basic and superfast broadband coverage, we are falling behind on full fibre connections. Ofcom reported in 2017 that only 2% of UK broadband connections are provided over fibre to the premise (FTTP), the lowest proportion among the EU5. As a consequence, the UK ranks last amongst the EU5 nations for the availability of ultrafast broadband with speeds of 300Mbit/s or higher.⁴
8. There have been some positive developments recently on this issue, with a number of network operators announcing plans to extend their full fibre networks.⁵ However, most of these plans are limited to 5 million premises or fewer, mainly in more densely populated and easier to serve areas. Openreach has indicated that it may be possible to extend its plan to 10 million premises by the mid 2020s, but this would rely on a number of conditions and regulatory changes.
9. In particular, Openreach has called for a new regulatory framework that moves away from lower pricing to encourage investment in the network.⁶ The regulatory framework is currently not well placed to incentivise investment in full fibre networks because of Ofcom's focus on encouraging competitive entry in the pursuit of price and cost cutting. This problem was highlighted with the publication of Ofcom's 2017 Wholesale Local Access (WLA) Market Review, which proposed a charge control on Openreach's up to 40Mbit/s FTTC product for ISPs that would gradually see the price fall from £88.80 per year to around £52.77 by 2020/21.

² Connected Nations 2017 Report, Ofcom, 15th December 2017, p.2

³ UK, Italy, Spain, Germany and France

⁴ International Communications Market Report 2017, EU5 and EU25 broadband scorecard, Ofcom, 18th December 2017

⁵ This includes plans from Virgin Media to roll out full fibre to two million more premises; City Fibre in partnership with Vodafone, rolling out full fibre to five million premises by 2025; Hyperoptic providing full fibre coverage to five million premises by 2025; Gigaclear, targeting more rural areas, aims to cover 150,000 premises by 2020; KCOM plans to have full fibre coverage across all of its network area by March 2019, providing coverage to 200,000 premises; and Openreach has outlined its ambition to roll out full fibre services to two million premises by the end of 2020.

⁶ Openreach fibre plan for 10m premises coming 'before Christmas', the Register, 13th November 2017

10. Openreach responded by saying: *“Ofcom’s proposals do not appear to incentivise more investment in ‘full fibre’ networks. The UK needs a regulatory framework that encourages investment and rewards risk. Building digital infrastructure is very expensive with long payback periods and we won’t recover our more than £3bn investment in fibre until after this charge control period.”*⁷
11. The then Culture Secretary, Karen Bradley MP, also raised concerns about Ofcom’s approach in an open letter to Ofcom CEO Sharon White in October 2017. The letter highlighted the risk that price suppression for Openreach’s superfast broadband services could reduce demand for better services, such as fibre, and so will disincentivise investment in the network. It went on to question whether Ofcom is striking the right balance between keeping bills low for consumers and incentivising the necessary levels of investment in the UK’s digital infrastructure.⁸
12. The CWU shares the concerns raised by Openreach and the Culture Secretary. We believe that affordability of services is an important consideration, but the UK has some of the lowest prices in the world for broadband services. We believe that Ofcom’s constant pursuit of lower prices is damaging for long term network investment because it restricts the funding available for investment projects.
13. Openreach has estimated that it will cost between £3bn and £6bn to rollout 10 million FTTP connections in the UK by 2025. It will take a collective effort across industry, government and the regulator to make this investment a reality. Openreach announced last year that its wholesale customers were generally supportive of its ambition to increase FTTP coverage. However, the company has emphasised that this means building a business case that is workable and fair for everyone. This will need to include a regulatory environment that encourages investment, and an agreement on how the costs of such a huge engineering project can be recovered fairly from all those that stand to benefit.⁹

4G and 5G deployment

14. The National Infrastructure Commission recently reported that the UK lags badly behind our global competitors for mobile services, ranking 54th in the world for 4G coverage last year.¹⁰ It said that the UK is being held back by poor mobile phone connectivity, and called for urgent and radical action from Ofcom and the Government to tackle this issue ahead of new mobile spectrum being auctioned and 5G technology being rolled out.¹¹
15. One key problem is that the ongoing reduction in prices for mobile services, as with fixed line services, makes it more difficult for operators to commit much needed investment

⁷ UK Government Seeks to Limit Ofcom 40Mbps FTTC Broadband Price Cut, ISP Review, 23rd October 2017

⁸ ISP Review, 23rd October 2017, *ibid*

⁹ Openreach: Comms providers ‘welcome’ our full-fibre ‘ambition’, the Register, 1st November 2017

¹⁰ Connected Future, National Infrastructure Commission Report, December 2016, p.3

¹¹ Urgent plan needed to tackle deplorable mobile services, National Infrastructure Commission, 18th December 2017

in new networks. This is especially so in the UK, which has the lowest available mobile prices amongst the EU5 and the USA.¹²

16. The other problem is that mobile revenues from traditional voice and SMS¹³ are falling with the growth of voice over IP (VOIP) services such as Whatsapp and Viber. A recent survey found that the level of texts is down by almost 40 per cent since 2012, and almost a third of people do not use their mobile phones for voice.¹⁴ The Economist has reported that as a result of increased competition in the mobile sector, average revenue per user (ARPU) is expected to fall by 2.3 per cent in 2018.¹⁵
17. Operators need large amounts of capital to create new mobile infrastructures, and so will need to find new ways of generating revenues if they are to be able to fund these new networks. In a survey by Ericsson last year, 64 per cent of operators said they cannot pay for 5G by simply raising rates on consumers, and 86 per cent were viewing the Internet of Things (IoT) as playing a major role in 5G revenue growth.¹⁶
18. Against this backdrop, Ofcom and the Government will need to ensure the right regulatory and legal framework is in place to incentivise and facilitate long term infrastructure investment from mobile operators. One part of the solution may be to allow a level of market consolidation to meet the need for significant capital expenditure in mobile networks. Given the UK's competitive mobile market and relatively low prices, the benefits of consolidation for customers in terms of network investment would almost certainly outweigh any potential risks to consumer choice. A recent study based on 33 OECD countries finds that a hypothetical four-to-three merger in the mobile sector would boost capital expenditure by 19.3% at the operator level, and urges policy makers to consider investment more seriously when weighing up their decisions.¹⁷

Q2. What barriers exist to long term investment in the UK telecoms market?

19. Regulatory pressure on price is a key barrier to long term investment, because it can restrict the ability of network providers to make an economic return on their investment. For example, Ofcom's WLA charge control proposals last year could move Openreach's returns below the estimated cost of capital, putting future network investment at risk. Ofcom's proposals included plans for Openreach to deliver high standards on fault volume reduction, repair and installations. However, the associated additional costs were not fully reflected in the proposed charge control. In particular, Ofcom proposed a resource uplift of only 8% to meet the higher quality of service requirements, whilst Openreach calculated the need for a much higher resource uplift of 23%.

¹² International Communications Market Report 2017, Ofcom, 18 December 2017, p.42

¹³ Short messaging services

¹⁴ A look ahead: the telecoms of 2018 including broadband and mobile, IT Proportal, 4th January 2018

¹⁵ Throttled: Telecoms in 2018, The Economist Intelligence Unit 26th December 2018

¹⁶ 5G monetisation survey: Operators look to IoT for Revenue Growth, Telecompetitor, 18th October 2017

¹⁷ Mobile telecoms consolidation, University of Cambridge Judge Business School, 7th August 2017

20. The CWU supports the view that Openreach should make further improvements in the quality of services it provides. However, as we have said to Ofcom, it is important that the additional resources needed to deliver those service improvements are fully reflected in Ofcom's modelling.¹⁸ CWU members work extremely hard for Openreach and its customers, and they do so in what is often a very challenging and stressful working environment. Placing excessive pressure on the Openreach workforce through more stretching targets combined with price and cost reductions would be damaging for operational effectiveness and service quality.
21. The existing short term approach to regulation is also a barrier to long term investment, because it raises the level of risk associated with large scale infrastructure projects. We believe that the mandate for Ofcom to assess markets every three years is too short a period and that the review cycle should be extended to create greater regulatory stability and investment certainty. This would help to avoid the external shocks to revenues and costs that increase investment risk.
22. Uncertainty about the strength of future take-up of services acts as another obstacle to investment. Recent research has found that as many as 7.8 million Britons do not use the internet in any way, and a further 7.4 million people are limited users.¹⁹ The Government's digital inclusion strategy²⁰ has invested only a fraction of the estimated £875 million needed to ensure the whole population has basic digital skills by 2020.²¹ We believe the Government should do more to encourage the take-up of broadband services, including through a high profile e-literacy campaign promoting the benefits of getting online and addressing the UK's online skills deficit. This would boost digital inclusion and strengthen the commercial business case for long term infrastructure investment.

Q3. What can the UK learn from the widespread deployment of fibre networks in other countries?

23. Countries that have deployed widespread full fibre networks tend to have very different regulatory, market and structural characteristics to the UK. These include differences in levels of government subsidy and investment, wholesale access requirements, network competition, population density and housing patterns.
24. In a recent study by Ofcom comparing 19 countries around the world, full fibre was the prevalent fibre technology in around half of these. They include Japan (97% coverage), Portugal (86% coverage), Spain (63% coverage) and Sweden (61% coverage). In South Korea, 95% of the population have access to both VDSL and full fibre broadband. In contrast, the UK had the second lowest availability of full fibre services with 2% coverage, after Nigeria.²²

¹⁸ CWU Response to Ofcom Wholesale Local Access Market Review, 9th June 2017

¹⁹ 15 million in UK do not make best use of the internet, Consultancy UK, 15th September 2017

²⁰ Digital skills and inclusion – giving everyone access to the skills they need, DCMS, 1st March 2017

²¹ 'Technology Manifesto', Policy Exchange, London, 4th June 2014

²² International Communications Market Report 2017, Ofcom, 18th December 2017, p.52

25. In Japan, South Korea and Sweden, full fibre networks were spurred by a combination of heavy government involvement and public subsidies. The Japanese government subsidised the real cost of FTTP by up to 33%²³, whilst the South Korean government incentivised investment through loans and tax subsidies. The Swedish government granted tax breaks for infrastructure investments and directly subsidised rural deployment.²⁴
26. In Portugal, there is no active wholesale access product available. This means that NGA-based competitors either use 'passive' duct and pole access (DPA) or they do not enter the market at all. The situation is similar in Spain, where there is no requirement for an active wholesale access product in areas where there is infrastructure competition. This contrasts with the UK where wholesale access has been available since BT started to deploy its FTTC network in 2008; and it has been taken up by many of BT's competitors, including Sky and TalkTalk.
27. Furthermore, the coverage and availability of underground duct is very high in Portugal and Spain, which is not the case in the UK. As a result of these various factors, research by Analysys Mason suggests that Portugal and Spain will see widespread coverage of three competing ultrafast networks, reaching around 40% premises in Portugal and around 50% in Spain. In contrast, a new entrant operator in the UK, deploying a new FTTP network using DPA, could viably deploy to up to 7% of the UK on a commercial basis. This makes it extremely unlikely that three competing FTTP networks could be expected over 40% of the UK.²⁵
28. Countries with more extensive FTTP rollout than the UK also tend to have a more concentrated, less competitive broadband market than the UK. In addition, the incumbent operator tends to have a greater share of the retail broadband market. These countries include Australia with a 47% incumbent market share, France (40%), Germany (41%), Italy (47%), Portugal (44%) and Spain (44%), compared with the UK (36%).²⁶ The lower level of competition makes infrastructure investment less risky, whilst higher market share gives operators a stronger position from which to invest and secure a return on their investment.
29. Another key difference is the higher proportion of Multiple Dwelling Units (flats and apartments) in countries where FTTP is more extensive, including in Australia where 49% of homes are in MDUs, France (36%), Germany (55%), Italy (58%), Portugal (40%), Spain (68%) and Sweden (42%), compared with the UK (12%). Nationwide rollout is cheaper in countries where a larger proportion of the population live in MDUs.²⁷
30. According to Analysys Mason, these regulatory, market-share and structural differences dramatically impact the viability of a DPA based FTTP deployment, in particular the

²³ Broadband goes big in Japan, BBC News, 26th May 2009

²⁴ The broadband gap: Why do they have more fiber? New York Times blogs, 12th March 2009

²⁵ Comparative analysis of outcomes in the UK broadband market: coverage, connections and competition, Analysys Mason, 3rd October 2016

²⁶ Analysys Mason, 3rd October 2016, ibid

²⁷ International Communications Market Report 2017, Ofcom, 18th December 2017, p.52

competitive nature of the UK market. These factors mean that any investor is likely to perceive significant risk in a widespread competitive rollout of FTTP in the UK. Consequently, the very high coverage of FTTP networks in other countries, such as Japan, South Korea, Portugal and Spain, is unlikely to be replicated in the UK under the current market structures.²⁸

31. To address this situation, the Government and the Regulator will need to give serious consideration to supporting investment through subsidies and other incentives, and reducing the level of risk associated with long term investment in FTTP. In particular, this must include giving operators sufficient regulatory certainty and flexibility to recoup their investment, including through higher prices for wholesale network access. Commercial operators inevitably take on an element of risk in any network build project, but they will only secure the necessary funding from shareholders if this risk is set within a reasonable level and there is a clear business case with a path to a return on investment.

4.a) What different market models might work in the UK in the longer term, and what risks and opportunities do they present?

32. We believe that market models where operators and ISPs contribute fairly to the costs of new infrastructure would be a practical way forward. This would help to spread the high costs of rollout and allow multiple providers to benefit from the same infrastructure on terms that are fair for all parties.
33. A diversified funding model to account for geographic variation would also be helpful, given the considerably higher costs of rolling out FTTP in rural and remote areas. The Government will need to commit far higher levels of public funding than has been committed to date, if it is serious about having a clear route to national coverage of full fibre networks. Openreach has estimated a cost of £3bn to £6bn for the first 10 million premises. Reaching the remaining twenty million premises is likely to be more than double this, with the costs increasing significantly in more sparsely populated areas.²⁹ The Government's recently announced £400m for a new digital infrastructure investment fund for FTTP networks is a drop in the ocean of what is needed for a full national deployment.
34. The Government could maximise the potential of its investment through a 'clawback' process similar to that introduced under the Broadband Delivery UK project, which has already seen hundreds of millions of pounds returned by BT and reinvested as a result of high take-up of broadband connections in upgraded areas.
35. Overall, securing long term private sector investment for FTTP networks will depend on a regulatory framework that allows network operators sufficient pricing flexibility and regulatory stability to meet the cost of network improvements and secure an economic

²⁸ Analysys Mason, 3rd October 2016, *ibid*

²⁹ The costs of deploying fibre-based next generation broadband infrastructure, Analysys Mason, 8th September 2008

return. For full national coverage, this private investment will also need to be heavily supported by public sector funding.

4.b) What should Government consider when assessing the potential for migration from copper to full fibre networks?

36. Given the vast levels of funding invested in FTTC technologies in recent years and the potential for this to continue to meet the needs of users for some time to come, it would appear sensible to allow communications providers some time to recoup their investment before the copper network is switched off.
37. However, as more money is invested in FTTP over the coming years, it will not be commercially viable to run the old copper network alongside the new fibre network. Openreach has called for an agreement on how mass migration of customers onto the new platform can be achieved, proposing that all customers should be migrated over to the new network as quickly as possible after it has been built in a given area.³⁰
38. The time period for migration will depend on the speed at which FTTP is rolled out, but as that FTTP rollout is likely to be a gradual process, this migration is likely to need to happen over a number of years. There may still be a need to maintain the copper network many years from now in some areas, due to the high costs of deploying FTTP in certain parts of the country.

5. The Government wants to achieve its digital infrastructure goals at the least additional cost. How should new digital infrastructure be paid for?

39. It is inevitable that price rises will be necessary for some services to fund the level of investment needed to upgrade and extend the UK's national communications infrastructure. Deploying full fibre at scale will cost billions of pounds, which will have to be passed on to customers where it is commercially funded. Openreach has already proposed that moving its entire customer base to fibre in the areas it has identified, would mean customers paying an additional £7 per month.³¹
40. Equally though, we recognise that maintaining affordability of services is an important objective and must remain a priority for Ofcom. In light of the drop in the proportion of household spend on telecoms services from 4.1% to 3.8% between 2011 and 2016³², we believe services remain affordable for most users.
41. We think customers are likely to be both willing and able to pay more for services if they see a corresponding benefit. Research suggests that consumers are willing to pay for

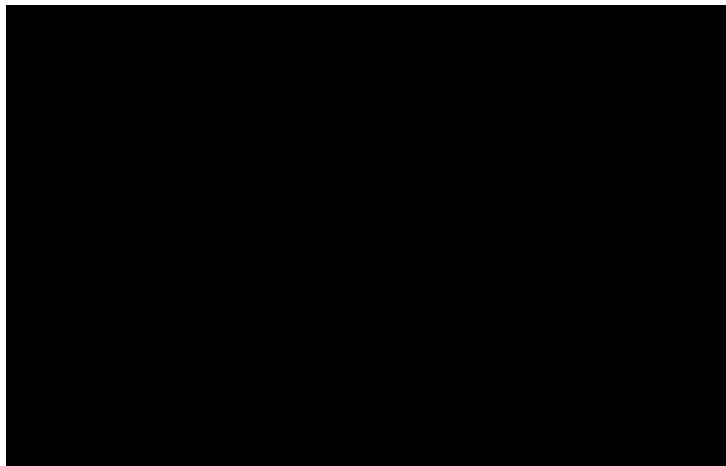
³⁰ Openreach Find "broad support" for Large Scale UK FTTP Broadband Rollout, ISP Review UK, 31st October 2017

³¹ Openreach pegs full fibre overhaul anywhere between £3bn and £6bn, and it'll cost consumers an extra £7 per head a month, The Register, 7th August 2017

³² Communications Market Report, Ofcom, 3rd August 2017, p.136

better broadband access, with a 100Mbit/s connection speed adding 8 percent to the value of a home.³³

42. Access to high quality content is also likely to see more customers prepared to pay higher prices for more reliable, faster broadband services. The growth of video on demand and pay TV services should boost the market for better quality broadband networks. However, network operators are likely to need to develop more partnerships with over the top (OTT) providers such as Netflix and Skype to help spread the cost of network infrastructure.
43. Due to the weak commercial case for investment in harder to reach areas, the Government will also need to contribute more funding to achieve its digital infrastructure goals of a national full fibre network and becoming a world leader in 5G mobile connectivity. As mentioned earlier, this could be delivered through direct subsidies and the tax system for rollout in harder to reach areas, as we have seen in other countries including Japan, South Korea and Sweden.



³³ UK house buyers 'would pay 14k more for a property with 100Mb broadband', 28th August 2015, uSwitch.com