

## **Future Telecoms Infrastructure Review**

### **INCA Response**

INCA welcomes the opportunity to respond to this consultation.

- INCA members also welcome Government's commitment to competing infrastructure investment in new digital infrastructure.
- We are beginning to see the positive impact of the Government's strategy on investment in the sector, which has led to investment announcements relating to a range of different business models.
- The adoption of the majority of recommendations in the Building Gigabit Britain<sup>1</sup> report underpins this strategy.
- Our members, and the investors who back them, want to see Government hold firm and maintain its commitment to a competitive market for digital infrastructure.
- A change of course would risk cutting off developing alternative infrastructure providers at the knees.
- Instead, our members ask the Government to further galvanise its efforts to remove the barriers to infrastructure roll-out, to ensure effective passive infrastructure access at scale, and to take action to deter predatory overbuild by Openreach.
- We are reviewing policy and regulatory progress since the Building Gigabit Britain report and look forward to sharing our findings with Government through the course of its consultation with industry on the future of telecoms in the UK.

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

- When will it deliver, and how certain can we be that it will fulfil the Government's ambitions for full fibre networks and 5G deployment?
- What will this mean for roll-out of these technologies and for competitive models in different geographic locations?

Since INCA was set up in 2010 the telecoms infrastructure market has changed significantly. In 2010 there was no superfast broadband. Today the government target for 95% superfast coverage has largely been met (with some caveats). In 2010 the telecoms infrastructure market was dominated by BT/Openreach, Virgin Media and some business service providers. Today a vibrant market of competitive digital infrastructure providers has emerged: the altnets.

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<sup>1</sup> <https://www.inca.coop/policy/building-gigabit-britain-report>

Companies like CityFibre, Hyperoptic, Gigaclear and B4RN and other players are making significant headway. When INCA published the Building Gigabit Britain Report in late 2016, we estimated that although by international comparator the numbers are small, twice as many premises could access full fibre connections from altnets than could from Openreach. In rural areas BDUK contracts started to be won by altnets. investment started flowing into the sector. Full fibre and fixed wireless operators are demonstrating their capabilities. INCA makes the case that the altnets are collectively becoming a third national competitor.

The companies involved operate different business models that best suit their strategies and investment profiles. CityFibre is a pure passive, open access operator. Hyperoptic focuses on delivering gigabit connections to residents of MDUs. Gigaclear operates only in rural areas. B4RN relies on a community investment model, leveraging community enthusiasm and engagement. Recent recipients of investment WightFibre and Truespeed operate more regionally/locally as do many of the fixed wireless operators. A number of companies operate both fibre and wireless networks - for instance Bridge Fibre / Air Broadband and M24Seven.

None have built and operate a copper access network for obvious reasons. However, a growing number of altnets are using BT's Passive Infrastructure Access. It works, but with many caveats. In its current form, it is doubtful that it is the answer to supporting competitive investment at scale.

Despite altnet investment, Project Lightning and commitments by BT Group and Openreach, in terms of full fibre coverage, the UK ranks far behind advanced countries in Scandinavia, other parts of Europe and Asia. The current competitive market structure is likely to sustain investment in the medium term - in terms of full fibre connections there is a very long way to go. We anticipate that reaching nearly all premises with full fibre connections will take 15-20 years. The altnets have committed to delivering a significant proportion of these full fibre connections, collectively equivalent to current plans announced by Openreach.

A more co-operative approach to new full fibre investment is desirable. Openreach is seeking 'co-investment' in the form of demand commitments (cut over) from major ISPs to justify full fibre investment. However, this risks re-monopolising a competitive market. CityFibre's approach is based on anchor tenancy from service providers or the public sector to support the investment case. B4RN raises investment in advance of deployment, from each community that wants to join its network. Hyperoptic works with property developers to access MDUs on an entirely competitive basis. INCA's members are concerned about the potential for predatory overbuild of new fibre networks that could undermine competitive investment.

The structural separation issue has not fully gone away. The Openreach capital budget is controlled by BT Group. This hampers Openreach's scope for committing to full fibre beyond plans for 3m connections in the announcement made last week. The bulk of their ultrafast investment focuses on extending the life of the copper network through G.Fast.

Our main comment on 5G is that fixed wireless providers can play an important role in delivering higher bandwidth services, particularly in rural areas that will not get full fibre for many years. This use case is recognised in the Arthur D Little report referenced in the DCMS 5G trials consultation. One way that government and regulator can support their efforts will be to provide access to suitable, licensed wireless spectrum, preferably in bands for which equipment is manufactured with significant economies of scale. 3.4-3.8 GHz spectrum is ideally suited to this task in rural areas. MNOs will struggle with the investment case for delivering rural services in these bands.

**2: What barriers exist to *long term* investment in the UK telecoms market (beyond work underway by the Local Full Fibre Networks programme to stimulate demand, and by the Barrier Busting Taskforce to reduce build costs)?**

- What effect do existing revenue streams have on investment plans?
- What effect do visibility and predictability of returns have on investment plans?
- What is the effect of current infrastructure deployment models?
- What impact do current infrastructure sharing arrangements have on investment?
- What is the impact of the existing relationship between wholesale and retail markets?
- What changes to spectrum licensing and sharing could foster greater innovation and investment in 5G?

**Revenue streams**

Existing revenues derived from the legacy network makes it difficult for BT/Openreach to justify investing in replacing copper lines with fibre optic cables. For an altnet launching a new full fibre (or wireless) network all revenue is new revenue so the risks are primarily in constructing the network and customer demand for new, better services.

Visibility & predictability of returns

**Deployment Models**

The NIC report on digital infrastructure costs<sup>2</sup> considered capex and likely opex over 30 year horizon for a range of technology options and mixes, including FTTP (with and without passive infrastructure re-use, with 5G local access, or FWA), DOCSIS and G.Fast. The report estimates whole life costs to be in the range £22bn - £40bn depending on technology mix.

New entrants generally deploy FTTP, FWA and sometimes sub-loop unbundling. Widespread deployment of G.Fast by Openreach is likely to reduce demand and slow full fibre deployment in some areas. G.Fast extends the life of parts of the copper network, but does not bring the overall benefits of full fibre: symmetry, gigabit bandwidth, lower opex and an

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<sup>2</sup> <https://www.nic.org.uk/wp-content/uploads/Cost-analysis.pdf>

end to the lottery of some customers in an area getting a good services, others getting poor services, depending on the copper network.

### **Infrastructure Sharing**

Ofcom's DCR focused on duct and pole access as a primary route to delivering competitive fibre networks for at least 40% of the population. It has been noted often by INCA members that the current arrangements for accessing Openreach infrastructure, although better than in the first iteration, need improvement both in processes and allowable uses - e.g. for mobile backhaul and for business services, not just 'mixed use' as proposed by Ofcom. Even with improvements, questions remain over how much of the existing infrastructure is actually fit for the purpose of DPA.

INCA members are working the industry process as hard as is feasible and pushing for a fit for purpose PIA product. However, this is starting several years after Ofcom's chosen preference for re-sale of VULA based services. For PIA to succeed, companies using the product need to be accorded full support by Ofcom and DCMS. One suggestion is to agree target volumes in order to measure success (or failure).

Some INCA members have made the argument that FTTP overbuild by Openreach should not be permitted, certainly until there is a fit for purpose DPA that can be used at scale. Otherwise there is no level playing field.

Recent moves by DCMS to support LFFN projects that facilitate public sector aggregation of duct infrastructure to offer to the market (the 'Thin Layer Model') have been welcomed by a number of INCA members. Others have also expressed interest in accessing Network Rail infrastructure if/when it becomes more widely available.

To our knowledge no INCA members have yet attempted to use the Communications (Access Infrastructure) Regulations 2016<sup>3</sup>, providing for access to other third-party infrastructure that could facilitate lower cost deployment. However, some have started exploring this option.

### **In 5G/mobile**

The Wireless Infrastructure Group is an INCA member that has developed a 5G project in Aberdeen based on the neutral sharing model. They have ambitions to expand their small cells pilot to include industrial, retail and residential. They plan to develop 5G antennas and work with Aberdeen to explore use cases in health, education and transport. Success of this approach will demonstrate that the independent neutral host model can deliver greater investment, competition and connectivity through maximising sharing whilst ensuring that incentives to share are maintained.

### **Wholesale/Retail Markets**

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<sup>3</sup> [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0025/95191/Guidance-under-the-Communications-Access-to-Infrastructure-Regulations-2016.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0025/95191/Guidance-under-the-Communications-Access-to-Infrastructure-Regulations-2016.pdf)

Today the retail market for broadband services is based almost exclusively on the Openreach infrastructure. Price and service competition between the small group of major ISPs means that margins are thin. One of the lessons from the early BDUK process was that major ISPs were only interested in committing to new, competitive infrastructure if they could be guaranteed 1m homes passed. This was a factor in Fujitsu falling out of the BDUK framework. Most altnets operate a vertically integrated model, of necessity (there would be no services if they didn't offer them) and to maximise ROI. However, some also provide wholesale services, mainly through the FluidOne platform. CityFibre has recently acquired Entanet to create its own wholesale platform.

A key criticism made of the Ofcom WLA Market Review is that it did not discuss switching between competing infrastructures - either by end customers or by service providers. We believe that this is one of the areas that needs policy and regulatory intervention to help sustain competitive investment.

### **Spectrum licensing and Sharing**

INCA has many members that operate fixed wireless networks, mainly but not exclusively in rural areas. Along with UKWISPA we have made the point to Ofcom that fixed wireless access can play an important role in delivering higher bandwidth services, particularly in rural areas that will wait many years for full fibre connections. Access to licensed spectrum, particularly in the 3.4-3.8GHz bands will help operators to deliver more reliable services and attract investment. MNOs are unlikely to deploy mobile services in these bands in rural areas. Consequently, we urge DCMS to pressing Ofcom to consider different approaches licensing in these bands in rural areas.

### **3: What can the UK learn from the widespread deployment of fibre networks in other countries?**

- What factors have led to higher full fibre investment in other countries and how applicable are these to the UK?
- What have been the impacts of fibre roll-out models in other countries on competition dynamics, consumer bills, and risk allocation?
- To what extent can the fibre that has been rolled out internationally be used for mobile backhaul, and what lessons can the UK learn?

Factors that have led to higher full fibre investment in other countries are well known. For example:

- In Scandinavia - Political commitment and backing for local action has played a significant role – we refer DCMS to the Stokab project in Stocholm, municipal networks throughout Sweden, rural Finnish projects and others.
- New Zealand has led on the regional franchise model that led to voluntary structural separation.
- Lithuania and Portugal – have led on open access duct infrastructure facilitating competitive deployment of fibre.

**4: The Government wants to consider all market models that will facilitate the next generation of technologies.**

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

- What consequences could different market structures, including ones which support longer pay-back periods, have on the investment environment, competition and outcomes for consumers?
- How might these vary in different geographic areas of the UK, including urban and rural areas?
- Over what timescale could market models be changed, and what policy conditions would be necessary to enable this?
- Are the current arrangements for BT legal separation working effectively?

*\* Market models which you may wish to consider in responding could include:*

Infrastructure competition between different network providers wherever possible

- Collaborative models at an infrastructure level
- Regulatory asset bases, franchise models, cap and floor regimes, a diversified model to account for geographic variation, and/or gainshare models for infrastructure provision
- Risk sharing models between infrastructure providers and retail providers

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

- Over what time period could migration occur?
- What phases might migration be required to go through?
- What would be the pros and cons for markets and competition?
- What would the implications be for different groups of consumers?

**Market Models**

INCA members operate different models for investment and deployment, consequently as yet there is no consensus approach to which model or models (if any) should be favoured by government.

We are beginning to see the positive impact of the Government's strategy on investment in the sector, which has led to investment announcements relating to a range of different business models. The adoption of the majority of recommendations in the Building Gigabit

Britain<sup>4</sup> report underpins this strategy. Our members, and the investors who back them, want to see Government hold firm and maintain its commitment to a competitive market for digital infrastructure. A change of course would risk cutting off developing alternative infrastructure providers at the knees.

Infrastructure competition with some degree of asset re-use (DPA) is the model preferred by Ofcom, aiming for competing networks in 40% of the country by 2025. One of the key risks of the current approach is the risk of predatory overbuild by Openreach dampening the appetite for altnet investment. For the Ofcom approach to work DPA needs to be properly fit for purpose and protection against predatory action needs to be in place.

A local/regional franchise model for full fibre networks is one approach to dealing with the overbuild issue. It is likely that this would only be acceptable for networks being built on a fully open access model. In New Zealand, this led to the full structural separation of the incumbent. In the UK, a number of important players are operating vertically integrated models which are not suited to an open access local/regional franchise approach and they risk being undermined by a franchise approach. At this stage it is unclear to us that a franchise model would lead to better outcomes than the current basis for competitive investment, though there may be arguments in favour of such an approach for some parts of the country.

### **Copper Switch-off**

Mandating copper switch off gives certainty to investors. Risks: demands for public subsidy in areas deemed uncommercial.

BDUK have reached 95% superfast coverage and will reach 98% by 2020. Much of the latter increment using FTTP. This is before the balance of BT's capital deferral (£347m) has been made available through a competitive process. It would seem peculiar to discuss a 'sunset' for telephony before all these funds were accounted for.

It may well be the case that BT's chosen preference for copper based solutions and subsidies in more difficult to serve areas, means BT's has little appetite to replace the telephony network unless paid to do so. INCA believes that any 'sunset' date for telephony should be set on terms acceptable both to Government and the wider industry.

### **Structural Separation**

The new Openreach separation arrangements leaves BT Group in control of the key capital expenditure and portfolio decisions. INCA members fall into two camps on structural separation – those that are keen to push hard for full separation (in general access seekers) and those that are more agnostic. A fully separated Openreach would have greater control over investment decisions. However, a re-monopolisation of the digital infrastructure is

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<sup>4</sup> <https://www.inca.coop/policy/building-gigabit-britain-report>



likely to set back independent, competitive investment. This would be a mistake. In the first half of 2017 alone £500m of new investment<sup>5</sup> was brought into the industry, mainly for rural deployments, by a small group of full fibre altnets.

It is also worth noting that whilst structural separation would remove the competition for capital from within BT Group, whoever owned the structurally separated entity would own the profitable business derived from the legacy assets. This leaves in place the incentive to sweat the assets rather than invest in new digital infrastructure.

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

- Are consumers (residential and business) willing and able to pay for new digital infrastructure, given its expected benefits?
- What could incentivise investors and shareholders to make long-term investment decisions in telecoms infrastructure?
- What is the potential role of government in stimulating demand or otherwise de-risking new infrastructure investment?

**Consumers willing to pay?**

Early adopters are often willing to pay some premium for high quality services – exemplified by services offered by Hyperoptic and Gigaclear. However, the bulk of the market has been conditioned to low prices for broadband services, or for broadband bundled with a range of services.

Businesses are willing to pay for benefits like security, resilience etc. But the industry suffers from poor service perceptions, based on the shortcomings of a copper network - the customer almost never gets the bandwidth they pay for (up to speeds), faults and poor service have been a longstanding bugbear for service providers and end customers. Evidence (EY) suggests that later adopters are more likely to favour bundled services and brand awareness will play a role.

**Government Support**

Demand stimulation through programmes like LFFN, voucher schemes, support for projects that exploit high bandwidth, low latency applications. All can play a valuable role in raising awareness and supporting the demand side of the equation.

**About INCA**

INCA is the association of the independent digital infrastructure providers – the altnets.

For more information please contact:

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<sup>5</sup> <https://www.ft.com/content/7b4fc7ea-7074-11e7-aca6-c6bd07df1a3c>



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