

# Digital Communications Infrastructure Strategy

## Written Evidence From The Rural West Sussex Partnership



### *The Role of Rural West Sussex Partnership*

1. The Rural West Sussex Partnership is a formal area partnership of the Coast to Capital LEP.

#### **RWSP Funding partners:**

West Sussex County Council  
South Downs National Park Authority  
Coast to Capital LEP  
Arun District Council  
Horsham District Council  
Chichester District Council  
Mid Sussex District Council

#### **RWSP Strategic Partners & Stakeholders include:**

National Farmers Union (SE)  
Country Land and Business Association (SE)  
Farming & Rural Issues Group (SE)  
Surrey LEADER LAG  
West Sussex LEADER LAGs (x2)  
Sussex Local Nature Partnership

#### **RWSP rural LEP Stakeholders include:**

Surrey County Council  
Mole Valley District Council  
Tandridge District Council  
Lewes District Council  
Surrey Local Nature Partnership

2. The RWSP Funding Stakeholder Group have identified Rural Digital Connectivity as a priority for the Group. We have been working in close collaboration with West Sussex County Council to support their BDUK broadband roll-out and have been in close liaison with DEFRA and other rural interest groups in championing the need for digital connectivity for the rural economy across both broadband and mobile technologies.
3. The Coast to Capital LEP has also identified Digital Connectivity as a priority and has allocated funding to support this priority via both the Growth Deal and ESIF funding streams.
4. Although the RWSP is not technically qualified or experienced to respond to all 44 questions within the consultation we have responded to those questions we feel able to effectively respond to based on our collective knowledge and experience.
5. The RWSP requests that DCMS and HMT consider including a representative from RWSP in future consultation and any follow-up to this specific consultation.

## Responses to specific Questions in the Consultation

The RWSP has attempted to give a response to those areas of the consultation that are most relevant. Some areas of technical detail have not been addressed as this is best left to the input of professionals in the area of digital infrastructure.

### *Q1. Views are sought on:*

- a) Is this an appropriate role for Government?*
- b) What other high level principles the Government might adopt?*
- c) What resources do you consider the Government should aim to deploy to effectively manage its role?*

#### **a) Is this an appropriate role for Government?**

As there is evidenced market failure in selected urban areas and the majority of rural areas with the roll-out of FTTC superfast broadband, we believe this is a highly appropriate role for Government intervention. There may also be need for limited intervention in FTTP

As the mobile industry crystallises into fewer operators with shared infrastructure and a move to newer 4G and 5G technology, mobile connectivity within rural areas is deteriorating rather than improving. Where previously with 2G & 3G, operators were in a race to offer maximum coverage, new pricing models are forcing operators to rationalise their mobile infrastructure to the most viable sites. There is now an increased need for Government intervention on mobile connectivity in rural areas.

#### **b) What other high level principles the Government might adopt?**

There is a need for Gov't to work across all departments: HMT, DCMS, BIS, DEFRA, DCLG, digital connectivity should be a pan-Government priority rather than ghettoised with DCMS. There should be a named Minister with sole responsibility for National Digital Connectivity.

The LEPs should be a key element of digital connectivity delivery as provide a local infrastructure linking public sector: Unitary, County, Borough & Districts with the private sector. They have the unique local knowledge as what interventions will produce maximum economic growth impact across the key measures of Jobs, Homes and Commercial Floorspace vs external leverage.

Each LEP should be required to identify a "Digital Champion" within its Board or Senior Management structure.

The coverage data currently held by DCMS for both broadband and mobile should be made freely available at the most granular detailed level to all LEPs and their strategic partners. The current situation when much of the data is deemed commercially sensitive is nonsensical when such huge amounts of public money are being deployed within the sector.

#### *c) What resources do you consider the Government should aim to deploy to effectively manage its role?*

The Gov't requires sufficient resources not only to research the market failure within broadband and mobile but also to help stimulate the market to deliver, through incentivisation or gap-funding. Funding resources should be deployed on a competitive basis to the LEPs to help deliver locally appropriate solutions to ensure their area is fully digitally connected.

## Section 1

*Q2. What potential opportunities are there for Government to leverage its combined buying power to support policy objectives?*

The Government has access to a significant number of infrastructure networks across a number of departments and pseudo-nationalised functions. Education, Public Sector, Health, Emergency Services, Transport (Road and Rail) and Military.

These 'public' networks where spare capacity exists or access to infrastructure (such as ducting) is possible should be brought into use especially in areas of market failure such as rural. E.g. The national Highways network and national rail network both have significant digital infrastructure in-situ throughout rural areas, which could be utilised as nodal jump-points to enable areas with both broadband and mobile masts requiring backhaul.

There are huge areas of the UK that remain not-spots commercially but could easily be enabled if cost-effective access was granted to existing infrastructure that was in place but at present in alternative quasi-public operation or ownership. Access has to be cost-effective.

We need Gov't to foster a joined-up approach to utilisation of these public assets.

*Q3. If migration to IPV6 is required, are there any barriers to that migration and if so how might these be addressed?*

We are unable to respond to this question.

## Section 2 - What might future demand look like?

*Q4. Is an ongoing disparity of provision of broadband services inevitable? If so should this be addressed and how might this be done most effectively?*

Disparity of provision is inevitable when driven by market viability. The commercial providers will only invest in infrastructure that can be commercially justified. The reality as we are now witnessing is that even in what was 'commercial' areas, the industry has chosen not to invest if the business case was marginal or there were high-value lease line customers that could migrate to cheaper packages if a cabinet became enabled on an open and equivalent access basis. The rural 10%-5% are generally not commercially viable for fibre and becoming less so for mobile 3G & 4G therefore continued state intervention in these areas is required.

Although there are calls that 24mbps is too slow for future needs, rather than start deviating with faster roll-out in urban areas, the Gov't must support the roll-out of at least 24mbps to all areas within the UK that can practically be covered. As the viability of FTTC/FTTP lessens then alternative solutions such as FTTRN and next-generation wi-fi should be considered and gap-funded.

Where areas require greater than 24mbps there should be a commercial case made for industry investment to support these businesses. If a strong business case can be made for public gap-funding then this should be made on a local basis to LEP funding streams.

The universal minimum service provision of 2mbps must be delivered to all premises and preferably ahead of the 2017 deadline. This cannot be fudged by a speed to cabinet measurement but to the actual premises.

*Q5. How symmetrical will digital communications networks have to be in the future? Will this differ across user types? What implications does this have for fixed and wireless broadband provision?*

Although residential users do not generally require symmetrical services, commercial users are increasingly needing symmetrical parity as via services such as Cloud the need for fast upload is becoming as important as the speed of download.

From a rural perspective agricultural businesses that require access to DEFRA need as fast upload as download to upload the huge files with mapping and graphics required for CAP and other land management grants and schemes.

The growth of Home Based Workers and Home Based Businesses will intensify the need for symmetrical supply. As more people utilise mobile devices such as Ipad's the need for this symmetry to be available on fixed, wireless and mobile connections.

*Q6. Which countries should be our benchmarks on communications infrastructure to ensure that businesses remain in the UK and continue to invest?*

Mobile roaming is widely used in most European countries allowing users to access a service from the service provider with the infrastructure most appropriate with a specific area. The charging mechanism for roaming is hidden from the consumer but calculated between operators.

The much reported mobile not-spots are in the main operator not-spots rather than true not-spots, in the UK we should have a rural roaming provision that allows users to switch to the strongest signal available with an internal charging mechanism between operators.

The industry have been railing against this practical solution to a large percentage of rural not-spots, the Gov't should intervene and force the operators to adopt the European roaming model.

*Q7. What metrics do you think should or will become relevant in comparing network performance in different countries? What metrics should most appropriately be used as the basis to set objectives for government policy?*

The use of population rather than premises is allowing the Gov't to present a coverage picture that is artificially positive. The Gov't needs to switch the measurement to actual premises that are able to receive broadband at 24mbps and have access to a mobile phone signal.

We would want to see the minimum for 2017 to be 95% of all premises not population to be able to receive 24mbps to the premise not just cabinet. And 100% of premises able to access at 2mbps by 2017 or sooner.

The mobile measurement depends in whether national roaming can be adopted, if not then a not-spot needs to be redefined as an area unable to receive 50% of the national operators.

The Gov't also needs to consider the artificial boundary that has been created between broadband and mobile. Users are not bound by this boundary. When in premises they will probably access the network from Fibre via a local wi-fi network, when outside will access via a mobile data service such as 3G or 4G and when in external locations may access via commercial wi-fi networks, the user does not generally differentiate between them as long as what they are wanting to do can be done when they want it to be done. To the consumer this process is virtually seamless, only shown by a subtle change of logo on their device from wi-fi to 3G/4G and back to wi-fi.

### Section 3 – Scenarios

The RWSP views elements of all three scenarios will most probably reflect future demand, with Scenario 3 showing the most ambitious scenario.

#### Scenario 1

*Q8. Do you agree with this scenario or elements within it? Where do you agree/disagree? If you disagree what alternative scenario do you envisage?*

We believe this scenario is probably the most realistic in terms of current investment and fragmented nature of the sector and lack of Gov't willingness to make the required investment in infrastructure.

We disagree with the penetration comment on smartphones and tablets and believe the use of these will continue to rise, exponentially.

*Q9. What are your views on the technology commentary underpinning this scenario? To what extent might the infrastructure/technology discussed evolve irrespective of demand and how far will it be a direct consequence of the level of demand?*

We do not believe rural areas will have 24mbps coverage based on current investment levels.

*Q10. Are there technologies not identified here that you think will have a major impact on the performance of existing infrastructure or the deployment of additional infrastructure in the next 10-15 years?*

FTTRN technology for rural areas has been omitted and use of next-gen wif-fi underplayed.

*Q11. Are there wider environmental issues not reflected in the scenario e.g. the price or availability of energy that will affect any of the scenarios and in what way?*

*Q12. How likely is any unforeseen disruption to this scenario and what area might it occur?*

#### Scenario 2

*Q13. Do you agree with this scenario or elements within it? Where do you agree/disagree? If you*

*disagree what alternative scenario do you envisage?*

We believe this is a realistic 'upside' scenario based on improved investment in infrastructure, however we believe the digital divide will have opened up between urban and rural where urban benefits from 24mbps+ and rural languishes at 2mbps universal service provision if lucky.

*Q14. What are your views on the technology commentary underpinning this scenario? To what extent might the infrastructure/technology discussed evolve irrespective of demand and how far will it be a direct consequence of the level of demand?*

The need to seamless access to mobile data we feel has been underplayed in this scenario

*Q15. Are there technologies not identified here that you think will have a major impact on the performance of existing infrastructure or the deployment of additional infrastructure in the next 10-15 years?*

FTTRN technology for rural areas has been omitted and use of next-gen wif-fi underplayed.

*Q16. Are there wider environmental issues not reflected in the scenario e.g. the price or availability of energy that will affect any of the scenarios and in what way?*

*Q17. How likely is any unforeseen disruption to this scenario and what area might it occur?*

### **Scenario 3**

*Q18. Do you agree with this scenario or elements within it? Where do you agree/disagree? If you disagree what alternative scenario do you envisage?*

We believe this scenario demonstrates the highest degree of up-side, although many cite Moore's Law, we believe the growth will come from a greater percentage of the population both individual and business embracing digital but on a sub 1gbps basis. There will be sectors and clusters requiring +1gbps connection but commercial providers with minimal Gov't intervention will accommodate these.

As with scenario 1 & 2 we believe the digital divide will be between rural and urban areas.

*Q19. What are your views on the technology commentary underpinning this scenario? To what extent might the infrastructure/technology discussed evolve irrespective of demand and how far will it be a direct consequence of the level of demand?*

*Q20. Are there technologies not identified here that you think will have a major impact on the performance of existing infrastructure or the deployment of additional infrastructure in the next 10-15 years?*

We would want to technologies utilised that brought cost effective connectivity to rural areas.

*Q21. Are there wider environmental issues not reflected in the scenario e.g. the price or availability of energy that will affect any of the scenarios and in what way?*

*Q22. How likely is any unforeseen disruption to this scenario and what area might it occur?*

#### **General**

*Q23. Are there factors, for example technical or unrelated to the regulatory framework, that could create bottlenecks and delay future infrastructure deployment in the UK in this timeframe, that would result in demand not being met or the UK not being seen as a leading digital nation?*

The sparse population and physical nature of the rural landscape provide barriers for digital infrastructure deployment. Unless these barriers are overcome in a cost-effective way demand will not be met and the UK will only be a leading 'digital nation' if you live and work in an urban area.

*Q24. Do you expect commercial providers to deliver future infrastructure and meet demand on a purely commercial basis, or is some form of public intervention likely? If public intervention is likely how might that work with the commercial provision of infrastructure? What form might that intervention take?*

The RWSP is of the view that this should not be left entirely to the market to deliver. Government intervention is essential, either to de-risk investment or to give certainty of Government backing to a long term and ambitious policy that will be backed up with relevant legislation that will encourage investors.

To effectively roll out full digital connectivity to rural areas the Gov't needs to devise a mechanism where the commercial success and profits of the urban areas help fund the more costly rural areas to create a truly digital nation. Urban-based businesses and residents bemoan the paucity of connectivity when visiting rural areas, we cannot afford to have this digital divide.

*Q25. Which current or draft legislation might prevent or facilitate the emergence of any of the scenarios?*

If the mobile operators do not voluntarily enable rural mobile roaming the Gov't should legislate.

*Q26. Do you have views on which scenario (or combination of scenarios) is most likely and should influence the development of future strategy?*

We believe that the future will be a combination of all three scenarios, with 1 being the most realistic based on current situation, 2 being an upside scenario if more investment and intervention is deployed and 3 being the most optimistic .

#### **Section 4 Competition and regulation**

*Q27. How might efficient investment in communications infrastructure be supported, for example by*

*changes in the regulatory framework?*

The Government should explore giving Ofcom an explicit duty to encourage investment that will bring forward deployment early. The focus of the ducts and pole sharing through Passive Infrastructure Access appears to be aimed mainly at retail use. For business growth, the RWSP would encourage more business to business services being made available and Ofcom being able to request more open access and specific actions (like a set range of prices) so business can choose from a wider range of service providers.

*Q28. Are there any further measures necessary to incentivise the rollout of future mobile infrastructure in currently underserved areas?*

Mobile roaming becomes mandatory in operator not-spot areas.

*Q29. Is there a role for a revised USO or USC to ensure that minimum consumer demand requirements are met and to reduce the potential for a new digital divide? What might this look like?*

We are unable to respond to this question.

*Q30. In terms of supporting future innovation and long-term investment in infrastructure, what areas of broadcasting regulation may have served its purpose by 2025 -2030 (or indeed earlier)? What future technical developments may also have longer term implications for regulation and wider public policy?*

We are unable to respond to this question.

*Q31. Are there changes to the EU Framework that the UK might seek to encourage more competition in UK markets?*

We are unable to respond to this question.

*Q32. Should Government seek changes to the European Framework which put more reliance on competition law and how might this be done?*

We are unable to respond to this question.

*Q33. In what ways can you see competition driving technological change in the UK in the future?*

We are seeing that increased competition between mobile providers and merging of some operators has led to a rationalisation of their mast infrastructure in rural areas. This has meant that some 2G/3G masts are being removed as unviable to operate and a number will not be replaced at the end of their operating life. 4G and 5G replacements are not planned to be widely deployed in rural areas as are more expensive, have smaller range and require greater backhaul for what is viewed as a relatively small market.



*Q34. How can the regulatory framework keep up to date with new business models and changes in technology?*

The Digital task-force and local LEP digital champions should be assisting Gov't with this task.

*Q35. Are there any changes to legislation other than the Communications Act that would incentivise the provision of communications infrastructure?*

Legislation should be considered to stimulate investment in rural infrastructure via the profitability of the urban market.

*Q36. Would there be benefits to investment from a focus on broadband only services? Are there any barriers to the emergence and adoption of broadband only services, whilst still providing necessary access to emergency services?*

Until VOIP technology is as seamless and reliable as traditional voice then the need for 2G remains.

## **Section 5 – Facilitating and Encouraging Investment**

*Q37. How might copper access networks evolve over time alongside other access technologies? Is there a role for policymakers in helping manage any transition from copper to other access networks?*

In the short to medium term improvements to the copper network will be required in rural areas as the fibre roll-out continues. Technology such as vectoring down copper lines will help to some extent. The current FTTC roll-out rather than FTTP means that copper will remain part of the national infrastructure unless incentives are brought forward to convert copper to fibre.

It is reasonable to project that if Government were to issue a clear statement outlining a direction of travel, with a plan and timeframe, to switch off copper access networks this would drive up demand for fibre and other solutions which would make them more financially viable.

*Q38. Views are sought on whether there are any additional actions the Government should consider to ensure:*

- a) That the provision of all areas of the UK's digital communications infrastructure remains competitive in order to ensure that the UK can take full advantage of growth opportunities in the Digital Age;*
- b) Aside from legislation and adapting the regulatory framework in the broad sense which other actions should the Government take to encourage investment in communications infrastructure?*
- c) That potential investment in the provision of digital communications infrastructure offers a suitable risk and reward profile to ensure that they can be financed by the private sector.*

*Q39. Views are sought on:*

- a) The case for the UK to invest to gain 'early mover advantage';*

*b) What areas in particular the UK should aim to see investment;*

Rural areas within the last 5-10% should be specifically targeted for investment.

*c) Are there any actions not covered elsewhere in this report that the government should consider to ensure digital communications infrastructure is in place before it is needed and such that it helps generate need.*

*Q40. How can we maximise the current R&D and innovation UK landscape to help take advantage of the opportunities provided by future technologies? What needs to be done by Government and its agencies, and industry to tackle any gaps?*

The £10m superfast fund projects should be reviewed and where successful fully funded for roll-out, a phase 2 fund should be launched to continue R&D into new innovation, this should be done annually to stimulate continuous developments in our digital infrastructure.

*Q41. In which future communications technologies do you consider the UK has, or could achieve, an international leadership position?*

We are unable to respond to this question.

*Q42. What more might government and industry do to exploit future technologies, associated new applications and emerging business models?*

Apply for broad state-aid exemption for new technologies.

*Q43. What role might local bodies have in facilitating the future delivery of digital communications infrastructure?*

The network of 39 LEPs provides the ideal platform for Gov't to deliver relevant and appropriate investment into digital infrastructure. They provide a conduit to public and private partners in each area that central Gov't could not hope to exploit.

*Q44. How can council's maximise the digital communications infrastructure in their local area to support their work on economic regeneration?*

Councils have a role in promoting digital connectivity to their residents and businesses but often are too small to have sufficient resources to effectively deliver. Therefore local authority clusters, upper-tier authorities and LEP's feel at the right level of size to be able to deliver effectively but have sufficient local connectivity to support local economic regeneration via digital connectivity.