

DIGITAL COMMUNICATIONS INFRASTRUCTURE STRATEGY

RESPONSE FROM THE LEP NETWORK



The Role of Local Enterprise Partnerships

1. In the White Paper published in October 2010, *Local Growth: realising every place's potential*, the Coalition Government argued that decision-making and delivery mechanisms for economic development should operate at the most appropriate geographical levels, based on specific market failures and maximising efficiency and effectiveness. The White Paper set out the critical role of local authorities in supporting their local economies and said that in place of the Regional Development Agencies, the Government would enable and encourage local ownership and leadership of action to address local economic priorities instead of imposing solutions from the centre. It also said that Local Enterprise Partnerships (LEPs), as joint local authority-business bodies, would provide strategic leadership to drive sustainable private sector-led growth and job creation in their areas.
2. Since that White Paper, the role of LEPs has evolved considerably, spurred in particular by Lord Heseltine's report *No Stone Unturned in Pursuit of Growth* which argued for a very significant devolution of funding from central government to Local Enterprise Partnerships. Lord Heseltine's argument was that this would allow government investment in economic development to be tailored directly to the individual challenges and opportunities in local communities, augmented by private sector investment. There is a significant shift in responsibility for local economic development from central to local government, a shift that has cross-Party commitment post the 2015 General Election.
3. In July 2013 the Government invited LEPs to submit Strategic Economic Plans (that covered a six year period from April 2015 to March 2021) and bid for a share of a £20 billion Local Growth Fund. Digital infrastructure is an issue that features highly in many Strategic Economic Plans as a current economic issue that needs to be improved (particularly around coverage for all businesses, including home workers, and access to superfast) and also a recognition of future economic potential for local areas.
4. LEPs submitted their Strategic Economic Plans at the end of March 2014 and first allocations from the fund were announced in July 2014, with investment in project activity to start from April 2015. Each LEP has identified Digital Infrastructure as a priority area with the potential to unleash economic and business growth. Some LEPs have been successful in securing investment into a 5G technology pilot as part of their 2015/16 Local Growth Fund allocations.
5. Alongside the Local Growth Fund, every Local Enterprise Partnership is being given responsibility for drawing up investment plans for over £5 billion of European Structural and Investment Funds for England for the period 2014-2020. LEPs are also central to the additional £100m being allocated to the Superfast Extension Programme run by BDUK.

6. The LEP Network supports the main thrust of the recommendations that the FSB outlined in their Fourth Utility report, as follows:
 - The creation of an ambitious national broadband strategy to deliver universal connectivity throughout the UK, regardless of location;
 - By 2018/19, delivery of a minimum 'service level floor' of 10 Mbps to all premises in the UK (although the LEP Network would urge Government to aspire to a higher goal that deals not only with download speeds);
 - By 2030, Government should deliver guaranteed minimum speeds of 100 Mbps to all premises (although the LEP Network would urge Government to aspire again to a higher goal);
 - In the short term, the Government should prioritise the delivery of fibre optic broadband to new and existing business parks and ensure enterprise zones are fully connected;
 - The CMA should, at the request of Ofcom, conduct a review of the broadband market to examine options to boost competition with the aim of delivering more affordable options to small businesses. This should include more support for new entrants in the market;
 - The Government should consider reforms in the mobile market including the viability of moving towards national roaming between Mobile Network Operators (MNOs);
 - All aspects of broadband policy should be tasked to one department with a single Minister assuming responsibility for overseeing the delivery of universal connectivity.
7. The LEP Network welcomes the Government's Industrial Strategy for the Information Economy where it is stated that *"Digital and physical infrastructure is vitally important for the information economy and for all UK businesses and society. Business and consumer expectations on the availability, cost, speed, security and reliability of the internet, including on mobile and wireless access, are increasing all the time. Meeting these demands is crucial in reinforcing the UK's position as a leading digital economy and driving jobs, investment, productivity and growth."* The LEP Network also supports the Government's ambition *"... for a nationwide effort to achieve our ambition to be a world leader in the development of 5G technology."* (June 2013, pgs 44-45.)
8. Having a world class digital infrastructure is vital to help the UK's economic strengths continue to be successful. In September 2014, as part of the announcement of the NextGen academy, the Business Secretary, Vince Cable MP, said: *"The UK's creative industries are amongst the strongest in the world, worth £71.4 billion per year to the UK economy and supporting more than 1.7m jobs. Visual effects and games in particular are a great British success story"*. This followed the release of the Creative Industries Strategy (Create UK), an industry led strategy launched in July 2014 that will see businesses and government work together to maintain the UK's position as a world leader and the Government's commitment to the video games industry, with the news that video games companies across the UK can now claim corporation tax relief for the production of games qualifying under new cultural test regulations, which came into force on 19 August 2014.
9. Fast ubiquitous connectivity is needed to take advantage of radical changes in the employment market and the major drivers of productivity including opportunities like the Cloud which are denied to many businesses. The development of new employment models offers further radical opportunities for regional economic development.

For example, new companies are already springing up based on allocating work at a distance from corporate offices— see <http://www.crowdsourcing.com/> and <https://www.articleonepartners.com/>. Employee pay is increasingly being linked to outputs (the completion of tasks) within a workflow process and not the time spent doing it, which drives up productivity and rewards it.

This change arises from the increasing ability of organisations to allocate work to remote workers within a business process. This sort of work can be done adequately if the remote connection is fast enough.

The implications for the public sector are potentially significant. Regional areas of underemployment can be specifically allocated work without the traditional need to develop large offices and infrastructure.

As companies and the public sector expand into these new models, the load on our digital infrastructure will increase dramatically. Companies are increasingly no longer issuing desk phones and call via VOIP devices if they have a reliable fast broadband connection.

A recent report from the British Educational Suppliers Association (BESA) warned that half of pupils in UK state schools have slow broadband or unreliable Wi-Fi, and that there is a correlation between poor broadband access and low use of ITC in the classroom. A digital divide is therefore opening up between urban and rural schools that risks blighting the economic chances of future generations.

The exponential rise of the internet of things will further substantially increase the load and reliance on our digital infrastructure.

10. In Summary:

- There needs to be an ambitious globally competitive national strategy that clearly articulates Government's role and the role of the constituent parties in providing a world class digital infrastructure for business.
- Government's role should not be concerned with the quantum public investment only, but in using various instruments (policy, planning, tax etc.) to encourage private capital.
- Much of Government policy in this area is aimed at the residential market with the strong involvement with the regulator, but the needs of business and our productive capacity (including small businesses) must be better served;
- The issue cannot be left to the market to sort out on its own. With the introduction of *Digital by Default* Government has a responsibility to ensure universal ubiquitous connectivity and, recognising that some form of digital variance or divide will always exist, should ensure that rural areas are not left disenfranchised through a failure to provide adequate connectivity, to not notice any deficiency will only serve to hasten the urbanisation of our productive capacity.
- Both upload and download speeds are key economic imperatives for businesses, as well as issues of latency, jitter, resilience and security which will all become increasingly important to business as future technologies develop and the internet of things takes hold.
- Scenario 3 in the consultation document appears the most sensible option to follow, as it is very recognisable even now. This means Government will need to raise its level of ambition. Future proofing digital capacity will be crucial to our global competitiveness.

11. With LEPs' central role in setting local economic development strategies which aggregate to national priorities, and driving the implementation, the LEP Network asks that LEPs receive formal recognition of their strategic role in relation to digital infrastructure as one aspect of the wider infrastructure mix that along with the other factors of production underline all economic growth. Two opportunities to ensure appropriate linkages would be for an informed player representing LEPs to be invited onto the Digital Task Force; and for the LEPs to play a key role within the national spectrum strategy debate.

A.L.J. Pratt OBE
Chair of Management Board
The LEP Network

Specific Consultation Questions: Responses

The LEP Network has attempted to offer a response to those areas of the consultation that are most relevant to our work in driving economic growth at the coalface. Some areas of technical detail have not been addressed as we believe these to be best left for the input of technical 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) The appropriate role for Government?

The LEP Network believes the role of Government should be to clearly outline a **long-term ambitious strategy** that will provide ubiquitous access of “always sufficient” bandwidth to meet businesses’ needs to upload and download data and foster the economic ambition of the nation. This should be part of the Government’s strategy to win the global economic race, by showcasing the nation as a premier location to start and grow a business.

Government policy appears to be fragmented and sits across a number of Departments – Government Digital Service, BIS, DCMS, DEFRA, DWP (Universal Credits), GO ON UK etc. The LEP Network asks that there is a **unified voice** across the various Departments and public sector agencies who have a role in this area. The Government should make clear which **Cabinet Minister** has responsibility for this agenda.

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

The Government should **not work in isolation**. There should be a formal recognised role for LEPs at an England level (where a LEP representative sits on the Digital Task Force) and also at a local level. There should also be on-going dialogue with the private sector, intervening directly in areas of market failure, where it is appropriate for Government to do so. There should also be close working with the 3rd Sector voluntary and community interest groups, particularly where relevant Government services are delivered on-line. Having a **single interface point** would help external organisations engage more efficiently and effectively with these various parts of Government.

Government policy must be underpinned by **robust research and data**, which provides an impartial view that is informed by, but not led by, commercial providers. Government should ensure that LEPs have access to access to data on where broadband networks reside and the speeds available on the same networks. For instance a LEP area may have a lot of dormant dark fibre that an operator just is not using (for its own reasons). Meanwhile businesses close to the dark fibre may have no/poor broadband. Knowing what networks are available and what they can/cannot do is vital to implementing Strategic Economic Plans. Government should ensure detailed and regular information from Ofcom. This includes data on mobile coverage, as lack of a mobile signal in LEP areas is a key strategic economic problem for the LEPs and clear instance of market failure.

Government have the ability to de-risk investment in infrastructure, through **fiscal measures** (like long-term loans or tax-incentives) or **policy powers** (like mandating new build has fibre installed like other utilities).

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

In order to fulfil its role, it is our view that the Government needs an **adequate level of resource** to engage fully in this agenda with the appropriate level of expertise, to set strategy and drive policy that is underpinned by evidence and research.

Section 1

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

The mandatory central pooling of procurement via Treasury or Cabinet Office may not have been as effective as Government would like, which may be as a result of the high levels of overhead cost of bidding and procurement for large contracts.

Some departmental procurements (such as N3 for the Health Service), local authorities and public sector “co-operatives” (such as the surviving REIPs, JANET and some of the National Educational Networks) appear to be able to procure complex networks to common standards at considerably lower cost (including subsequent operations and changes over time) and to share these with local science parks and other community users.

The savings made when local authorities make available the infrastructures for their local traffic control networks, in return for fibre upgrades, low cost mobile connectivity for front-line service staff, Wi-Fi available in shopping centres and other community benefits also show what could be achieved by local initiatives organised by those with public sector procurement experience.

Government should therefore focus on publicising existing good practice and improving guidance on the use of procurement frameworks so that these can address the above problems.

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

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?

The LEP Network is particularly concerned about the ongoing disparity of broadband services and the apparent low level of ambition shown by Government policy. The UK needs a ‘National Broadband Plan’ that rises to the challenge of current shortfall and has wireless/5G at its core.

The 24Mbps will look increasingly slow in competition with ‘superfast’ broadband availability elsewhere at home and abroad. Given the projected growth in the area of Internet of Things the LEP Network strongly encourages the Government to not set policy to achieve an average household requirement of a high end of 52Mbps by 2018 (as stated in para 2.9 of the consultation document). The Government should set an aspiration that aims far higher.

3% of all jobs nationally are in the information economy sector and this is likely to grow. There is also growing numbers of home workers. Some areas have higher proportions of jobs in this sector yet still have large parts without access to more than 2Mbps. By way of an example, in the Buckinghamshire LEP area (where 4.8% of all jobs are in the information economy) an increase of 1,100 jobs was created in the sector between 2012 and 2013 and the expansion of Pinewood Studios will bring a further 3000. This in an area where 16.3% of employees are home workers.

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?

Symmetry between both download and upload speeds is critical, particularly for the future growth in new markets coming from the Internet of Things. This symmetry requirement is already needed now, with many businesses moving to cloud based systems and more workers becoming home based or mobile. We hear reports from business saying that their products produce a large volume

of data that takes many hours to upload, such as monitoring systems technologies that collect data from various components, sub-systems or systems.

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

The UK should be competing with those countries that rival our economy and try to attract Foreign Direct Investment and the Government should publically state this ambition.

Earlier in 2014 the DCMS website stated *'We want to achieve a transformation in our broadband access, with everyone in the UK able to access broadband speeds of at least 2 megabits per second (Mbps) and 95% of the UK receiving far greater speeds (at least 24Mbps) by 2017. We are also exploring options to extend the benefits of fast broadband to remaining areas'*.

This looks hugely under-aspirational when compared with the statement published in the International Business Times (January 2014) that *"South Korea's Ministry of Science and Technology announced that it would invest \$1.5 billion and partner with local telecom operators and smartphone makers to install a 5G wireless network that would become fully operational by December 2020. ... The new technology will reportedly enhance current connection speeds by 1,000 times in a country that is already home to the planet's fastest Internet speeds. And, according to reports, the 5G network will be first tested on social-networking sites in 2015, and expand to the speed of 1 gigabit (1,000Mbps) per second in 2017, and be introduced as a fully commercial service in 2020."*

The UK Government should be setting similar goals, to give a clear intention of its ambition that the UK has world class infrastructure and that the Government will play a role in terms of legislation, tax incentives, policy steer (in planning) working with industry suppliers.

In a speech at the Conservative Party Conference Sept 2014 the Culture Secretary Sajid Javid said *"We need to compete with the likes of Japan and South Korea...So yes, we're making progress, but there's still more to do. We need to work harder on improving mobile phone coverage, especially in rural areas. There's vast swathes of our countryside where you can't get a decent phone signal. And that's just not good enough. Our mobile operators must do more."* ([News Cloud](#), 29th September 2014.)

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 LEP Network recommends that future metrics should show how the available performance and service is "business friendly" allowing the business to do what they want, where they want and when they want to do it. We believe that measures employed should show upload and download speeds and that the service needs to deliver ubiquity, resilience and stability. The goal for measurement should be "my device connects anywhere", "I have 100% access" and "the service I receive is fit for purpose". 100% coverage does not mean geographical coverage, rather it is an ambition that all premises have access to a service that meets their needs.

Section 3 – Scenarios

The LEP Network views Scenario 3 as the most likely. Answers are reflected against Q18- Q22.

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?

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?

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?

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?

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?

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?

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?

This scenario appears most likely. It is almost impossible to forecast what the future opportunities

and demand will mean for new areas of innovation. Looking back over the last two decades, smart phones were first made commercially available in the late 1990s, who would have predicted they could deliver the solutions that we now take for granted. Since the first iPhone was released in June 2007, there have been 7 generations of phone released and by March 2014 a recorded 0.5bn devices were sold. With emerging markets in wearable technologies and new product development in foldable phones and power for mobile devices, this trend for growth does not appear to be slowing. The 3rd Scenario appears to be the best at capturing the scale of ambition that the LEP Network considers the UK should be articulating so its business community is able to operate in new and unforeseen markets.

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?

The LEP Network is not in a position to provide a view on the likely technology outlined in this scenario. We welcome the thoughts of the industry in this area.

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?

The LEP Network is not in a position to provide a view on the likely technology outlined in this scenario. We welcome the thoughts of the industry in this area.

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?

The LEP Network is not in a position to provide a view on the likely technology outlined in this scenario. We welcome the thoughts of the industry in this area.

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

The LEP Network is not in a position to provide a view on the likely technology outlined in this scenario. We welcome the thoughts of the industry in this area.

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?

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 LEP Network is of the view that this should not be left entirely to the market to deliver. Government intervention will help; 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. Look at how the Government's move to turn off analogue transmitters drove

activity across both suppliers and consumers in the digital communications sector. There are similar approaches being used by local and national government to drive behaviour, like the Energy Performance Certificates (EPCs) that are needed whenever a property is built, sold or rented, or the phasing out the use of high energy light bulbs, or use of waste recycling bins.

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

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

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 LEP Network 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?

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?

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?

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

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

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

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

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

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?

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?

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.*

On 19th August 2014, video games companies across the UK are now able to claim corporation tax relief for the production of games qualifying under new cultural test regulations. Could tax incentives be an area that the Government could use to stimulate investment from the private sector? Are there other financial instruments that the Government could use? What about using facilities available through low interest loans via Public Works Loan Board for quasi-public sector organisations (who may not be Local Authorities) to access to match private sector investment?

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;*
- 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.*

The UK is currently not leading in Europe in this area which will threaten our position as a location to attract Foreign Direct Investment. Other countries will soon catch up and overtake our position. The

UK needs to look at the longer term and encourage investment in the infrastructure. The temptation is to seek a fixed fibre solution. But this is likely to be too costly and not being certain of the direction that the new developments will take it would be more pragmatic to invest in a multi strategy of FTTP, satellite and wireless.

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?

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

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

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

With LEPs' central role in setting local economic development strategy and driving the implementation, the LEP Network asks that LEPs receive formal recognition of their role in digital infrastructure. Two areas that would be welcome are for a LEP representative to be invited to sit on the Digital Task Force; and for LEPs to have a key say on the national spectrum strategy.

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

The LEP Network