Policy Position:

DIGITAL CONNECTIVITY

June 2019

ADEPT

The Association of Directors of Environment, Economy, Planning & Transport

POLICY POSITION: DIGITAL CONNECTIVITY KEY MESSAGES

- Coverage – the digital industry must deliver fast and effective connectivity throughout the UK, supported by the Government and regulators, as quickly as possible. Rural areas need equitable access through a variety of options, including rural roaming and the new Emergency Services Network.

- Quality – the speed of broadband connection and the strength of mobile signals are crucial elements of effective connectivity.

- Competition – customers must be able to choose between service providers if competition is to drive quality up and prices down.

- New builds – new homes and commercial premises must be provided with full fibre ultrafast broadband.

- Delivery impact – street works to enable digital infrastructure must be well planned, delivered, and reinstated to minimise disruption and maintain the safety and quality of the highway at no extra cost to councils.

- Local industrial strategies must include strategies to deliver enhanced digital connectivity locally.

- Inclusive connectivity – broadband and mobile services must be affordable for all with people and businesses provided with opportunities to develop the skills to use them effectively.

What ADEPT will do

- **Bring together the Government, digital infrastructure providers, service operators, regulators, Local Enterprise Partnerships (LEPs) and our corporate partners to identify key barriers and develop cross-sector interventions to tackle them.**
- **Advocate what 'good' looks like, using our evidence base and case studies. We will use our awards competition to spread best practice, and our Live Labs pilot schemes to link up with transport innovation.**
- **Provide a community of practice, collective thinking and options appraisal.**
- **Encourage local planning authorities to include digital policies in their local plans, and ensure that staff are knowledgeable about the benefits of digital connectivity.**
- **Encourage local highways authorities to adopt a pragmatic approach to street works to facilitate the deployment of digital infrastructure, while requiring contactors to ensure public safety and maintain the quality of the highways asset.**
- **Work with LEPs locally to ensure that local industrial strategies encompass digital connectivity requirements.**
- **Make the case for regional spatial strategies that align digital infrastructure planning with sub-national transport, infrastructure and economic planning.**
- **Encourage a more collaborative approach in two tier areas so that local planning decisions align with strategic needs.**
- **Help articulate the different digital connectivity issues between high coverage areas in the big cities and poorly served rural areas.**

Introduction

Digital infrastructure is now as important to our economy and society as traditional infrastructure and utility services. In the near future, fixed and wireless networks will drive economic growth, offering the potential to boost productivity and open up new business models. Investment in these is therefore central to the UK's industrial strategy post-Brexit. Full fibre fixed networks and 5G mobile networks will deliver faster and better connectivity, enabling innovation across the economy, including in manufacturing, services, health and transport.

Good digital connectivity is already a vital element of everyday life for residents, and has become increasingly important for ordinary activities such as shopping, banking and utilities. As public services – including central and local government, and health – become 'digital by default', more people need to have faster and more reliable broadband access, and the skills to utilise it.

Mobile services are now at the heart of how most people stay in touch and go online. In 2016, the National Infrastructure Commission stated that mobile connectivity had become a "necessity", while Ofcom reported in 2018, that smartphones had become the most popular internet-connected device, used by 78% of adults. As a result, there is a continuous increase in the demand for mobile data.

In the near future 'smart places' will increasingly use digital technology to connect, protect and enhance the lives of residents and businesses. The 'Internet of Things' will collect huge amounts of data via sensors, video cameras and other input devices on roads, transport, town and city centres and in buildings. Properly integrated and managed, this data will provide the evidence in order to help tackle congestion, air quality, public safety and other common challenges facing communities.

Case Study 1: Suffolk County Council: Internet of Things

Suffolk Highways, collaborating with Telensa and BT, embarked on a project to demonstrate Internet of Things (IoT) technologies to support the 'greenest county' aspirations of Suffolk County Council. The aim was to dynamically control the light intensity on a section of road by deploying traffic counting sensors to interface with Suffolk's street lighting system, which had first been configured to use real-time traffic data. Firstly, a camera-based system used sensors with edge processing to count traffic. The video feed was then analysed and only the traffic data sent over the network. Secondly, the data was stored in a HyperCat-enabled BT data hub, meaning that it could be made available to other organisations via a simple application, without the need for time-consuming and costly integration work between different technical systems. Thirdly, the street lighting management system's algorithms took the raw traffic count data and applied techniques to smooth the dimming programmes, avoiding sudden changes and making the process imperceptible to pedestrians and local residents.

Context: Government policy and activity

The UK Digital Strategy, published in March 2017[1], has seven strands:

- **World-class digital infrastructure, including the Universal Service Obligation to provide an affordable high-speed broadband connection**
- **Digital skills for all**
- **Creating the right conditions for digital business start-ups and growth**
- **Helping all businesses to become digital**
- **Cyber security**
- **Digital Government services**
- **Harnessing the power of data**

The Department for Culture, Media and Sport (DCMS) Barrier Busting Taskforce was set up October 2017, in response to the Broadband Stakeholder Group report, 'Tackling Barriers to Telecoms Deployment' (May 2017). The report looked at the factors slowing down the rollout of UK broadband, including local authority planning and the business rates regime for fibre. The Taskforce aims to reduce the costs of street works, streamline planning and simplify wayleave agreements, and to work with councils to increase consistency and speed.

The Government's White Paper, *'Industrial Strategy: building a Britain fit for the future'* [2] (2017) announced an additional £385m for investment in digital infrastructure, taking the total provision for the National Productivity Investment Fund to £740m. The Fund includes support for a 5G test network facility, pilot schemes for technical and commercial solutions to high-speed and reliable connectivity on the train via trackside infrastructure, and to encourage network sharing between mobile network operators. It has also been used to set up a Local Full Fibre Networks Challenge Fund to incentivise the industry to build more full-fibre connections to homes and businesses across the UK.

The Future Telecoms Infrastructure Review (FTIR), announced in July 2018 as part of the Industrial Strategy, set out the changes needed to give the majority of the population access to 5G, connect 15 million premises to full fibre broadband by 2025, and provide full fibre broadband coverage across all of the UK by 2033. **Full fibre infrastructure is essential to underpin 5G coverage and the UK will need between £3bn - £5bn to address the final 10% of full fibre gaps.**

In July 2018, DCMS published *'A framework for UK fibre delivery: Street Works'* [3]. The document outlines best practice and advice for managing the street works process, providing examples and including a toolkit for local authorities and utilities wishing to collaborate in a cooperative working relationship. Recommendations have been drawn from local authority traffic and permitting managers, telecom operators and contractors' street works teams, the Joint Authorities Group UK, the Highways Authorities and Utilities Committee (HAUC (UK)), Street Works UK, Broadband Delivery UK, the Department

for Transport, and DCMS. It also contains good practice examples from a wide range of ADEPT members.

In December 2018, DCMS launched its Digital Connectivity Portal[4] to encourage closer cooperation between network providers, local authorities and property developers to offer guidance on effective policies and processes and to facilitate the deployment of broadband and mobile networks and digital infrastructure.

What ADEPT has done to date

The ADEPT Digital Connectivity Working Group was established in 2018. Chaired by Cllr Mark Hawthorne, Leader of Gloucestershire County Council, it supports the Local Government Association (LGA)'s People and Places Board's elected member sub-group of the same name. The ADEPT Working Group includes representatives from the LGA, county councils (including Kent and Cambridgeshire), unitary councils (including Wolverhampton, Herefordshire, and Shropshire), and a district council (Forest of Dean).

The Working Group initially identified 3 key issues:

- **Number of new build homes that aren't fibre enabled**
- **Future strategy for mobile – the disparity in coverage – finding solutions to 'not spots' and 'partial not spots' in rural areas, and the requirements for 5G deployment in urban areas**
- **How to bring together thinking about fibre and mobile deployment to drive the deployment of a world class digital infrastructure**

There has been some recent movement on government policy for fibre to new builds, including the Future Telecoms Infrastructure Review (2018), the implications of which is being studied closely by ADEPT.

The Working Group is in active discussions with Ofcom, the Barrier Busting Taskforce, Mobile UK (which represents mobile network operators), the British Standards Institute and a number of other related industry bodies. We participated in a roundtable discussion with Mobile UK, mobile infrastructure providers and mobile network operators (MNOs) in March 2019, to identify barriers and opportunities for joint advocacy.

Key issues in more detail

Coverage

The UK has four MNOs (EE, Vodafone, Three and O2), which are used by all other mobile services operators. According to Ofcom's *'Connected Nations'* (2018), which combines statistics from across the four MNOs, 65% of the UK landmass has 4G data coverage from all four MNOs, but 9.3% of the UK has no 4G data coverage at all. In terms of coverage at individual premises, 77% have indoor 4G coverage and 92% have indoor voice call coverage. Coverage varies in different parts of the country, being highest in London and the other big cities, and lowest in the rural areas of England (South West, East Anglia, East Midlands and the North), Scotland, Wales and Northern Ireland. The Government has committed to extend geographic mobile coverage to 95% of the UK by the end of 2022.

Coverage obligations

Coverage obligations are legal requirements on mobile operators to provide a minimum level of mobile coverage across a geographic area or number of premises. Since 2016, government policy for improving mobile coverage has focused on obligations for operators and reforms to make it easier to build mobile infrastructure. Under the Broadband Universal Service Obligation, the Government has set a target of universal 10Mbps download speed by 2020.

Ofcom is consulting on proposals to impose new coverage obligations on licences for the 700 MHz band that are expected to be released for mobile data in 2020. The release of the 700 MHz band is a key part of Ofcom and government proposals to improve rural mobile coverage and meet increasing demands for mobile data. Ofcom's proposals include an obligation to provide good quality mobile service outdoors (including data), to at least 90% of the UK's geographical area, with minimum amounts for each nation.

[1] https://www.gov.uk/government/publications/uk-digital-strategy/uk-digital-strategy
[2] https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future
[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727780/Street_Works_Tool_Kit.pdf
[4] https://www.gov.uk/guidance/digital-connectivity-portal

Rural connectivity

The disparity in coverage and the need to ensure equitable access is one of the main issues identified by ADEPT's Digital Connectivity Working Group. **We urge the industry to develop the use of rural roaming to enable coverage across all the MNOs wherever there is a signal.** The new Emergency Service Network (ESN) is being delivered, in part, by EE upgrading their existing network and building up to 500 new sites. We believe that it could be shared with other MNOs to improve rural mobile coverage. The Extended Area Service programme will extend the ESN further through the public sector building up to 200 additional masts in the most rural and remote parts of the country. This will make it technically possible to bring fast 4G commercial services to locations and communities that have previously had poor or no mobile coverage.

Planning and building mobile infrastructure

Improving mobile coverage in an area requires more mobile base stations (masts). The roll out of mobile services and infrastructure is led by private operators, who take commercial decisions about where to build masts and deliver services. Once a suitable location for a mast has been identified, operators need to have an access agreement with the landowner and may require planning permission, or approval, from the local authority.

The industry has argued that local planning policies and decisions are barriers to digital infrastructure, although this is disputed by local government. **We believe that all local planning authorities should have up to date Local Plans that include a digital policy, and ensure that planning officers are familiar with the strategic importance of digital connectivity.**

Since 2016, the Government has introduced two main reforms intended to make building masts easier - changes to permitted development rights (2016) and reforms to the Electronic Communications Code (2017). The Government has also launched a Digital Connectivity Portal to provide resources and advice for local authorities and commercial providers to facilitate the deployment of broadband and mobile networks. The industry is leading calls for further reform to make it easier to build the mobile and full-fibre infrastructure necessary to support the forthcoming roll-out of 5G.

Competition

Customers must be able to choose between broadband and mobile service providers if competition is to drive quality up and prices down.

Highways issues

ADEPT members have a good track record in adopting pragmatic approaches to street works to support the deployment of digital infrastructure, but roads and pavements must be treated with respect. It is important to get the quality and safety of street works right, and reinstatements must meet the necessary standards. Councils want street works that are well planned, integrated and delivered so that disruption to traffic and residents is minimised, the quality and safety of the highway is maintained, and the cost to councils of inspections and fault fixing is reduced.

Case Study 2: Thurrock Council: Pothole spotter

Thurrock Council was the first authority to work with SOENECS and GAIST on the Department for Transport funded Pothole Spotter trial. High-definition cameras were mounted on public sector refuse collection vehicles in Thurrock, and on buses, highways vans and e-bikes in the other trial areas (Wiltshire and City of York) to capture regular, detailed images of the same sections of the highways network. Over time, these images were used to model deterioration and ultimately prevent potholes. Normally, this kind of work is undertaken by dedicated teams, but by using existing vehicles to capture the same information, Pothole Spotter increases efficiency and provides value for money for the Council.

Local Industrial Strategies

ADEPT will work with LEPs locally to ensure that local industrial strategies encompass digital connectivity requirements – all LEPs should have digital strategies. **Local digital investment plans must enable the delivery of industry rollout plans, and combine with public infrastructure (such as street furniture), to support the rollout of the Internet of Things.** Local industrial strategies should recognise that digital investment not only improves connectivity and productivity, but also reduces the need for travel and brings environmental benefits as a result.

Inclusive connectivity

Broadband and mobile services must be affordable for all, with people and businesses provided with opportunities to develop the skills to use them effectively.

Building on the ADEPT SMART Places Live Labs pilots[5], we will work with developers and providers of autonomous vehicles, Mobility as a Service, and demand-responsive transport to enable a connected, integrated transport system. **We want to see a service that provides digitally enabled travel that meets customers' needs and keeps them connected while on the move.** Improved infrastructure and connectivity will help to make places more accessible, more attractive to live in, and easier for businesses to operate.

Asks of Government, Ofcom and the industry

- **The Government should require Ofcom to collect and report accurate and verified coverage data. Government should ring-fence a proportion of receipts from the sale and licensing of spectrum bands to fund robust and independent verification of coverage.**
- **We welcome the guidance and toolkits developed by DCMS but believe that more should be done to actively communicate and promote these.**
- **When inviting bids for spectrum bands, Ofcom should set stringent requirements and offer attractive incentives to companies to invest in providing better quality services in rural areas. If geographical coverage obligations are not cascaded down to local authority areas, it is likely that MNOs will cite commercial considerations to seek to avoid the most challenging geographies, and continue to leave some communities without access to a service.**
- **As regulator, Ofcom has a role to ensure that the market's claims of coverage and compliance are robustly and independently challenged, tested and assured.**
- **The industry should demonstrate what positive impacts they believe have been achieved by previous relaxations of the planning system, and where it wants to see further relaxations, demonstrate how these will contribute to the roll out of better services and networks.**
- **When seeking planning permission, MNOs should ensure early information and engagement to enable communities to fully understand the potential benefits as well as disbenefits of digital infrastructure.**
- **MNOs can help improve and utilise the DCMS guidance and toolkits by using them and providing feedback.**

Case Study 3: Hertfordshire & Essex County Councils: real time roadworks information

Delivering live road closure information to sat nav devices and providing real time roadworks monitoring across Hertfordshire and Essex, benefitting road users by giving immediate notice of when roads have been closed and re-opened. Traffic management operatives can communicate via smartphone or tablet directly to sat nav services to update on actual road closures, not just planned road closures. Live traffic monitoring capability across Herts and Essex has increased from 5% to 40% of the network without having to deploy expensive roadside monitoring equipment.

5 https://www.adeptnet.org.uk/livelabs

- ADEPT members are the place-making strategists and policy shapers across top tier local authority areas
- ADEPT members are specialists, delivering services and sharing best practice across key sectors including environment, planning, housing, transport and economy
- ADEPT members design strategies for the future, taking communities beyond 2035
- ADEPT members operate in networks, cutting through boundaries to work with partners across the political, public, private and community sectors
- ADEPT members provide opportunities to develop new talent, supporting the Place Directors of tomorrow

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