

Digital Communications Infrastructure Strategy Consultation response

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Director**

Representing:

Cambridge City Council

Cambridgeshire County Council

East Cambridgeshire District Council

Fenland District Council

Greater Cambridgeshire, Greater Peterborough Local Enterprise Partnership

Huntingdonshire District Council

Peterborough City Council

South Cambridgeshire District Council

Nb. Not all questions answered.

Section 1

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

As outlined in the consultation document, the Public Services Networks (PSN) initiative has delivered benefits in facilitating better digital infrastructure to support public service delivery and in particular has already leveraged significant economies of scale. This has been strongly evidenced in the Cambridge sub region via the Cambridgeshire Public Services Network (CPSN), which extends through Cambridgeshire into neighboring counties. Significant savings have been accrued via aggregation and it has delivered a platform for service transformation and greater shared public service delivery across multiple agencies. A further benefit of the CPSN via joined up public service delivery has been the provision of public access to the Internet – eg free public access Wifi in “One Stop” shops and community hubs/libraries.

In future, as identified, the PSN approach could in principle deliver greater value if it evolves to support greater use of mobile technology and use of the Internet as the main transport network. This would provide benefits not only to future public service delivery but would also further the ambition for the UK to be a leading digital nation. However this will only be successful if:

- The current silo based approach which allows separate “health” and “social care” networks to exist whilst serving the same communities is overcome in a timely manner. It has been estimated health and local government spend combined equates to roughly two thirds of UK public expenditure therefore this

is an area where improvements would have a high impact.

- The PSN procurement frameworks continue to evolve effectively, taking into account: emerging service models; telecommunications developments; and encompassing both central government and local public service delivery requirements and opportunities for greater efficiency.
- The role of the voluntary and community sector - including social enterprises - in the delivery of public services is understood and taken into account in relation to the further development of PSN.

These opportunities are complemented by the increase in use of superfast broadband and technology within people's homes which could further support :

- assistive technology to be implemented
- integrated assistive technology care packages in people's homes to extend independence with extended support to families
- targeted use of assistive technology to support service users with specific needs such as dementia
- delivery of integrated digital health and social care records
- delivery of patient and/or carer management of their own records

Self-management of health conditions, through the use of technology such as telehealth, is enormously important to the future provision of modern and affordable health and social care. But medical staff and patients need to have confidence in the reliability of remote monitoring applications and services.

Joint funding and joint commissioning of the new infrastructures which will sit alongside the PSN and home connectivity is required (e.g. for machine-to-machine connectivity). This will deliver the reliability and resilience required for time-sensitive/real-time e-health communications leading to faster adoption of e-health applications and services.

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?

See Q29

Section 3 - Scenarios

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

The emergence of fresh digital divides is a concern in all scenarios and should therefore impact the development of the future strategy.

In all scenarios, the digital divide will continue to be defined by user skill, motivation and confidence as primary factors rather than lack of access to high speed networks.

People who stay offline do not have access to the same:

- technological opportunities
- life chances and freedom
- economic, social and cultural capital and resources
- positions, power and participation opportunities
- development of skills and capabilities.

As we enter the long tail of adoption for Internet access, over 50% of the 4 million households that do not have a connection say that they do not need the Internet (Source: Office for National Statistics). Lack of skills and cost are the next most cited reasons. Unavailability of broadband was the reason given in only 1% of responses.

By implication, a new digital divide will emerge, based on digital literacy, between those sophisticated, content-creating, next generation users and basic Internet users that will need addressing.

To date commercial roll-out decisions relating to superfast broadband services have been made primarily based on overall population density rather than fine grained analysis of the socio-economic characteristics of an area, which has created “digital deserts” in less populated areas. Wide scale infrastructure rollout is now being undertaken as part of the BDUK-funded intervention programmes being around the country and there is emerging evidence – certainly in the Eastern region of England – that take-up in more wealthy rural areas is extremely high, which offers a commercial incentive for future development and deployment of high speed networks to cope with rapidly increasing demand. However there is a risk that a new digital divide could emerge based more closely on the economic geography of an area in future, if estimations of commercial returns become more sophisticated as a result of the current infrastructure intervention programme.

If future deployment plans are market-led and dependent on take-up from the current intervention projects, this could create new disparities due to socio-economic factors. In effect this could “lock-in” and exacerbate the current digital divide and serve to hold back the future economic regeneration of areas of deprivation.

Each digitally excluded person has their own individual set of circumstances but Internet take-up is low among the most vulnerable and disadvantaged groups in society:

- those in social housing
- those on lower wages, or unemployed
- those with disabilities
- older people
- young unemployed people

The alignment of policies and actions for digital inclusion (synonymous with social inclusion, now) and future digital infrastructure will support a digital society, support economic growth and allow new technology to flourish.
(see also Section 4 - Q29)

Section 4 Competition and regulation

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

Although the mobile market is deemed competitive in relation to conventional assessments such as those undertaken by Ofcom, the lack of comprehensive 2G, 3G and 4G coverage across indoor and outside locations is a constant issue for businesses, communities and local public services in much of the East Midlands/ Eastern areas of the UK.

The Greater Cambridgeshire Greater Peterborough Local Enterprise Partnership (GC-GP LEP) recently consulted with businesses in the LEP area about the barriers to future growth. Lack of mobile coverage across the area and particularly on the transport corridors, including trains, was cited as an issue of significant concern.

The Mobile Infrastructure Project (MIP) as currently structured will deliver only marginal benefits to the GC-GP LEP area. The planned expansion of the mobile networks following the 4G license auctions is welcome, and the impact is yet to be felt. However to deliver a true picture of mobile communications coverage it would be better described in terms of geographic coverage rather than the less helpful “population coverage” based on a premises count.

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?

The current USO and USCs that relate to fixed and mobile telecommunications services are poorly understood by all sections of the UK business and consumer communities, with the exception of small number of telecommunications specialists. This undermines their effectiveness and minimises their impact.

Universal service obligations/commitments are key to preventing significant geographical and socio-economic disparities in access to digital services and therefore there is a case for increasing the resources available to:

- Revise the USO/USCs to make them more effective
- Provide consumer oriented versions with simplified language.
- Publicise and explain the commitments more widely

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

The State aid rules which restrict how the public sector can intervene in a market can cause perverse outcomes. An example of this is where there have been challenges to public investment in broadband for cities, from the private sector, under European ‘State aid’ law. The result has been a “state aid safe” policy which has undermined the effectiveness of the Super-Connected Cities programme. If it remains unaddressed,

this could result in a lack of investment into broadband in certain cities.

The current European Union and UK Government's position is that market failure has been demonstrated for rural areas which justifies intervention in the market to deliver broadband to the rural areas of the UK, but this is not the case for urban areas. This has led to an 'urban-rural' divide in Government broadband funding, which results in the perverse situation that rural areas on the edge of cities can get investment to improve infrastructure, whilst those classified as 'urban' with large concentrations of business are unable to benefit from infrastructure intervention programmes in the same way.

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

See Q31

Section 5 – Facilitating and Encouraging Investment

Q39 Views are sought on:

- The case for the UK to invest to gain 'early mover advantage';
- What areas in particular the UK should aim to see investment;
- 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 Cambridge sub-region has significant strength in technology sectors which are dependent on early mover advantage. It is based on a networked and connected city region characterised by world-leading innovation. Research into the Cambridge phenomenon shows success happened here because:

- A world class university drew talent into the area from across the globe, fostered innovation and encouraged business spinout from that innovation which developed into strong hi-tech, bio-medical and other clusters with over 1,525 tech companies employing more than 53,000 people and a combined turnover over £11.8bn
- The area's scale and connectedness allowed overlapping networks to develop and facilitated a culture of cooperation and cross-fertilisation between entrepreneurs and with academics.
- It is an attractive place and competes with other world cities as a good place for business leaders and their families to live, not just a good place to do business. The recent decision of AstraZeneca to consolidate its UK operations in Cambridge, with some 2,000 staff and its global HQ moving here, underlines this point, and the importance of maintaining a strong network effect over a wider geographic area.

The global nature of many Cambridge businesses means that they are "footloose" and could easily move their operations elsewhere in the world. Retaining our success stories in the local area is as important as generating the home-grown, multi-billion pound international businesses (such as ARM, Autonomy and Marshalls) of tomorrow. Much of the growth that we expect to drive in the next 20 years is net growth to the UK, rather than displacing economic activity from elsewhere in the country.

The UK has some world class companies, including telecoms companies, working on emerging technologies such as the Internet of Things (IoT), including ARM, Nuel/Huawei and others local to Cambridge. There is potential to make the UK a world-leader in applying the technology its companies are capable of delivering.

Emerging technology based developments such as IoT also offer the prospect of wider economic growth for companies outside the tech sector. It can create demands for new services at various skill levels. However in order to support the early mover advantage the respective input from government departments and local public services needs to be both complimentary and aligned.

In order to facilitate the growth and development of “future internet” based technologies in a growth area such as the Cambridge city region it is vital that “research grade” connectivity is available to foster the collaborative development of emerging technologies and support the development of new service delivery ecosystems.

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?

Innovate UK – Funding:

Cambridgeshire County Council has worked closely with Innovate UK and its various programmes and tools. Through collaboration we seek to work with businesses to develop solutions which help us to address our service delivery issues and allow the development of innovative technology that can potentially be scaled. This would be facilitated if public service delivery agencies and policy teams worked better together to align objectives and to ensure that there is no disconnect between public policy and the delivery of new public services.

Other Government Funding:

Consideration could be given to the way in which Government funding opportunities are structured and how they can support innovation. The indicators used in some funding streams mean that only traditional measures such as hard infrastructure are likely to be successful. For local authorities accessing central government funding streams this limits the amount of funding that can be used to deploy innovative solutions, as the quantification of benefits using evidence from previous deployment is not possible. This restricts test bed opportunities and can mean UK companies missing out on early mover opportunities.

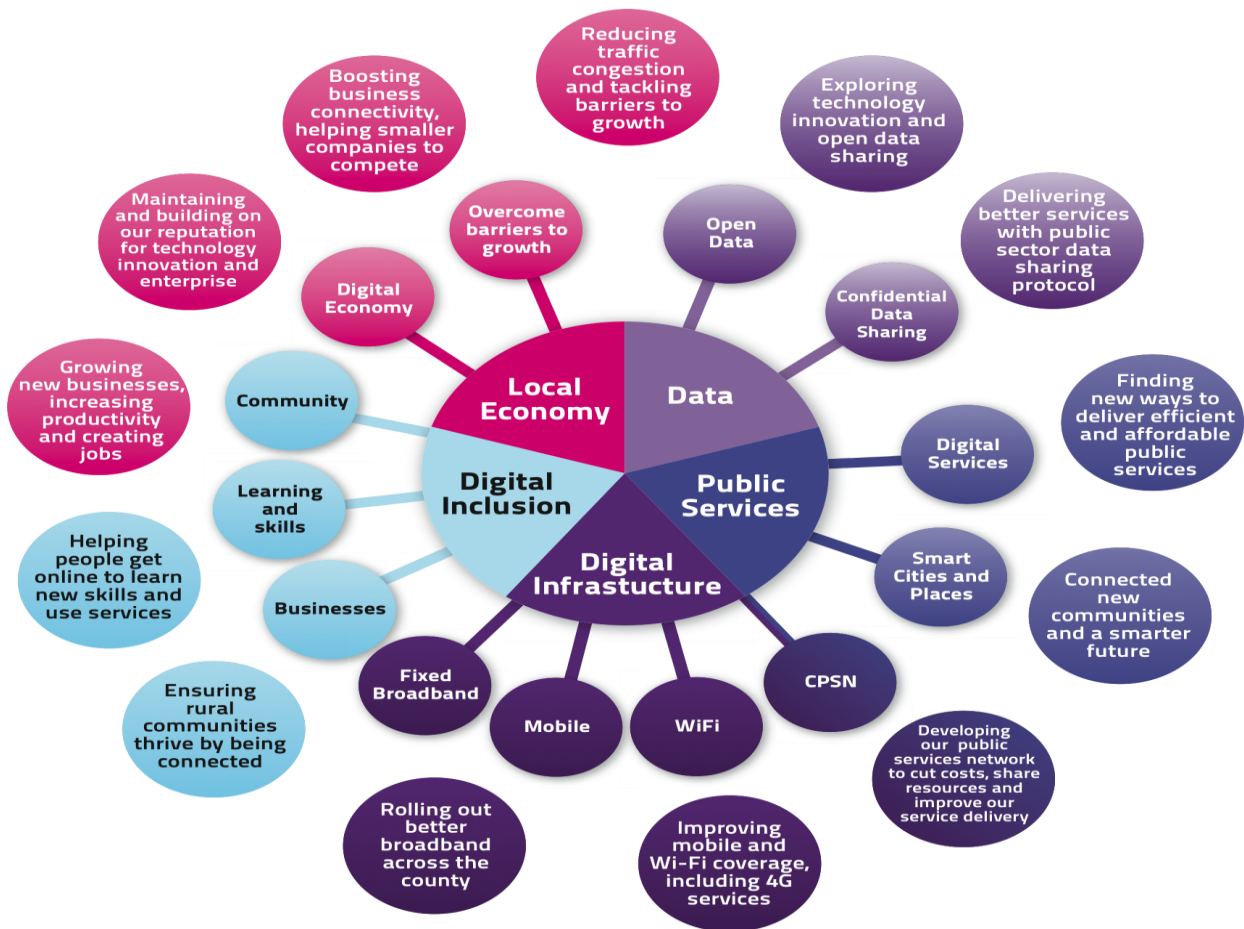
Q42 What more might government and industry do to exploit future technologies, associated new applications and emerging business models?

New approaches to public service procurement may assist delivery and in commissioning.

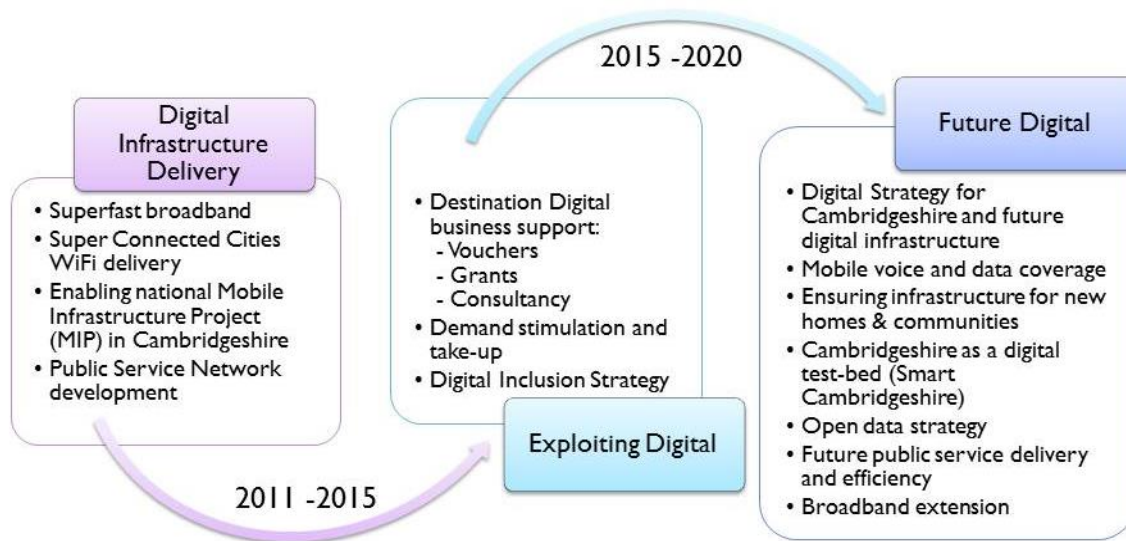
See 40

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

The interconnected nature of the digital communications infrastructure and the link between infrastructure deployment, take-up and exploitation of technology innovation has driven the establishment of the Connecting Cambridgeshire programme which is a partnership of multi-tier Cambridgeshire local authorities, with strong support from the local business and academic communities. Working in concert with the business and academic communities as well as with government, local authorities have a natural leadership role which can facilitate the ambitions of the future digital communications strategy across a number of areas. As outlined in the diagram below:



The programme is focussed on digital infrastructure delivery, ensuring that the opportunities this brings can be maximised as well as looking to the future to support longer term benefits and opportunities. See below for programme schematic.



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

Council's can continue to use their local leadership role to increase collaboration with the academic and business communities to provide a forward view of requirements and by using technology innovation to power better public service delivery.

The GC-GP LEP area has relatively few areas of regeneration but a significant growth agenda with a large programme of housing growth set out in the district council's local plans. Ensuring that all new homes are built with access to appropriate digital infrastructure is critical to future take-up growth and exploitation of digital services.

There is evidence across the Eastern region of the UK that developers are still failing to plan infrastructure deployment by enabling ducts to provide FTTP to all homes at an early stage. The economics of house building and FTTP deployment mean that there is a very small planning window to deliver this. There is evidence that the developer and telco communities are not working well together to achieve this. This is a significant barrier to new residents accessing services on-line and being able to work flexibly which in turn creates pressure on the road networks. Cambridgeshire local authorities, along with many others, are attempting to address this issue through the use of planning conditions and creating policies within local plans. However this could be supported by Central Government through legislation requiring the provision of FTTP in new development. This would also deliver the EU directive which will require all new buildings and renovated premises to be "high speed ready" from 1 January 2017.